Published by:
Creamer Media's
RESEARCH CHANNEL
AFRICA

REAL ECONOMY INSIGHT
GOLD

JULY **2019**

CREAMER MEDIA'S
ENGINEERING NEWS

creamer media

Contents

GOLD

BY MARIAAN WEBB

CREAMER MEDIA SENIOR RESEARCHER AND DEPUTY EDITOR ONLINE

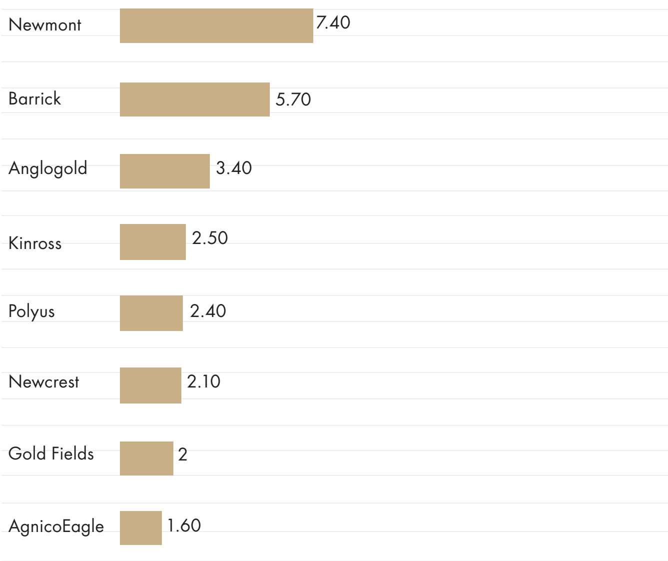
Far-reaching changes have swept through the global gold mining industry in the past year, with takeovers of Randgold Resources by Barrick Gold and Goldcorp by Newmont Mining creating two new gold Goliaths, leaving South African gold mining companies quite some way behind.

Newmont Goldcorp is now the world's largest producer, with a 2018 output of 7.40-million ounces, followed by Barrick at 5.70-million ounces. South Africa's AngloGold Ashanti remains in the third position, but at a more distant 3.40-million ounces, while fellow Johannesburg-headquartered Gold Fields is in seventh place at two-million ounces.

AngloGold Ashanti and Gold Fields have turned their gaze internationally and derive most of their revenue from operations outside the country. Each have only one mine left in South Africa, leaving the local gold industry anchored by Sibanye-Stillwater, Harmony Gold, DRDGold and Pan African Resources.

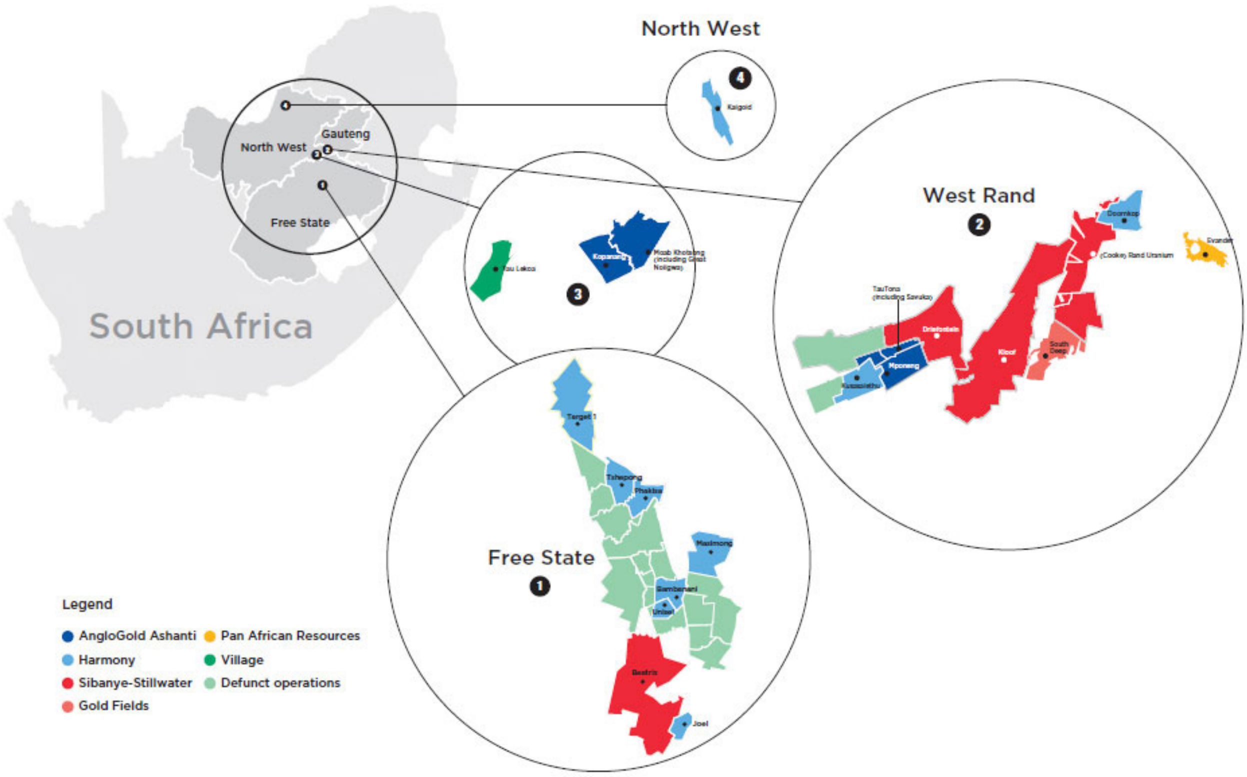
Gold mining in South Africa is considered to be a sunset industry, with production in terminal decline.

Gold companies ranked by 2018 gold production (in million ounces)



Source: Barrick Gold

South African gold operations



Source: Minerals Council South Africa

Real Economy Insight 2019:

GOLD

Once the world's largest gold producer, South Africa is producing at only a fraction of what it produced in its heyday in 1970, when output peaked at 1 000 t/y. Statistics South Africa reports that, in the past 20 years, gold miners have had only two years of positive yearly growth – in 2002 and 2013. Last year, production fell by 14% to 132.20 t, according to figures provided by Minerals Council South Africa.

The industry is facing challenges such as deeper-level mining, decreased productivity, ever-increasing costs, labour disruptions, community protests and illegal mining. Further, no new deep-level gold mines have been built since 2003. According to the GFMS Gold Survey 2019, published by global market data provider Refinitiv, the rate at which South Africa's production costs are rising rank among the fastest. Multiple operational disruptions, owing to power cuts, seismic damage and labour unrest, pushed up the 2018 total cash cost and all-in sustaining cost (AISC) of South African mines by 10% and 12% respectively to "near subeconomic values".

Gold sector in numbers (2018)

- 101 085 – the number of direct employees.
- R26.50-billion – the rand value of employee earnings.
- R590-million – the royalties that miners paid to government.
- 132.20 t – the volume of gold that was produced.
- R69.90-billion – the total value of gold sales.
- 50% – the value of the percentage of gold production that was exported.

Source: Minerals Council South Africa

Gold Fields' South Deep mine operated at an AISC of $1 903/oz last year, compared with a world average of $897/oz. Sibanye, which suffered a bruising five-month strike at its gold mines, operated at an AISC of R914 590/kg, or $2 030/oz, in the March 2019 quarter – almost double what the company received for the gold it sold.

Following the strike called by the Association of Mineworkers Union, Sibanye has said that it will restructure its unprofitable gold mining operations and that it could lead to more than 6 000 job losses.

South Africa's gold mines last year employed 101 000 direct employees, who earned R26.50-billion.

POWER SHORTAGES

Production costs will continue to increase as the cash-strapped Eskom looks towards electricity users to help keep it afloat. The mismanaged State-owned utility increased tariffs by an average of 15.50% a year from 2006 to 2017, reducing fixed investment in gold mines by R16.06-billion. This year, tariffs rose by another 13.82%, with increases of at least 8.10% and 5.22% to follow in the next two years.

The industry has warned that it cannot absorb any more electricity increases, as the majority of the county's gold mining operations are marginal. In 2018, 71% of gold mining operations, representing 60% of gold production, were either marginal or lossmaking.

Mining companies are studying self-generation alternatives to reduce their reliance on Eskom. Generating renewable energy for their operations will take companies down the cost curve and provide crucial energy security. Prospects for self-generation received a major boost when the National Energy Regulator of South Africa was given Ministerial approval in May to licence projects that have a combined capacity of 500 MW.

Harmony has indicated that it is considering self-generation options and is investigating a 30 MW solar plant in Welkom, in the Free State. The company expects solar will come in at below Eskom prices.

Sibanye has also been considering the feasibility of a 150 MW solar plant on the West Rand of Gauteng, since 2014, but it has been delayed by red tape. The first phase of 50 MW has been postponed to 2019.

Allowing the private sector to arrange its own sources of lower-cost power could strengthen the South African mining industry's investment case. However, to take mining companies completely off the grid will require substantial investments that will take several decades to come to fruition, and it will severely hurt Eskom's revenue, accelerating the utility's death spiral.

PROLONGING THE 'GOLDEN HOUR'

With the gold industry in a long-term decline, miners are considering technological solutions to prolong the 'golden hour' before the sun finally sets on the South African industry.

Modernisation could improve the productivity of the extreme deep-level mining that characterises the local gold industry. Modernising mines through mechanisation could extend production to beyond 2045, but a failure to move mines into the twenty-first century will result in gold mining in South Africa dying out completely by 2033, Minerals Council South Africa has warned.

The organisation, which represents most mining companies in South Africa, estimates that mechanisation will allow for an additional 592 t of gold resources being mined – the equivalent of 11 large mines.

There is an estimated 160-million tons of high-grade ore locked in underground support pillars of the deep-level mines and these are accessible from current infrastructure. At least double that could be mined below infrastructure using appropriate techniques. The country's 400-million tons of low-grade gold ore could also be amenable to profitable extraction using mechanised techniques. A low-grade mine with a current conventionally mined life expectancy of about four years using semimechanised methods could extend operations to 15 years and, with full mechanisation and 24/7 operations, to as many as 25 years.

The short-term operationally focused first phase of the country's gold mining modernisation plan will shine the spotlight on improving the stop-start and cyclic mining method involving drilling, blasting and clearing. The second phase will search for ways of improving the mining methods by removing people from the working face and getting them into positions of operating customised equipment remotely. The third, and longest, phase will be used for research into developing continuous mining systems that will reduce the impact of dilution and allow for mining to take place 24/7 at a higher mining grade.

The industry will adopt a people-centric approach to modernisation and has said that it is not about replacing workers with machines, but instead to extend the life of the deep-level mines and, thereby, safeguarding jobs.

Value in remining dumps

With a history of more than a century of mining, South Africa has hundreds of tailings that still contain gold and that could be remined. Extraction technologies and processing techniques have improved in the past 30 years, which means that tailings dumps can now be effectively mined and processed.

DRDGold, which has played a pioneering role in tailings retreatment, has generated R2.40-billion from the 150 423 oz of gold it produced from its surface operations on Gauteng's East Rand and West Rand in the 2018 financial year. Last year, DRDGold concluded the acquisition of gold assets associated with Sibanye's West Rand Tailings Retreatment project and, with a 2.70-million-ounce reserve, the project increased the miner's reserves by 82%.

Pan African, a deep-level miner in Barberton, Mpumalanga, has also moved into tailings retreatment.

These companies argue that gold tailings retreatment operations have demonstrated better resilience and have attracted more investor interest than traditional operations.

Source: *Mining Weekly*

With new equipment, which allows for the conventional drill, blast and clean cycle, employees skilled in the use of remotely controlled equipment can fulfil the tasks 24/7 from safe, healthy sites. Considering that 40 people died in gold mines last year, modernisation could significantly improve mines' safety performance. Independent consultant Dr Paul Jourdan believes that South Africa should cease sending people down deep-level mines and introduce remote machinery at depth.

GOING OFFSHORE

While the much-talked about global consolidation of the

Picture by Creamer Media

gold industry has not spilled over to South Africa (other than a rumoured, but-denied, merger of AngloGold and Gold Fields), the spotlight has fallen on the strategy that number-three producer AngloGold will pursue.

AngloGold has announced that it has embarked on a process to review divestment options for its South Africa operations, including the Gauteng-based Mponeng mine, which will require a substantial investment to extend its life, the surface rock dump processing business and mine waste retreatment operations, which includes Mine Waste Solutions.

CEO Kelvin Dushnisky has emphasised that Mponeng is a well-capitalised and -run operation with an excellent orebody, but that the group has competitive, higher-return options available in its portfolio, which makes an investment by AngloGold in deepening the mine unlikely.AngloGold concluded the gross R3.58-billion sale of its Moab Khotsong gold mine, in the North West, and related assets and liabilities to gold mining company Harmony last year. It also concluded the separate sale of the Kopanang gold mine, in Gauteng, and related assets and liabilities to Chinese-backed investment company Heaven-Sent SA Sunshine.

Names of companies that have been circulating as interested parties in the assets that AngloGold plans to sell include Sibanye, Harmony and Heaven-Sent SA Sunshine Investment.

Sibanye CEO Neal Froneman has told Bloomberg News that the Mponeng mine and Gold Fields troubled South Deep mine would fit into the company's portfolio.

The completion of its gradual withdrawal from South Africa could result in AngloGold's moving its primary listing to an international exchange, such as London or Toronto, although Dushniksy has told *Mining Weekly* that the company will always have a JSE listing as well.Sibanye has also indicated that it is considering moving its primary listing offshore to ensure that it can compete for international assets, removing the perceived "South Africa discount" associated with being listed on the JSE. The company is currently listed in Johannesburg and has American Depositary Receipts that trade in New York. Froneman has emphasised that moving its primary listing is not an exit strategy from South Africa and that it will stay domiciled in the country.

Sibanye's growth options in South Africa's gold mines have largely been exhausted, with an extension for the Driefontein mine, in Gauteng, said to require R1-billion, which may be a tough sell to investors in the country's current gold mining environment.

Gold Fields has invested heavily in its offshore assets in the past two years to offset the underperforming South Deep mine.

BRIGHTER DAYS AHEAD

Following what proved to be a challenging year for the gold price, 2019 looks set to be a good year for South African gold producers, as ever-increasing geopolitical risks are strengthening the metal's fundamentals, combined with rand weakness. A stronger rand reduces the rand revenue that South African producers earn for gold they sell at a price determined in US dollars on global markets.

Real Economy Insight 2019:

GOLD

Gold, which is traditionally seen as a safe investment during periods of uncertainty, reached a trough of $1 160/oz in August last year, but conditions started to improve thereafter, and this has continued into 2019. Prices have been supported by strong demand and a fall in long-term real interest rates.

While there is consensus about the direction of the price of gold this year, analysts seem somewhat divided over the exact impact that Britain's exit from the European Union, the US-China trade wars, US real interest rates, the dollar price and the likely impact of geopolitical factors will have on the gold price. The London Bullion Market Association's (LBMA's) 2019 Precious Metals Forecast Survey came up with a divided opinion for gold prices, with a forecast range of $1 150/oz to $1 475/oz: "A trading spread of $325 (25% of the forecast average price) suggests that the gold price could be in for an interesting journey in 2019".

European precious metals consultancy Metals Focus expects global gold demand to rise to the highest level in four years, as higher consumption by jewellers offsets a fall in central bank buying. The world will consume 4 370 t of gold this year, the most since 2015 and up slightly from 4 364 t in 2018.

Metals Focus' 'Gold Focus 2019' report, published in March, is forecasting accelerated growth in jewellery fabrication, with a 3% rise to a four-year high of 2 351 t. The largest increase comes from India. Industrial offtake is expected to result in a further slight rise in 2019, while physical investment is forecast to remain flat at 1 082 t. Central bank buying is likely to remain elevated at 600 t this year, but the consultancy does not expect the official sector purchases to match 2018's levels. Purchases by the official sector surged almost 75% in 2018, as central banks added gold to diversify their reserves.

Gold supply will increase by 1% to 4 707 t, the report predicts.

Overall, Metals Focus is forecasting that macroeconomic conditions will remain generally positive for gold this year, which should encourage professional investors to remain net buyers, supporting the price. Metals Focus is forecasting that gold prices will average at $1 310/oz this year, up from $1 268/oz last year.

The World Bank is also predicting a price increase of about 3% for 2019, setting its forecast at $1 300/oz on robust demand and a prolonged pause in interest rate hikes by the US Federal Reserve.

The GFMS Gold Survey for the fourth quarter of 2018, published in January, forecasts gold at $1 292/oz in 2019.

Picture by Creamer Media

creamer media

This brief was compiled by Mariaan Webb – Creamer Media Senior Researcher and Deputy Editor online.

Creamer Media (Pty) Ltd
tel +27 11 622 3744
email subscriptions@creamermedia.co.za