

Twiga Minerals Corporation

SETTING A GOLD STANDARD IN AFRICA



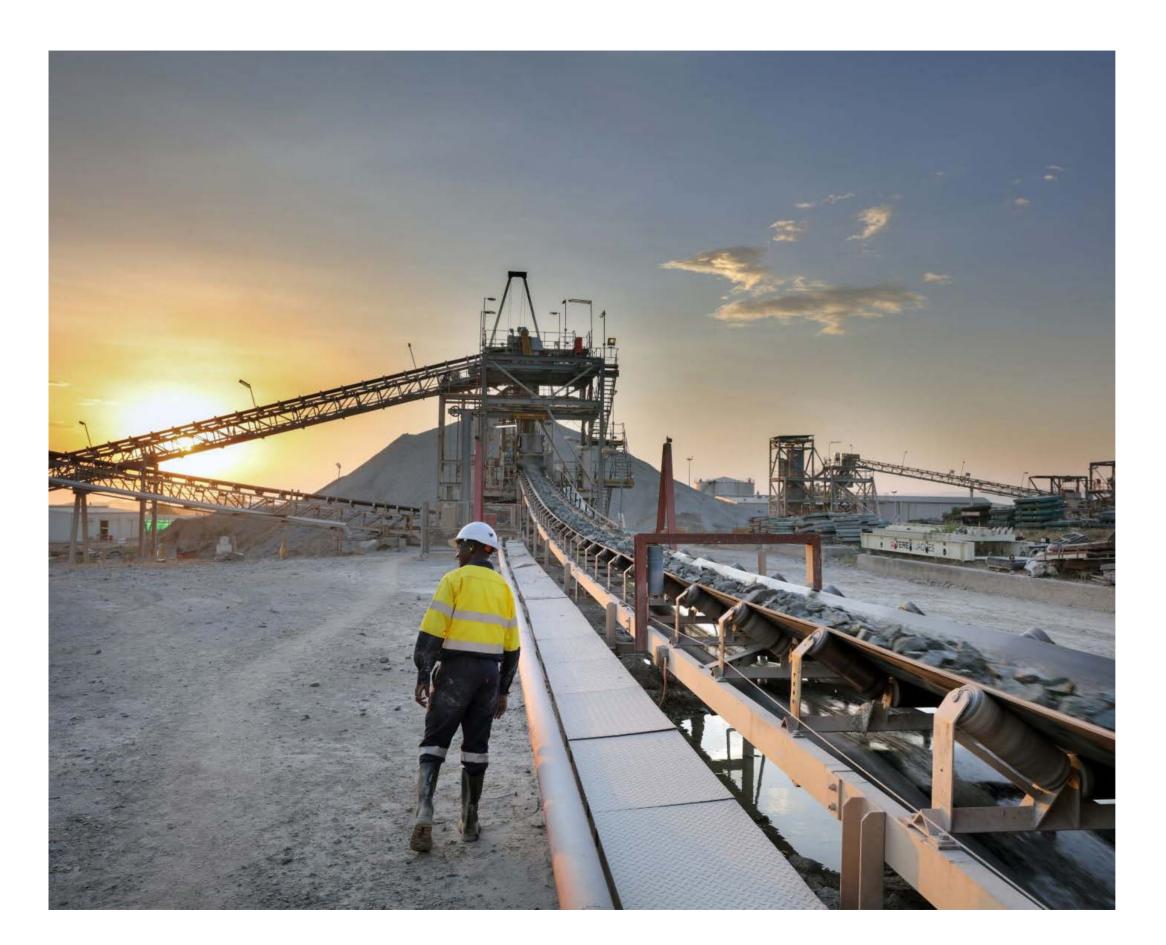


TMC

TWIGA MINERALS CORPORATION

Setting A Gold Standard In Africa

RESEARCH BY MAME COUMBA GAYE



n 2020, the Tanzanian Government and Barrick Gold Corporation launched a joint venture - Twiga Minerals Corporation - intending to revitalize two gold mines at North Mara and Bulyanhulu and make the 50:50 enterprise a model for similar operations in other regions.

Tanzania is one of Africa's top five producers of gold and accounts for 1.3% of total global gold production. The nation's gold reserves are approximately 45 million ounces, and production is currently at around 50 tonnes per year, with 2020 a standout with 55.6 tonnes. Gold accounts for about 90% of all mineral revenues in Tanzania. Gold exports in 2021 stood at \$2.7 billion worth of trade.

The country's primary gold mines are located around Lake Victoria, including the North Mara and Bulyanhulu mines, which are now referred to as the Twiga Complex following the joint venture. Twiga Minerals operates as a management company overseeing the management of Barrick's local operations and the company's future gold mining operations in the country.

Since Barrick's involvement, the two previously rundown mines that had stalled on output due to a deadlock dispute between the Government and previous operators, production has ramped back up.

The Twiga Complex now produces gold at a Tier One level, with at least 500,000 ounces of gold extracted annually, rising to 547,000 ounces in 2022. The mines and Barrick's combined contribution to the Tanzanian economy since 2020 now equates to about \$3 billion.





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Since its establishment in 1999, Sandvik Mining and Construction Tanzania Limited has played a pivotal role in the Tanzanian mining industry. As the first major Original Equipment Manufacturer (OEM) to establish a base in Tanzania, Sandvik has cultivated strong customer relationships with the country's major mining companies, primarily in the Lake Zone Area. These valued customers include Barrick Gold's Bulyanhulu Mine and North Mara Mine, AngloGold Ashanti's Geita Gold Mine, Barminco's AUMS, Shanta Gold Mine, and Taifa Mining (formerly known as Caspian).

Global Collaborations

Sandvik's global presence is further solidified through strategic agreements with Barrick Gold Corporation, a mining industry giant. Barrick Gold's operations in Tanzania, including Bulyanhulu Mine and North Mara Mine, rely on Sandvik machinery as a part of the larger global mining ecosystem.

Powerful Machinery Fleet

A major player in both surface and underground mining, Barrick uses an extensive fleet of Sandvik equipment. These include drill rigs, loaders, and trucks, are all manufactured at Sandvik's factories in Tampere and Turku, Finland. Some of the equipment used by Barrick includes TH550, TH540, TH663i, TH55li, DI650i, DU4II, DD42I, DL42I, DL422, LH62Ii, LH5I7i, and Crushing Units at North Mara, and TH545i, LH4I0, LH5I4, LH307, DL2I0, DL32I, DD32I, DD2I0 at Bulyanhulu.

To ensure operational efficiency, Sandvik operates a 24/7 Vendor Managed Inventory (VMI) system that supports spare parts and

drilling consumables at both North Mara and Bulyanhulu sites, with a dedicated team of 26 Sandvik employees and 21 Sandvik employees at Bulyanhulu and North Mara respectively.

"Barrick Gold is a major player in Tanzania through the Twiga Corporation. Sandvik Tanzania is committed to a close collaboration with Barrick Mines, including Bulyanhulu Mine and North Mara Mine. We deeply appreciate Barrick Gold's continued investments in Sandvik drills, loaders, trucks, rock tools, automation (vehicle operations and people detection systems), ground support, and crushing and screening equipment. In response, Sandvik has established VMIs and Experts-on-Site Agreements to ensure seamless parts support and technical backup." Tanzania Managing Director, Sandi Zaranyika.

Complete Customer Value Chain

Sandvik's machines cover the entire customer value chain, thanks to substantial investments in research and development, deep insights into customer needs, and a profound understanding of industrial processes, including digital solutions.

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Sandvik leads the industry in advanced mining automation and tele-remote systems, significantly enhancing productivity and safety while reducing the total cost of ownership. Automation is currently integrated into various Sandvik products for both underground and surface mining applications. Sandvik's mine automation systems encompass all aspects of automation, from individual equipment control to full fleet management.

Sandvik Mining and Rock Solutions stands as a global leader, providing equipment, tools, parts, services, and technical solutions to the mining and infrastructure industries.

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Twiga Complex

Barrick Gold Corporation has an 84% ownership in the North Mara and Bulyanhulu mines, with the Tanzanian Government holding the remaining minority stake.

The North Mara gold mine, located in the northwest in the Tarime district of the Mara region, holds around 2.8 million ounces of proven and probable gold reserves. North Mara began commercial production in 2002, and by 2021, annual production had reached 260,000 ounces of gold.

The mine combines open pit and underground operation from two deposits, Gokona (underground) and Nyabirama (open pit). The process plant has the capacity to process an average of 8,000 tonnes of ore per day.

Bulyanhulu Gold Mine, based in the Kahama district of the Shinyanga region, is known as a narrow-vein gold mine containing gold, silver, and copper mineralization and has been in production since 2001. The mine is thought to have 2.5 million ounces of proven and probable gold reserves.

Gold production reached 178,000 ounces in 2021.

The forming of the Twiga Minerals Corporation (Twiga is the Swahili word for giraffe and Tanzania's national symbol) between Barrick and the Tanzania Government followed an agreement to settle all disputes between the Government and mining companies formerly operated by Acacia but not managed by Barrick.

The terms under the agreement included a payment of \$300 million to the Government to settle any outstanding tax disputes, lifting a concentrate export ban, sharing future economic benefits from the mines on a 50-50 basis, and establishing a unique, Africa-focused international dispute resolution framework.

Twiga Minerals, given the 50-50 split between Barrick and the Government. ensures that half of all the economic benefits from taxes, royalties and all cash distributions made by the venture ensures the Tanzanian population share fully in the value the mines create.

CEO. Mr. Mark Bristow said "We settled the



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Since Barrick's buyout of the minority shareholders, they have contributed more than \$2.8 billion to the Tanzanian economy in the form of taxes, levies, dividends, salaries and payments to local suppliers

dispute and established Twiga as a 50:50 economic benefits sharing partnership, which also vested a 16% shareholding in each mine with the government. We reinvented the mines which now, as a combined complex, produce gold at a Tier One level, in other words one which can produce at least 500,000 ounces of gold annually for more than 10 years at the lower half of the industry cost curve. So successful are these operations that, since Barrick's buyout of the minority shareholders, they have contributed more than \$2.8 billion to the Tanzanian economy in the form of taxes, levies, dividends, salaries and payments to local suppliers,"

Barrick Gold Corporation

Barrick Gold Corporation evolved from a privately-held North American oil and gas company, Barrick Resources, before refocusing on gold production in 1983. Barrick now has the most extensive portfolio of Tier One and world-class gold assets that is unmatched in the industry.

Its portfolio spans the world's most prolific gold districts and focuses on high-margin,



long-life assets. The company is highly committed to investing in sustainable growth and partnering with host countries, such as Tanzania, and local communities to transform their natural resources into tangible benefits and mutual prosperity.

Their 13 mines globally have 10-year business plans and, in some cases, are being rolled out to 15 and 20 years, based on their expertise in geological understanding, engineering and commercial feasibility. Their growth projects support and enhance current production levels, while sustainability, socioeconomic impact and biodiversity management are entrenched in Barrick's DNA.

New Technology and Mine Expansions

Twiga Minerals, believed to be the first partnership of its type in Africa, has quickly seized the need to upgrade the North

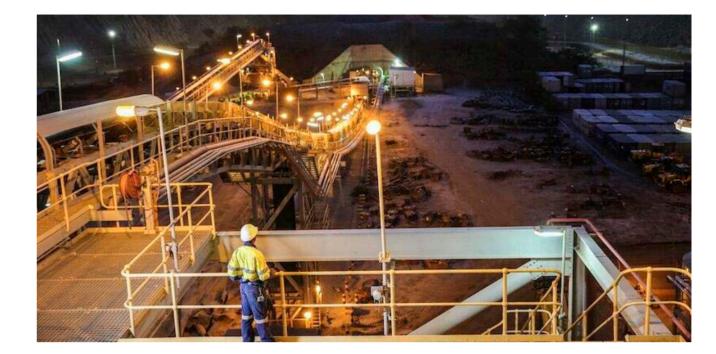


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Derm Group is a registered with the Contractors Registration Board (CRB) and is also a member of the Association of Citizens Contractors Tanzania (ACCT).



Adopting new technology in the mines' operations and plans for significant expansions are demonstrable to its commitment to its pledges to ramp up production, minimize environmental impact and maximize local involvement and benefit.

Mara and Bulyanhulu mines. Adopting new technology in the mines' operations and plans for significant expansions are demonstrable to its commitment to its pledges to ramp up production, minimize environmental impact and maximize local involvement and benefit.

At North Mara, the company said underground mining continues to benefit from a new mining fleet with a record total tonnes mined last year at 1.747 Mt. The North Mara fleet includes Sandvik trucks and Caterpillar R2900G LHDs, plus Sandvik production and development drills.

Technological advancements at North

Mara continue to lead the way with the Multi-Lite project at its underground mine, increasing productivity and improving reliability. The Sandvik AutoMine® Multi-Lite equipment completes automated missions in its own dedicated production area. It offers substantial benefits of increased productivity, safety and cost efficiency.

At North Mara's open pit mining, a ramp-up in production has been experienced. Ten new Cat 777 trucks were commissioned in late 2022 to help shoulder capacity performance, and continued investment enabled the achievement of record tonnes mined in the open pit in 2022 of 3.7 metric tonnes.





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A new crushing plant is on track for the end of 2023 and, when launched, will aim to produce better crush sizes to reduce the milling power required and increase throughput. Conversion drilling at North Mara has been successfully replacing reserves depleted by mining, and the first ore has also been mined at the mine's new Gena pit.

At Bulyanhulu, the development of the main declines to access the Deep West zone of the orebody began last year. Fleet upgrades are also supporting production ramp-up.

The resurrection of North Mara and Bulyanhulu has enabled Twiga Minerals to achieve a combined production of over 500,000 ounces for the second year running. Exploration also continues to deliver opportunities to grow the mineral reserves net of depletion at both mines.

Socioeconomic Impact

As much as Twiga Minerals is uplifting the mines' production capacity, it keeps sight of its impact on local communities, the regional outlook, and the economic good of Tanzania.

In line with Barrick's localization policy, Tanzanians comprise 96% of the mines' workforce, with 45% drawn from the surrounding communities. Host country nationals account for 58% of the senior management. Tanzanian nationals are continuing to be trained to replace expatriate staff.

As an example of key support to local companies, the mines spent \$339 million with Tanzanian suppliers and service



Twiga Minerals continues to develop a local supplier strategy and community development to create sustainable opportunities for people living near the mines

providers. Twiga Minerals continues to develop a local supplier strategy and community development to create sustainable opportunities for people living near the mines. It also cooperates with local and regional authorities to restore the mines' social license to operate and address environmental issues at North Mara.

While Twiga Minerals continues to fix environmental, land claims and human

rights issues that destroyed the mines' reputations, it has worked hard to integrate with local communities. Since being launched, it has invested over \$12.5 million in projects identified in collaboration with the community development committees we established at the mines to provide access to quality healthcare, educational facilities, potable water and alternative sources of income.

These have included an irrigation system, expected to substantially improve production for 2,356 farmers.

Twiga has also earmarked \$30 million for a Future Forward School Programme. In partnership with the Government, it will build 1,090 classrooms and other facilities across 161 schools nationwide to accommodate 49,000 of the estimated 190.000 students starting A-levels this year. It has also pledged \$40 million to construct a 73-kilometre road from Kahama to Kakola in Tanzania.



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North Mara has already spent \$1.9 million on 87 primary and secondary schools in the Tarime District, 14 of which are the best-performing schools in the district. Bulyanhulu has spent \$1.8 million on 80 educational projects around the mine and is building a Vocational Education Training College Centre in Bunango Village. Barrick's investment around the mine has given 7,557 Tanzanian girls access to education in 2022.

In Kahama, where the Bulyanhulu mine is, Bulyanhulu's community team has been working with the Kahama municipality to improve healthcare facilities in the region. As part of this project, it has donated an ambulance and built 18 pharmacies to assist with the distribution of medicines, and more importantly, helped to fund the establishment of a nursing training centre.

The Twiga complex has also maintained a strong focus on the health and safety of its workers. Bulyanhulu won the Overall Tanzanian OSHA1 Compliance Award for 2023 in the Mining Sector Category, with North Mara runner-up.

Last year, North Mara was officially recognized as Tanzania's largest taxpayer, while the National Social Security Fund awarded Bulyanhulu the Best Compliant Employer prize. North Mara and Bulyanhulu also received the first and second runner-up recognition awards for the Export of Minerals and the generation of foreign currency.

Barrick's 2022 Sustainable Development Report represented its 14th year of annual reporting on the sustainability and development aspects of its business globally.

Partners and Suppliers

Twiga Minerals Corporation fully encompasses Barrick's procurement practices in which local companies are prioritized. One example is Nguvu Moja Security Services (NgMSS), a local security company which won the prestigious Annual Company of the Year (ACOYA) award.

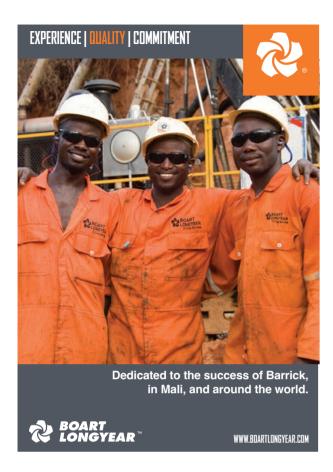
NgMSS, a 100% local Tanzanian company. deals with security, safety and rescue operations. It is fully engaged at the North Mara Gold Mine. Another important partners to it operation is Sandvik, a reliable partner to Barrick across its operations globally.

Other important partners to the project are Rock Solutions, AKO Catering, Kascco Limited, CSI Energy, Orica Tanzania,



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Petrolube, Mantrac, Byrnecut Offshore and many others. Twiga Minerals strongly desires to continue developing a locally strong network of suppliers and partners.

All of Barrick's global operations have localization plans. They help identify top talent in communities and provide them with world-class training and mentorship programs to help them grow and develop into leaders at their operations or valued suppliers with world-class standards.

In 2022, 96% of Barrick's employees and 78% of site senior management were host country nationals. During the year, it procured goods and services worth \$1.4 billion from suppliers in the communities closest to its operations. It spent over \$6 billion on goods and services from local and host country suppliers.





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Future Outlook

Twiga Minerals Corporation is highly committed to expanding its mines' operations, while Barrick is keen to upscale its gold mining operations in Tanzania. Barrick is currently consolidating essential prospecting licenses in the country with a view to expanding its existing reserves and resources and discovering new worldclass gold deposits.

With production at North Mara and Bulyanhulu continuing to see output rise - 547,000 ounces in 2022 as a benchmark - it is taking another significant step to

developing its Tier One status potential. And as the mines ramp up, so will the combined benefits to the local communities and the national economy.

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