

AGA MINERAÇÃO

BRAZIL



AngloGold Ashanti Córrego do Sítio Mineração (AGA Mineração), in the state of Minas Gerais, close to the city of Belo Horizonte, is wholly-owned and comprises the Cuiabá complex, the Córrego do Sítio mining operation and the Cuiabá and Queiroz gold plants.

- The Cuiabá complex comprises the Cuiabá and Lamego underground mines, and the Cuiabá and Queiroz plants. Cuiabá has been in operation for over 30 years while Lamego has been in operation for 10 years. The Cuiabá mine has changed from cut-and-fill to sub-level stoping, increasing the contribution from narrow-vein orebodies to the mine's total production and improving rock-engineering controls (support, design and monitoring). Ore from the Cuiabá and Lamego mines is processed at the Cuiabá gold plant. The concentrate produced is transported by aerial ropeway to the Queiroz plant for processing and refining

FEATURES OF THE YEAR

PRODUCTION

362,000oz affected by operational challenges

BROWNFIELDS EXPLORATION

to focus on growing Ore Reserve to enhance flexibility

IMPROVED RECOVERED GRADE

3% higher y-o-y to 4.32g/t

17.48Moz

inclusive Mineral Resource* as at 31 December 2019

* Includes CdS, Cuiabá and below infrastructure

PERFORMANCE 2019

Total annual capacity of the complete Cuiabá circuit is 1.75Mt. The Queiroz hydrometallurgical plant also produces around 190,000t of sulphuric acid as a byproduct, which is sold commercially in local Brazilian markets

- Córrego do Sítio (CdS), in operation since 1989, consists of one open-pit mine and one underground mine. The oxide ore mined is treated by heap leach and a pressure leaching plant treats sulphide ore. The sub-level stoping mining method is used underground. The distance from the main underground mine (Mina I) to the metallurgical plant is around 15km. Combined annual plant capacity is 1.6Mt

Gold production from both Cuiabá and Córrego do Sítio is refined at the Queiroz plant 14km from the Cuiabá gold plant.

Operating performance

Production

AGA Mineração produced 362,000oz of gold in 2019 compared to 364,000oz in 2018. Performance was impacted by poor ground conditions at Cuiabá where, to ensure safe production, the rate of mining was slowed while a new surface support regime and mine sequencing plan were introduced. Early indicators show these new controls to be successful and condition monitoring will be ongoing as mining progresses in the deeper, higher grade areas.

At the Córrego do Sítio complex, geological model changes, open pit licence delays for the Rosalino orebody, geotechnical issues and unexpected heavy rains in the last two months of the year delayed the development and mining of the planned open pit mining areas.

Costs

Total cash costs were \$783/oz, impacted by inflationary pressures in wages and the cost of operational materials coupled with the impact of rehabilitation provisions for the Brazilian operations as required by new legislation. This was slightly offset by a weaker currency.

Capital expenditure

Sustaining capital expenditure was spent mainly on Ore Reserve development at underground operations in Brazil.

Growth and improvement

In Brazil, the strategy is to enhance mining flexibility and predictability by investing in Ore Reserve development, along with Mineral Resource and Ore Reserve conversions. More brownfields exploration is planned to increase the Ore Reserve and related confidence levels. This work will be vital in the upcoming year.

At Cuiabá, a new international contractor in the Brazilian market was signed on in March 2019 and has to date delivered a 28% year-on-year increase in metres developed. Cuiabá is also investigating the potential of new orebodies and a plan for deepening the mine.

At CdS the focus is to re-open the CdS II underground mine. Along with a focus on Mineral Resource conversion and stabilising production, CdS will invest in looking at the potential of CdS III and the Rosalino open-pit expansion.

Safety

There were no fatalities in 2019. A Safe Production Programme, based on the Dupont Sustainable Solutions safety regime, is being trialled at Cuiabá, following the fatality that occurred in 2018. The programme aims to eliminate fatalities, transform the way we work, and create a sustainable organisational culture and work process. See the case study: *Cuiabá Safety Production Programme*, in the <SR>.

The programme is currently being rolled out and will be completed by the end of 2020. Once completed, the programme will be implemented at all our Brazilian operations.

Environment

No environmental incidents were reported in the 2019 year. In Brazil, critical licences were obtained despite a challenging environment for the mining industry, following the collapse of a TSF operated by Vale in Brumadinho in January 2019. Several draft bills are under consideration at federal and state levels which include, among others: proposals for a surety bond to cover TSF-related incidents; stricter approval requirements; inspection of construction and maintenance of new existing and TSFs; a possible increase in mining royalties and taxes; and the possible removal of existing export incentives. AngloGold Ashanti's Brazilian operations are in compliance in all material respects with all laws and regulations as provided for in the existing permits.

At Cuiabá, licences were obtained to optimise the position of the tailings reservoir in the calcined dam at Queiroz Plant and to implement a tailings drying system. Authorisation was also received to operate above level 901 at the Cuiabá dam.

Community development

In Brazil, harmonious community relations reflect the community's goodwill towards the company. This remains a key strategic objective in maintaining and strengthening this social licence at all our operations. In Brazil, social investment in communities prioritise projects focused on culture, social development, health, income generation and sustainable environment solutions. Major projects implemented include:

- **Sustainable Partnerships Programme** (Public call for projects): Social projects supported by the company are selected by a committee comprising AngloGold Ashanti, specialists in social projects and representatives of communities in line with open and transparent management of social investments. In 2019, 24 projects were supported with the investment of more than R\$1.1m
- **Tax incentives:** In Brazil, specific laws allow the company to invest part of the income tax in projects approved by the federal government in areas such as culture, sport, children and youth, elderly and disabled people, as well as health (particularly oncology). AngloGold Ashanti invested around R\$7 million in initiatives, that will be implemented in 2020, for the benefit of cities surrounding its operations

PERFORMANCE 2019 CONTINUED

- **Volunteerism:** The Holding Hands Programme, established in 2004, has benefited more than 35,000 people through more than 256 activities (5,206 voluntary participators) over the years. The programme aims to encourage employees to become involved in and to contribute to social causes within local municipalities where the company operates
- **Good Neighbourhood Programme:** The purpose of this programme is to strengthen AngloGold Ashanti's relationship and

dialogue with communities in Brazil, including regular meetings and publication of a special printed newspaper. A toll-free hotline also receives grievances and complaints

- **Tailings dam management:** Since 2015, AngloGold Ashanti Brazil has been reinforcing its tailing dam management programme plan. Activities in 2019 included dam break simulations at all business units

Key statistics

AGA Mineração	Units	2019	2018	2017
Operating performance				
Cut-off grade ⁽¹⁾	oz/t	0.093	0.053	0.088
	g/t	3.20	1.82	3.02
Recovered grade	g/t	4.32	4.21	4.97
Tonnes treated/milled	Mt	3.2	3.0	3.0
Gold production	000oz	362	364	424
Total cash costs	\$/oz	782	723	671
All-in sustaining costs	\$/oz	1,107	973	1,006
Capital expenditure	\$m	91	96	136
Productivity	oz/TEC	9.97	10.60	11.66
Safety performance				
No. of fatalities		0	1	0
All injury frequency rate (AIFR)	per million hours worked	4.75	5.05	3.48
People				
Total average no. of employees		4,885	4,736	4,932
– Permanent		3,517	3,418	3,465
– Contractors		1,368	1,318	1,467
Environmental performance				
Water use	ML	6,825	4,717	5,292
Water use efficiency	kL/t	2.11	1.59	1.76
Energy consumption	PJ	1.83	1.72	1.77
Energy intensity	GJ/t	0.57	0.58	0.59
Greenhouse gas (GHG) emissions	000t	52	45	52
GHG emissions intensity	t CO ₂ e/t	16	15	17
Cyanide use	t	738	781	878
No. of reportable environmental incidents		0	0	0
Total rehabilitation liabilities	\$m	62	49	57
Social performance				
Community investment	\$m	1.5	1.2	0.4
Payments to government ⁽²⁾	\$m	109	107	126

⁽¹⁾ Based on the Ore Reserve.

⁽²⁾ Total paid to the Brazilian government for AGA Mineração and Serra Grande.

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