

Exploration Boom In West Africa

Opportunity or Challenge?

The mining industry is poised for a substantial increase in exploration to replace mined production and increase reserve and resource inventories ahead of a metals 'supercycle'

Global reserves and resources of critical metals are at a cyclical low, with average mine lives having halved in the past decade due to lack of investment in exploration programmes

Growing reserves and resources can only happen through two principal means – drilling and assaying, and through mergers and acquisitions ("M&A")

Capital markets continue to fund mining companies at a level not seen for the past decade, but this exploration boom has been slow to arrive in Africa, and has the potential to constrain the supply side response to demand, particularly in West Africa ("the Region")

OVERVIEW

Capital Limited ("Capital") is one of the largest mining services providers in Africa with a 17-year track record of delivering drilling services, and more recently contract mining and laboratory assay analysis services, to global, mid-tier and junior mining companies.

The West African mining industry has seen significant fundraising activity since Q4 2020, driven by higher metal prices and a need to identify and mine metals to fulfil growing global demand.

The "Exploration Boom" report ("the Report") provides an analysis into why West Africa in particular is going through a sustained period of elevated exploration activity precisely at the time when the mining sector is entering what leading market commentators such as JPMorgan and Goldman Sachs refer to as the current metals 'supercycle'.

The current 'supercycle' is underpinned by a significant increase in demand for metals combined with capital market fundraising activity for listed mining groups not seen for a decade. Demand is being driven by metals needed for the transition to carbon emissions reduction and lessening the impact of climate change, and the stimulation of global economies through government spending to fuel the post Covid-19 recovery that will include infrastructure and industrial investment, as the US Government has shown with its US\$1.9 trillion Covid-19 relief package announced recently. In addition, the prospective reflationary monetary policies being pursued by most of the leading global central banks could positively impact precious metals over the medium term, despite the recent pull back from gold. Yet the supply of metals such as copper, cobalt, nickel, as well as PGMs and gold have been hampered by a lack of exploration spending during the down cycle (between 2012 and 2018), a trend further exacerbated by the impact of the global Covid-19 pandemic, which has disrupted supply chains and the ability of mining groups to deploy assets across international borders.

“A dearth of exploration has seen average mine life across the gold mining sector fall from 20 years to closer to 10 years... The prospect of a serious reserve crisis is looming”

Mark Bristow – President and CEO of Barrick Gold, the world's largest gold producer, recently quoted in October 2020

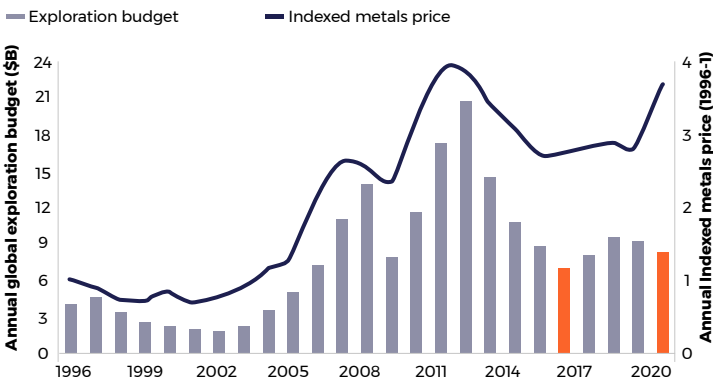
These macro forces are becoming evident with not only a significant increase in capital available for exploration programmes, but also through M&A in West Africa, resulting in a significant increase in demand for exploration services in the Region. There has been significant M&A activity in the last two years in West African gold mining alone, starting with the Barrick Gold acquisition of Randgold, the acquisition of Teranga and Semafo by Endeavour Mining, Cardinal by Shandong Gold, and Allied Gold's various acquisitions of Bonikro, Sadiola and Agbaou.

The Report is based on public and capital market information sourced from leading providers, including S&P Global Market Intelligence, investment banking research, and from publicly disclosed information from leading mining groups operating specifically in the African mining industry.

Key highlights

S&P Global Market Intelligence states that equity market activity in the mining industry has surged to a nine-year high in 2020, yet nonferrous exploration budgets remain substantially below the previous cycle (US\$8.7bn in 2020 versus US\$21bn in 2012 and \$9.6bn in 2019 – see Graph 1 below).

Graph 1 – Global nonferrous exploration budget down but remains above 2016 low

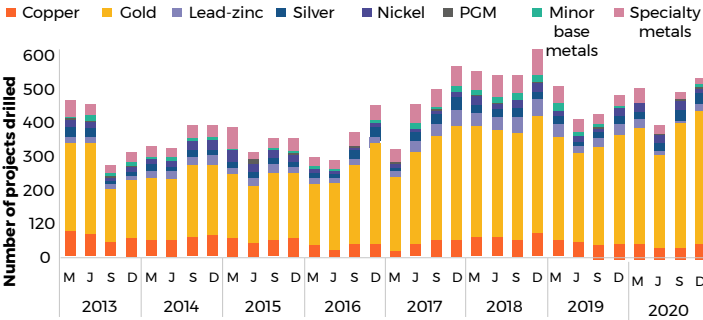


Data as of Jan. 5, 2021
Source: S&P Global Market Intelligence

During 2020, 52% of exploration drilling was targeting gold, 21% copper and 5% zinc-lead, with gold drilling's share of holes increasing to 78% from 69% in 2019, the "highest level ever recorded".²

The increase in gold drilling was mainly at late-stage and minesite projects, reflecting the impact of the pandemic on large-scale, early-stage regional programmes.

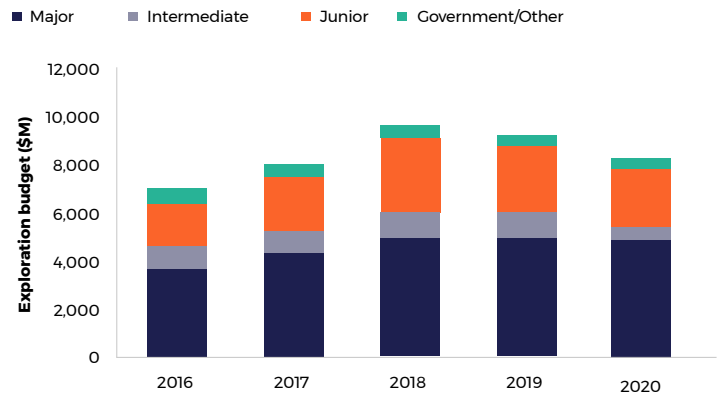
Graph 2 – Global drilling activity, 2013-20



Data as of Jan. 5, 2021
PGM = platinum group metals
Source: S&P Global Market Intelligence

Drilling spend in 2020 saw major mining companies accounting for over 50% of all exploration drilling, 29% from junior, 12% from intermediates and 4% from government, with 41% on minesite campaigns, 35% on late stage and 24% on grass roots drilling programmes (see graph 3).

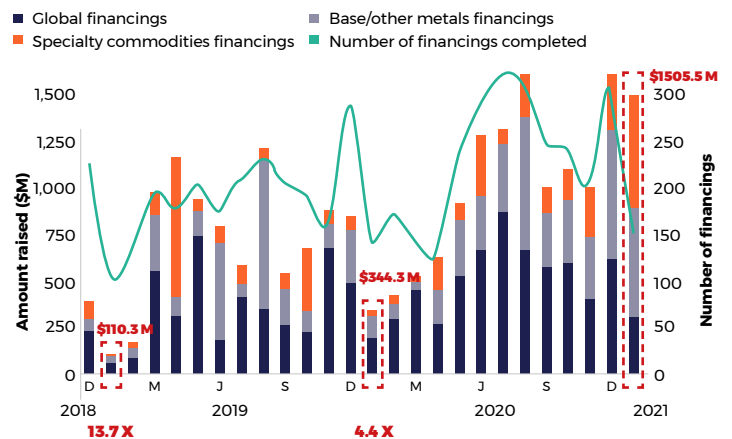
Graph 3 – Majors continue to drive exploration



Data as of Jan. 5, 2021
Source: S&P Global Market Intelligence

2021 has already seen record inflows of capital into exploration – funds raised by junior and mid-tier mining companies for drilling programmes reached US\$1.5bn (in January 2021) versus \$0.3bn in January 2020, with the number of fundraisings four times higher.

Graph 4 – Junior and intermediate financings, Dec 2018 – Jan 2021



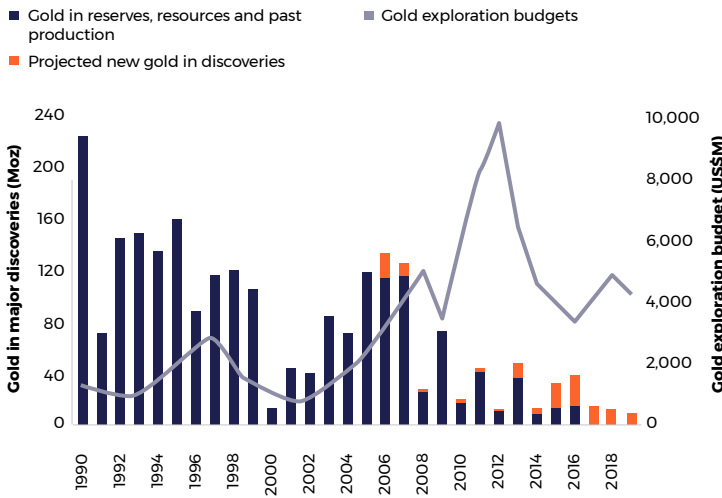
Source: S&P Global Market Intelligence Metals & Mining Research – Industry Monitor February 2021

S&P Global anticipate a 20% increase in exploration budgets in 2021 – “there is usually a delay between companies completing fundraising and putting the funds to use”.

During the last ten years known metal reserves/resources have not been replaced due to low exploration capex during this period, and this shortfall will be further compounded by the anticipated period of sustained increased demand for key metals, particularly precious and battery-related metals.

The steep decline in exploration spending since 2012 from gold companies provides a direct correlation to the lack of major gold discoveries, of which there have been zero in the past three years alone (see graph 5).

Graph 5



Source: S&P Global Market Intelligence

The majority of gold miners with operations in Africa are starting to react to the decline in reserves and resources and have announced significant increases in their exploration spend for 2021 versus 2020 (including Endeavour by 100%, Newmont by 26%, Barrick by 9%, Resolute by 55%, and B2Gold by 38%).³

But, the “Exploration Boom” is now a reality...

The mismatch between demand and supply of exploration, delineation and production drilling rigs has the potential to put the mining & exploration industry in the Region under significant pressure

Major Drilling highlighted there is typically a “lag of 4-6 months between financings and drilling but takes 10-15 years to bring mine into production”⁴

The bottleneck in increasing exploration activity lies not only with drilling rigs - the time required for testing assay samples has blown out from an average of 6 weeks to 3 months⁵

The “Exploration Boom” is a phenomenon happening now and is set to only become more severe as replenished drilling budgets are potentially not matched with rig availability

Average Life of Mines in the gold industry have halved in the last decade⁶ and the need to make new discoveries or expand current reserves has never been greater

West African gold mining exploration boom - the situation today

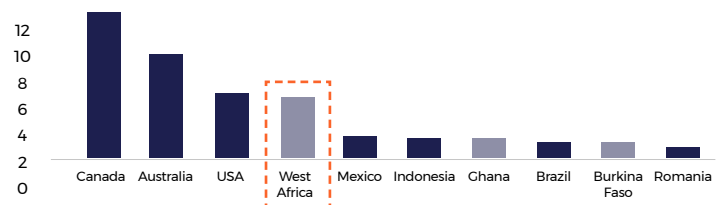
Africa hosts some of the largest known reserves and resources of some of the key metals needed to re-boot the global economy once the impact of the global COVID-19 pandemic recedes. Added to the raw materials required to rebuild infrastructure, industrial and large central-government led projects needed to re-stimulate hard hit economies across the globe, the push for significantly lower carbon emissions to combat climate change, has seen demand soar for metals driving the transition to electric vehicles and the renewable energy generation. Beyond copper, cobalt, platinum group metals and rare earths, the demand for gold as a safe haven against inflation, which is another monetary tool used by central governments to re-inflate growth, has been unprecedented which is set to continue for the next few years. The impact of all these forces has seen unprecedented capital market activity in raising funds to mine and process these metals, as investors scramble to re-configure their portfolios in line with the new paradigm of investment policy.

This has translated into a significant rush by mining groups into geographies which host these metals as global demand outstrips supply, causing the underlying commodity prices to soar. There is no region where this is more pertinent than West Africa, which has seen a combination of ten year highs in fund raisings for gold companies and strong M&A activity over the past two years, causing an exploration boom which has gathered pace since Q4 2020.

The West African region has been one of the fastest growing mining jurisdictions in the world, particularly for large proven gold deposits which stretch from Senegal in the West to Nigeria in the East, and from Mali in the North to Ghana in the South. This region, which includes new gold producing countries such as Burkina Faso and Côte d’Ivoire, saw the third largest inflow of exploration expenditure globally (behind Australia and Canada) in 2020 with over US\$470m invested into the ground. West African gold exploration has been fuelled by the comparative lack of modern exploration campaigns used in developed markets such as Australia and North America, yet the region benefitted from being the world leader in exploration success, with over 50 million ounces of gold reserves discovered between 2009 and 2019, dwarfing its nearest rivals of Canada (36 million ounces) and Ecuador (24 million ounces).

Strong equity market support

£4.9 B raised for West African projects
Financing for gold companies (\$B) 2009 – 2021 (current)



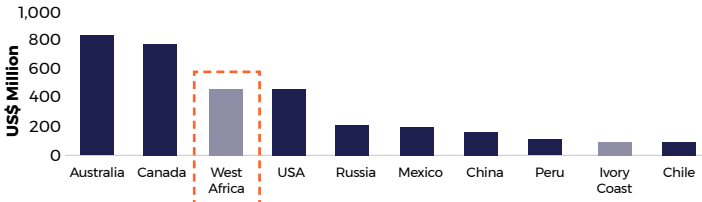
³ See Table in Appendix ⁴ Page 10: <https://www.majordrilling.com/wp-content/uploads/2021/01/Jan-2021-MDI-Investor-Deck-Final-Web.pdf>
⁵ Resource Maven | Why So Slow, Labs? ⁶ As per Mark Bristow’s quote at the start of the document

West African gold mining exploration boom – the situation today (cont)

Significant exploration activity

Region features strongly in 2020 exploration budgets

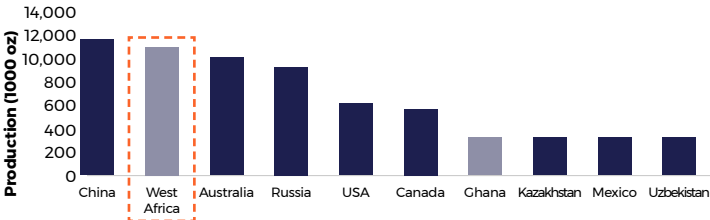
2020 Gold Exploration budget (\$M)



2nd top gold producing region

11.1Moz production in 2020 (estimated)

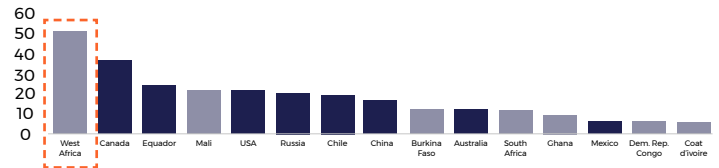
National gold production (Moz)



Greatest exploration success

#1 global region for successful discoveries

Gold discoveries (Moz) 2009 – 2019



S&P Global Mining as per Capital Ltd's 2020FY results presentation on capdrill.com

Conclusion

'Supercycles' in mining do happen, with the current cycle widely perceived to be the fourth in the last hundred years. Metals and mining is a cyclical industry after all. However, the West African gold mining industry faces the challenge of an exploration boom which has only started to gather pace since late 2020, with the ability to implement these exploration programmes facing the restrictions brought on by Covid-19 and the availability of the sufficient mining services resources to meet that demand.

The challenges to deliver reserve and resource growth brought on by the impact of this "Exploration Boom" in West Africa translates to a rapid need for investment towards the discovery of new orebodies and the expansion of existing resources, which seems to be even more than it has in any of the previous three 'supercycles' in the last century.

Appendices

Figure 1

Mining industry highlights

	MOM			YOY			Rolling monthly average YOY
	Dec 2020	Jan 2021	Change	Jan 2020	Jan 2021	Change	
Exploration & development							
Number of significant drill results	161	225	+64	183	225	+42	
Initial resource announcements	7	3	-4	2	3	+1	
Positive project milestones	5	3	-2	5	3	-2	
Finance & markets							
Exploration Price Index	160	168	+8	131	168	+36	
Industry Market Cap (\$B)	1,942	1,954	+12	1,393	1,954	+561	
Junior/Intermediate financings (\$M)	1,678	1,505	-173	344	1,505	+1,162	
Pipeline Activity Index	128	115	-12	94	115	+21	

Data as of Feb. 11, 2021
Source: S&P Global Market Intelligence

Appendices

Figure 2 – Precious metals initial resources (in gold equivalent)

S&P Global Market Intelligence

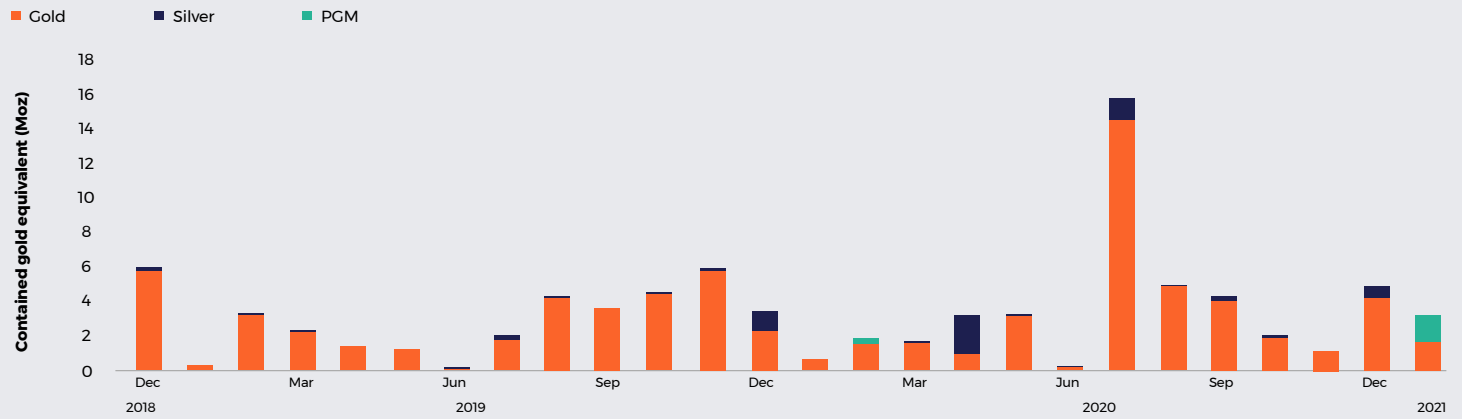


Figure 3

	2021 Exploration spending (US\$m)	2020 Exploration spending (US\$m)	% Difference	notes	source
CENTAMIN PLC	18	28.6	-37%	2020 figure was based of assumptions from H1 results) & 2021 figures were taken from CME in December	Link
Barrick*	250	230	9%	pg 40	Link
Newmont*	390	309	26%	Exploration and advanced projects R&D	Link
RESOLUTE MINING LIMITED	17.1	11	55%		Link
SHANTA GOLD LIMITED	8	4.2	90%		Link
B2 Gold*	66	48	38%		Link
IAM Gold	2.8	1.8	56%		Link
Kinross*	120	92	30%		Link
Endeavour	90	45	100%		Link
total	961.9	769.6	25%		