

OPERATIONAL PROFILE 2018

SIGUIRI
GUINEA

SIGUIRI



LEGEND

1 SiguiRI (85%)

● Operation

0 200km

SiguiRI in Guinea is a multiple open-pit oxide gold mine in the relatively remote district of SiguiRI, around 850km north-east of the country's capital, Conakry. The gold processing plant treats about 981ktpm. A combination plant conversion project began during 2017. This conversion will allow the mine to treat six million tonnes of sulphide ore and six million tonnes of oxide ore. Commissioning is currently underway with the first material fed through the plant on 1 March 2019.

AngloGold Ashanti holds an 85% interest in SiguiRI, with the remaining 15% held in trust for the nation by the government of Guinea. SiguiRI is contractor-mined using conventional open-pit techniques. The area has significant gold prospectivity and exploration potential.

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HIGHLIGHTS

Combination plant construction completed and commissioning begun – first gold poured in August 2018

Exploration drilling underway at Saraya and Foulata

Significant investment in community projects

Mineral Resource* of 7.18Moz (inclusive)

Ore Reserve* of 2.06Moz

* At 31 December 2018

Operating performance

Siguiiri's production in 2018 was negatively impacted by a 16% decrease in recovered grade, owing to the treatment of lower-grade oxide material and an 11% decrease in tonnes due to delays in the commissioning of the carbon-in-leach (CIL) combination plant. The leach circuit was converted during the year to a hybrid CIL circuit as part of the combination plant project. As a result, production decreased year-on-year, exacerbated by depleted high-grade oxide deposits. The delay in the commissioning of the ball mill in the combination plant and three-stage crushing plant resulted in the limited treatment of available higher-grade harder ore with the plant feed being supplemented by lower-grade oxide ore. The required new power plant was successfully commissioned during the year.

Costs

All-in sustaining costs were \$930/oz while total cash costs were \$844/oz. The increase in Siguiiri's costs is attributable to lower production during the combination plant project phase, partly offset by lower overhead costs derived from increased efficiencies.

Capital expenditure

Capital expenditure increased, in line with planned inward company investment in growth projects. Most of the capital expenditure was spent on completion of

the combination plant, which will allow for treatment of harder rock, and of the new power plant which will help meet the mine's additional power requirements.

Growth and improvement

Construction of the Siguiiri combination plant was successfully completed in March 2019, and commissioning of the different sections of the plant is underway. The CIL circuit was commissioned in July 2018 and first gold from it was poured in August 2018. The 30MW power plant was commissioned in October 2018. It is now fully operational providing reliable, low-cost power to the Siguiiri mine. The crushing and milling circuits for the treatment of the hard sulphide ore are currently being commissioned and full ramp-up is expected in the first half of 2019.

The focus for the coming year will be to stabilise plant throughput and operating stability as the new plant is commissioned.

Exploration drilling continued at Saraya and Foulata to support a prefeasibility study for the Block 2 permit area. This study is due to be completed during 2019 and is aimed at improving the mine's ounce profile from 2020 onwards and potentially extending the life of the mine. The current option on the Siguiiri Block 2 considers the trucking of oxide material to the existing process plant to displace marginal ore. The evaluation of this has been completed.

The requisite permitting and feasibility studies are scheduled for the latter part of 2019.

Sustainability performance

Security and human rights

No human rights violations were recorded during the year. The Human Rights Working Group (HRWG) representatives at corporate, regional and operational levels continued to implement the Human Rights Framework across the region.

The Voluntary Principles on Security and Human Rights (VPSHR) are the key driver for our security management practices. See <IR> and <SDR> for further information.

Employees and labour relations

The labour relations climate remained peaceful and stable during the year.

The 2018 wage negotiations at Siguiiri were successfully conducted and finalised within 10 days in the spirit of mutual understanding and trust with the agreed outcome remaining within mandate.

Health

Malaria control efforts continued with spraying activities in targeted surrounding villages. While there was a 46% improvement in the incidence of malaria from 2017 to 2018 among employees and contractors in Siguiiri, significant challenges remain in reaching those areas where most of the employees and their families reside.

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Community development

The socio-economic challenges of poverty and unemployment were reflected in the frequent community grievances related to demands for employment, electricity and land access. The local community demanded access to inactive pits, which led to various incidents, including invasion of the marginal stockpile. These incidents were managed without any significant conflict taking place.

Siguiri economic development programme

AngloGold Ashanti aims to leave communities better off post-mine closure. To achieve this vision at Siguiri, through the Siguiri economic development programme (SEDP), AngloGold Ashanti promotes local economic development. The SEDP comprises agricultural, skills and enterprise development projects aimed at developing small businesses and employment opportunities for local communities. Current projects include horticulture, a cashew plantation, rice-paddy farming and fish farming as well as education-related and healthcare projects.

- **Fish farming project:** In 2014, a study for a commercial-scale aquaculture project (tilapia farming) in Siguiri was commissioned. The results recommended development of an aquaculture project in local water bodies and the establishment of a value chain to benefit communities in terms of both employment and trade. The overall goal of the project was to

contribute to the local economy by developing the local fish farming industry as an alternative and sustainable source of livelihood. The project is being implemented in partnership with specialist consultants and traditional community fishermen. Implementation of the project started in the first half of 2016, with four cages being constructed and completed in 2017. The project will directly benefit at least 60 fishermen and traders, including over 300 additional indirect beneficiaries along the value chain. The project aims to enhance the skills of farmer-based groups and associations to become independent to ensure the long-term sustainability of the project upon completion. Siguiri's contribution to the project is to provide guidance, monitoring and evaluation of project progress to ensure its long-term success and profitability.

- **Promoting vegetable production:**

Following a socio-economic baseline study on Block 1 of our concession in 2013, a vegetable cultivation project was established, based on the findings. The project was established on large tracts of wetland that were available to the host communities for agricultural purposes. However, the agricultural use of the wetlands is marginal as only a tiny proportion of the population would be involved given the high prevalence of artisanal mining among the local population.

Based on the study findings and in consultation with farmer-based

organisations (FBOs) in host communities and in line with a partnership agreement, Siguiri undertook to establish vegetable cultivation as an alternative income-generating activity in July 2015. The project aimed to help eradicate food insecurity and malnutrition, while reducing involvement of the population in artisanal mining and thus the associated negative impact on people's health and the environment. Through this project, some women have left unsafe illegal mining to participate in this project. The project started with four farming groups, of which about 80% were women. With the excitement generated by the first production campaigns, 10 additional groups were formed in mid-2016. The success of this project is a result of working in partnership with community vegetable producers, FBOs and the Prefectural Directorate of Agriculture.

Siguiri provides input seeds, fertiliser, training, boreholes and irrigation to ensure sustainable farming practices. The project is expected to directly benefit about 20 FBOs made up of 300 producers in host communities, who will be supported to grow and sell vegetables to the local market as well as to supply vegetables to the Siguiri kitchen which serves employees and contractors. Ultimately, it is estimated the project will benefit the entire population of 127,000 of the Bouré districts who will have regular access to fresh vegetables.

Technical support is jointly provided by teams from the Siguiri mine and the Siguiri agricultural directorate. Support given to the groups will allow them to improve productivity and maximise their income. During the 2018 production campaign, Siguiri supported and equipped two co-operatives of 34 groups comprising 616 members, 55% of whom are women.

- **Cashew pilot project empowers youth:**

Siguiri has introduced cashew plantations as part of the SEDP to create an alternative industry, post mine closure. The objective of this project is to develop a sustainable industry for cashew-nut production for the export market. While this project is aimed at creating sustainable economic livelihoods for Siguiri communities, it will also form part of the mine's rehabilitation programme by planting productive trees on waste-dumps for restoration purposes.

In partnership with the local community and authorities, Siguiri has introduced improved cashew seeds and will develop plantations in 11 villages in Bouré, covering an area of approximately 1,100 hectares. Siguiri has cultivated approximately 74 hectares as part of its pilot plantation in Bouré at the Sintroko waste dump in Kourouda (is Kourouda in Bouré?) and transplanted some 1,500 cashew nut trees at the Siguiri nursery. As part of our commitment to creating youth employment, planting has been contracted to a youth company in

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Bouré called Bouré Multi Services Agency. This initiative has been welcomed and supported by the surrounding community who will benefit greatly from the proceeds. This initiative is consistent with the Guinean government's call to unlock the country's huge agricultural potential in cashew plantations and processing as well as to promote youth employment. It is anticipated that the success of the project will further boost the economy through export markets. The company has spent about \$2.5m on this project. The project will initially reach 600 cashew farmers, service providers, and other value chain participants through its five proposed activities. It will also support cashew farmers to increase gross margins for crops by about 30%.

The project strategy includes:

- Building local capacity to strengthen eight producer organisations representing approximately 600 producers
- Linking at least eight village agents to rural agro-dealers to deliver extension and inputs linking 300 producers and enterprises to savings and credit services, including village savings and loan associations
- Developing three new private cashew nurseries and grafting services to rehabilitate farms

- Facilitating commercial relationships between firms and farmers to increase cooperation and sustained growth
- Designing with an inclusive approach that recognises the importance of youth, women and other vulnerable populations to its success

Bouré secondary education development project As part of Siguiri's commitment to support the communities in Bouré to access secondary education and to prepare a pipeline of educated youth to drive the local economy, the Company has, since 2002, provided free daily transportation to children in Bouré to attend school in Siguiri town (about 30km away).

While this support was meant to address a pressing need to access education, upon evaluation, it was realised to be unsustainable. As a result, Siguiri, together with the various regional, prefectural, local, and community stakeholders, developed a strategy to support the establishment of a secondary school in Bouré. The strategy was based on the government sectorial education policy letter of 2015–2017, which identifies three main areas of support for the development of secondary education in Bouré, namely, school infrastructure development, didactic and pedagogical infrastructure development, and human

resources. The Bouré secondary education development project focuses on two of these three areas: school infrastructure development and didactic and pedagogical infrastructure development.

The main objective of the project is to improve access to secondary education in the Bouré district and this will be achieved by expanding educational facilities. The project contributed to the provision of infrastructures in the Kintinian, Boukaria, Balato, Fatoya and Didi communities and is run in partnership with the Prefectural Education authorities. The following activities are underway as part of the project:

- Delivery and installation of computer equipment in the libraries in each of the five high schools
- Provision of hardware and pre-installation of all necessary software
- Training of appointed staff

Of total procurement by Siguiri in 2018, 76% was spent locally within Guinea.

Environment

One reportable environmental incident was reported in 2018, occurring on 18 November within the processing plant area at Siguiri. The incident was caused by an overflow of tailings slurry from the processing plant containing elevated levels

of cyanide. This caused the death of four birds in a stagnant tailings pool within the plant area and the death of a cow outside the plant fence adjacent to the pool.

Remedial actions were immediately put in place to deal with the incident. The tailings overflow was stopped, the pool was detoxified, the tails were pumped back into the plant, contaminated soil was removed and the faulty equipment replaced.

There was no risk to community health as the spillage was contained in an area that is inaccessible by the community. Nor was there a risk to employee health as the cyanide concentrations were within normal operating limits and all plant employees are trained to handle cyanide.

Siguiri was granted an environmental certificate for the Silakoro pit project in March 2018. This high-grade pit is located approximately 1.5km to the east of the existing processing plant.

The Siguiri mine was successfully audited and certified to the ISO 14001:2015 standard during the year.

For further information on AngloGold Ashanti and its work and performance, as a group and in the Continental Africa region, see the <IR> and <SDR> which are available online at www.aga-reports.com

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Key performance

SIGUIRI	Units	2018	2017	2016
Operating performance				
Cut-off grade ⁽¹⁾	oz/t	0.019	0.019	0.018
	g/t	0.65	0.65	0.60
Average recovered grade	oz/t	0.025	0.030	0.023
	g/t	0.85	1.01	0.79
Tonnes treated/milled	Mt	8.9	9.9	10.3
Gold production	000oz	242	324	259
Total cash costs	\$/oz	844	725	784
All-in sustaining costs	\$/oz	930	796	915
Capital expenditure	\$m	82	70	50
Productivity	oz/TEC	17.50	21.69	15.40
Safety performance				
No. of fatalities		0	0	0
All injury frequency rate (AIFR)	per million hours worked	0.22	0.13	0.13
People				
Total average no. of employees		3,869	3,353	3,509
– Permanent		1,885	1,850	1,839
– Contractors		1,984	1,503	1,670
Environmental performance				
Water use	ML	6,027	6,349	3,395
Water use efficiency	kL/t	0.58	0.54	0.28
Energy consumption	PJ	2.29	2.40	2.58
Energy intensity	GJ/t	0.22	0.21	0.21
Greenhouse gas (GHG) emissions	000t	156	163	194
GHG emissions intensity	t CO ₂ e/t	15	14	16
Cyanide use	t	3,186	2,508	2,378
No. of reportable environmental incidents		1	0	0
Total rehabilitation liabilities	\$m	53	59	56
Social performance				
Community investment	\$000	2,474	890	1,706
Payments to government	\$m	78	100	41

⁽¹⁾ Based on the Ore Reserve.