



## OPERATIONAL PROFILE 2016



Geita, one of our flagship mines, is located in north-western Tanzania, in the Lake Victoria goldfields of Mwanza Region, about 120km from Mwanza and 4km west of Geita town. The Geita gold deposit mined solely as a multiple open-pit operation until 2015 and successfully commenced underground mining below the Star & Comet pit in 2016. The mine will operate as an open-pit and underground operation until all open-pit economic resources are exhausted. The mine is currently serviced by the CIL processing plant with 5.2Mtpa capacity.

# HIGHLIGHTS

- **PRODUCTION IN LINE**

with plan

- **5% INCREASE IN**

throughput

- **COMMENCED**

underground mining

## FOCUS ON COST MANAGEMENT

and efficiency improvements continues

## ALL-IN SUSTAINING COSTS

of \$844/oz

As at 31 December 2016:

- **MINERAL RESOURCE**

of 7.3Moz (inclusive)  
(plus 3.2Moz below infrastructure)

- **ORE RESERVE** of 2.0Moz

## OPERATIONAL PERFORMANCE

### PRODUCTION

There was a 5% increase in plant throughput at Geita due to the treatment of softer ore and improved plant availability through consistent maintenance of operations. However, production was down owing to a planned 12% decrease in recovered grade. This was in line with the mining plan which introduced ore sourced from the initial underground operations at the Star & Comet mining area at lower than the average grades. Higher grades are expected to be realised as development progresses and commercial quantities are achieved.

### COSTS

During the year, AngloGold Ashanti consolidated its continuous improvement and operational review processes at its Continental Africa operations, together with the various cost management initiatives under the umbrella of the 'Operational Excellence'

programme, focused on delivering systemic and sustainable operational improvements and aimed at each operation rapidly progressing towards targeted all-in sustaining unit costs that reflect the inherent opportunity and value set within the operation. Operational Excellence principles will leverage the learnings and system opportunities derived through the P500 cost saving initiative with standardised and consistent measurement of operating metrics. The initial diagnostic assessments have been completed at Geita, with opportunities identified either in the stage of implementation or budgeted and planned for implementation in 2017.

### GROWTH AND IMPROVEMENT

Geita has successfully transitioned to underground mining in the Star & Comet area. 2017 will be the first full year of underground commercial production. This underground production will supplement that from open-pit ore sources. Preparatory work to access the

Nyankanga underground Mineral Resource has been completed and blasting operations will begin in 2017. Permitting for Nyankanga was obtained from the government of Tanzania in early 2017. The long-term strategy for Geita is to extend the mine's life by extracting the Mineral Resource utilising both open-pit and underground mining methods. In 2017, the plan includes replacing the mine's original 20-year-old power plant to ensure reliable power supply.

### CAPITAL EXPENDITURE

Capital expenditure rose in 2016 due to the purchase of a fleet of Caterpillar dump trucks on the scheduled retirement of the existing fleet which is nearing the end of its useful economic life.

Capital expenditure in 2017 is expected to increase as underground production is ramped-up at Geita and the mine's power plant is replaced.



## SUSTAINABILITY PERFORMANCE

For information on our sustainable development activities, refer to:

- the Continental Africa regional review in the Integrated Report 2016, available at [www.aga-reports.com/16/ir/](http://www.aga-reports.com/16/ir/)
- the Sustainable Development Report 2016, available at [www.aga-reports.com/16/sdr/home](http://www.aga-reports.com/16/sdr/home)

## GEITA – KEY STATISTICS

	Units	2016	2015	2014
<b>Operational performance</b>				
Cut-off grade <sup>(1)</sup>	oz/t	<b>0.041</b>	0.042	0.039
	g/t	<b>1.40</b>	1.45	1.35
Recovered grade	oz/t	<b>0.080</b>	0.093	0.092
	g/t	<b>2.74</b>	3.18	2.86
Tonnes treated/milled	Mt	<b>5.4</b>	5.2	5.2
Gold production	000oz	<b>489</b>	527	477
Total cash cost	\$/oz produced	<b>530</b>	480	599
All-in sustaining cost	\$/oz sold	<b>844</b>	717	890
Capital expenditure	\$m	<b>119</b>	116	129
Productivity	oz/TEC	<b>20.94</b>	27.78	19.50
<b>Safety</b>				
No. of fatalities		<b>0</b>	0	0
All injury frequency rate (AIFR)	per million hours worked	<b>0.39</b>	0.47	0.51
<b>People</b>				
Total average no. of employees		<b>3,748</b>	3,041	3,265
– Permanent		<b>1,682</b>	1,612	1,573
– Contractors		<b>2,066</b>	1,429	1,692
<b>Environment</b>				
Water use	ML	<b>3,637</b>	3,249	4,101
Water use efficiency	kL/t	<b>0.66</b>	0.63	0.79
Energy consumption	PJ	<b>3.07</b>	2.93	3.21
Energy intensity	GJ/t	<b>0.56</b>	0.57	0.62
Greenhouse gas (GHG) emissions	000t	<b>228</b>	218	238
GHG emissions intensity	t CO <sub>2</sub> e/t	<b>41</b>	42	46
Cyanide use	t	<b>1,197</b>	1,105	1,970
No. of reportable environmental incidents		<b>0</b>	0	3
Total rehabilitation liabilities	\$m	<b>55</b>	56	59

<sup>(1)</sup> Based on the Ore Reserve.