



# B2Gold Fekola Mine

FULFILLING MALI'S GOLDEN POTENTIAL



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BFM

# B2GOLD FEKOLA MINE

Fulfilling Mali's Golden Potential

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Nestled in the heart of Mali, a country steeped in the historical riches of Mansa Musa's golden legacy, B2Gold's Fekola mine has emerged as a modern testament to the nation's enduring association with natural riches.

Evoking the nation's past prosperity, the Fekola mine is a pivotal player in Africa's contemporary gold mining sector. It is an important contributor to Mali's economic growth and underscores the nation's continued significance in the world of gold production.

The Fekola Mine is a bridge that intricately weaves the tapestry of Mali's rich history to its progressive future in the pursuit of sustainable and responsible resource extraction. The mine continues to surpass all expectations economically and is an important link to the community within which it serves.

Situated in southwest Mali, on the border with Senegal, 500km due west of the capital, Bamako, the mine is presently the nation's third-largest gold mine. Canada's B2Gold acquired the Fekola project in a merger with Papillon Resources in 2014. Construction work commenced in

**The project was constructed by the B2Gold's internal construction team and it was delivered on budget and ahead of schedule by 3 months at a cost just about half a billion dollars**



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February 2015, and ore processing began in 2017. The first gold pour occurred on October 7, 2017. The project was constructed by the B2Gold's internal construction team and it was delivered on budget and ahead of schedule by 3 months at a cost just about half a billion dollars

B2Gold retains an 80% share of the mine while the Mali Government holds the remaining 20% interest. In September 2021, the Fekola Mine produced its two millionth ounce of gold, followed by its three millionth ounce of gold in 2023.

## Operational Overview

Following the Fekola Mine acquisition in 2014, B2Gold embarked on a long period of construction, concluding in 2017, with the completion of the Fekola mill and start of ore processing.

Fekola Mine and the Cardinal zone, covering 52 km<sup>2</sup> of exploration, are part of the Medinandi area, one of five areas in the Fekola Regional Project. Medinandi also includes Menankoto, a 52 km<sup>2</sup> exploration permit about 20 km north of Fekola, and the southern portion of Mamba and the northern portion of Cobra.

Additionally, Bantako North is the northern strike extension of the Mamba; Bakolobi, with 100 km<sup>2</sup> exploration, covers possible



extensions of the Fekola structure northward and the Cobra structures southward, and finally, Dandoko, a 100 km<sup>2</sup> exploration area.

One thing B2Gold does very well is exploration, and B2Gold budgeted \$35 million for exploration in Mali in 2023, with an ongoing focus on the Bantako, Menankoto, and Bakolobi (Anaconda

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## AFRIK EMPLOI

AFRIK EMPLOI, a recruitment and human resources consulting firm, stands out for its synergy of actions led by renowned consultants from various fields and different countries. Their cumulative experience over several years aims to develop human capital through continuous training and assistance in human resources management to enhance the productivity of companies and organizations. AFRIK EMPLOI provides tailor-made solutions adapted to the needs of businesses by managing the temporary workforce.

The firm operates in various sectors such as mining, transportation and logistics, industries, services, NGOs, and microfinance. AFRIK EMPLOI distinguishes itself by offering a range of recruitment, training, and human resources consulting services to meet the varied needs of its clients.

In terms of recruitment, AFRIK EMPLOI is committed to providing candidates from all socio-professional categories and types of contracts, ranging from daily laborers to senior executives. Their recruitment process is well-established, relying on a rich and constantly updated database, as well as their in-depth knowledge of the job market.

Among its clients, Afrik Emploi includes the Fekola gold mine, a major player in the mining sector in the West African region, which it has been supporting since its creation in 2017 for the supply and management of qualified workforce, through its sister company, Mali Assistance Services. With this partnership, as well as other successful collaborations, Afrik Emploi is capable of assisting companies of all sizes in providing and managing highly skilled workforce for the sector.

Area) permits. In addition, the extensions of known prospective structures in the Anaconda Area and the Fekola Mine are being targeted in the area between them on the newly acquired and relatively underexplored Bakolobi permit.

The Dandoko permit, located east of Fekola, provides a new focus for exploration. The mineralized structures identified at the Fekola Mine track northward onto the Bakolobi permit and onward onto the Anaconda Area. Drilling undertaken in 2022/23 has identified significant mineralization on the southward extensions of the Cobra and Adder zones. Drilling will continue to advance these zones of gold mineralization.

Another north-trending structure parallel to and 25km east of Fekola is being drilled

on the Dandoko permit. The mineral resources remain open and are expected to grow with ongoing exploration drilling along strike and at depth.

At the Fekola Mine, ore will be mined from the Fekola and Cardinal pits, including higher-grade Fekola Phase 6 ore in the fourth quarter of 2023. Production from the Fekola and Cardinal pits is being accelerated and guidance of between 580,000 and 610,000 ounces for the Fekola Complex for 2023.

As a result of the expected sustaining capital expenditure increases for the year, the Fekola Complex all-in sustaining cost guidance range is expected between \$1,175 and \$1,235 per ounce sold.

B2Gold's capital expenditure in 2023 at





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Fekola is expected to total \$352 million, of which approximately \$214 million is classified as sustaining capital expenditures and \$138 million as non-sustaining capital expenditures. Sustaining capital expenditures are anticipated to include, \$101m for capitalized stripping, \$51m for new and replacement Fekola mining equipment, including capitalized rebuilds, and \$35m to commence construction of a new tailings storage facility.

Non-sustaining capital expenditures are anticipated to include \$63m to develop and equip Fekola Regional's Anaconda Area and Dandoko project, \$54m for underground mine development (Fekola Mine underground ore production anticipated to commence in the first quarter of 2025) and \$16m for haul road construction to Fekola Regional's Anaconda Area and Dandoko project.

Gold production from the Fekola Mine of 244,014 ounces in the fourth quarter of 2022 was a quarterly record. High-grade ore from Fekola open-pit Phase 6 contributed to consecutive monthly production records in October and November 2022.

The Fekola processing facilities continued to outperform, with 2.47 million tonnes processed during the fourth quarter, due to favorable ore fragmentation, availability of supplemental four saprolite feed and continued optimization of the grinding circuit. Mill feed grade was higher in the fourth quarter due to the increased volume of high-grade ore processed from Fekola Phase 6 pit.

In 2022, the Fekola Mine produced 598,661



ounces of gold, exceeding the annual guidance range of 570,000 to 600,000 ounces. Fekola, which now employs nearly 2,800 people, forecasts a 2023 gold production of between 1 and 1.08 Moz.

## Owner's Background

Led by Clive Johnson, President and CEO at B2Gold is a low-cost international senior gold producer based in Vancouver. Founded in 2007, it operates gold mines in Mali, Namibia, and the Philippines, and has a mine under construction in northern Canada, and is involved in development and exploration projects in various countries.

Fekola is B2Gold's second African mine. It was preceded by the Otjikoto mine in Namibia, which was commissioned in November 2014. Experience there was put to good use in Mali.

The Fekola gold mine plant was initially

designed to be a 4 Mtpa (million per tonne per annum) facility, but due to exploration successes, B2Gold decided to pivot to 5 Mtpa. The acquisition of the mill ensured the project could produce 7.5 Mtpa. The company was persuaded to spend \$18 million to increase capacity by an extra one Mtpa.

The mill was underutilized at 5 Mtpa, so B2Gold approved an increase in plant capacity to 7.5 Mtpa. A \$50 million expansion was commissioned in 2020, with the processing upgrade focused on increased ball mill power and upgrades to other components, including a new





cyclone classification system, pebble crushers, and additional leach capacity to support the higher throughput and increased operability. Plans to put 9 Mt through the mill in 2023 are expected to be maintained for the foreseeable future.

Ore for the mill is derived from the Fekola gold mine and Cardinal pits. Material movements for Fekola this year will total 73.5 Mt of ore and waste, with Cardinal adding a further 14 Mt. B2Gold's trucking fleet consists of 44 Cat 777 trucks with a 90-tonne capacity and 17 Cat 789s with a 180-tonne capacity. Eighteen Volvo A45G articulated haulers supplement these rigid trucks with a 45-tonne capability.

### Strategic Contractors and Suppliers

B2Gold's commitment to excellence is fortified by a network of esteemed supply partners, each playing a crucial role in



the success of the Fekola mine. OXYMAT, recognized as the largest supplier of PSA oxygen and nitrogen gas generators in Europe, stands out as a key contributor to the mine's operational efficiency. Their cutting-edge technology ensures a reliable supply of essential gases, vital for various processes within the mining operations.

Mali Assistance Services (MAS), another integral partner, specializes in targeted training and HR consulting. Their expertise in human resources not only aids in talent

acquisition but also facilitates ongoing training programs, ensuring that the workforce at the Fekola mine remains skilled and adaptable to evolving industry standards.

WEM INVT, known for its prowess in electric motors and AC drives, plays a pivotal role in powering the machinery at the mine. The reliable and efficient solutions provided by WEM INVT contribute to the overall sustainability and productivity of the Fekola mine's operations.

BME South Africa, ERM Mining, and Tierra Group International are also noteworthy contributors to B2Gold's supply chain. BME South Africa's expertise in blasting solutions, ERM Mining's environmental and social impact assessments, and Tierra Group International's proficiency in engineering services collectively ensure that the Fekola mine adheres to the highest standards of safety, environmental responsibility, and operational excellence.

Djet-N-Agraire Consulting, UL Solutions, MineKale/SFTP Mining, DRA Global, and SGS Laboratories Mali further augment the capabilities of the Fekola mine. Djet-N-Agraire Consulting's agricultural expertise supports sustainable land use practices, UL Solutions contributes to safety and compliance, MineKale/SFTP Mining provides specialized mining solutions, DRA Global offers comprehensive engineering services, and SGS Laboratories Mali ensures rigorous quality control and testing.

Knight Piesold, MANUTENTION-AFRICAINE -MALI, Byrncut, VITCO, Stuart Pumps Ltd / Stuart Group, Bisame Mining Services, ATC Mali, IMAGRI Sarl (Bamako-Mali), and SLR Consulting complete the array of services that fortify B2Gold's operational framework. From



engineering and project management to logistics, these partners contribute to the seamless functioning of the Fekola mine, embodying B2Gold's commitment to excellence in every facet of its operations.

### Sustainability

B2Gold is dedicated to sustainability across all its mines. At Fekola, another capital investment is the expansion of the mine's solar plant, which is due for completion in late 2024. The project will add 22 MW of capacity to the 30 MW of solar power already installed, making the combined installation once completed as one of the largest at any African mine.

The existing solar farm, which is approximately four times the size of B2Gold's pioneering installation in Namibia,

**At Fekola, another capital investment is the expansion of the mine's solar plant, which is due for completion in late 2024**





is integrated with Fekola's conventional HFO and diesel-fuelled power station, which has a capacity of 64 MW.

Since its commissioning in 2021, the plant has reduced HFO consumption by over 13 million litres a year and CO2 emissions by about 37 kt a year. The expansion will allow an additional yearly reduction of 7.6 million litres in HFO consumption and 24 kt in CO2 emissions. The company's goal is to achieve zero engine operation during daylight hours.

In 2022, B2Gold employed locals across all operations at a rate of 97%. It also procured 62% of goods and services within our host countries. At the Fekola Mine, purchasing from local businesses in the surrounding communities doubled, driving significant economic growth in the area.

In Mali, B2Gold also entered into a partnership with Global Affairs Canada and Cowater International to support

the FEMA Project (Femmes et Enfants des Communautés Minières Artisanales), which aims to improve conditions for women and children living in artisanal mining communities.

Biodiversity is a critical issue, especially in regions where mining operations exist. Recognizing the sensitivity of the area and the importance of engaging with stakeholders, B2Gold Mali, in collaboration with Mali's Ministry of Environment, Sanitation and Sustainable Development of Environment and the Ministry of Mines, organized the first-ever Biodiversity Symposium in Bamako on December 30, 2022.

The symposium, attended by 70 stakeholders, provided an opportunity to discuss approaches to biodiversity risk management and conservation initiatives in Mali. Representatives from Malian authorities, national and international NGOs, consultancies, universities, the

mining community and other project developers graced the event.

B2Gold has also supported sustainable efforts locally by establishing fish and poultry management cooperatives. With the support of the communities, B2Gold, through its Fekola Community Relations team, financed the construction of all infrastructure as well as the purchase and supply of 1,000 broiler chicks, 1,000 laying chicks, fingerlings, consumables for start-up, and financing the capacity-building of the cooperative members.

Revenue generated from the sales of the two projects will ensure continued operation, financing of community projects, and micro-financing for hamlet residents. The projects have also contributed to significant improvements in community health, especially for mothers and children, and have added substantially to food security for the community.

### Moving Forward

The Fekola Complex, as part of the Fekola Regional project, is continuing to prove its worth on many fronts even through the geopolitical current perception of the West African region. The exploitation of the resources of Fekola Regional, in addition to the construction of a second processing facility, will enable Fekola to increase production from around 600 koz a year to potentially more than 800 koz a year.

Higher-grade saprolite material (with an average annual grade of up to 2.2 g/t gold) from Bantako North will be trucked and fed into the Fekola mill at a rate of up to 1.5 Mtpa. This can generate approximately 80 to 100 koz of initial annual gold production.



While engineering and optimization studies continue, the company is considering constructing a new standalone Fekola Regional mill in the Anaconda area to process 4 Mtpa of saprolite and transitional (oxide) material.

B2Gold acquisition of Oklo Resources gave it an additional landholding of 1,405 km<sup>2</sup> covering highly prospective greenstone belts in Mali, including the Dandoko Project, which now forms part of the Fekola Complex.

B2Gold is conducting a 2022 Mali drill program of 161,000 meters with a budget of about \$35m million and continuing to evaluate its options for the timing and sourcing of material on a regional basis from all deposits within the Fekola Complex area.

#### BFM

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