

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13a-16 OR 15d-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934

Report on Form 6-K dated March 27, 2020

Commission File Number 1-14846

AngloGold Ashanti Limited

(Name of registrant)

76 Rahima Moosa Street  
Newtown, 2001  
(P.O. Box 62117, Marshalltown, 2107)  
South Africa

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes\_ No

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes\_ No

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes\_ No

Enclosure: Press release **ANGLOGOLD ASHANTI LIMITED – MINERAL RESOURCE AND ORE RESERVE REPORT FOR THE YEAR ENDED DECEMBER 31, 2019**



# <R&R>

DIVERSIFIED, DECISIVE, SUSTAINABLE BUSINESS

MINERAL RESOURCE AND  
ORE RESERVE REPORT 2019



ANGLO**GOLD**ASHANTI



VISION

TO BE THE  
**LEADING  
MINING  
COMPANY**





# CONTENTS

## MISSION

... to create value for stakeholders and to leave communities and society better off for our having been there

## VALUES

Our values and beliefs ... guide all decision-making and activities in conduct of our business to ensure we make a positive impact. They underpin our environmental, social and governance (ESG) performance



Safety and Health



Dignity and respect



Accountability



Community



Diversity



Environment

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### AngloGold Ashanti's 2019 suite of reports comprises of:

- <IR>** Integrated Report
- <NOM>** Notice of Annual General Meeting and Summarised Financial Information (Notice of Meeting)
- <SR>** Sustainability Report
- <R&R>** Mineral Resource and Ore Reserve Report
- <AFS>** Annual Financial Statements
- <WWW>** Reporting website





## ABOUT THIS REPORT

The Mineral Resource and Ore Reserve for AngloGold Ashanti Limited (AngloGold Ashanti) are reported in accordance with the minimum standards described by The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (The SAMREC Code, 2016 edition).

The reporting criteria, as outlined in the reporting code, have been used in the preparation of Internal Competent Person reports (CPR) for each operation, from which the numbers stated in this report have been drawn. Reporting is also in accordance with Section 12 of the Johannesburg Stock Exchange (JSE) Listings Requirements.

Information is presented by operating region, country, mine and project. Topics for brief discussion in this report include regional and country overview, introduction, geology, exploration, projects and estimation. Further to this, the following information is used to illustrate additional detail across our operations and projects:

- Location and infrastructure maps
- Legal aspects and tenure
- Geological cross-sections and maps of underground workings where applicable
- Details of average drill hole spacing and type
- Inclusive Mineral Resource and Ore Reserve
  - below infrastructure
  - by-products
  - year-on-year reconciliation
  - sensitivities
- Exclusive Mineral Resource
- Inferred Mineral Resource in business plan
- Ore Reserve modifying factors
- Grade tonnage information on the Mineral Resource
- Details of appointed Competent Persons

The following should be noted in respect of the <R&R> report

- All figures are expressed on an attributable basis unless otherwise indicated
- Unless otherwise stated, \$ or dollar refers to United States dollars
- Locations on maps are indicative
- Group and company are used interchangeably
- Mine, operation and business unit are used interchangeably
- Rounding off of numbers may result in computational discrepancies
- To reflect that figures are not precise calculations and that there is uncertainty in their estimation, AngloGold Ashanti reports tonnage, content for gold, silver and uranium to two decimals and copper, sulphur and molybdenum content with no decimals
- Metric tonnes (t) are used throughout this report and all ounces are Troy ounces
- For terminology used in this report, please refer to the <Glossary of terms> on page 234.
- All grade tonnage curves reflect the Mineral Resource and exclude stockpiles unless otherwise stated
- Abbreviations used in this report: gold – Au, copper – Cu, silver – Ag, sulphur – S, uranium oxide – U<sub>3</sub>O<sub>8</sub>, molybdenum – Mo

The Mineral Resource, as reported, is inclusive of the Ore Reserve component unless otherwise stated. Mineral Resource and Ore Reserve estimates are reported as at 31 December 2019, and are net of 2019 production depletion.

### RELEVANT STRATEGIC OBJECTIVES

Ensuring a viable Mineral Resource and Ore Reserve pipeline will enable delivery of sustained value-adding growth in the long term



MAINTAIN LONG-TERM  
OPTIONALITY



IMPROVE PORTFOLIO  
QUALITY

### RELATED RISK

Ore Reserve and Mineral Resource conversion

### CAPITAL AFFECTED



NATURAL CAPITAL

### ACHIEVEMENTS 2019

- Our Ore Reserve increased by 3.5Moz (before depletion), indicating the progress made in extending the lives of our mining operations
- After depletion and excluding South Africa, the Ore Reserve increased by 1.1Moz

### FUTURE APPROACH

To improve operating and mining flexibility by investing in Ore Reserve development and Mineral Resource conversion drilling at sites with high geological potential over the next two to three years.

For further details please refer to the <IR>



GROUP PROFILE

# OUR FOOTPRINT



Our operations and projects are located in key gold producing regions around the world and are grouped regionally as Americas, Continental Africa, South Africa and Australia.

Our operations and projects are grouped regionally as follows:

**AMERICAS**

- 1 Argentina  
Cerro Vanguardia (92.5%)<sup>(1)</sup>
- 2 Brazil  
Serra Grande  
AGA Mineração
- 3 Colombia  
Gramalote (51%)  
La Colosa  
Quebradona <sup>(2)</sup>

**CONTINENTAL AFRICA**

- 4 Guinea  
Siguri (85%)
- 5 Mali  
Morila <sup>(3)</sup>  
Sadiola (41%) <sup>(3)</sup>
- 6 Ghana  
Iduapriem  
Obuasi <sup>(4)</sup>
- 7 Democratic Republic of the Congo (DRC)  
Kibali (45%) <sup>(5)</sup>
- 8 Tanzania  
Geita

**SOUTH AFRICA**

- 9 South Africa  
Mponeng <sup>(6)</sup>  
Surface Operations <sup>(6)</sup>

**AUSTRALIA**

- 10 Australia  
Sunrise Dam  
Tropicana (70%)

**Legend**

○ Operations   ● Projects   ● Asset sale underway

<sup>(1)</sup> Sale process at an advanced stage  
<sup>(2)</sup> Change in ownership to 100% as B2Gold's shareholding was converted to a share of profits. Will be a copper mine producing gold and silver as by-products  
<sup>(3)</sup> Agreement and sale announced in December 2019  
<sup>(4)</sup> Obuasi's redevelopment project began in 2019  
<sup>(5)</sup> Kibali and Morila are operated by Barrick Gold Corporation (Barrick). Morila Mineral Resource and Ore Reserve has been written off  
<sup>(6)</sup> Agreement and sale announced post year end in February 2020

Note: Percentages indicate the ownership interest held by AngloGold Ashanti. All operations are 100%-owned unless otherwise indicated

**OUR MINERAL RESOURCE AND ORE RESERVE ARE UNDERPINNED BY APPROPRIATE MINERAL RESOURCE MANAGEMENT PROCESSES AND PROTOCOLS**

# CORPORATE GOVERNANCE

**A**ngloGold Ashanti reports its Mineral Resource and Ore Reserve in accordance with the minimum standards prescribed by the SAMREC Code, 2016 edition.

We achieve this through ensuring the principles of integrity, transparency and materiality are central to the compilation of this report and through using the reporting criteria and definitions as detailed in the SAMREC Code. Refer to <Definitions> in this report on page 232 for further details. In complying with the SAMREC Code, changes to AngloGold Ashanti's Mineral Resource and Ore Reserve have been reviewed and it was concluded that none of the changes are material to the overall valuation of the company. AngloGold Ashanti has therefore, once again, resolved not to provide the detailed reporting as defined in Table 1 of the code. We will however continue to provide the high level of detail we have in previous years in order to comply with the transparency requirements of the code.

Our established Mineral Resource and Ore Reserve Steering Committee (RRSC) is responsible for setting and overseeing our Mineral Resource and Ore Reserve governance framework and for ensuring that it meets the AngloGold Ashanti's goals and objectives while complying with all relevant regulatory codes. The committee's membership and terms of references are mandated under a policy document signed by the Chief Executive Officer.

For more than a decade, the company has developed and implemented a rigorous system of internal and external reviews aimed at providing assurance in respect of Ore Reserve and Mineral Resource estimates. The following operations were subject to an external review in line with the policy that each operation/project will be reviewed by an independent third party on average once every three years:

- Mineral Resource and Ore Reserve at Siguiri
- Mineral Resource and Ore Reserve at Geita
- Mineral Resource and Ore Reserve at AGA Mineração Cuiabá and Lamego
- Mineral Resource and Ore Reserve at AGA Mineração Córrego do Sítio

The external reviews were conducted by Golder Associates Pty Ltd and certificates of sign-off received to state that the Mineral Resource and/or Ore Reserve estimates are reported in accordance with the SAMREC Code.

In addition, numerous internal Mineral Resource and Ore Reserve process reviews were completed by suitably qualified Competent Persons from within AngloGold Ashanti. No significant deficiencies were identified. Our Mineral Resource and Ore Reserve are underpinned by appropriate Mineral Resource management processes and protocols. These procedures have been developed to be compliant with the guiding principles of the Sarbanes-Oxley Act of 2002 (SOX).

AngloGold Ashanti makes use of a web-based group reporting database called the Resource and Reserve Reporting System (RCubed) for the compilation and authorisation of Mineral Resource and Ore Reserve reporting. It is a fully integrated system for reporting and reconciliation of Mineral Resource and Ore Reserve that supports various regulatory reporting requirements, including the United States Securities and Exchange Commission (SEC) and the JSE under the SAMREC Code. AngloGold Ashanti uses RCubed to ensure a documented chain of responsibility exists from the Competent Persons at the operations to the company's RRSC.

AngloGold Ashanti has also developed an enterprise-wide risk management tool that provides consistent and reliable data that allows for visibility of risks and actions across the group. This tool is used to facilitate, control and monitor material risks to the Mineral Resource and Ore Reserve, thus ensuring that the appropriate risk management and mitigation plans are in place.

## Competent Persons

The information in this report relating to Exploration Results, Mineral Resource and Ore Reserve is based on information compiled by, or under, the supervision of the Competent Persons as defined in the SAMREC Code. All Competent Persons are employed by AngloGold Ashanti, except for Kibali and Morila, and have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking. The legal tenure of each operation and project has been verified to the satisfaction of the accountable Competent Person and it has been confirmed that all of our Ore Reserve is covered by the required mining permits or there exists a realistic expectation that these permits will be issued. This will be detailed within this document. The Competent Persons consent to the inclusion of Exploration Results, Mineral Resource and Ore Reserve information in this report, in the form and context in which it appears.

Accordingly, the Chairman of the Mineral Resource and Ore Reserve Steering Committee, VA Chamberlain, MSc (Mining Engineering), BSc (Hons) (Geology), MGSSA, FAusIMM, assumes responsibility for the Mineral Resource and Ore Reserve processes for AngloGold Ashanti and is satisfied that the Competent Persons have fulfilled their responsibilities. VA Chamberlain has 32 years' experience in exploration and mining and is employed full-time by AngloGold Ashanti and can be contacted at the following address: 76 Rahima Moosa Street, Newtown, Johannesburg, 2001, South Africa.



# YEAR IN REVIEW

AngloGold Ashanti strives to actively create value by growing its major asset – the Mineral Resource and Ore Reserve. This drive is based on active, well-defined brownfields and advanced project development programmes, innovation in both geological modelling and mine planning, and continual optimisation of the asset portfolio.

## Price assumptions

The SAMREC Code requires the use of reasonable economic assumptions. These include long-range commodity price and exchange rate forecasts. These are reviewed annually and are prepared in-house using a range of techniques including historic price averages. AngloGold Ashanti selects a conservative Ore Reserve price relative to its peers. This is done to fit into the strategy to include a margin in the mine planning process. The resultant plan is then valued at a higher business planning price.

The Mineral Resource sensitivities shown in the detail of this report use a base of \$1,400/oz and a range of \$200/oz, unless otherwise stated. The Ore Reserve sensitivities shown in the detail of this report use a base of \$1,100/oz and a range of \$100/oz, unless otherwise stated.

At several of our underground operations, primarily in Brazil and Australia, a change in methodology in 2019 resulted in significant reductions in Mineral Resource. These changes were introduced in order to better meet the requirement for eventual economic extraction. The process saw the introduction of a slope optimiser to constrain the Mineral Resource in an economically and technically defined shape, and a clean out of existing pillars not considered minable from a geotechnical perspective. This process represents a once off adjustment.



## Gold price

The following local prices of gold were used as the basis for estimation:

	Local prices of gold					
	Gold price US\$/oz	South Africa ZAR/kg	Australia AUD/oz	Brazil BRL/oz	Argentina ARS/oz	Colombia COP/oz
2019 Ore Reserve	1,100	541,501	1,512	4,230	57,080	3,230,030
2018 Ore Reserve	1,100	511,150	1,509	3,565	45,443	-
2019 Mineral Resource	1,400	613,274	1,981	5,166	78,102	3,838,220
2018 Mineral Resource	1,400	563,331	1,778	4,501	51,564	-

## Copper price

The following copper prices were used as the basis for estimation:

	Copper price US\$/lb	Copper price COP/lb
2019 Ore Reserve	2.65	7,947
2018 Ore Reserve	2.65	-
2019 Mineral Resource	3.30	9,646
2018 Mineral Resource	3.30	-

GOLD

**175.6Moz**

Inclusive  
Mineral Resource

**43.9Moz**

Ore Reserve

COPPER

**9,677Mlb**

Inclusive  
Mineral Resource

**3,068Mlb**

Ore Reserve

# YEAR IN REVIEW CONTINUED

## Mineral Resource

### Gold

Our Mineral Resource reduced from 184.5Moz in December 2018 to 175.6Moz in December 2019. This gross annual decrease of 8.9Moz includes depletion of 4.1Moz. The balance of 4.8Moz resulted from reductions of 4.0Moz due to the application of a revised methodology, at some operations, to constrain the underground Mineral Resource and thereby ensure the Mineral Resource meets the requirement for reasonable and realistic prospects of eventual economic extraction. Further reductions of 2.4Moz were due primarily to pillar cleanup, 0.6Moz was due to revised geotechnical design requirements and other factors resulted in reductions of 1.3Moz. These reductions were offset by increases due to exploration of 2.9Moz, changes in economic assumptions of 0.3Moz and changes in ownership of 0.3Moz. The Mineral Resource was estimated at a gold price of US\$1,400/oz (2018: US\$1,400/oz).



### Year-on-year changes

		Moz
Mineral Resource as at 31 December 2018		184.5
Depletions		(4.1)
Sub-total		180.4
Additions		
Due to:		
Quebradona	Remodelling and change in ownership	1.4
Geita	Exploration of underground and surface targets	1.0
Iduapriem	Mineral Resource conversion drilling and reduced mining costs after contract renegotiation	0.9
Other	Additions less than 0.5Moz	0.8
Sub-total		184.5
Reductions		
Due to:		
Obuasi	Constraining of the Mineral Resource following changes in methodology and removal of Mineral Resource at depth resulting from downgrading	(3.0)
AGA Mineração	Application of a mining constraint on the underground Mineral Resource	(2.8)
Sunrise Dam	Application of a mining constraint on the underground Mineral Resource	(1.5)
Siguiri	Increased costs	(1.1)
Other	Reductions less than 0.5Moz	(0.5)
Mineral Resource as at 31 December 2019		175.6

### Copper

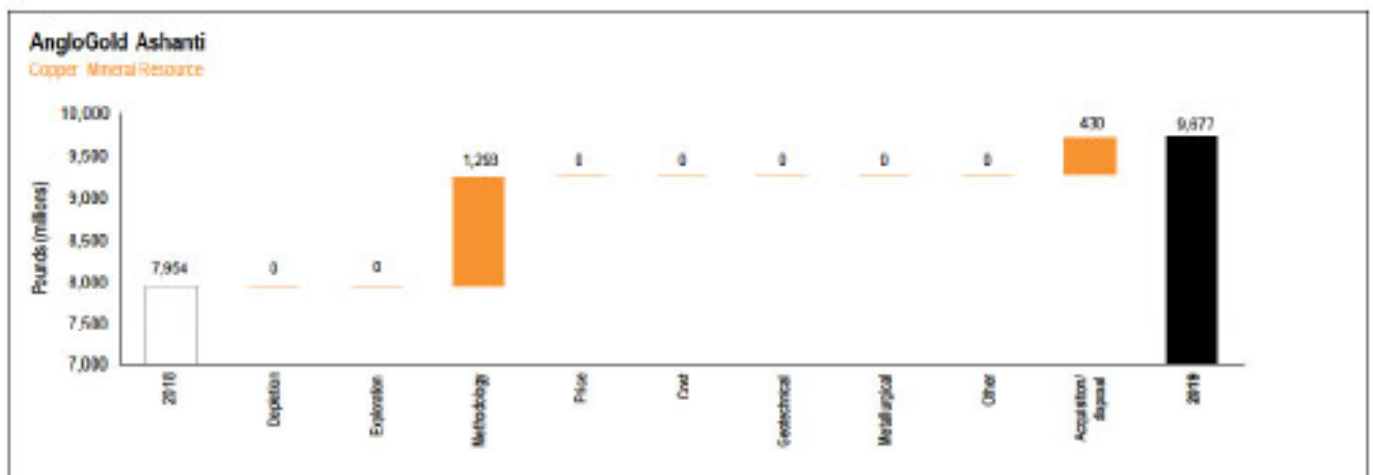
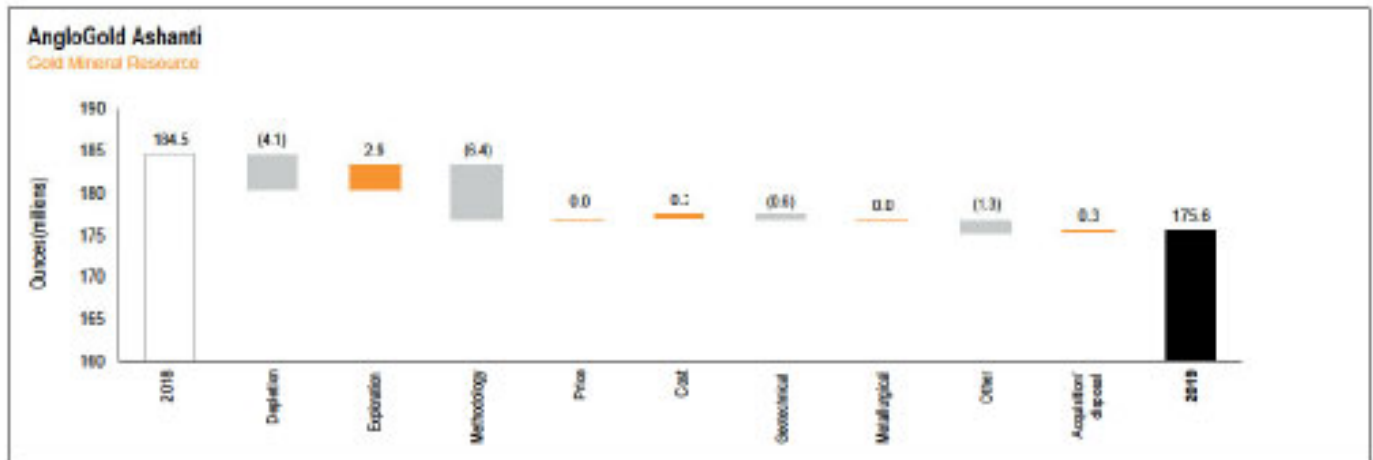
The AngloGold Ashanti Mineral Resource increased from 3.61Mt (7,954Mib) in December 2018 to 4.39Mt (9,677Mib) in December 2019.

This gross annual increase of 0.78Mt includes an increase of 0.58Mt (1,293Mib) due to methodology and 0.20Mt (430Mib) due to change in ownership from 94.875% to 100% as B2Gold's shareholding was converted to a share of profits. The Mineral Resource was estimated at a copper price of US\$3.30/lb (2018: US\$3.30/lb).

### Year-on-year changes

		Mt	Mib
Mineral Resource as at 31 December 2018		3.61	7,954
Additions			
Due to:			
Quebradona	Remodelling and change in ownership	0.78	1,723
Mineral Resource as at 31 December 2019		4.39	9,677





# YEAR IN REVIEW CONTINUED

## Ore Reserve

### Gold

Our Ore Reserve reduced from 44.1Moz in December 2018 to 43.9Moz in December 2019. This gross annual decrease of 0.2Moz includes depletion of 3.7Moz. The increase before depletion of 3.5Moz, resulted from additions of 3.5Moz due to exploration and modelling changes, changes in economic assumptions of 0.4Moz and a change in ownership of 0.1Moz. Other factors resulted in a 0.6Moz reduction. The Ore Reserve was estimated using a gold price of US\$1,100/oz (2018: US\$1,100/oz).



### Year-on-year changes

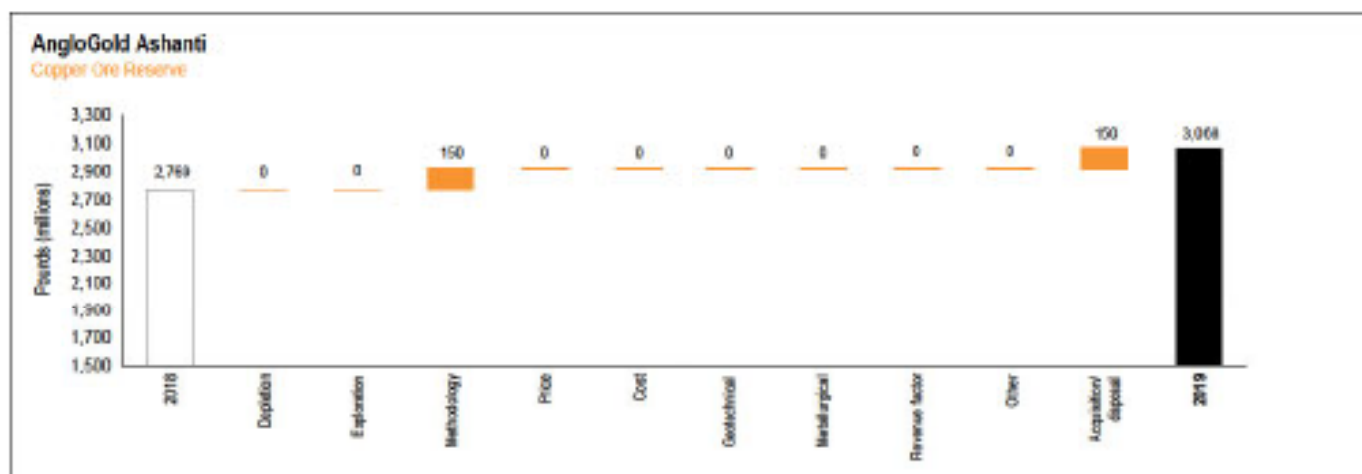
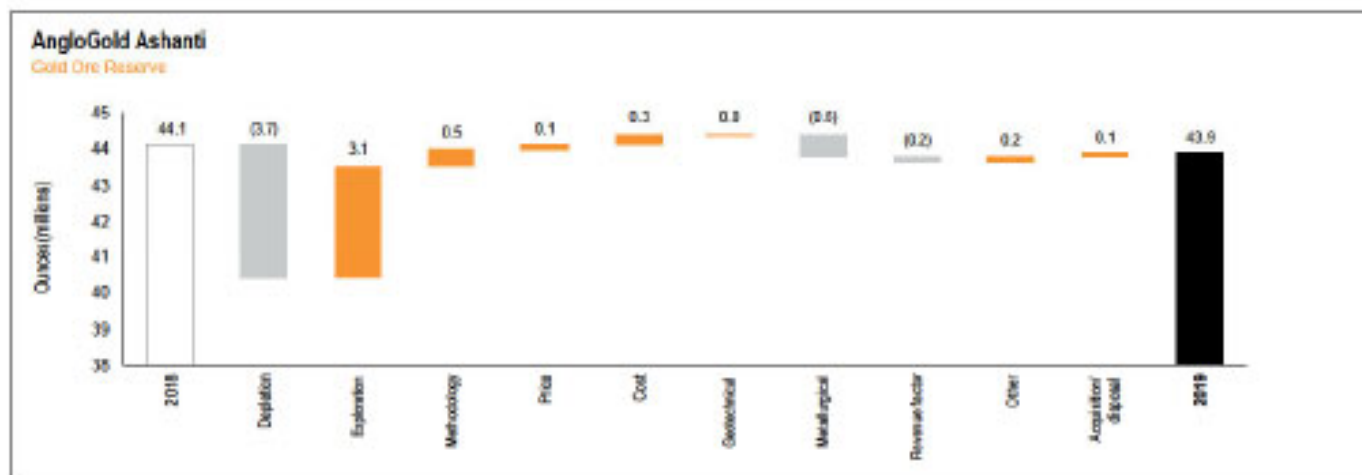
		Moz
Ore Reserve as at 31 December 2018		44.1
Depletions		(3.7)
Sub-total		40.4
Additions		
Due to:		
Obuasi	Model updates which resulted in new designs for Sansu, Blocks 8 and 11	1.3
Kibali	Exploration upgraded Inferred Mineral Resource which was partially offset by higher open pit costs which resulted from the changes in the DRC mining code. Fresh rock processing costs also increased	0.8
Geita	Exploration which upgraded additions at Nyankanga and Star and Comet and the steepening of the planned eastern pit wall at Nyankanga Cut 8	0.8
AGA Mineração	Additions to the Culabá model, mainly at Serrotonho, which were countered by increased costs used in the feasibility study (FS) for mining of the secondary orebodies as well as a review of mining methods. At Lamego, additions resulted from exploration at Carrugem	0.5
Iduapriem	Inclusion of Block 5 in the Ore Reserve given reduced mining costs	0.5
Quebradona	Remodelling and change in ownership	0.3
Other	Additions less than 0.3Moz	0.3
Sub-total		44.9
Reductions		
Due to:		
Other	Reductions less than 0.3Moz	(1.0)
Ore Reserve as at 31 December 2019		43.9

### Copper

The AngloGold Ashanti Ore Reserve increased from 1.26Mt (2,769Mib) in December 2018 to 1.39Mt (3,068Mib) in December 2019. This gross annual increase of 0.14Mt includes an increase of 0.07Mt (150Mib) due to methodology and 0.07Mt (150Mib) due to change in ownership from 94.876% to 100% as B2Gold's shareholding was converted to a share of profits. The Ore Reserve was estimated at a copper price of US\$2.65/lb (2018: US\$2.65/lb).

### Year-on-year changes

		Mt	Mib
Ore Reserve as at 31 December 2018		1.26	2,769
Additions			
Due to:			
Quebradona	Remodelling and change in ownership	0.14	300
Ore Reserve as at 31 December 2019		1.39	3,068



### By-products

Several by-products are recovered as a result of processing of the gold Ore Reserve and copper Ore Reserve. These include estimates over life of mine (LOM) of 0.39Mt of sulphur from Brazil, 18.76Moz of silver from Argentina and 25.95Moz of silver from Colombia.



Sunnse Dam



# GROUP OVERVIEW

## Mineral Resource

### Mineral Resource by country inclusive of Ore Reserve: gold

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Democratic Republic of the Congo	Measured	14.49	4.02	58.19	1.87
	Indicated	43.37	3.30	143.08	4.60
	Inferred	12.05	3.22	38.84	1.25
	<b>Total</b>	<b>69.91</b>	<b>3.43</b>	<b>240.11</b>	<b>7.72</b>
Ghana	Measured	10.43	5.28	55.03	1.77
	Indicated	186.23	3.66	682.34	21.94
	Inferred	74.64	5.63	420.05	13.50
	<b>Total</b>	<b>271.30</b>	<b>4.27</b>	<b>1,157.42</b>	<b>37.21</b>
Guinea	Measured	18.20	0.63	11.55	0.37
	Indicated	113.65	0.96	109.58	3.52
	Inferred	53.75	1.04	56.08	1.80
	<b>Total</b>	<b>185.60</b>	<b>0.95</b>	<b>177.21</b>	<b>5.70</b>
Mali	Measured	-	-	-	-
	Indicated	46.63	1.86	86.63	2.79
	Inferred	7.23	1.68	12.19	0.39
	<b>Total</b>	<b>53.86</b>	<b>1.83</b>	<b>98.82</b>	<b>3.18</b>
Tanzania	Measured	4.89	4.85	23.71	0.76
	Indicated	35.27	2.60	91.73	2.95
	Inferred	21.47	4.24	90.99	2.93
	<b>Total</b>	<b>61.63</b>	<b>3.35</b>	<b>206.42</b>	<b>6.64</b>
South Africa	Measured	104.63	1.64	171.13	5.50
	Indicated	596.87	1.91	1,142.09	36.72
	Inferred	24.70	11.25	277.65	8.93
	<b>Total</b>	<b>726.21</b>	<b>2.19</b>	<b>1,591.07</b>	<b>51.15</b>
Argentina	Measured	8.23	2.14	17.62	0.57
	Indicated	20.19	2.71	54.73	1.76
	Inferred	5.71	2.63	14.99	0.48
	<b>Total</b>	<b>34.13</b>	<b>2.56</b>	<b>87.34</b>	<b>2.81</b>
Brazil	Measured	17.78	4.58	81.51	2.62
	Indicated	30.03	4.47	134.25	4.32
	Inferred	49.52	4.23	209.41	6.73
	<b>Total</b>	<b>97.33</b>	<b>4.37</b>	<b>425.16</b>	<b>13.67</b>
Colombia	Measured	57.90	0.58	33.84	1.09
	Indicated	1,120.18	0.79	884.33	28.43
	Inferred	622.16	0.45	280.35	9.01
	<b>Total</b>	<b>1,800.23</b>	<b>0.67</b>	<b>1,198.51</b>	<b>38.53</b>
Australia	Measured	57.88	1.17	67.62	2.18
	Indicated	70.81	1.91	135.36	4.35
	Inferred	28.30	2.69	76.23	2.45
	<b>Total</b>	<b>156.99</b>	<b>1.78</b>	<b>279.40</b>	<b>8.98</b>
<b>Total</b>	Measured	294.43	1.77	520.39	16.73
	Indicated	2,263.23	1.53	3,464.11	111.37
	Inferred	899.53	1.64	1,476.96	47.49
	<b>Total</b>	<b>3,457.19</b>	<b>1.58</b>	<b>5,461.46</b>	<b>175.59</b>



## Mineral Resource by country exclusive of Ore Reserve: gold

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Democratic Republic of the Congo	Measured	5.83	2.98	17.35	0.56
	Indicated	28.93	2.63	76.08	2.46
	Inferred	12.05	3.22	38.84	1.25
	Total	46.81	2.83	132.28	4.25
Ghana	Measured	2.03	3.92	7.94	0.26
	Indicated	129.75	3.48	452.03	14.53
	Inferred	74.64	5.63	420.05	13.50
	Total	206.42	4.26	880.02	28.29
Guinea	Measured	-	-	-	-
	Indicated	49.17	0.95	46.60	1.50
	Inferred	53.89	1.04	56.06	1.80
	Total	103.06	1.00	102.66	3.30
Mali	Measured	-	-	-	-
	Indicated	21.08	1.72	38.21	1.16
	Inferred	7.23	1.68	12.19	0.39
	Total	28.32	1.71	48.40	1.56
Tanzania	Measured	1.97	3.18	6.27	0.20
	Indicated	25.10	1.95	48.87	1.57
	Inferred	14.48	4.16	60.31	1.94
	Total	41.55	2.78	115.45	3.71
South Africa	Measured	7.37	18.83	138.81	4.46
	Indicated	61.63	9.64	593.96	19.10
	Inferred	17.88	15.36	274.73	8.83
	Total	86.88	11.60	1,007.49	32.39
Argentina	Measured	3.80	3.17	12.05	0.39
	Indicated	12.80	2.86	36.65	1.18
	Inferred	4.81	2.91	14.01	0.45
	Total	21.41	2.93	62.72	2.02
Brazil	Measured	12.59	4.49	56.60	1.82
	Indicated	13.68	3.24	44.25	1.42
	Inferred	48.59	4.25	206.28	6.63
	Total	74.86	4.10	307.14	9.87
Colombia	Measured	57.90	0.58	33.84	1.09
	Indicated	945.23	0.79	751.05	24.15
	Inferred	622.16	0.45	280.35	9.01
	Total	1,625.28	0.66	1,065.24	34.25
Australia	Measured	30.26	1.17	35.54	1.14
	Indicated	41.17	1.64	67.41	2.17
	Inferred	28.30	2.69	78.23	2.45
	Total	99.73	1.80	179.17	5.76
Total	Measured	121.75	2.53	308.40	9.92
	Indicated	1,328.55	1.62	2,153.12	69.22
	Inferred	884.03	1.63	1,439.05	46.27
	Total	2,334.33	1.67	3,900.56	125.41

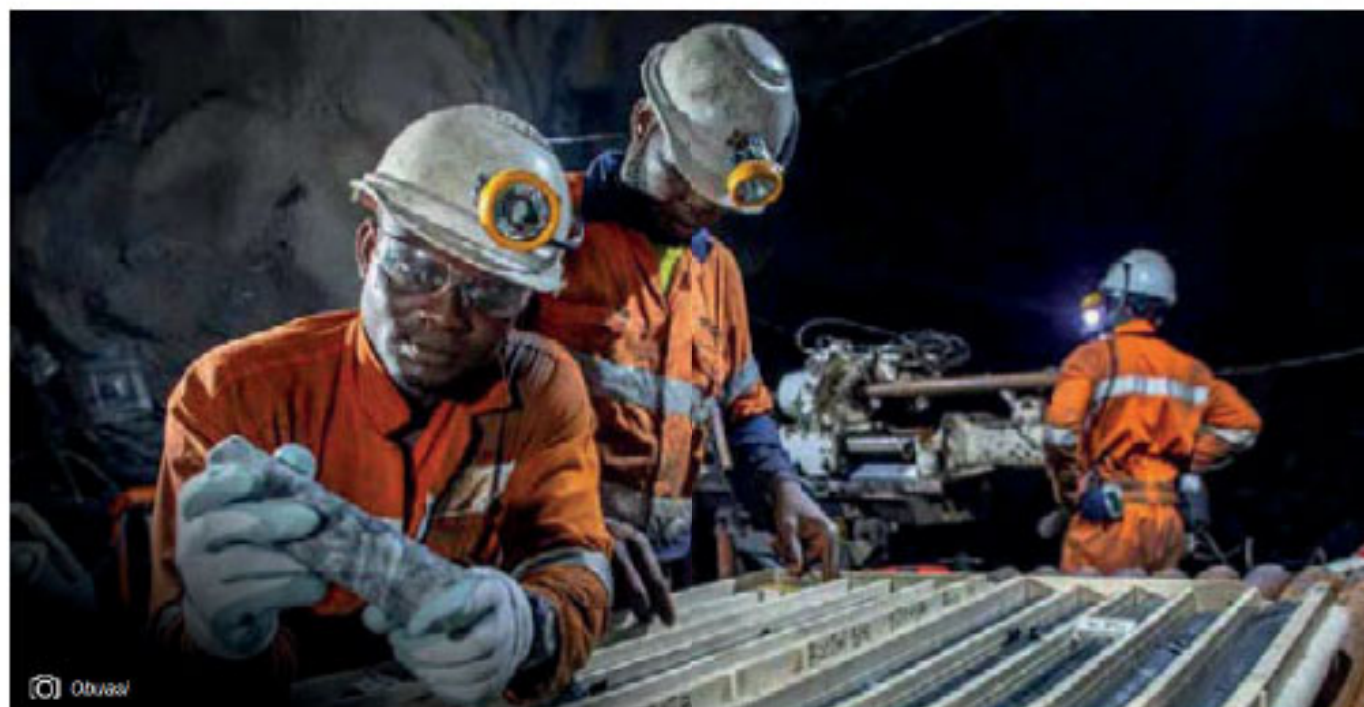
# GROUP OVERVIEW CONTINUED

## Mineral Resource by country inclusive of Ore Reserve: copper

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Colombia	Measured	57.90	1.10	0.64	1,406
	Indicated	203.77	0.89	1.81	3,981
	Inferred	340.43	0.57	1.95	4,290
	<b>Total</b>	<b>602.10</b>	<b>0.73</b>	<b>4.39</b>	<b>9,677</b>
Total	Measured	57.90	1.10	0.64	1,406
	Indicated	203.77	0.89	1.81	3,981
	Inferred	340.43	0.57	1.95	4,290
	<b>Total</b>	<b>602.10</b>	<b>0.73</b>	<b>4.39</b>	<b>9,677</b>

## Mineral Resource by country exclusive of Ore Reserve: copper

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Colombia	Measured	57.90	1.10	0.64	1,406
	Indicated	92.53	0.45	0.41	913
	Inferred	340.43	0.57	1.95	4,290
	<b>Total</b>	<b>490.86</b>	<b>0.61</b>	<b>3.00</b>	<b>6,609</b>
Total	Measured	57.90	1.10	0.64	1,406
	Indicated	92.53	0.45	0.41	913
	Inferred	340.43	0.57	1.95	4,290
	<b>Total</b>	<b>490.86</b>	<b>0.61</b>	<b>3.00</b>	<b>6,609</b>



## Ore Reserve

### Ore Reserve by country: gold

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Democratic Republic of the Congo	Proved	9.29	4.13	38.36	1.23
	Probable	21.52	4.23	90.99	2.93
	Total	30.81	4.20	129.35	4.16
Ghana	Proved	3.40	0.84	2.85	0.09
	Probable	63.14	4.35	274.53	8.83
	Total	66.54	4.17	277.37	8.92
Guinea	Proved	18.20	0.63	11.55	0.37
	Probable	54.12	0.80	43.27	1.39
	Total	72.33	0.76	54.82	1.76
Mali	Proved	-	-	-	-
	Probable	24.50	2.01	49.23	1.58
	Total	24.50	2.01	49.23	1.58
Tanzania	Proved	-	-	-	-
	Probable	13.44	3.50	47.03	1.51
	Total	13.44	3.50	47.03	1.51
South Africa	Proved	65.00	0.36	23.49	0.76
	Probable	493.05	0.93	457.83	14.72
	Total	558.05	0.86	481.32	15.47
Argentina	Proved	4.47	1.25	5.59	0.18
	Probable	7.68	2.38	18.30	0.59
	Total	12.16	1.97	23.89	0.77
Brazil	Proved	3.80	3.66	13.90	0.45
	Probable	12.24	4.38	53.65	1.72
	Total	16.04	4.21	67.55	2.17
Colombia	Proved	-	-	-	-
	Probable	174.95	0.76	133.27	4.28
	Total	174.95	0.76	133.27	4.28
Australia	Proved	27.62	1.17	32.28	1.04
	Probable	29.64	2.29	67.95	2.18
	Total	57.26	1.75	100.23	3.22
Total	Proved	131.79	0.97	128.02	4.12
	Probable	894.28	1.38	1,236.05	39.74
	Total	1,026.07	1.33	1,364.07	43.86

### Ore Reserve by country: copper

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Colombia	Proved	-	-	-	-
	Probable	111.24	1.25	1.39	3,068
	Total	111.24	1.25	1.39	3,068
Total	Proved	-	-	-	-
	Probable	111.24	1.25	1.39	3,068
	Total	111.24	1.25	1.39	3,068

# GROUP OVERVIEW CONTINUED

## Reconciliation of gold Mineral Resource (gold content Moz)

as at 31 December 2019	Previous year	Depletion	Exploration	Methodology	Price	Cost	Geotechnical	Metallurgical	Other
<b>Continental Africa region</b>									
Kibali	7.65	(0.43)	0.68	(0.18)	-	(0.05)	-	-	0.04
Idusriem	5.56	(0.33)	0.04	-	-	1.00	(0.10)	-	0.01
Obuasi	34.05	(0.03)	0.01	(1.42)	-	-	(0.36)	-	(1.21)
Siguiri	7.18	(0.39)	0.05	(0.07)	-	(1.10)	0.03	-	(0.00)
Morila	0.09	(0.04)	-	1.00	-	-	-	-	(0.06)
Sadiola	3.23	(0.05)	-	-	-	-	-	-	-
Gelta	6.26	(0.64)	0.52	1.03	-	0.45	-	-	0.03
<b>Total</b>	<b>64.01</b>	<b>(1.91)</b>	<b>1.30</b>	<b>(1.64)</b>	<b>-</b>	<b>0.30</b>	<b>(0.43)</b>	<b>-</b>	<b>(1.19)</b>
<b>South Africa region</b>									
Vaal River Surface	2.81	(0.23)	0.01	-	-	-	0.03	-	(0.00)
Mine Waste Solutions	2.18	(0.09)	0.05	-	-	-	-	-	0.00
West Wits Surface	0.62	(0.05)	0.01	-	-	-	0.00	-	(0.01)
Mponeng	46.18	(0.30)	0.59	-	-	(0.60)	-	-	(0.05)
<b>Total</b>	<b>51.79</b>	<b>(0.67)</b>	<b>0.66</b>	<b>-</b>	<b>-</b>	<b>(0.60)</b>	<b>0.03</b>	<b>-</b>	<b>(0.06)</b>
<b>Americas region</b>									
Cerro Vanguardia	2.86	(0.21)	-	(0.08)	-	0.29	-	-	(0.05)
AGA Mineração	13.63	(0.41)	0.43	(3.37)	-	0.36	(0.19)	-	-
Serra Grande	3.84	(0.15)	0.28	0.75)	-	-	-	-	0.00
Gramalote	3.07	-	-	-	-	-	-	-	-
La Colosa	28.33	-	-	-	-	-	-	-	-
Quebradona	5.74	-	-	1.08	-	-	-	-	-
<b>Total</b>	<b>57.47</b>	<b>(0.77)</b>	<b>0.72</b>	<b>(3.13)</b>	<b>-</b>	<b>0.65</b>	<b>(0.19)</b>	<b>-</b>	<b>(0.05)</b>
<b>Australia region</b>									
Sunrise Dam	5.84	(0.32)	0.16	(1.65)	0.04	-	-	-	-
Tropicana	5.39	(0.48)	0.07	1.02	-	(0.10)	-	-	0.01
<b>Total</b>	<b>11.23</b>	<b>(0.80)</b>	<b>0.24</b>	<b>(1.63)</b>	<b>0.04</b>	<b>(0.10)</b>	<b>-</b>	<b>-</b>	<b>0.01</b>
<b>Grand total</b>	<b>184.50</b>	<b>(4.14)</b>	<b>2.91</b>	<b>(6.40)</b>	<b>0.04</b>	<b>0.25</b>	<b>(0.60)</b>	<b>-</b>	<b>(1.29)</b>

## Reconciliation of copper Mineral Resource (copper content Mlb)

as at 31 December 2019	Previous year	Depletion	Exploration	Methodology	Price	Cost	Geotechnical	Metallurgical	Other
<b>Americas region</b>									
Quebradona	7,954	-	-	1,293	-	-	-	-	-
<b>Total</b>	<b>7,954</b>	<b>-</b>	<b>-</b>	<b>1,293</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Grand total</b>	<b>7,954</b>	<b>-</b>	<b>-</b>	<b>1,293</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



Acquisition/ disposal	Current year	Net diff	%	Comments
-	7.72	0.07	1	Additional ounces from exploration drill campaigns offset the combined impacts of depletion, increase in open pit cut-off grades (higher unit costs) and removal of unrecoverable blocks from underground.
-	6.17	0.61	11	Increase due to revised Mineral Resource models using the 2019 exploration information from Mineral Resource conversion drilling programmes and a mining cost reduction secured by contract renegotiation.
-	31.04	(3.01)	(9)	Remodelling of Sansu, Blocks 8 and 11 resulted in reductions.
-	5.70	(1.46)	(21)	The reduction in Mineral Resource is largely due to an increase in cost. The processing cost for sulphide material increased which resulted in higher cut-off grades being used in the Mineral Resource reporting process.
-	-	(0.09)	(100)	The remaining Mineral Resource was written off.
-	3.18	(0.05)	(1)	Open pit mining activities stopped at the end of March 2018 and the in situ Mineral Resource remained the same. Stockpile material was processed from April 2018 until December 2019.
-	6.64	0.38	6	Mineral Resource depletion has been offset by gains from exploration due to Mineral Resource development drilling on potential underground and surface targets. Reduced costs also increased the Mineral Resource.
-	60.44	(3.57)	(6)	
-	2.62	(0.19)	(7)	Depletions from Sulphur Paydan, South East Extension and East tailings storage facilities (TSFs). Harties 7 low grade stockpile was depleted in 2019. Buffels 9 low grade stockpile was also processed. Additions include West Compartment 4 and West Extension TSFs.
-	2.15	(0.03)	(1)	Material was processed from Harties 1, 2 and 7 TSFs. A new Mineral Resource model was estimated for Harties 2 TSF.
-	0.57	(0.05)	(8)	Normal additions and depletions for 2019. Sources processed include Mponeng and Savuka R11 low grade stockpile and Old North L19 TSF material. A Mineral Resource model update was estimated for the Old North TSF.
-	45.81	(0.37)	(1)	Change mainly due to value reductions based on the latest information used in the updated Mineral Resource model. Other changes include depletion through mining and Mineral Resource being transferred to Inventory on the Carbon Leader Reef (CLR).
-	51.15	(0.64)	(1)	
-	2.81	(0.05)	(2)	The depletion was partially replaced by additions due to cost reductions resulting from exchange rate fluctuation.
-	10.46	(3.18)	(23)	At Cuiabá, Lamaço and Córrego do Sítio (CdS) the decrease is predominantly due to the application of a mining constraint on the underground Mineral Resource in order to better meet the requirement for eventual economic extraction. This requirement was also met by removal of historical and crown pillars. Further reductions resulted from depletion. At CdS, the open pit Mineral Resource grade and tonnage reduced due to model changes. Additions resulted from improved costs and exchange rates as well as exploration additions.
-	3.21	(0.62)	(16)	The Mineral Resource decreased, predominantly due to the application of a mining constraint to the underground Mineral Resource. Depletion was more than countered by exploration additions.
-	3.07	-	-	No change from 2018.
-	28.33	-	-	No change from 2018 as the project remains in force majeure.
0.31	7.13	1.39	24	Increases resulted from re-estimation of the Mineral Resource model and by a change in ownership percentage.
0.31	55.01	(2.46)	(4)	
-	4.07	(1.77)	(30)	The Mineral Resource decreased, predominantly due to the application of a mining constraint to the underground Mineral Resource. Mining depletion exceeded the exploration additions and surface stockpiles continue to slowly deplete as they are used to supplement plant feed.
-	4.91	(0.47)	(9)	The modest decrease was largely driven by depletion and an increase in costs which offset exploration gains. The application of a mining constraint to the underground Mineral Resource and exploration success resulted in an increase in the underground Mineral Resource at Boston Shaker.
-	8.96	(2.24)	(20)	
0.31	175.59	(8.91)	(5)	
Acquisition/ disposal	Current year	Net diff	%	Comments
430	9,677	1,723	22	Increases resulted from re-estimation of the Mineral Resource model and by a change in ownership percentage.
430	9,677	1,723	22	
430	9,677	1,723	22	

# GROUP OVERVIEW CONTINUED

## Reconciliation of gold Ore Reserve (gold content Moz)

as at 31 December 2019	Previous year	Depletion	Exploration	Methodology	Price	Cost	Geotechnical	Metallurgical	Revenue factor
<b>Continental Africa region</b>									
Kibali	3.75	(0.41)	0.65	-	0.08	(0.37)	-	-	-
Iduapriem	1.63	(0.30)	-	-	-	0.45	-	-	-
Obuasi	5.86	(0.03)	1.28	-	-	-	-	-	-
Siguiri	2.06	(0.24)	-	0.05	-	(0.36)	(0.33)	-	-
Morila	0.06	(0.04)	-	0.01	-	-	-	-	-
Sadiola	1.63	(0.06)	-	-	-	-	-	-	-
Geita	1.33	(0.60)	0.64	-	-	0.06	-	-	0.03
<b>Total</b>	<b>16.33</b>	<b>(1.65)</b>	<b>2.57</b>	<b>0.06</b>	<b>0.08</b>	<b>0.38</b>	<b>(0.33)</b>	<b>-</b>	<b>0.03</b>
<b>South Africa region</b>									
Vaal River Surface	2.65	(0.18)	0.01	-	-	-	0.03	(0.35)	-
Mine Waste Solutions	2.18	(0.09)	0.05	-	-	-	-	(0.21)	-
West Wits Surface	0.33	(0.04)	-	-	-	(0.32)	0.00	(0.31)	-
Mponeng	11.65	(0.25)	(0.21)	(0.06)	-	-	(0.32)	-	-
<b>Total</b>	<b>16.80</b>	<b>(0.56)</b>	<b>(0.14)</b>	<b>(0.06)</b>	<b>-</b>	<b>(0.02)</b>	<b>0.31</b>	<b>(0.57)</b>	<b>-</b>
<b>Americas region</b>									
Cerro Vanguardia	1.07	(0.21)	(0.07)	0.00	-	0.06	(0.35)	-	-
AGA Mineração	1.70	(0.41)	0.43	-	-	(0.31)	(0.32)	(0.30)	(0.11)
Serra Grande	0.39	(0.14)	0.04	0.07	-	0.06	0.06	-	(0.03)
Gramalote	1.76	-	-	-	-	-	-	-	-
Quebradona	2.22	-	-	0.18	-	-	-	-	-
<b>Total</b>	<b>7.14</b>	<b>(0.76)</b>	<b>0.40</b>	<b>0.25</b>	<b>-</b>	<b>0.11</b>	<b>(0.00)</b>	<b>(0.00)</b>	<b>(0.15)</b>
<b>Australia region</b>									
Sunrise Dam	1.20	(0.27)	0.30	-	-	(0.36)	-	(0.36)	-
Tropicana	2.62	(0.46)	(0.02)	0.21	0.00	(0.38)	0.33	-	(0.09)
<b>Total</b>	<b>3.82</b>	<b>(0.72)</b>	<b>0.29</b>	<b>0.21</b>	<b>0.00</b>	<b>(0.14)</b>	<b>0.33</b>	<b>(0.36)</b>	<b>(0.09)</b>
<b>Grand total</b>	<b>44.09</b>	<b>(3.69)</b>	<b>3.12</b>	<b>0.47</b>	<b>0.08</b>	<b>0.33</b>	<b>0.31</b>	<b>(0.54)</b>	<b>(0.21)</b>

## Reconciliation of copper Ore Reserve (copper content Mb)

as at 31 December 2019	Previous year	Depletion	Exploration	Methodology	Price	Cost	Geotechnical	Metallurgical	Revenue factor
<b>Americas region</b>									
Quebradona	2,769	-	-	150	-	-	-	-	-
<b>Total</b>	<b>2,769</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Grand total</b>	<b>2,769</b>	<b>-</b>	<b>-</b>	<b>150</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

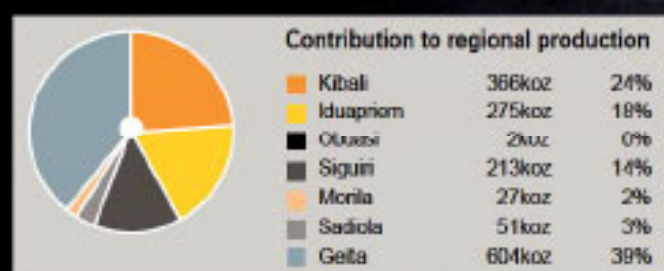


Other	Acquisition / disposal	Current year	Net diff	%	Comments
0.16	-	4.16	0.41	11	Mining depletion was more than offset by significant exploration changes (conversion of Inferred Mineral Resource to higher confidence categories). The application of a higher gold price (\$1,200/oz) on selected small open pits resulted in a small increase that is offset by increased open pit cut-off grades due to higher general and administrative costs as well as processing costs. Other increases include modelling changes on one of the main underground lodes.
0.01	-	1.80	0.16	10	The addition of Block 5 increased the Ore Reserve by more than depletion.
-	-	7.12	1.26	21	The increase was due to the model updates which resulted in redesigns for Sansu, Blocks 8 and 11, whilst some depletion occurred at Sansu.
(0.02)	-	1.76	(0.30)	(15)	Reduction includes depletion, change in geotechnical designs and change in economics (increase in general and administrative costs as well as processing costs) which were offset by planning based on revised Tubani and Bidini Mineral Resource models.
(0.03)	-	-	(0.06)	(100)	The remaining Ore Reserve was written off.
-	-	1.58	(0.05)	(3)	Stockpile material was processed from April 2018 until December 2019.
0.05	-	1.51	0.18	13	Depletions occurred at Nyankanga (open pit) Cut 8, Star and Comet and Nyankanga underground operations. Increases were driven by the mine's ongoing exploration programme at both underground operations. The majority of the increase was at Nyankanga Blocks 3 and 4 which was achieved by converting Inferred to Indicated Mineral Resource and grade control drilling.
0.17	-	17.93	1.60	10	
0.01	-	2.17	(0.47)	(18)	Normal operational additions and depletions occurred. Sources processed were Sulphur Paydam, East and South East Extension TSFs. The West Extension TSF which is now below cut-off grade was excluded from the Ore Reserve.
0.00	-	1.93	(0.24)	(11)	Normal depletions for 2019. Sources processed were Harties 1, 2 and 7 TSFs. Harties 2 was re-estimated post drilling. Harties 5 and 6, which were below the cut-off grade, were excluded from the Ore Reserve.
0.00	-	0.27	(0.06)	(18)	Sources processed were Mponeng low grade stockpile and Old North L19 TSF. The L19 Old North TSF was re-estimated post drilling. The L18 portion of Old North TSF was excluded from the Ore Reserve as it is below cut-off grade.
(0.01)	-	11.10	(0.54)	(5)	Reductions were due to depletion and changes brought about by new low grade sampling results.
0.00	-	15.47	(1.32)	(8)	
(0.04)	-	0.77	(0.30)	(28)	Depletion caused the main change for Cerro Vanguardia (CVSA) with other losses from Mineral Resource charges. Updated economic parameters resulted in an increased Ore Reserve.
0.19	-	1.76	0.06	4	At all three mines, depletion was offset by exploration (Mineral Resource conversion drilling). At Cuiabá, increases resulted from mine design updates while general and administrative costs impacted negatively. At Lemego, costs and geotechnical changes caused minor change. At CdS a change in revenue factor based on incremental net present value (NPV) negatively impacted on Ore Reserve.
(0.04)	-	0.41	0.02	5	Depletion was offset by exploration (Mineral Resource conversion drilling) and methodology changes. Cost decrease mainly due to cost reduction actions and exchange rate thereby increasing Ore Reserve. Geotechnical changes to design and pillar layout were positive. In the open pits, changes to the revenue factor and other factors caused reductions.
-	-	1.76	-	-	No change from 2018.
-	0.12	2.53	0.30	14	The Ore Reserve increased due to remodelling of the Mineral Resource and re-optimisation of the sub-level cave mining design as well by a change in ownership percentage.
0.11	0.12	7.22	0.09	1	
(0.00)	-	1.10	(0.10)	(8)	Reduction due to depletion, a reduced recovery percentage and increased cost. Golden Delicious was added to the Ore Reserve and Measured Mineral Resource was downgraded to Probable Ore Reserve. Exploration additions were also forthcoming from Vogue. Stockpile depletion continued so as to keep the mill running at capacity.
(0.09)	-	2.12	(0.50)	(19)	Depletion from Havana 3 and Havana South pits and mining to completion in Tropicana 2 pit accounted for the majority of the change. The remainder of the change is as a result of additional drilling and Mineral Resource modelling methodology.
(0.10)	-	3.22	(0.60)	(16)	
0.18	0.12	43.86	(0.23)	(1)	
Other	Acquisition / disposal	Current year	Net diff	%	Comments
-	150	3,068	300	11	The Ore Reserve increased due to remodelling of the Mineral Resource and re-optimisation of the sub-level cave design as well by a change in ownership percentage.
-	150	3,068	300	11	
-	150	3,068	300	11	



## SECTION 2

# CONTINENTAL AFRICA



Regional overview	20
Democratic Republic of the Congo (DRC)	22
Ghana	32
Republic of Guinea (Guinea)	56
Mali	70
Tanzania	82

## 47%

contribution to group production\*

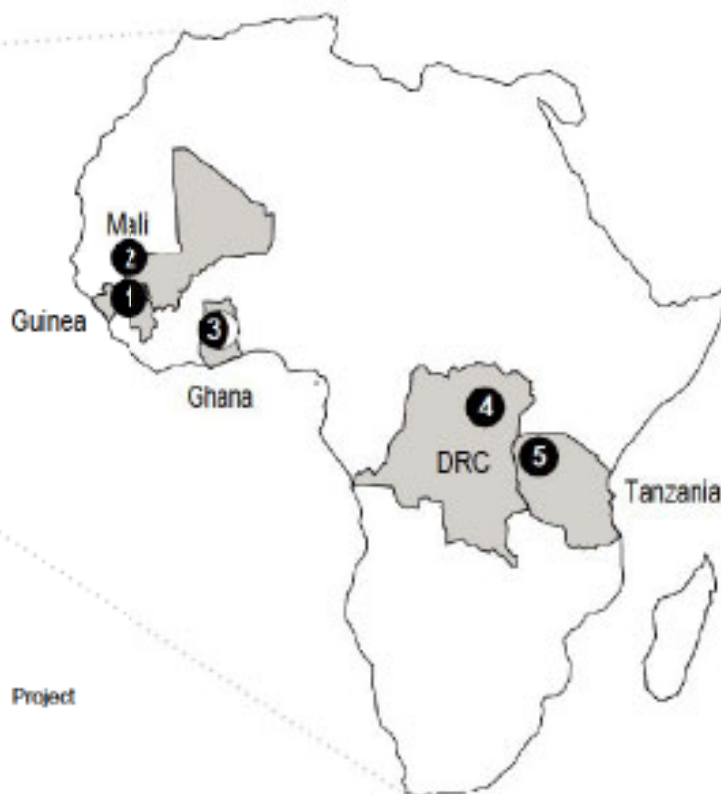
\* Group including South African Operations





# REGIONAL OVERVIEW

## Continental Africa



### LEGEND

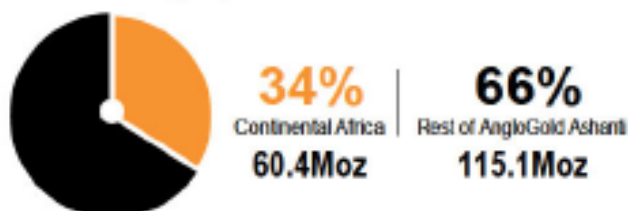
- 1 Guinea Siguri (85%)
- 2 Mali Sadiola (41%)
- 3 Ghana Iduapriem/Obuasi
- 4 DRC Kibali (45%)
- 5 Tanzania Geita

● Operation ○ Project  
0 2,000km

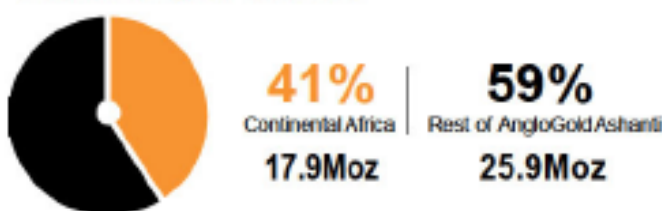
### Key statistics

	Units	2019	2018	2017
<b>Operational performance</b>				
Tonnes treated/milled	Mt	26.6	27.3	28.0
Recovered grade	oz/t	0.052	0.050	0.047
	g/t	1.80	1.72	1.61
Gold production	000oz	1,538	1,512	1,453
Total cash costs	\$/oz	759	773	720
All-in sustaining costs <sup>(1)</sup>	\$/oz	896	904	952
Capital expenditure	\$m	410	313	409

### Contribution to group Mineral Resource



### Contribution to group Ore Reserve





As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for the Continental Africa region was 60.4Moz (2018: 64.1Moz) and the Ore Reserve 17.9Moz (2018: 16.3Moz).

This is equivalent to 34% and 41% of the group's Mineral Resource and Ore Reserve respectively. Combined production from these operations totalled 1.54Moz of gold in 2019, or 47% of group production<sup>1</sup>.

We have seven mining operations within the Continental Africa region:

- Kibali in the DRC, a joint venture (JV) with Barrick and Société Minière de Kilo-Moto (SOKIMO), the state-owned gold mining company
- Iduapriem in Ghana
- Obuasi in Ghana
- Siguiri in Guinea
- Sadiola in Mali, a JV with IAMGOLD and the state of Mali
- Geita in Tanzania

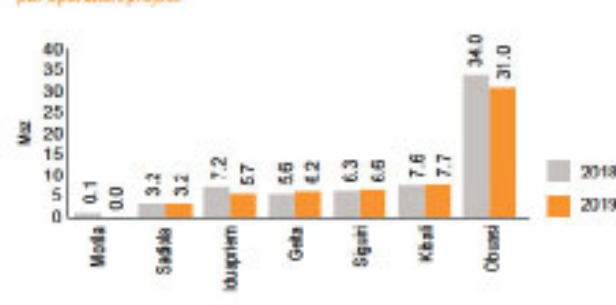
Mining is from both open pit and underground, with Obuasi being an underground mine, Iduapriem, Siguiri and Sadiola being open pit mines, and Kibali and Geita being a combination of open pit and underground mines.

An agreement and sale was announced in December 2019 for Sadiola<sup>2</sup>.

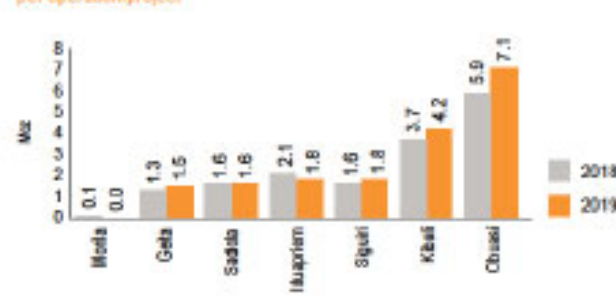
<sup>1</sup> Group including South African Operations

<sup>2</sup> Refer to the IR for more information

Continental Africa Mineral Resource  
per operation/project



Continental Africa Ore Reserve  
per operation/project



### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Continental Africa	Measured	48.01	3.09	148.48	4.77
	Indicated	425.15	2.62	1,113.36	35.80
	Inferred	169.14	3.65	618.15	19.87
	<b>Total</b>	<b>642.30</b>	<b>2.93</b>	<b>1,879.99</b>	<b>60.44</b>

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Continental Africa	Measured	9.83	3.21	31.57	1.01
	Indicated	254.04	2.60	659.80	21.21
	Inferred	162.29	3.62	587.45	18.89
	<b>Total</b>	<b>426.16</b>	<b>3.00</b>	<b>1,278.81</b>	<b>41.11</b>

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Continental Africa	Proved	30.89	1.71	52.76	1.70
	Probable	176.72	2.86	606.05	16.24
	<b>Total</b>	<b>207.62</b>	<b>2.69</b>	<b>657.80</b>	<b>17.93</b>

# DEMOCRATIC REPUBLIC OF THE CONGO

## Continental Africa



**K**ibali, one of the largest mines of its kind in Africa, is situated in the DRC, adjacent to the town of Doko and 210km from Arua on the Ugandan border. Kibali is co-owned by AngloGold Ashanti (45%), Barrick (45%) following its merger with Randgold Resources Limited, and SOKIMO (10%), a state-owned gold mining company.

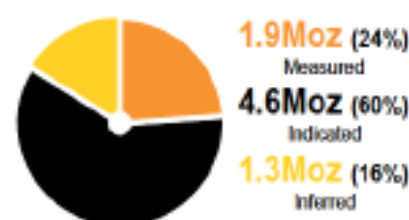
The consolidated lease is made up of 10 mining concessions. The metallurgical plant comprises a twin-circuit sulphide and oxide plant with conventional carbon-in-leach (CIL), including gravity recovery.

Barrick operates the mine which comprises both open pit and underground operations.

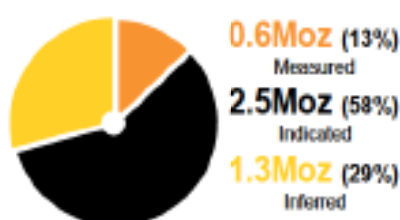
Attributable production from the DRC was 365koz of gold in 2019, or 24% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for the DRC was 7.7Moz (2018: 7.7Moz) and the Ore Reserve was 4.2Moz (2018: 3.7Moz).

**Inclusive Mineral Resource**



**Exclusive Mineral Resource**



**Ore Reserve**







# KIBALI

## Continental Africa

### Introduction

<b>Property description</b>	Operations currently focus on openpit and underground mining. Development of the underground mine commenced in 2013 and production ramped up to 3.6Mt in 2019. Initial production was via a twin decline from surface. From 2018 onwards, the majority of ore was hoisted up the shaft. The decline to surface is used to haul some of the shallower zones and to supplement shaft haulage.
<b>Location</b>	Kibali is located in the northeastern part of the DRC near the international borders with Uganda and South Sudan. The mine is located adjacent to the village of Doko, which is located to the west of the lease area. Kibali is approximately 210km by road from Arua and immediately north of the district capital of Watsa. The operational area falls within the administrative territory of Watsa in Haut-Uele province.
<b>History</b>	<p>On 15 October 2009, we acquired a 50% indirect interest in Moto Goldmines Limited through a JV with Randgold, with Moto holding a 70% stake in Kibali and the balance (30%) being held by the DRC parastatal, SOKIMO. On 21 December 2009, Randgold and AngloGold Ashanti increased their JV interest in Kibali to 90%, while SOKIMO retained a 10% holding. On 2 January 2019, Randgold merged with Barrick and the JV is now with the combined company, trading as Barrick.</p> <p>First gold was poured in September 2013 from the open pit operations and development of the underground mine commenced in the same year. First underground ore from development was also mined in 2013 and stoping began in 2015. Underground production has since ramped up to 1.8Mt in 2017, 3.5Mt in 2018 and 3.6Mt in 2019. Initial production was truck hauled by a twin decline to surface. In 2017, the haulage shaft (740m deep) and materials handling system were commissioned.</p>
<b>Legal aspects and tenure</b>	The Mineral Resource and Ore Reserve is covered by exploitation permits (11447, 11467, 11468, 11469, 11470, 11471, 11472, 5052, 5073 and 5088) totalling 1,836km <sup>2</sup> . Kibali was granted 10 exploitation permits under the DRC mining code, seven of which are valid until 2029 and three are valid until 2030. All necessary government agreements and approvals required for the mine are in place.
<b>Mining method</b>	<p>The operation comprises both open pit and underground mining. The open pit Ore Reserve shell optimisations are conducted on the Mineral Resource models. Detailed mine designs are then completed for open pit mining. This incorporates the mining layout, operating factors, stripping ratio, relevant cut-off grades, and modifying factors required for the reporting of Ore Reserve.</p> <p>For the underground operation, longitudinal and transverse longitudinal stoping methods with paste backfill are used as the mining methods.</p>
<b>Operational infrastructure</b>	The mine site is located within 160km of the border with Uganda and all transport links take place through Uganda to Kenya or Tanzania. Surface infrastructure associated with the overall Kibali operation includes a processing plant, TSF, camp, airstrip, workshops and offices. Power to the mine is self-generated by a combination of hydroelectric and diesel generators.
<b>Mineral processing</b>	The current processing plant can treat both oxide and fresh sulphide material and uses flotation with ultra-fine grind of the flotation concentrate, a treatment that is required for the sulphide ore type before leaching. Kibali has a processing operation capable of producing an average of 600koz of gold per annum by treating 7.2Mtpa throughput.
<b>Risks</b>	There are no known material risks that will impact on the Mineral Resource and Ore Reserve.

### Geology

#### Deposit type

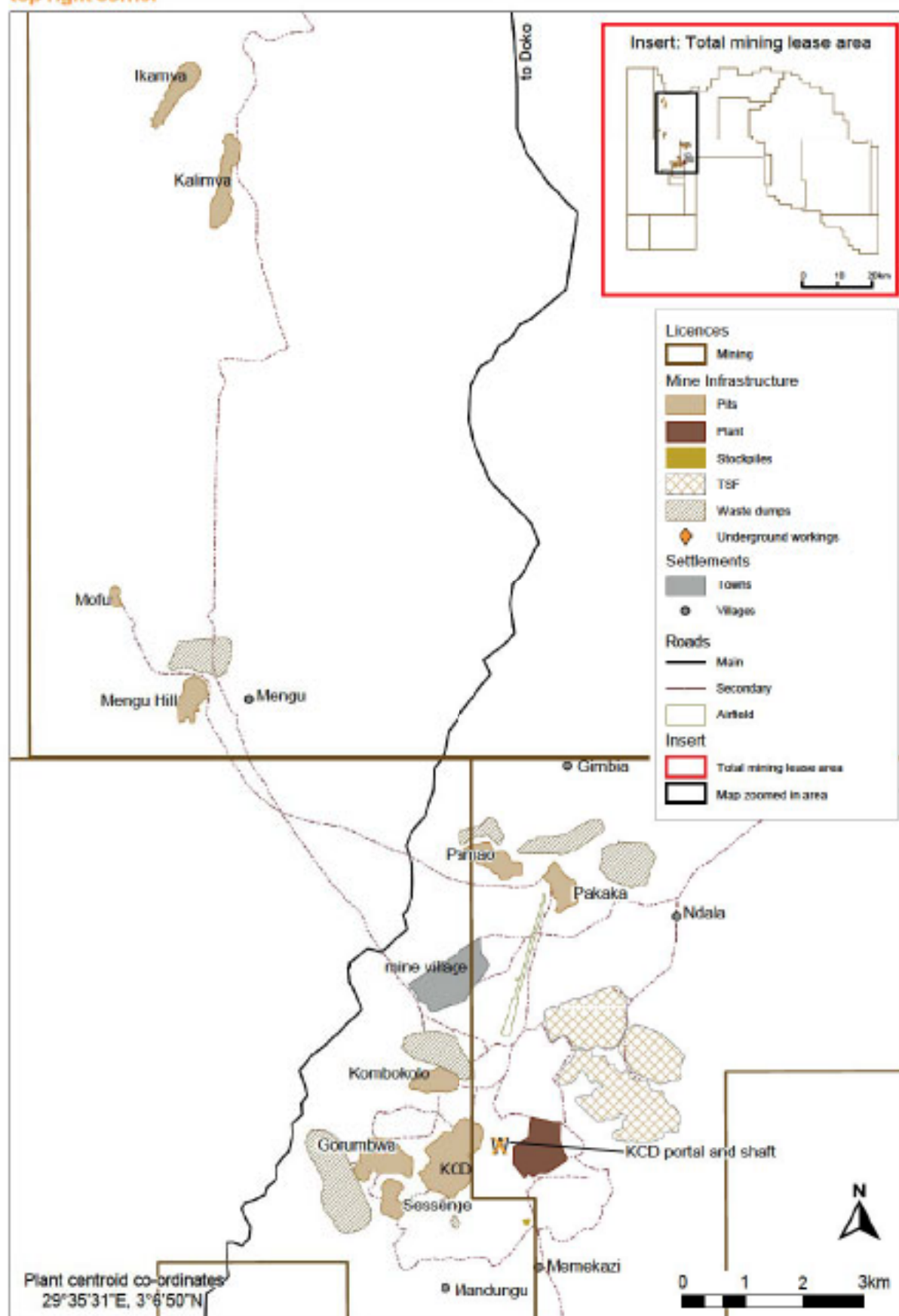
Deposits of the Kibali district are located in the Archaean Moto Greenstone Belt bounded to the north by the West Nile Gneiss and to the south by plutonic rocks of the Watsa district. The belt comprises three lithostratigraphically distinct blocks. The eastern portion of the belt comprises of psammopelitic schists, amphibolite, banded iron formation (BIF), and gneissic granitoid sills metamorphosed under upper greenschist to low-mid-amphibolite facies conditions. Relative weakly foliated basalts, cherts, siliciclastic rocks, dacitic volcanoclastic rocks, and carbonaceous argillite metamorphosed under mid-to-upper greenschist facies conditions comprise the central and western-most parts of the belt. Granitoid plutons, aged ca. 2,460Ma, intrude these rocks.

A thick package of immature sandstone, gritstone, conglomerate, and probably acid tuffs forms much of the western part of the belt, including the host rocks to Karagba, Chauffeur and Durba (KCD), the largest deposit discovered to date within the belt. Radiometric dating indicates these siliclastic rocks were deposited during a belt-wide basin extension event between ca. 2,629Ma and 2,626Ma with much of the detritus derived from adjacent older parts of the belt.

Boundaries between these lithostratigraphic blocks represent important exploration targets.

The main Kibali deposit consists of a combination of the KCD deposits. Currently, only the KCD deposits host an underground Ore Reserve and this constitutes 76% of the total Kibali Ore Reserve.

Map showing Kibali mine infrastructure and licences with the total mining lease area insert shown in the top right corner

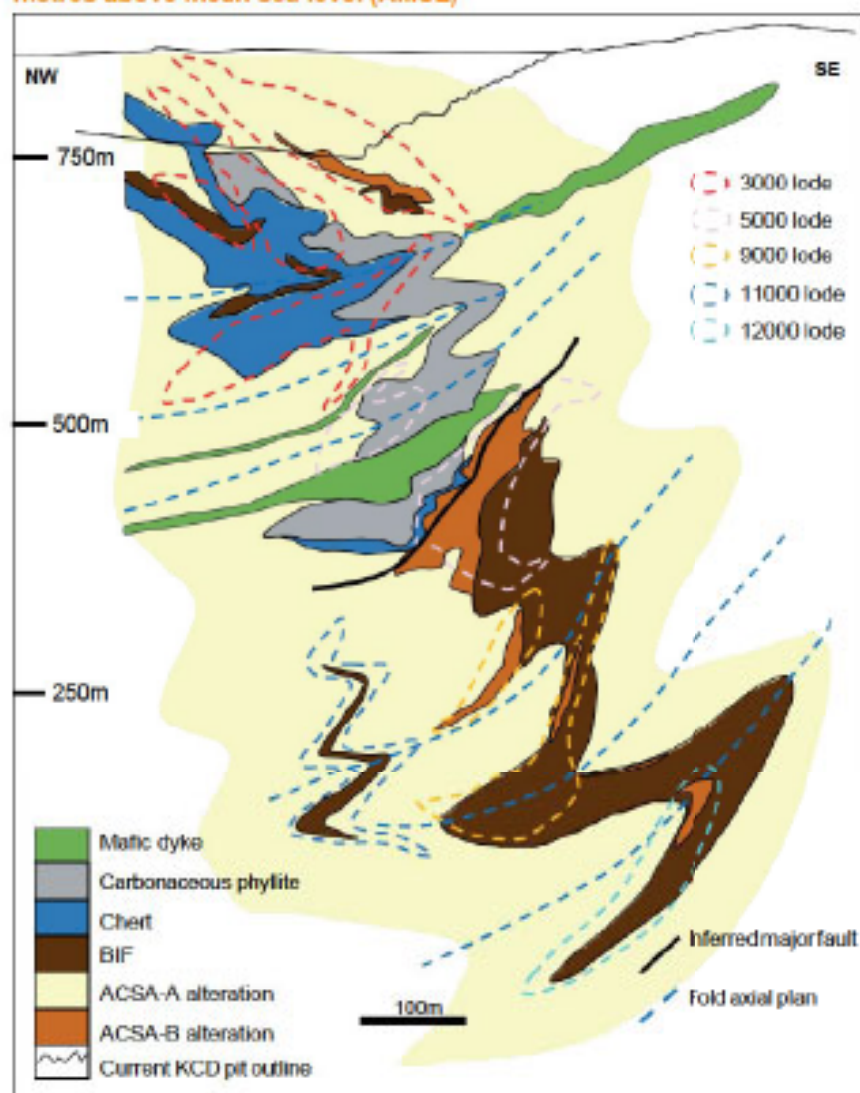




# KIBALI CONTINUED

## Continental Africa

NW-SE Geological cross-section through the KCD orebody, elevation in metres above mean sea level (AMSL)



### Mineralisation style

Gold deposits of the Kibali district are classified as Archean orogenic gold deposits. At Kibali, the gold deposits are largely hosted in siliciclastic rocks, BIF and chert that were metamorphosed under greenschist facies conditions. Ore-forming  $H_2O-CO_2$ -rich fluids migrated along a linked network of gently northeast-dipping shears and northeast to north-northeast plunging fold axes that are commonly referred to as the KZ Trend. The richly mineralised KZ Trend appears to have initiated as an extensional fault system along the boundary between the relatively young basin in the western part of the belt and older rocks to the east. Mineralisation occurred during the later stages of subsequent regional contractional deformation which resulted in inversion of the basin and the development of reverse faults and folds. Ongoing deformation during hydrothermal activity resulted in development of lodes in a variety of related structural settings within the KZ Trend. The source(s) of metal and fluids, which formed the deposits remain unknown, but metamorphic devolatilisation reactions within the supracrustal rocks of the Molo Greenstone Belt and/or deeper fluid and metal sources may have contributed.

### Mineralisation characteristics

Gold deposits of the Kibali district are associated with halos of quartz, ankerite and sericite (ACSA-A alteration) that extend for 10s to 100s of metres into the adjacent rocks. This widespread ACSA-A alteration assemblage is superimposed on older greenschist facies metamorphic assemblages. Locally, in the vicinity of the main mineralised zones, ACSA-A alteration is overprinted by ankerite-siderite, pyrite alteration (ACSA-B) that hosts the ore. Gold is directly associated with the ACSA-B alteration assemblage. In smaller peripheral deposits a late chlorite, carbonate, pyrite assemblage is associated with the ore rather than the ACSA-B assemblage, implying a district-wide zonation of mineral assemblages along and across the mineralised KZ Trend. Zones of auriferous ACSA-B alteration are commonly developed along the margins of BIF, or contacts between chert, carbonaceous phyllite and BIF. Mineralised rocks in the Kibali district typically lack significant infill quartz-rich veins, unlike many other orogenic gold deposits. Gold is instead associated with pyrite in zones of alteration that replaced the earlier mineralogy of the host rocks. Local remobilisation and upgrading of ACSA-B related ore occurred adjacent to the margins of some post-ore cross-cutting chlorite, carbonate, pyrite, magnetite-altered diorite dykes.

The location of the individual lodes within the KCD deposit are intimately controlled by the position, shape, and orientation of a series of gently northeast-plunging tight to isoclinal folds. The ACSA-A alteration developed during the formation of these folds, and the sericite foliation which is an integral part of the ACSA-A assemblage formed parallel to their axial planes. Zones of later auriferous ACSA-B alteration developed along the axes, limbs, and more rarely the axial planes of these folds, locally wrapping around the hinges of the folds to form elongate northeast-plunging concave-shaped rods. ACSA-B alteration is also commonly focused along the margins of more extensive BIFs, indicating a stratigraphic as well as structural control to the distribution of ore, both within KCD, and the wider KZ Trend. Shear zones that were active during folding are a third key structural control on the location of ore within KCD and the wider KZ Trend.



At KCD a folded carbonaceous shear in the core of the deposit juxtaposes stratigraphically distinct blocks. The 3000 lodes above this shear are hosted by locally ferruginous cherts, carbonaceous argillites, and minor greywacke, whereas the 5000 and 9000 lodes below are hosted by siliciclastic rocks and BIF. Fold shapes and wavelength differ between the two blocks reflecting their different rheologies during folding, and this is reflected in the scale, shape, and continuity of lodes in each block. At Pakaka and Kalimva-Ikamva chlorite, carbonate, pyrrhotite, pyrite-altered shear zones rather than folds are the principal controls of gold distribution.

### Exploration

During 2019, KCD was the centre of exploration activities with further testing of the 12000 lode from surface, and continued underground Mineral Resource definition of the up and down dip extensions of the 11000 lode. Continued Mineral Resource definition drilling in KCD underground added 1.1Moz of Mineral Resource to Kibali. At Pakaka and Ikamva, optimisations have commenced to assess the potential for underground opportunities following positive down-plunge drill results. A Kalimva-Ikamva pre-feasibility study (PFS) was successfully completed, adding a new open pit Proved and Probable Ore Reserve, extending the Kibali

open pit life to 2030. Further along the KZ North structure, continued exploration drilling is underway with the aim of defining an additional Mineral Resource at Oere.

Kibali more than replaced depletion of both Mineral Resource and Ore Reserve, whilst also extending the +750Koz gold production to 2025, and +600Koz gold production to 2030. The planned 2020 exploration program is expected to extend this further.

### Projects

During 2019, Kibali delivered a record year of gold production, as an increased and stable plant performance were backed up with a record underground ore production of 3,615kt.

During 2019, the Newtrax radio-frequency identification tracking system was implemented for underground equipment and personnel, providing cost benefits through automation of secondary ventilation and improved equipment utilisation. Additionally, a trial of Sandvik AutoMine Multi-Lite was undertaken, which assists in stabilising the ore feed through the ore passes from production levels and has the potential to further increase the quantity of ore hoisted through the shaft.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	5 x 10, 10 x 25	✓	✓	-	-	-
Indicated	30 x 40, 40 x 40	✓	✓	-	-	-
Inferred	80 x 80	✓	✓	-	-	-
Grade/ore control	5 x 10, 10 x 25	✓	✓	-	-	-

#### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Open pit	Measured	4.35	2.59	11.26	0.36
	Indicated	15.04	2.63	39.51	1.27
	Inferred	5.03	1.98	9.97	0.32
	<b>Total</b>	<b>24.42</b>	<b>2.49</b>	<b>60.73</b>	<b>1.95</b>
Underground	Measured	9.15	4.94	45.23	1.45
	Indicated	28.33	3.66	103.57	3.33
	Inferred	7.03	4.11	28.87	0.93
	<b>Total</b>	<b>44.51</b>	<b>3.99</b>	<b>177.68</b>	<b>5.71</b>
Stockpile	Measured	0.99	1.72	1.70	0.05
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>0.99</b>	<b>1.72</b>	<b>1.70</b>	<b>0.05</b>
<b>Kibali</b>	<b>Total</b>	<b>69.91</b>	<b>3.43</b>	<b>240.11</b>	<b>7.72</b>

# KIBALI CONTINUED

## Continental Africa

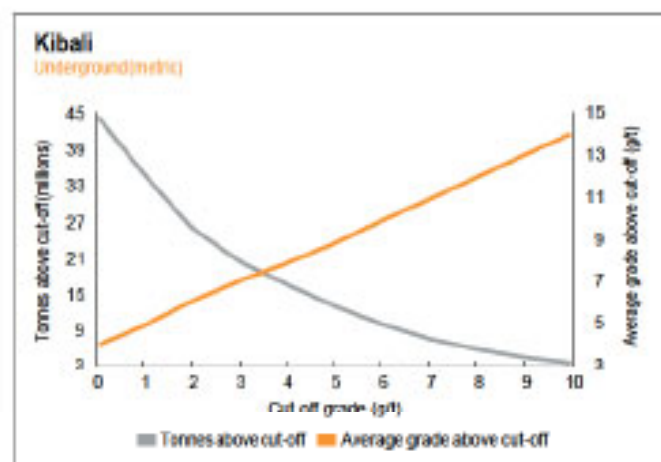
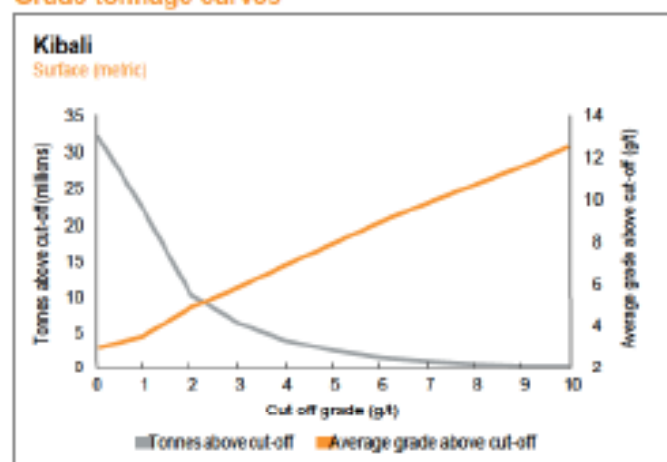
### Estimation

Mineral Resource estimation is undertaken by Barrick in-house Competent Persons or by approved external consultants. The results of both diamond drilling (DD) and reverse circulation (RC) drilling are used in the estimation process. 3D mineralised envelopes are established using grade and geology and these are then statistically verified to confirm their validity for use in grade estimation.

Appropriate domaining of homogeneous zones is conducted whereby high-grade central core areas are modelled separately from the lower-grade surrounding halos. Volumes are filled with

block model cells and interpolated for density, rock type and grade; the latter using ordinary kriging. Grade top cuts and high-yield restricted searches are applied to drill hole data to prevent the spread of high grades during the estimation process. Drill hole spacing is used to guide the Mineral Resource classification. The open pit Mineral Resource is quoted within a limiting shell. The underground Mineral Resource is constrained by the application of optimised mineable Mineral Resource shapes, which applies reasonable mineability constraints including a minimum mining width, a reasonable distance from current or planned development and a measure of assumed profitability at the related Mineral Resource cut-off grade.

### Grade tonnage curves



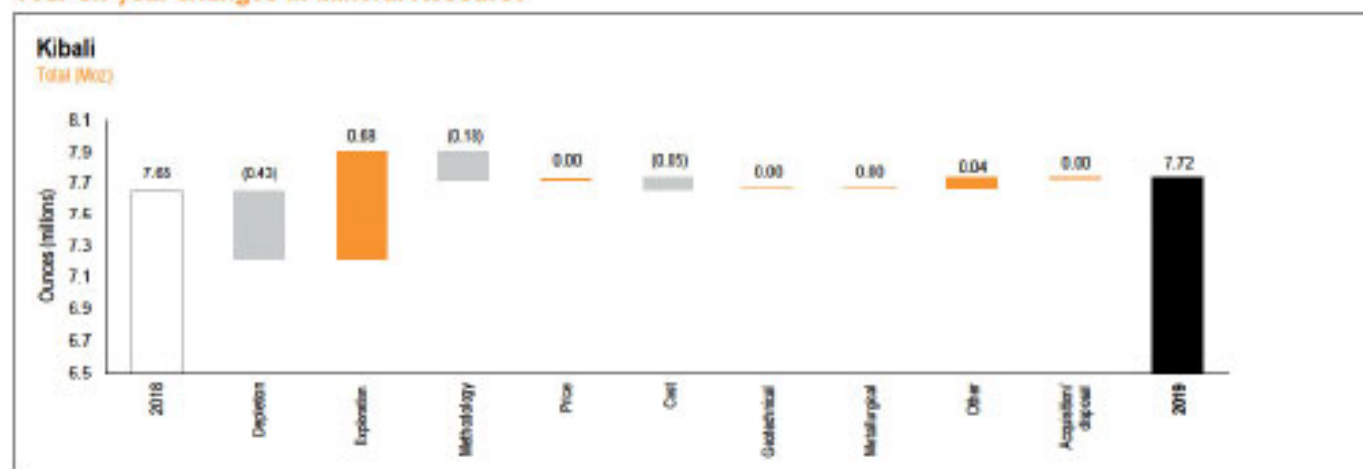
The grade tonnage curve does not include stockpiles.

### Exclusive Mineral Resource

as at 31 December 2019		Tonnes million	Grade g/t	Contained gold	
Category	tonnes			Moz	
Kibali	Measured	5.83	2.98	17.35	0.56
	Indicated	28.93	2.63	76.08	2.45
	Inferred	12.06	3.22	38.64	1.25
	<b>Total</b>	<b>46.81</b>	<b>2.83</b>	<b>132.28</b>	<b>4.25</b>

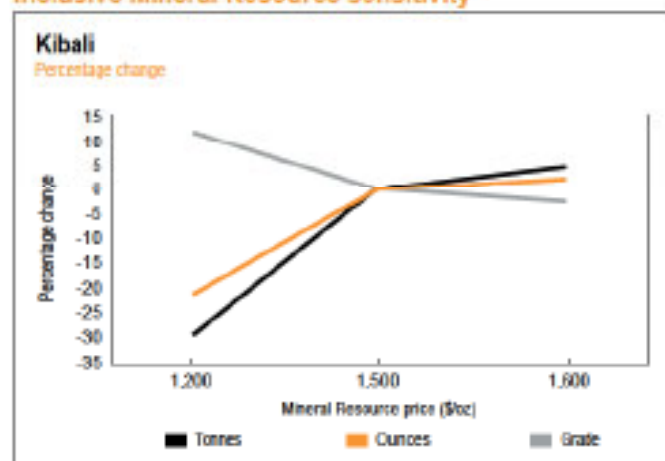
The exclusive Mineral Resource for the open pits largely comprises inferred Mineral Resource and tonnages that occur below the Ore Reserve cut-off grade (due to gold price difference). At the KCD deposit it is also partially due to the selection of a fixed interface between open pit and underground mining areas. Both the open pit and underground Mineral Resource below the Ore Reserve mining cut-off grade form a significant part of this material.

## Year-on-year changes in Mineral Resource



Exploration changes (additional ounces from exploration drilling campaigns) offset the combined impacts of depletion, increase in open pit cut-off grades (higher unit costs) and removal of unrecoverable blocks from underground.

## Inclusive Mineral Resource sensitivity



Kibali Mineral Resource is quoted at \$1,500/oz (used by Barrick, the operating partner) and the sensitivities are run at \$1,200/oz and \$1,600/oz, representing a change of \$200/oz down and \$100/oz up from the Mineral Resource price. Kibali Mineral Resource is highly sensitive to a significant decrease in gold price for both open pit and underground, but less sensitive to an increase in gold price. This is due to the geological constraints placed on the high grade underground mineralisation which leaves a lower grade surrounding margin that only becomes mineable at materially higher gold prices.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Open pit	Proved	2.54	2.79	7.08	0.23
	Probable	7.05	3.14	22.11	0.71
	<b>Total</b>	<b>9.59</b>	<b>3.04</b>	<b>29.19</b>	<b>0.94</b>
Underground	Proved	5.77	5.13	29.58	0.95
	Probable	14.47	4.76	68.88	2.21
	<b>Total</b>	<b>20.23</b>	<b>4.87</b>	<b>98.46</b>	<b>3.17</b>
Stockpile	Proved	0.99	1.72	1.70	0.05
	Probable	-	-	-	-
	<b>Total</b>	<b>0.99</b>	<b>1.72</b>	<b>1.70</b>	<b>0.05</b>
<b>Kibali</b>	<b>Total</b>	<b>30.81</b>	<b>4.20</b>	<b>129.35</b>	<b>4.16</b>



# KIBALI CONTINUED

## Continental Africa

### Estimation

The open pit Ore Reserve shell optimisations were run on the Mineral Resource models. The process incorporated the mining layout, operating factors, stripping ratio, relevant cut-off grades and modifying factors for reporting the Ore Reserve. An open pit underground interface was set at 5,685mRL between the KCD open pit and underground mine.

A cut-off grade analysis at \$1,200/oz was used to determine a cut-off grade of 2.4g/t for the underground mine. Longitudinal and

transverse longhole open stoping methods with paste backfill are the current preferred mining methods. Underground slope designs were updated from the previously reported Ore Reserve using the latest Mineral Resource models. Modifying factors for planned and unplanned rock dilution, backfill dilution and ore loss were applied to obtain the reported Ore Reserve.

Metallurgical, environmental, social, legal, marketing and economic factors were adequately considered in the Kibali FS and have been updated as the project has developed.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	Dilution %	Dilution g/t	NCF %	MetRF %
Open pit	1,200	1.50	10.0	-	100.0	84.5
Underground	1,200	2.40	4.0	1.0	100.0	89.8
Stockpile	1,200	0.00	-	-	100.0	88.0

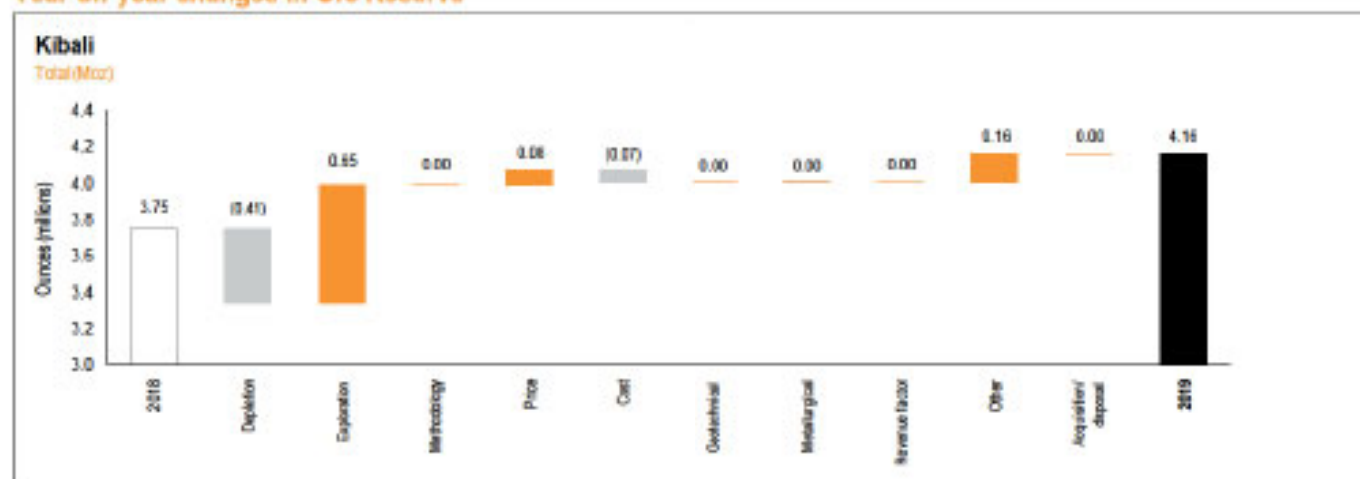
\$1,200/oz Ore Reserve price was used by Barrick, the operating partner.



### Inferred Mineral Resource in business plan

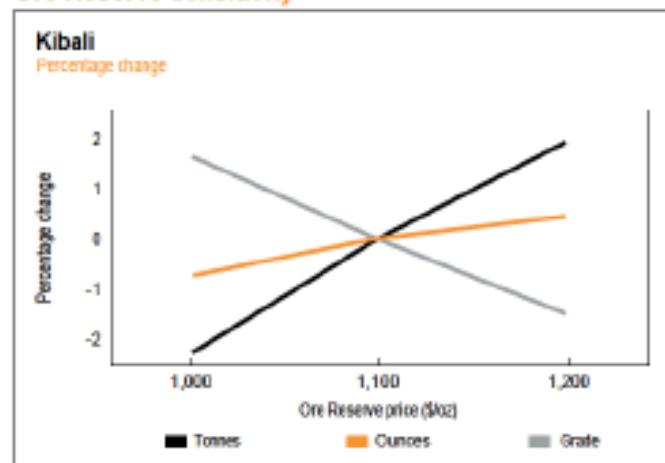
There is no Inferred Mineral Resource included in the reported Ore Reserve for Kibali. The current mine plan has no reliance on the Inferred Mineral Resource to support the economic viability of the project for the main KCD deposit.

### Year-on-year changes in Ore Reserve



Mining depletion was more than offset by significant exploration changes (conversion of Inferred Mineral Resource to higher confidence categories) and subsequent inclusion in Ore Reserve based on study outcomes. The application of a higher gold price (\$1,200/oz) on selected small open pits resulted in a small increase that is offset by increased open pit cut-off grades due to higher general and administration costs as well as processing costs. The 'other' reconciliation item predominantly relates to modelling changes on one of the main underground lodes.

### Ore Reserve sensitivity



Kibali underground Ore Reserve is insensitive to a small change in gold price because it is geologically constrained and the current Ore Reserve designs effectively mine the entire high grade shoots, with the surrounding halo of mineralisation providing dilution. The open pit Ore Reserve has a limited sensitivity due to data constraints within the higher confidence Measured and Indicated Mineral Resource. A \$1,200/oz Ore Reserve price was used.

### Competent Person

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource and Ore Reserve	Simon Bottoms <sup>(1)</sup>	Geological Society of London (FGS CGeol)	1 023 769	10 years	MGeol

<sup>(1)</sup> Employed by Barrick as SVP, Africa and Middle East Mineral Resource Manager, 3rd Floor, Unity Chambers, 28 Halkett Street, St. Helier, Jersey, Channel Islands

# GHANA

Continental Africa



**W**e have two mines in Ghana. Obuasi, currently in a redevelopment phase, is an underground mine operating at depths of up to 1,500m with a continuous history of mining dating back to the 1890s and Iduapriem, an open pit mine.

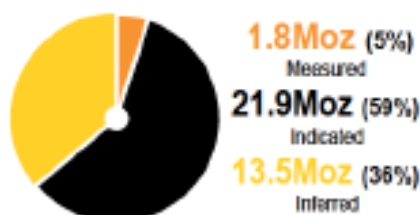
Obuasi underground development restarted in the first half of 2019 with the first gold produced in December 2019.

Obuasi and Iduapriem are both wholly owned by AngloGold Ashanti. Obuasi is located in the Ashanti region of southern Ghana, approximately 80km south of Kumasi. Mining was temporarily suspended at the end of 2014 while a series of economic studies progressed. Iduapriem is located in western Ghana, some 85km from the coast and south of Obuasi, near the town of Tarkwa.

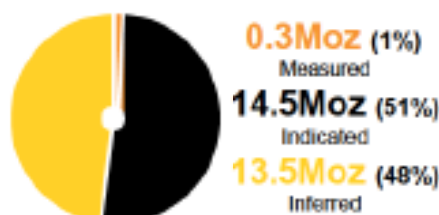
Attributable production from Ghana was 277koz of gold in 2019, or 18% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for Ghana was 37.2Moz (2018: 39.6Moz) and the Ore Reserve was 8.9Moz (2018: 7.5Moz).

### Inclusive Mineral Resource



### Exclusive Mineral Resource



### Ore Reserve







# IDUAPRIEM

## Continental Africa

### Introduction

<b>Property description</b>	Iduapriem Mine is wholly owned by AngloGold Ashanti. It is a multiple open pit operation that currently sources ore from the Ajopa and Block 7 and 8 pits.
<b>Location</b>	The mine is located in the western region of Ghana, some 70km north of the coastal city of Takoradi and approximately 10km southwest of the town of Tarkwa. Iduapriem Mine is bordered to the north by Gold Fields Ghana Limited (Tarkwa Mine) and to the east by the Ghana Manganese Company Limited (a manganese mine in existence since the 1920s).
<b>History</b>	<p>A FS was completed in 1990 and in October 1991 Golden Shamrock Limited (Golden Shamrock) began construction of a 1.36Mtpa semi-autogenous milling circuit and carbon-in-pulp (CIP) plant. Mining commenced in August 1992 with the first gold pour achieved in September of that year.</p> <p>Golden Shamrock was acquired by Ashanti Goldfields Company Limited in 1996. In 2000, a portion of the non-operational Teberebie Goldfields Limited company (a subsidiary of Pioneer Goldfields Limited) was purchased resulting in an increased Ore Reserve and LOM. In 2002, Ashanti upgraded the plant capacity to 4Mtpa and in 2009 the plant capacity was further extended to the current 5Mtpa.</p>
<b>Legal aspects and tenure</b>	<p>Iduapriem comprises the following mining leases:</p> <ul style="list-style-type: none"> <li>- Iduapriem Concession – LVB1539/89 covering 36.47 km<sup>2</sup>, expired but extension granted to December 2019</li> <li>- Ajopa Concession – LVB/WR326/09 covering 46.12km<sup>2</sup>, expired but extension granted to December 2019</li> <li>- Teberebie Concession – LVB3722H/92 covering 28.98km<sup>2</sup>, expired but extension granted to December 2019</li> <li>- Ajopa South West Concession – covering 28.10 km<sup>2</sup>, expired but extension granted to December 2019</li> </ul> <p>Applications have been submitted to the minerals authority for the renewal of the mining permits which, according to Ghanaian law, allows for the continuation of mining on the expired leases while the renewal process is in progress and the proposed licence boundaries are shown on page 35.</p> <p>The environmental certificate for the project expired in October 2017. However, the 2017- 2020 Environmental Management Plan (EMP), which is required to renew the certificate, was submitted on 6 April 2017. Comments were received by the mine from the Environmental Protection Agency (EPA) in June 2017 together with invoices for payment of the permit fees for the certificate. AAAIL submitted the revised EMP (with the EPA's comments addressed) to the EPA on 10 August 2018 and made the required payments. The certificate is still pending at the time of writing this report. The Chamber of Mines is currently engaging with the regulator (EPA) on behalf of the company and other sister mines whose certificates and other permits are outstanding.</p> <p>There is reasonable basis to believe that all permits required for the project will be obtained.</p>
<b>Mining method</b>	Iduapriem Mine is an open pit mine which makes use of contract mining. It uses conventional drill and blast, with truck and excavator load and haul.
<b>Operational infrastructure</b>	Surface infrastructure associated with Iduapriem's operation includes a primary crusher, overland conveyor, CIL processing plant next to the main office building, a TSF and two camp areas for contractors and company employees. Tarkwa town is also adjacent to the tenement. Power is supplied to the mine by the Volta River Authority and GridCo.
<b>Mineral processing</b>	The current processing plant treats free-milling material from open-cast mining, by a conventional crush with a semi-autogenous ball milling circuit and cyanide leach. Iduapriem operates a two stage crushing circuit consisting of a 54-75 primary gyratory crusher and two GP550 gyratory crushers for secondary crushing. The Iduapriem treatment plant has two semi-autogeneous grinding mills (SAG mills) and two ball mills which run in two parallel circuits, each with a SAG mill and a ball mill.
<b>Risks</b>	Power reliability and stability, slope/high wall stability (rockfall potential) and inrush/inundation (flooding of pits, TSFs and infrastructure) are considered potential risks. Mitigation plans are in place to manage these risks. The future lower mining cost is a risk going forward if not realised, however there is a realistic expectation it will be achieved through competitive bidding.







# IDUAPRIEM CONTINUED

## Continental Africa

### Geology

Iduapriem Mine is located within the Tarkwaian Group which forms part of the West African Craton that is covered to a large extent by metavolcanics and metasediments of the Birimian Supergroup. In Ghana, the Birimian terrane consists of northeast-southwest trending volcanic belts separated by basins and the Tarkwaian Group was deposited in these basins as shallow water deltaic sediments. The Tarkwaian lithologies are considered to represent the erosion products that accumulated following uplift and deformation of the underlying Birimian rocks during the Eburnean orogeny. The basins (grabens) are believed to have formed as a result of rifting, preferentially in the central parts of the Birimian volcanic belts. The Tarkwaian Group consists of a thick sequence of clastic metasedimentary rocks which have undergone low grade regional metamorphism.

### Deposit type

At Tarkwa, the entire Tarkwaian Group has been folded into a broad syncline and is locally referred to as the Tarkwa Syncline. The Banket Series Formation comprises a sequence of individual quartz pebble conglomerates (Banket beds), breccia conglomerates and metasandstones (also called quartzites and grits). All known gold mineralisation within the Banket Formation is associated with

the conglomerates and is found within the matrix that binds the pebbles together. Gold content is a function of the size and amount (packing) of quartz pebbles present within a conglomeratic unit – the bigger and/or more pebbles present, the higher the gold grade. The upper stratigraphic limit of the Banket Series Formation is marked by the hangingwall quartzite which exhibits well-developed and characteristic trough- and cross-bedded haematitic black sand banding. The hangingwall quartzite which also contains thin discontinuous grit interbeds. Dykes and sills of doleritic composition intrude the sedimentary sequence and frequently occur adjacent to complex structural zones. All gold mineralisation generally occurs within four specific zones or reefs.

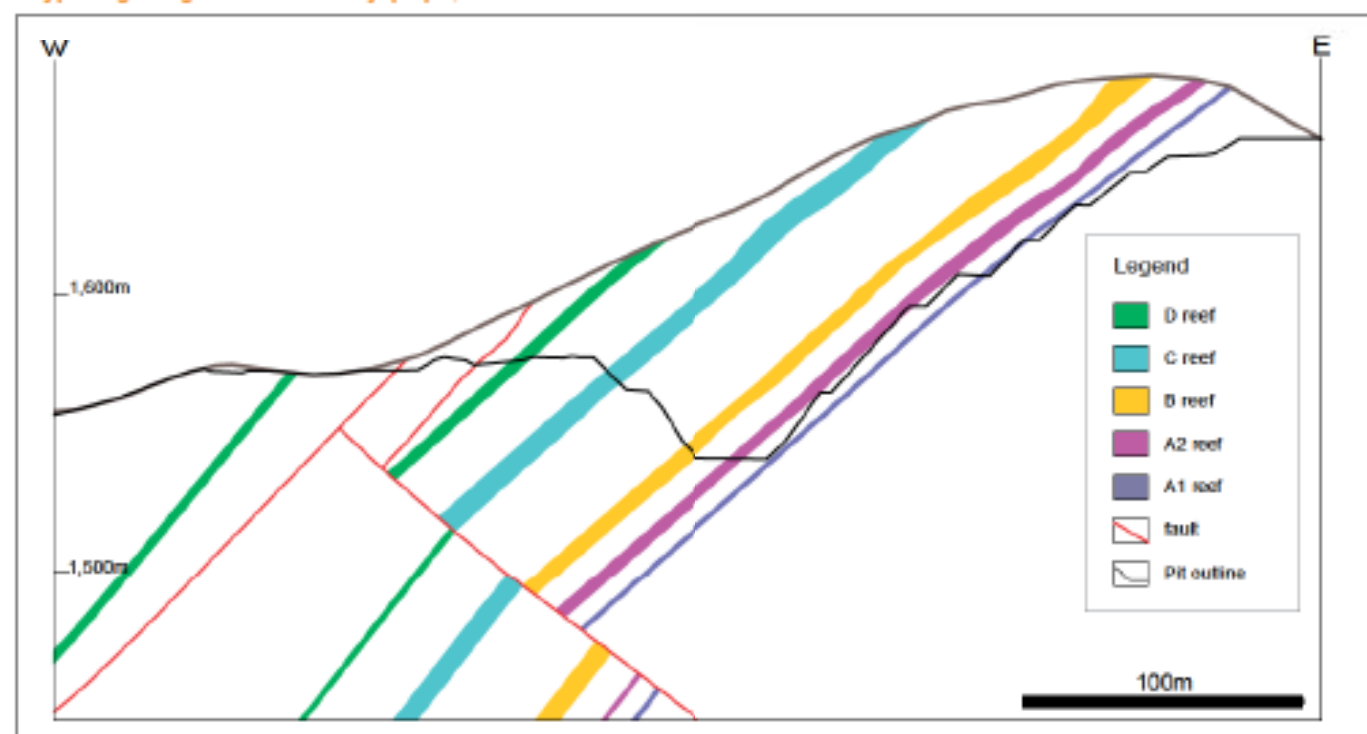
### Mineralisation style

There are four recognised conglomerate reefs namely A, B, C and D which are equivalent to the Tarkwaian Sub-basal, Basal (or Main), Middle (or West) and Breccia Reefs respectively. The B and C reefs are oligomictic, and consist of well sorted conglomerates and have been mined underground in some areas for more than a century ago. The A and D reefs have a lower gold tenor and are polymictic containing both well rounded and angular fragments.

### Mineralisation characteristics

The gold is fine-grained, free milling and not associated with sulphides.

### A typical geological section of Ajopa pit, elevation in mRL\*



\* mRL = 1,483.386m AMSL

## Exploration

At Iduapriem 21,279m were drilled. Exploration focused on Mineral Resource conversion drilling at Block 1, Ajopa, Efuanta and Block 4S.

Regional mapping of the hydrothermal targets commenced during the year as well as auger drilling at Mile 8 and Mile 5W targets.

At Block 1, the reef package observed confirms the stratigraphy to be similar to that developed in Block 7 and 8. Significant intersections were returned for samples submitted from all drill holes.

At Ajopa, 39 holes were drilled. Sample results received from the lab showed significant results in the B and C reefs and thin widths of duplicated reef often surrounded by low grade material. While, at Efuanta the phase 1 drilling was completed. C reef (6m thick) and D reef (11m thick) were intersected. Gold mineralisation was intercepted at shallower depth within potassic altered quartzite units.

In Block 4S, 1,534.1m was drilled and significant intersections returned.

Regional mapping & drilling commenced with mapping of the hydrothermal target areas where grab samples returned very low gold tenors. Detailed mapping was carried out and indicated that the area is underlain with regolith with limited exposure to outcrops for sampling. Auger drilling at Mile 8 target commenced.

## Projects

No major projects have recently been completed or are planned at Iduapriem. Geology projects planned include mine-wide geochemical sampling, Mineral Resource drilling at Blocks 7 and 8, Ajopa and Block 5 extension.

## Mineral Resource

### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	20 x 15	-	✓	-	-	-
Indicated	50 x 75	✓	✓	-	-	-
Inferred	100 x 100	✓	✓	-	-	-
Grade/ore control	20 x 15	-	✓	-	-	-

In general, 200 x 200m drill hole spacing is used to define the extent and geometry of an anomaly. The majority of the Mineral Resource area has been drill tested at a spacing of a 100 x 100m with the spacing closed up to 50 x 75m for the shallower, Indicated Mineral Resource.

The appropriate grid for each phase is optimised for each project based on the geometry of the mineralisation, the continuity of geology and grade, and mining experience from the pits.

In some cases, the data spacing may be reduced where structural complexity is encountered. Apart from the major fault structures, geological continuity is considered to be very good with the conglomerate reefs being laterally consistent and continuous.

# IDUAPRIEM CONTINUED

## Continental Africa

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Ajopa	Measured	-	-	-	-
	Indicated	4.30	1.60	6.90	0.22
	Inferred	1.13	1.41	1.59	0.05
	<b>Total</b>	<b>5.43</b>	<b>1.56</b>	<b>8.49</b>	<b>0.27</b>
Block 1	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	2.81	1.64	4.60	0.15
	<b>Total</b>	<b>2.81</b>	<b>1.64</b>	<b>4.60</b>	<b>0.15</b>
Block 3W	Measured	-	-	-	-
	Indicated	4.95	1.19	5.91	0.19
	Inferred	3.50	1.25	4.36	0.14
	<b>Total</b>	<b>8.46</b>	<b>1.21</b>	<b>10.27</b>	<b>0.33</b>
Block 5	Measured	-	-	-	-
	Indicated	5.19	1.18	6.14	0.20
	Inferred	2.16	1.26	2.72	0.09
	<b>Total</b>	<b>7.34</b>	<b>1.21</b>	<b>8.85</b>	<b>0.28</b>
Block 7 and 8 (other)	Measured	-	-	-	-
	Indicated	47.22	1.50	70.90	2.28
	Inferred	18.64	1.60	29.74	0.96
	<b>Total</b>	<b>65.86</b>	<b>1.53</b>	<b>100.64</b>	<b>3.24</b>
Block 7 and 8 East cutback	Measured	-	-	-	-
	Indicated	27.49	1.60	44.00	1.41
	Inferred	-	-	-	-
	<b>Total</b>	<b>27.49</b>	<b>1.60</b>	<b>44.00</b>	<b>1.41</b>
Stockpile (full grade ore)	Measured	2.81	0.88	2.46	0.08
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>2.81</b>	<b>0.88</b>	<b>2.46</b>	<b>0.08</b>
Stockpile (other)	Measured	-	-	-	-
	Indicated	10.80	0.57	6.16	0.20
	Inferred	2.76	0.68	1.88	0.06
	<b>Total</b>	<b>13.56</b>	<b>0.59</b>	<b>8.03</b>	<b>0.26</b>
Stockpile (marginal ore)	Measured	0.59	0.66	0.39	0.01
	Indicated	6.23	0.67	4.17	0.13
	Inferred	-	-	-	-
	<b>Total</b>	<b>6.82</b>	<b>0.67</b>	<b>4.56</b>	<b>0.15</b>
<b>Iduapriem</b>	<b>Total</b>	<b>140.56</b>	<b>1.37</b>	<b>191.90</b>	<b>6.17</b>

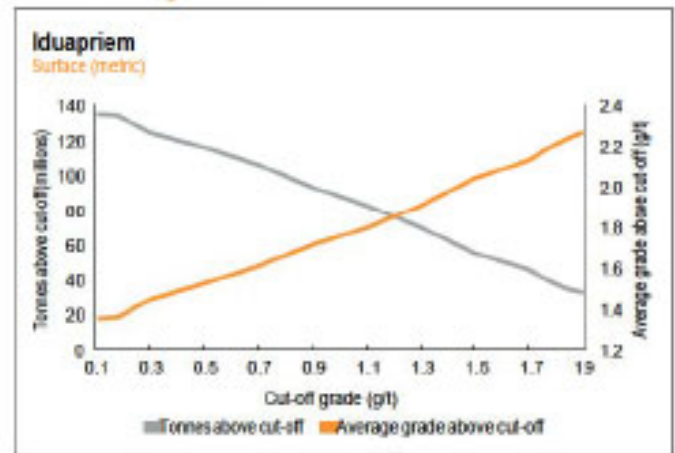
*Dykes which sterilise mineralisation and faults which may offset mineralisation are explicitly modelled.*



### Estimation

Geostatistical techniques are used in estimating the Mineral Resource. 3D wireframes are built from all geological information obtained from drill hole data, mapping of pits and geophysical data interpretations. Where appropriate, these wireframes are subdivided into the individual reef units that occur within a broad conglomerate package. Estimation is by ordinary kriging into block sizes that range from 5 to 25m in the X and Y directions and between 6 and 12m in the Z direction depending on the reef width and data spacing. Densities are allocated from tests conducted on drill hole samples. Grade and tonnages are estimated from these block models that are constrained within an optimised pit shell at the Mineral Resource gold price. Full grade ore and marginal stockpiles are surveyed on a monthly basis to validate tonnage measurements. Grade estimates for these stockpiles are based on RC grade control drilling from the individual pits mined. Old, historical stockpiles have been drilled and sampled with the results used to assign grades. These stockpiles were reported as part of the Mineral Resource if material occurred above the economic cut-off grade at the Mineral Resource gold price.

### Grade tonnage curve



The grade tonnage curve does not include stockpiles.



Iduapriem core shed

# IDUAPRIEM CONTINUED

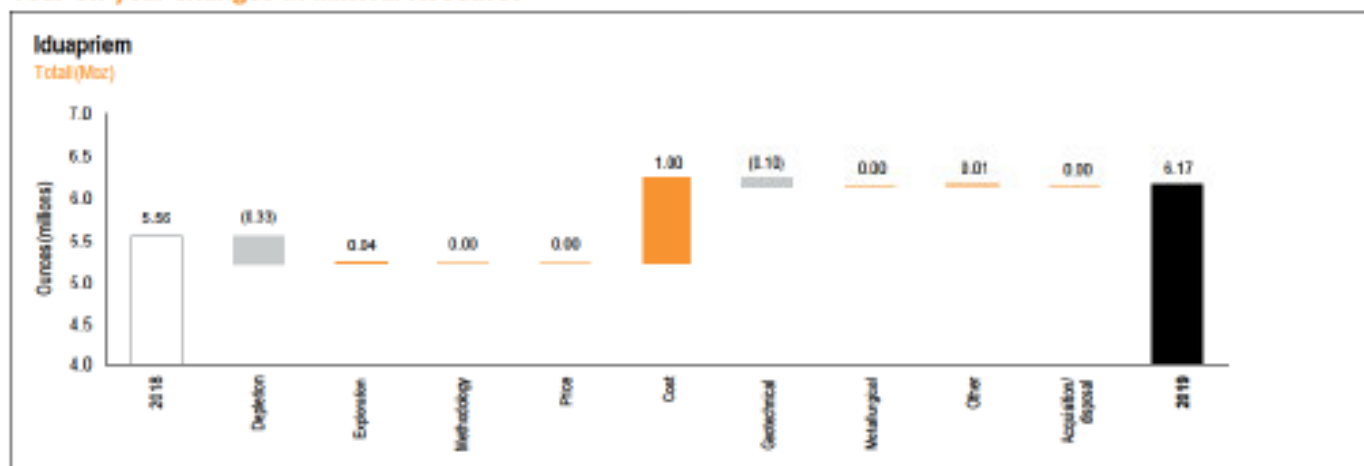
## Continental Africa

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Iduapriem	Measured	-	-	-	-
	Indicated	67.25	1.35	91.07	2.93
	Inferred	30.99	1.45	44.88	1.44
	<b>Total</b>	<b>98.25</b>	<b>1.38</b>	<b>135.95</b>	<b>4.37</b>

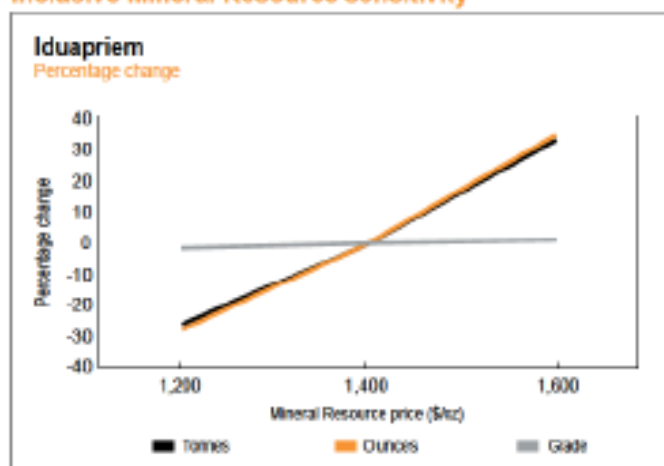
The exclusive Mineral Resource is that part of the Mineral Resource that was not converted to an Ore Reserve. It is defined as the Mineral Resource that is outside the current Ore Reserve designs, but inside the Mineral Resource shells and includes the Inferred Mineral Resource within the Ore Reserve design. The exclusive Mineral Resource gives an indication of the future potential of the deposit. This material could be converted to Ore Reserve by an increase in gold price or a reduction in costs. Exclusive Mineral Resource also includes material within the design pit between the Mineral Resource and Ore Reserve cut-offs.

### Year-on-year changes in Mineral Resource



Year-on-year changes include a decrease in the Mineral Resource as a result of depletion and an increase due to cost reductions and exploration additions.

### Inclusive Mineral Resource sensitivity



The Mineral Resource is highly sensitive to changes in gold price due to the high stripping cost and capital intensive cutbacks required to access the deeper portions of the orebody. There is a 34% upside in ounces at a higher Mineral Resource price and 28% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Ajopa	Proved	-	-	-	-
	Probable	1.35	2.07	2.80	0.09
	Total	1.35	2.07	2.80	0.09
Block 3W	Proved	-	-	-	-
	Probable	0.60	1.32	0.78	0.03
	Total	0.60	1.32	0.78	0.03
Block 5	Proved	-	-	-	-
	Probable	2.15	1.23	2.65	0.09
	Total	2.15	1.23	2.65	0.09
Block 7 and 8 East cutback	Proved	-	-	-	-
	Probable	23.29	1.66	38.77	1.25
	Total	23.29	1.66	38.77	1.25
Stockpile (full grade ore)	Proved	2.81	0.88	2.46	0.08
	Probable	-	-	-	-
	Total	2.81	0.88	2.46	0.08
Stockpile (other)	Proved	-	-	-	-
	Probable	5.25	0.74	3.88	0.12
	Total	5.25	0.74	3.88	0.12
Stockpile (marginal ore)	Proved	0.59	0.66	0.39	0.01
	Probable	8.23	0.67	4.17	0.13
	Total	8.82	0.67	4.56	0.15
Iduapriem	Total	42.28	1.32	55.90	1.80

### Estimation

The 3D Mineral Resource models are used as the basis for the Ore Reserve. An ore envelope is developed using the Mineral Resource block model, geological information and the relevant cut-off grade, which is then used for mine design. An appropriate mining layout is utilised and incorporates mining extraction losses and dilution factors.

The Ore Reserve is estimated within mine designs, using modifying factors based on actual mining and detailed analysis of cut-off grade, geotechnical, environmental, productivity considerations and the requirements of the mining fleet. The upper portions of the Ajopa deposit have been discounted for the estimated depletion by artisanal miners. This discount factor has been derived from observation and estimates based on the Mineral Resource model.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	RMF % (based on tonnes)	RMF % (based on g/t)	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MeIRF %
Ajopa	1,100	0.95	100.0	100.0	100.0	96.0	100.0	95.9
Block 3W	1,100	0.85	100.0	100.0	100.0	96.0	100.0	95.9
Block 3 and 4	1,100	0.85	100.0	100.0	100.0	96.0	100.0	95.9
Block 5	1,100	0.85	100.0	100.0	100.0	96.0	100.0	95.9
Block 7 and 8 East cutback	1,100	0.85	100.0	100.0	100.0	96.0	100.0	95.9
Stockpile (full grade ore)	1,100	0.60	100.0	100.0	100.0	100.0	100.0	93.0
Stockpile (other)	1,100	0.70	100.0	100.0	100.0	100.0	100.0	93.0
Stockpile (marginal ore)	1,100	0.60	100.0	100.0	100.0	100.0	100.0	93.0



# IDUAPRIEM CONTINUED

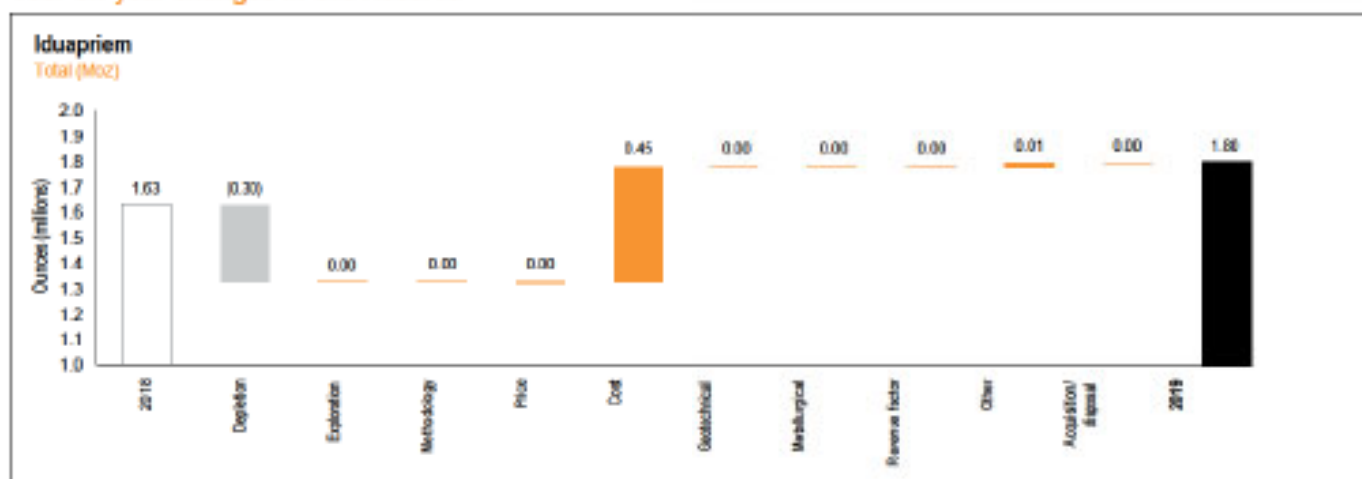
## Continental Africa

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Block 5	0.03	1.45	0.05	0.00
<b>Total</b>	<b>0.03</b>	<b>1.45</b>	<b>0.05</b>	<b>0.00</b>

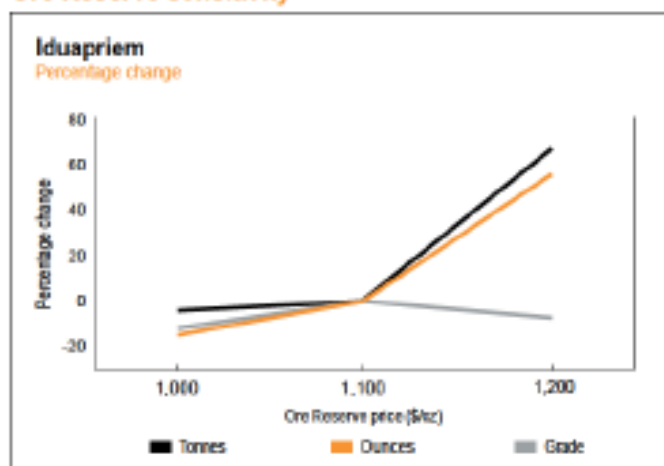
Inferred Mineral Resource is included in the business plan. The overall Inferred Mineral Resource allowed for in the plan is around 2%. However, only Measured and Indicated Mineral Resource within the design of the selected pit shells are converted to Ore Reserve.

### Year-on-year changes in Ore Reserve



On a year-on-year basis, the Ore Reserve increased as a result of lower mining costs.

### Ore Reserve sensitivity



Iduapriem Ore Reserve is highly sensitive to gold price changes due to the high stripping cost and capital intensive cutbacks required to access the deeper portions of the orebody. There is a 56% upside in ounces at a higher Ore Reserve price and 15% downside in ounces at a lower Ore Reserve price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Charles Kusi-Manu	MAusIMM	205 238	29 years	(Geostatistics), Dip (Geological Engineering)
Ore Reserve	Philemon Frimpong	MAusIMM	319 521	13 years	BSc Hons (Mining Engineering)



Block 7 and 8 Cut 1 pit



# OBUASI

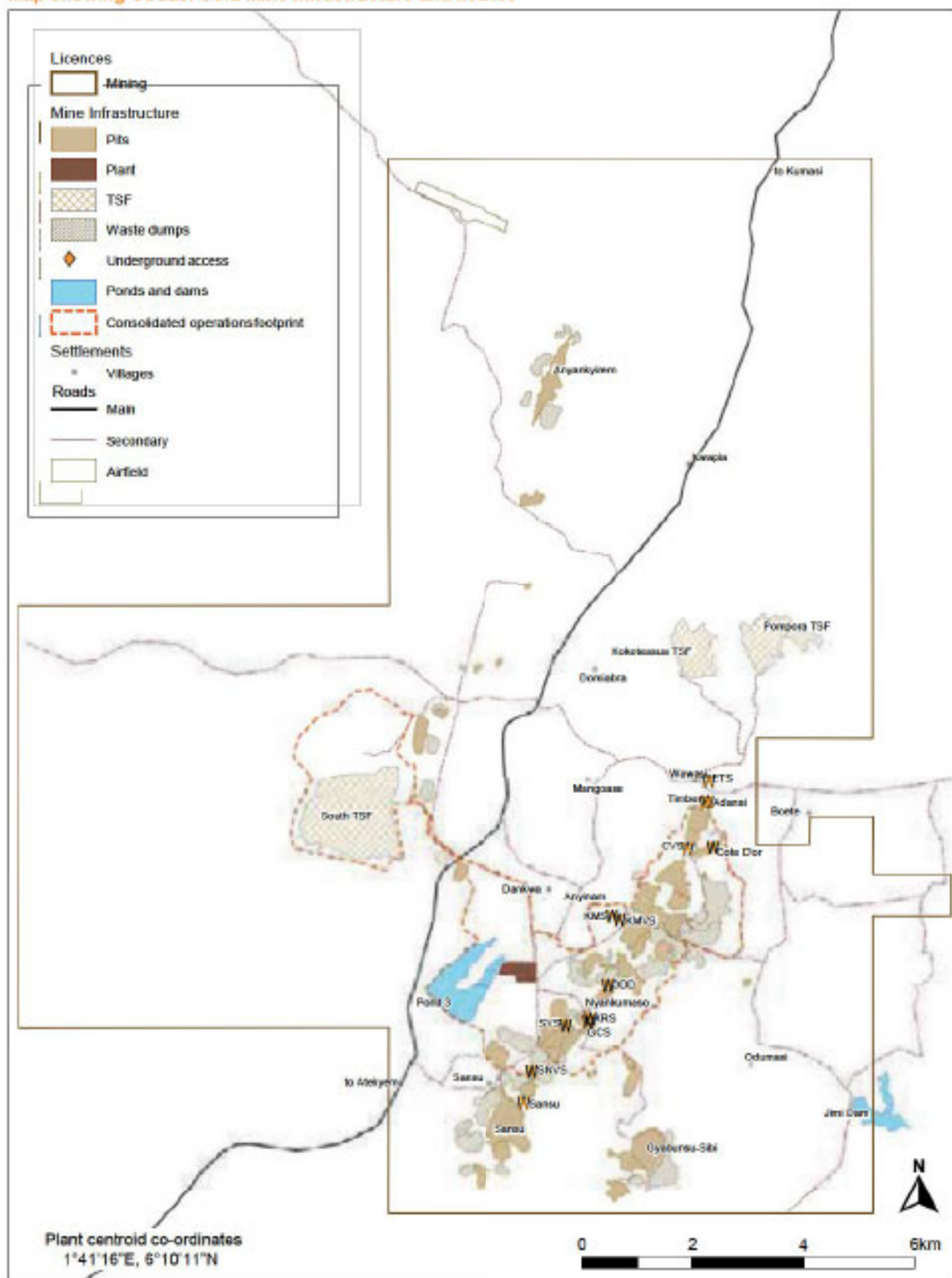
## Continental Africa

### Introduction

<b>Property description</b>	<p>Obuasi Gold Mine is owned and operated by AngloGold Ashanti (Ghana) Limited (AGAG). AGAG was established following the merger of the former AngloGold Limited of South Africa and Ashanti Goldfields Company Limited of Ghana in April 2004.</p> <p>Production at Obuasi started in 1897 and stopped in the last quarter of 2014. Some aspects of the mine continued under limited operational conditions, including the development of the underground decline.</p> <p>A favourable FS was completed in 2017 and indicated a strong technical and economical case with an anticipated 20 year LOM. In 2018, approval was received from the AngloGold Ashanti board to proceed with the project. The redevelopment project commenced in late 2018 and first gold was poured during the fourth quarter of 2019.</p>
<b>Location</b>	Obuasi Gold Mine is located in the municipality of Obuasi, in the Ashanti region of Ghana, some 260km northwest of the capital Accra and 60km south of Kumasi.
<b>History</b>	Underground production was continuous from 1897 to 2014 and recommenced in October 2019. A phase of open pit mining was conducted from 1988 to 2000 with small intermittent open pit mining beyond that period. Total historic production is ~33Moz gold, including ~6Moz gold from open pits.
<b>Legal aspects and tenure</b>	<p>Obuasi Gold Mine concession previously covered an area of approximately 475km<sup>2</sup> and had 80 communities within a 30km radius of the mine. This was reduced to 201km<sup>2</sup> in March 2016. The majority of the reduced concession area falls in the Obuasi municipality. Minor portions of the new concession fall in the Adansi North, Adansi South and Amansie Central districts.</p> <p>The Mineral Resource and Ore Reserve are covered by two mining leases, namely:</p> <ul style="list-style-type: none"> <li>- Obuasi Concession comprising 152.6km<sup>2</sup></li> <li>- Binsere Concession parts 1, 2 and 3 comprising 48.86km<sup>2</sup></li> </ul> <p>The mining concessions, which expire on 5 March 2054, are covered by a Development Agreement and Tax Concession Agreement with the government of Ghana.</p>
<b>Mining method</b>	<p>Mine designs are done to delineate development layouts and production stopes by taking into consideration economic cut-off grade and geotechnical design parameters for each mining block, mining level and section. The underground development extends to a depth of 1,500m from surface. Mining levels are between 15 and 21m intervals with major levels between 30 and 60m intervals. Underground production was by open-stope mining (both longitudinal and transverse), and sub-level caving method, with future designed production by longhole open-stope mining methods with paste fill. Ore is transported to surface via shafts or trucked up the decline.</p>
<b>Operational infrastructure</b>	Existing infrastructure includes a 2.4Mtpa processing plant with flotation and bacterial oxidation (BIOX), underground development, hoisting shafts and associated infrastructure, power and water reticulation, office complexes, workshops and company housing estates. Power is supplied to the mine by the Volta River Authority and GridCo.
<b>Mineral processing</b>	The plant is configured for flotation and BIOX treatment which is required for the refractory sulphide ore.
<b>Risks</b>	<p>All available, appropriate data has been used for Mineral Resource estimation. This includes data collected prior to the merger of AngloGold and Ashanti Goldfields Company Limited in 2004. The risk associated with the inclusion of this data has been mitigated by a comprehensive Data Validation Project completed between 2015 and 2018.</p> <p>Obuasi is currently implementing a redevelopment project that aims to establish Obuasi as a modern, efficient, mechanised, underground operation. The first gold pour occurred in December 2019.</p>



Map showing Obuasi Gold Mine infrastructure and licence



# OBUASI CONTINUED

## Continental Africa

### Geology

#### Deposit type

The mine is located within the Obuasi concession area in southwestern Ghana along the northeasterly striking Ashanti volcanic belt. The deposit is one of the most significant Proterozoic gold belts discovered to date. The Ashanti belt predominantly comprises sedimentary and mafic volcanic rocks, and is the most prominent of the five Birimian Supergroup gold belts found in Ghana.

The Birimian was deformed, metamorphosed and intruded by syn- and post-tectonic granitoids during the Eburnean tectonothermal event around two billion years ago. Folding trends are dominantly north-northeast to north-east. Elongate syn- Birimian basins developed between the ridges of the Birimian system and these were filled with the Tarkwaian molasse sediments made up primarily of conglomerates, quartzose and arkosic sandstones and minor shale units. Major faulting has taken place along the same trends.

The Lower Birimian metasediments and metavolcanics are characterised and defined by argillaceous and fine to intermediate arenaceous rocks. These rocks are represented by phyllites, metasilstones, metagreywackes, tuffaceous sediments, ash tuffs and hornstones in order of decreasing importance. Adjacent to the shear zones, these rocks are replaced by sericitic, chloritic and carbonaceous schists, which may be graphitic in places. Multiple lodes are a common feature in the mine.

Granites outcrop in the west and northwest of the concession area and intrude the Birimian rocks only. Two types of granite are

present: one is more resistant to weathering than the other, with less resistant granite being prospective for gold mineralisation.

Mineralised shears are found in close proximity to the contact with harder metamorphosed and metasomatically altered intermediate-to-basic Upper Birimian volcanics. The competency contrast between the harder metavolcanic rocks to the east and the more argillaceous rocks to the west is thought to have formed a plane of weakness. During crustal movement, this plane became a zone of shearing and thrusting coeval with the compressional phases.

#### Mineralisation style

Gold mineralisation is associated with, and occurs within, graphite-chlorite-sericite fault zones. These shear zones are commonly associated with pervasive silica, carbonate and sulphide hydrothermal alteration and occur in tightly folded Lower Birimian schists, phyllites, metagreywackes and tuffs, along the eastern limb of the Kumasi anticlinorium.

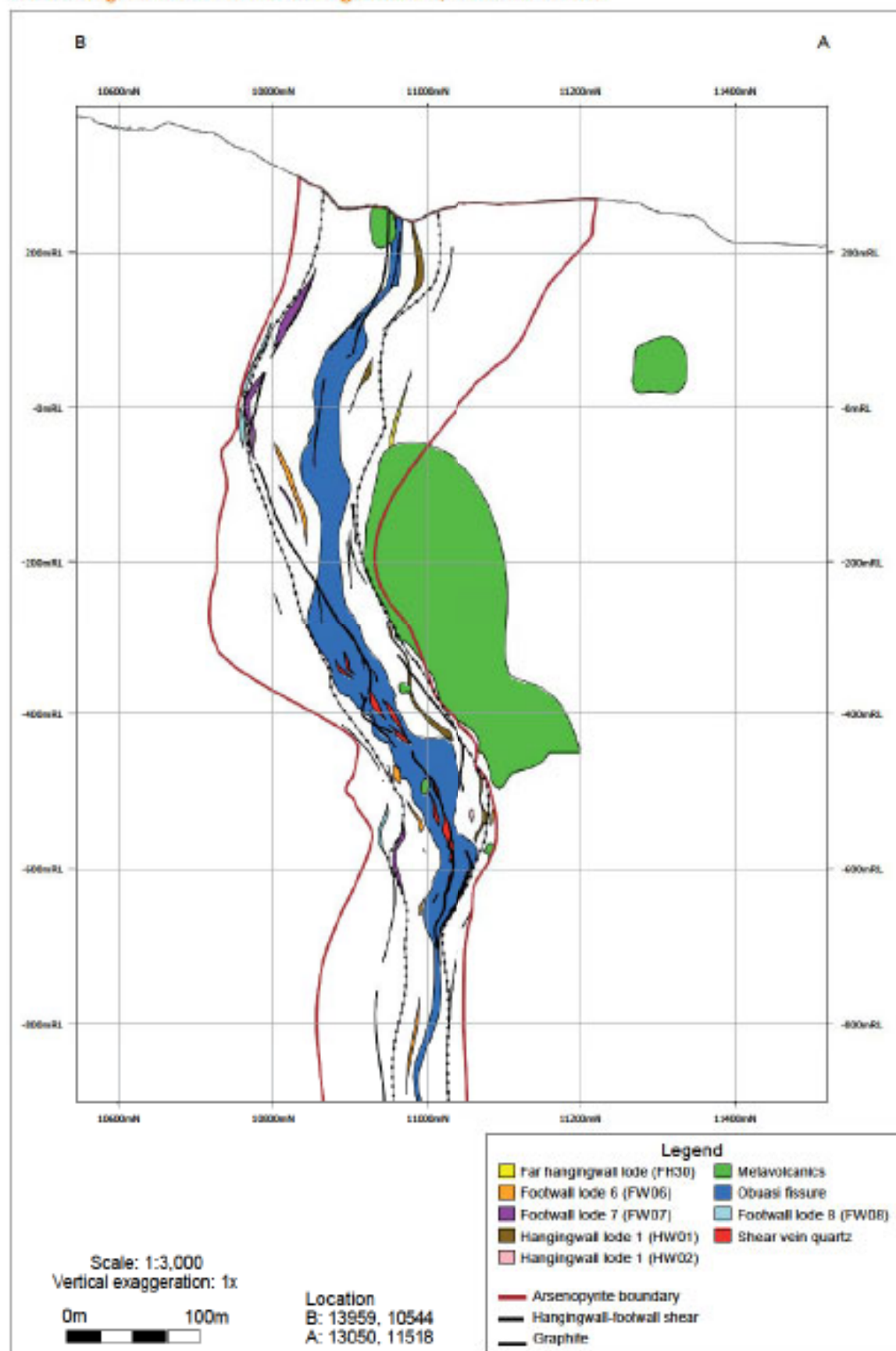
#### Mineralisation characteristics

Two main ore types are present, namely quartz vein and sulphide ore. The quartz vein type consists mainly of quartz with free gold in association with lesser amounts of various metal sulphides containing iron, zinc, lead and copper. This ore type is generally non-refractory. Sulphide ore is characterised by the inclusion of gold in the crystal structure of arsenopyrite minerals. Higher gold grades tend to be associated with finer grained arsenopyrite crystals. Sulphide ore is generally refractory.



View of the Obuasi processing plant

## N-S Geological cross-section through Block 8, elevation in mRL



\* mRL = 1.18m AMSL



# OBUASI CONTINUED

## Continental Africa

### Exploration

On 27 May 2019, underground DD recommenced at Obuasi which was outsourced to two drilling contractors: Boart Longyear and Westfield Drilling Limited. As part of the drilling, two multipurpose rigs capable of drilling RC with diamond tails have been mobilised to site to be used for drilling infill and grade control holes.

During the year, capitalised drilling focused on 41 level infill and grade control drilling of scheduled stopes on Sansu 17 and 22n1 levels. While the expensed drilling targeted the George Cappendell Shaft (GCS) top (Block 8) area to convert conceptual material to Inferred Mineral Resource. In total, for the year, 12,636m were drilled of which 2,353m was RC.

The focus of the exploration drilling programme was to convert the conceptual material in GCS top to the Inferred Mineral Resource category. GCS top has extensive historical mining, however the block has further opportunity for Mineral Resource identification and definition with the planned drilling programme. The focus of the drilling for the conceptual material in GCS top is ongoing and expected to infill an area between 900 Level to 1400 Level. The strategy is to make use of the existing stockpile cuddles along the main decline and drill from 8 Level towards 14 Level. A total of 10,998m have been planned for the area of which 25 holes with total depth of 4,578m were completed during the year.

The focus of the infill drilling during the year was to upgrade Block 10 from Inferred to Indicated Mineral Resource and ultimately prepare it for mining by doing the last phase of grade control drilling. The strategy is to use 41 Level as the main drilling platform and target the area below 41 Level. The area to be drilled lies along the trend of a flat plunging shoot of approximately 380m vertical extent, where the current geological interpretation shows wider mineralisation with multiple lodes. A total of about 32,000m

have been planned to be drilled on 41 Level. Due to the number of metres to be drilled, and the tight time frame to drill it, the strategy is to use a multi-purpose rig; RC precollars with diamond tails. The main advantage of the RC drilling is accelerated data acquisition and reduction in unit cost. Fifty-six drill holes with a total of 7,768m were completed during the year. Where tighter spaced drilling has already been done into the area, elevated metal content has been observed.

### Projects

In 2014, a detailed FS began that considered the optimum mining methodology and schedules for the underground mine, based on modern mechanised mining methods and refurbishment of underground, surface and process plant infrastructure. It was recognised that a significant rationalisation and/or replacement of current infrastructure will enable the delivery of high utilisation and productivity metrics.

During this time, Obuasi continued in a limited operating phase with underground activities essentially restricted to ongoing development of Obuasi's deeps decline and underground infill drilling. The limited operating phase was brought to a halt after an incursion by illegal miners on Obuasi's concession in February 2016. The mine was subsequently placed under care and maintenance. The FS was finalised in March 2016, with a schedule for the potential restart of underground production. The FS was followed up with an optimised FS that considered reducing upfront capital spend and this was finalised at the end of 2017. In 2018 approval was received from the AngloGold Ashanti board for project commencement.

Obuasi has embarked on the process of rebuilding the mine in all its aspects to deliver a modern, efficient, mechanised, underground operation. Underground development recommenced in quarter one of 2019 and first gold was poured in December 2019.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	20 x 20	✓	✓	-	-	-
Indicated	60 x 60	✓	✓	-	-	-
Inferred	90 x 90,	✓	✓	-	-	-
	120 x 120					
Grade/ore control	10 x 10	✓	✓	-	✓	-

## Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Anyankyirem	Measured	-	-	-	-
	Indicated	5.52	2.38	13.10	0.42
	Inferred	0.09	2.71	0.24	0.01
	<b>Total</b>	<b>5.61</b>	<b>2.38</b>	<b>13.35</b>	<b>0.43</b>
Anyinam	Measured	0.00	2.50	0.01	0.00
	Indicated	0.45	3.54	1.59	0.05
	Inferred	1.02	4.23	4.32	0.14
	<b>Total</b>	<b>1.47</b>	<b>4.02</b>	<b>5.92</b>	<b>0.19</b>
Gyabunsu – Sibi	Measured	0.05	4.00	0.21	0.01
	Indicated	0.05	3.48	0.16	0.01
	Inferred	0.28	3.97	1.13	0.04
	<b>Total</b>	<b>0.38</b>	<b>3.92</b>	<b>1.50</b>	<b>0.05</b>
Above 50 Level – Block 1	Measured	-	-	-	-
	Indicated	10.29	5.16	53.10	1.71
	Inferred	2.04	5.08	10.36	0.33
	<b>Total</b>	<b>12.33</b>	<b>5.15</b>	<b>63.46</b>	<b>2.04</b>
Above 50 Level – Block 2	Measured	-	-	-	-
	Indicated	8.69	5.94	51.61	1.66
	Inferred	2.83	5.91	16.72	0.54
	<b>Total</b>	<b>11.52</b>	<b>5.93</b>	<b>68.32</b>	<b>2.20</b>
Above 50 Level – Block 8	Measured	6.64	7.42	41.07	1.32
	Indicated	16.11	5.73	92.33	2.97
	Inferred	2.96	5.99	17.72	0.57
	<b>Total</b>	<b>24.60</b>	<b>6.14</b>	<b>151.12</b>	<b>4.86</b>
Above 50 Level – Block 10	Measured	-	-	-	-
	Indicated	21.20	6.09	129.08	4.15
	Inferred	5.06	5.82	29.49	0.95
	<b>Total</b>	<b>26.26</b>	<b>6.04</b>	<b>158.57</b>	<b>5.10</b>
Above 50 Level – Adansi	Measured	-	-	-	-
	Indicated	5.48	14.52	79.69	2.56
	Inferred	1.81	14.31	25.89	0.83
	<b>Total</b>	<b>7.29</b>	<b>14.47</b>	<b>105.49</b>	<b>3.39</b>
Above 50 Level – Côte d'Or	Measured	-	-	-	-
	Indicated	0.01	18.03	0.19	0.01
	Inferred	13.85	10.75	148.84	4.79
	<b>Total</b>	<b>13.86</b>	<b>10.76</b>	<b>149.03</b>	<b>4.79</b>
Above 50 Level – Sansu	Measured	1.44	7.58	10.90	0.35
	Indicated	7.89	5.98	47.16	1.52
	Inferred	3.30	5.76	19.00	0.61
	<b>Total</b>	<b>12.63</b>	<b>6.10</b>	<b>77.06</b>	<b>2.48</b>
Below 50 Level – Block 11	Measured	-	-	-	-
	Indicated	2.86	20.38	58.30	1.87
	Inferred	2.12	18.55	39.25	1.26
	<b>Total</b>	<b>4.98</b>	<b>19.60</b>	<b>97.55</b>	<b>3.14</b>
Below 50 Level – Block 14	Measured	-	-	-	-
	Indicated	1.50	7.95	11.96	0.38
	Inferred	8.30	7.50	62.20	2.00
	<b>Total</b>	<b>9.80</b>	<b>7.56</b>	<b>74.16</b>	<b>2.38</b>
Obuasi	<b>Total</b>	<b>130.74</b>	<b>7.39</b>	<b>965.52</b>	<b>31.04</b>



# OBUASI CONTINUED

## Continental Africa

### Estimation

The underground Mineral Resource models are informed by underground mapping as well as DD and cross-cut channel sampling. 3D wireframe models of the mineralisation are developed and used to define the grade estimation domains which are estimated by ordinary kriging into blocks of 20 x 5 x 15m.

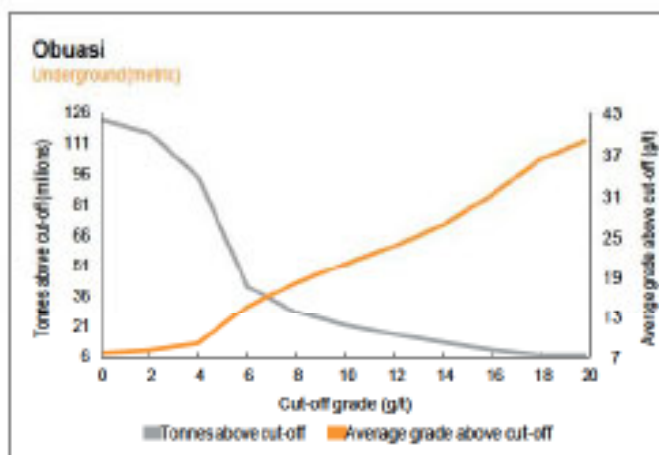
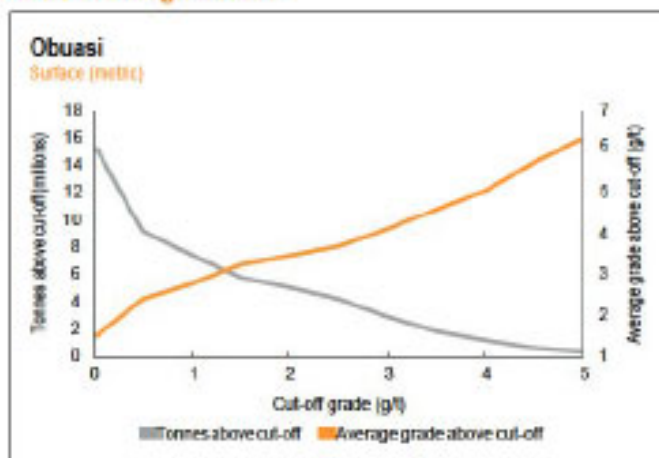
For the open pit Mineral Resource, geological interpretation is based on RC and diamond core samples. Estimation is by ordinary kriging into 30 x 30 x 10m blocks.

Obuasi uses AngloGold Ashanti's internal rule of 15% error at 90% confidence to classify its Mineral Resource into Measured, Indicated and Inferred Mineral Resource. The open pit Mineral Resource is constrained by pit optimisation whilst the underground Mineral Resource is constrained by optimised mineable shapes.



Mineralised quartz core sample at Obuasi

### Grade tonnage curves



### Exclusive Mineral Resource

as at 31 December 2019		Tonnes million	Grade g/t	Contained gold	
Category	tonnes			Moz	
Obuasi	Measured	2.03	3.92	7.94	0.26
	Indicated	62.49	5.78	360.96	11.61
	Inferred	43.65	8.59	375.17	12.06
	<b>Total</b>	<b>108.17</b>	<b>6.88</b>	<b>744.07</b>	<b>23.92</b>

The exclusive Mineral Resource is made up of Mineral Resource from underground and open pit. The bulk of the exclusive Mineral Resource is from underground, and is spread across the entire deposit, where further study and design, change in costs and/or gold price is required to develop economic extraction plans. A large proportion of the exclusive Mineral Resource is Inferred Mineral Resource and will require upgrading before it can be mined.

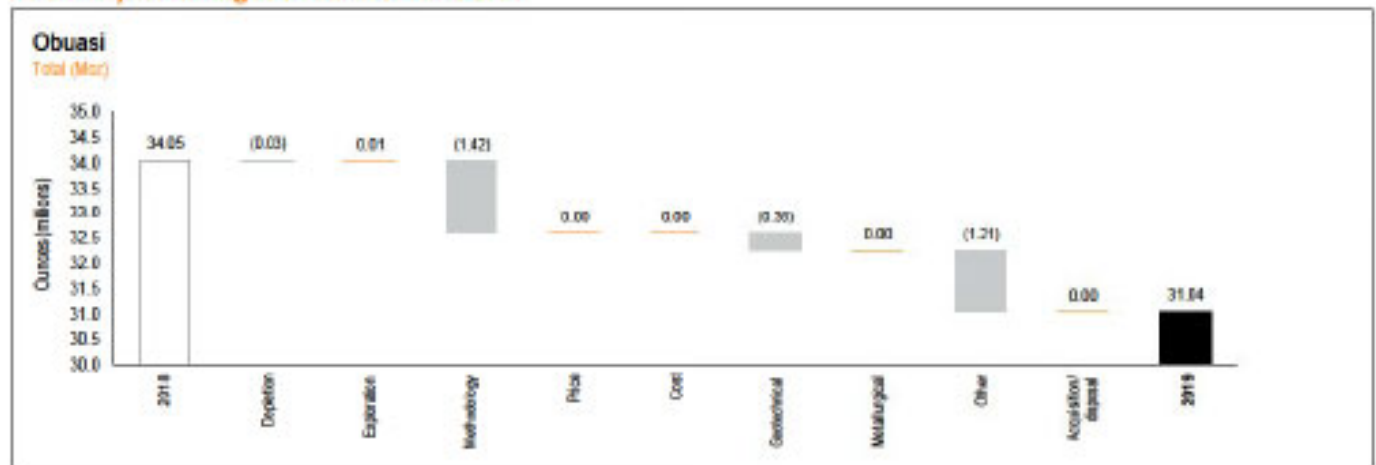
### Mineral Resource below infrastructure

as at 31 December 2019		Tonnes million	Grade g/t	Contained gold	
Category	tonnes			Moz	
Obuasi	Measured	-	-	-	-
	Indicated	4.37	16.10	70.26	2.26
	Inferred	10.41	9.74	101.45	3.26
	<b>Total</b>	<b>14.78</b>	<b>11.62</b>	<b>171.71</b>	<b>5.52</b>

Mineral Resource below infrastructure is from areas below 50 Level. These areas have been extensively drilled but no infrastructure is currently in place to exploit it.



### Year-on-year changes in Mineral Resource



The most significant changes came from the methodology, geotechnical and other categories. There were no price, cost, metallurgical or acquisition/disposal changes.

The exploration, methodology and other changes came from Block 8, Sansu and Block 11. The Mineral Resource models for these three areas were updated during the year. All other areas remained unchanged. The geotechnical change came from Block 8 and was due to the exclusion of the crown pillar. Only a small amount of Mineral Resource was depleted during the year (from Sansu). This number reflects the resumption of mining.

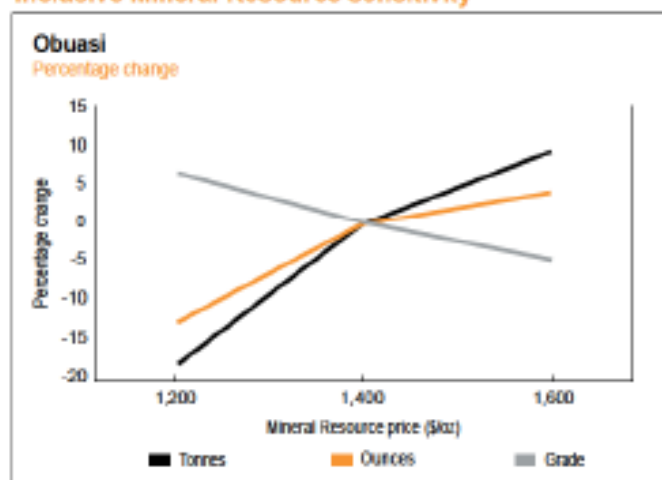


Development drill underground at Obuasi

# OBUASI CONTINUED

## Continental Africa

### Inclusive Mineral Resource sensitivity



Obuasi is very sensitive to changes in gold price, especially to a lower gold price, due to the lower grade sulphide mineralisation on the flanks of the high grade quartz. There is a 4% upside in ounces at a higher Mineral Resource price and 13% downside in ounces at a lower Mineral Resource price.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Above 50 Level – Block 1	Proved	-	-	-	-
	Probable	0.91	6.49	5.91	0.19
	<b>Total</b>	<b>0.91</b>	<b>6.49</b>	<b>5.91</b>	<b>0.19</b>
Above 50 Level – Block 2	Proved	-	-	-	-
	Probable	1.35	6.08	8.22	0.26
	<b>Total</b>	<b>1.35</b>	<b>6.08</b>	<b>8.22</b>	<b>0.26</b>
Above 50 Level – Block 8	Proved	-	-	-	-
	Probable	9.18	7.86	72.20	2.32
	<b>Total</b>	<b>9.18</b>	<b>7.86</b>	<b>72.20</b>	<b>2.32</b>
Above 50 Level – Block 10	Proved	-	-	-	-
	Probable	6.42	7.28	46.73	1.50
	<b>Total</b>	<b>6.42</b>	<b>7.28</b>	<b>46.73</b>	<b>1.50</b>
Above 50 Level – Adansi	Proved	-	-	-	-
	Probable	0.74	16.60	12.36	0.40
	<b>Total</b>	<b>0.74</b>	<b>16.60</b>	<b>12.36</b>	<b>0.40</b>
Above 50 Level – Côte d'Or	Proved	-	-	-	-
	Probable	0.01	16.47	0.10	0.00
	<b>Total</b>	<b>0.01</b>	<b>16.47</b>	<b>0.10</b>	<b>0.00</b>
Above 50 Level – Sansu	Proved	-	-	-	-
	Probable	2.85	7.86	22.42	0.72
	<b>Total</b>	<b>2.85</b>	<b>7.86</b>	<b>22.42</b>	<b>0.72</b>
Below 50 Level – Block 11	Proved	-	-	-	-
	Probable	2.80	19.14	53.54	1.72
	<b>Total</b>	<b>2.80</b>	<b>19.14</b>	<b>53.54</b>	<b>1.72</b>
<b>Obuasi</b>	<b>Total</b>	<b>24.26</b>	<b>9.13</b>	<b>221.47</b>	<b>7.12</b>



### Estimation

3D Mineral Resource models are used as the basis for the Ore Reserve evaluation. Using the Mineral Resource block model, an ore envelope is developed by applying the relevant cut-off grade, which is then used for mine design. An appropriate mining layout is designed that incorporates mining extraction losses and dilution factors.

All mine designs delineate stopes by taking into consideration cut-off grade, geotechnical design parameters for each mining block, ventilation and backfill requirement, mining level and section, usually leading to an optimisation of the existing infrastructure, mining sequence, and corresponding development layouts. The underground operation runs to a depth of 1,500m from surface.

Mining levels are between 15 and 20m intervals with major levels between 30 and 60m intervals. Underground production mining methods include both longitudinal and transverse open stoping.

The current Ore Reserve has been estimated based partially on the 2014/2016 Mineral Resource and partially on the 2019 Mineral Resource. The significant changes to the Mineral Resource, resulting from the revised geological model and extensive data validation, have not impacted the entire Ore Reserve with only the southern blocks and Block 11 redesigned to the 2019 Mineral Resource. The blocks redesigned during 2019 include Sansu and Blocks 8 and 11. The remaining blocks will be redesigned during 2020.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	Dilution %	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MeIRF %
Above 50 Level – Block 1	1,100	4.20	16.0	95.0	100.0	100.0	87.0
Above 50 Level – Block 2	1,100	4.30	15.0	95.0	100.0	100.0	87.0
Above 50 Level – Block 8	1,100	4.10	15.0	95.0	100.0	100.0	87.0
Above 50 Level – Block 10	1,100	4.25	10.0	95.0	100.0	100.0	87.0
Above 50 Level – Adansi	1,100	5.20	14.0	98.0	100.0	100.0	87.0
Above 50 Level – Côte d'Or	1,100	5.00	5.0	100.0	100.0	100.0	87.0
Above 50 Level – Sansu	1,100	4.10	15.0	95.0	100.0	100.0	87.0
Below 50 Level – Block 11	1,100	5.20	16.0	95.0	100.0	100.0	87.0

Several factors are used for the modifying of the Ore Reserve and include mining recovery, dilution and processing recovery. These are applied based on the mining method employed. A weighted average dilution factor equal to 15.5% is used for all of the Ore Reserve.

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Above 50 Level – Block 1	0.01	6.36	0.09	0.00
Above 50 Level – Block 2	0.67	6.70	4.49	0.14
Above 50 Level – Block 8	0.54	5.96	3.23	0.10
Above 50 Level – Block 10	0.20	8.08	1.58	0.05
Above 50 Level – Adansi	0.09	8.01	0.72	0.02
Above 50 Level – Côte d'Or	2.56	6.66	17.01	0.55
Below 50 Level – Block 11	1.01	14.84	15.02	0.48
<b>Total</b>	<b>5.08</b>	<b>8.30</b>	<b>42.13</b>	<b>1.35</b>

With appropriate caution, a portion of the Inferred Mineral Resource was included in the business plan during the optimisation process. This accounts for 15% of the business plan. The planned mining of Inferred Mineral Resource in the business plan is mainly at the end of the LOM and has an exploration programme attached to it to allow for the upgrade to Indicated Mineral Resource. This conversion of Inferred to Indicated Mineral Resource has taken into consideration historic conversion outcomes.



# OBUASI CONTINUED

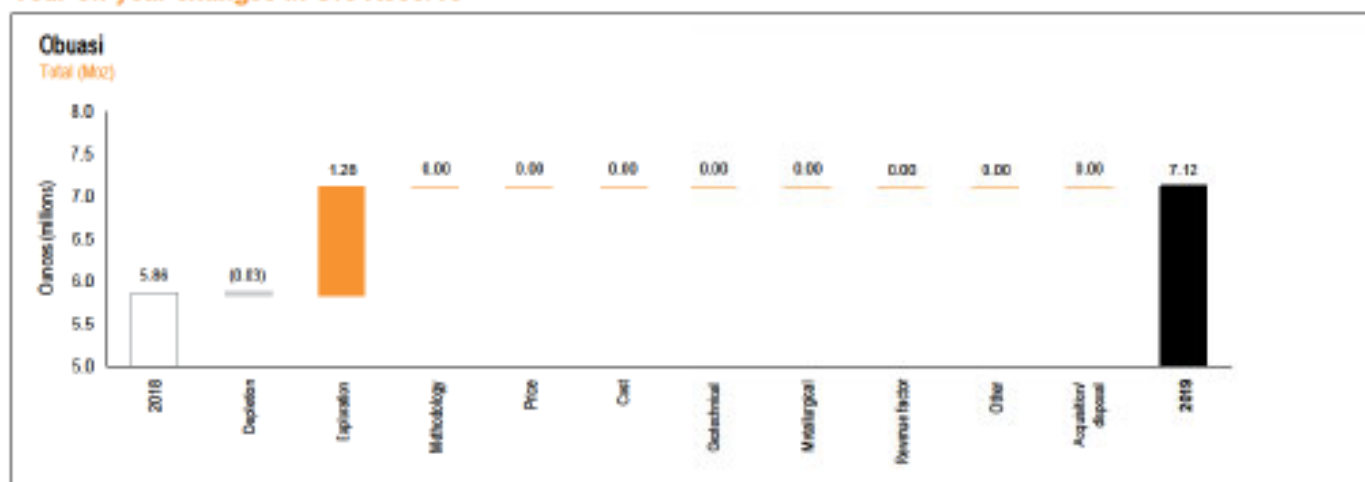
## Continental Africa

### Ore Reserve below infrastructure

as at 31 December 2019		Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Obuasi	Proved	-	-	-	-
	Probable	2.80	19.14	53.54	1.72
	<b>Total</b>	<b>2.80</b>	<b>19.14</b>	<b>53.54</b>	<b>1.72</b>

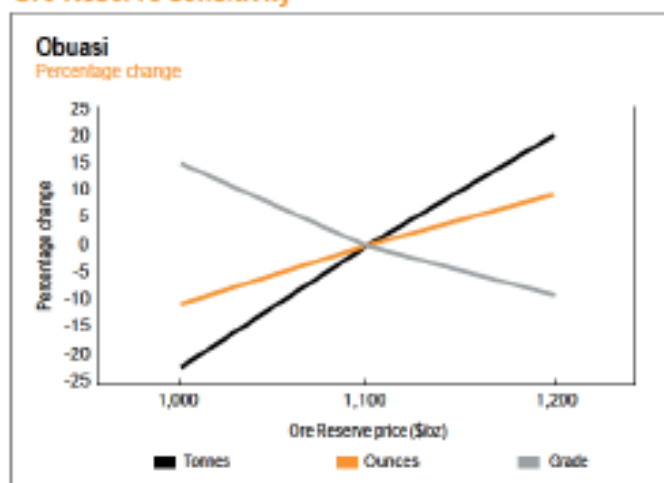
Ore Reserve below infrastructure is restricted to the ground below 50 Level that requires a decline to access and is located between 50 and 60 Level below the Kwesi Mensah Shaft (KMS).

### Year-on-year changes in Ore Reserve



The change in Ore Reserve year-on-year resulted in a 21% increase in contained metal. The positive net changes are mainly attributable to new designs due to model changes in Sansu and Blocks 8 and 11 which significantly improved the quality of the Mineral Resource models.

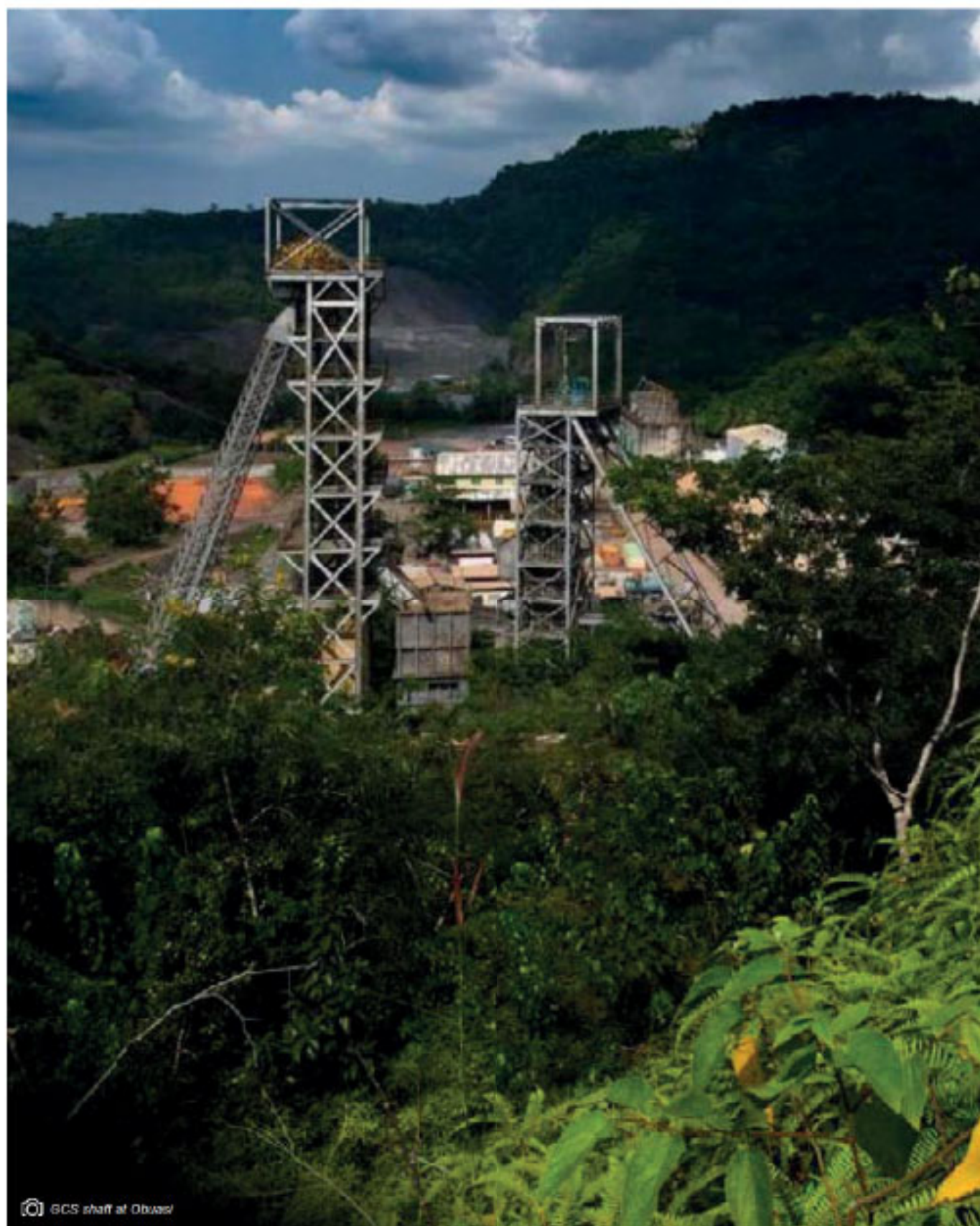
### Ore Reserve sensitivity



Obuasi is very sensitive to the changes in gold price, especially to a lower gold price. There is a 9% upside in ounces at a higher Ore Reserve price and 11% downside in ounces at a lower Ore Reserve price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Emmarentia Maritz	SACNASP	118 345	16 years	BSc (Geology), BSc Hons (Geology), MSc (Mineral Resource Evaluation)
Ore Reserve	Gerard Bagnell	MAusIMM	334 405	29 years	Dip (Mining Technology)



# GUINEA

Continental Africa



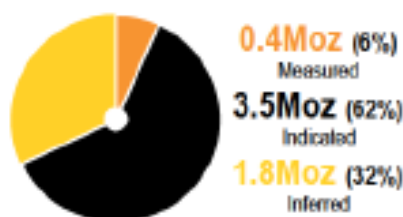
**S**iguiri Gold Mine is our only operation in the Republic of Guinea. The mine is 85% owned by AngloGold Ashanti and 15% by the government of Guinea. The mine is a conventional open pit operation situated in the Siguiri district in the north-east of Guinea. It lies about 850km north-northeast of the capital city of Conakry and 109km west of the border with Mali by road.

Gold-bearing ore is mined from several pits (generally three pits at any one time). A plant upgrade to process hard rock was completed in 2018 and production ramped up during 2019. Siguiri Gold Mine will continue to focus on debottlenecking and plant optimisation.

Attributable production from Guinea was 213koz of gold in 2019, or 14% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for Guinea was 5.7Moz (2018: 7.2Moz) and the Ore Reserve was 1.8Moz (2018: 2.1Moz).

**Inclusive Mineral Resource**



**Exclusive Mineral Resource**



**Ore Reserve**







📷 Tuban / (Sorofe) fresh pit cutback stripping

# SIGUIRI

## Continental Africa

### Introduction

<b>Property description</b>	<p>Siguiiri, in Guinea, is 85% owned by AngloGold Ashanti and 15% by the government of Guinea. It is an open pit operation.</p>
<b>Location</b>	<p>The mine is located approximately 850km north-northeast of Conakry, 25km northwest of the town of Siguiiri and 220km southeast of the Malian capital Bamako, near the Malian border.</p>
<b>History</b>	<p>First gold mining can be traced back to the first great West African Empire, the Sarakolle Kingdom in 3BC, but there are no reliable records of prewestern production. The French became involved in the area in the late-19th and early-20th centuries. Between 1931 and 1951, the French reported gold coming out of Siguiiri, with figures varying between 1 and 3.6t annually however, little exploration work was completed.</p> <p>There was a phase of Russian exploration in the area between 1960 and 1963. The Russian work focused on the placer deposits along the major river channels in the area.</p> <p>In 1980, Société Minière Internationale du Québec (SOMIQ) gained the exploration rights for Siguiiri and Mandiana. SOMIQ focused its work on the Koron and Didi areas. The Chevaning Mining Company Limited was then created to undertake a detailed economic evaluation of the prospect, with more intensive work beginning in the late 1980s.</p> <p>Société Aurifere de Guinea (SAG) took over from its predecessors and continued work on the placer deposits. Production on the Koron placer reached a peak in 1992 with 1.1t gold being produced, although due to a number of difficulties, the mine was shut down later that year.</p> <p>In the mid-1990s, Golden Shamrock acquired and operated the project as an open pit and heap leach. In October 1996, Golden Shamrock was acquired by Ashanti Goldfields Corporation which operated Siguiiri as a heap leach until 2004. Ashanti Goldfields Corporation merged with AngloGold Corporation in 2004 to become AngloGold Ashanti. AngloGold Ashanti completed the design and construction of the 8.5Mtpa saprolite soft rock treatment plant and commissioned it in 2005. This was later increased to 12Mtpa.</p> <p>A Siguiiri combination plant FS based on the requirement to process fresh and transitional material in combination with existing oxide material was completed in 2015. The combination plant conversion project began in 2017. The plant conversion will allow the mine to treat six million tonnes of sulphide ore and six million tonnes of oxide ore. Construction was completed in March 2019 and further optimisation and debottlenecking of the plant continues.</p>
<b>Legal aspects and tenure</b>	<p>Siguiiri is mined under licence from the government of Guinea. The published Mineral Resource and Ore Reserve are covered by SAG mining concession D/97/171/PRG/SGG, totalling 1,494.5km<sup>2</sup>.</p> <p>The original SAG concession was granted under the Convention de Base between the Republique de Guinea and SAG signed on 4 August 1997. The concession is to be explored and mined exclusively for gold, silver and diamonds by SAG for 25 years from the date of the agreement, until 4 August 2022.</p> <p>The Convention de Base will guide the renewal of the mining concession in 2022. The SAG concession was granted under a new amended Convention de Base between the Republique de Guinea and SAG signed on 28 June 2016 and ratified by the Guinean parliament on 13 December 2016. The Convention de Base was ratified by the constitutional court and published in the Journal Officiel of the Republic of Guinea on 24 January 2017. Dependent on the submission of the necessary renewal documentation on, or before, 4 March 2022, the concession is to be explored and mined exclusively for gold, silver and diamonds by SAG for 25 years from the date of agreement to 13 December 2041.</p>
<b>Mining method</b>	<p>Siguiiri is currently a multi-pit fresh rock and oxide gold mining operation, mined by a contract miner. The mining method is selective conventional techniques using excavators and trucks on 3m high flitches. Three Caterpillar 6020B excavators are the main loading equipment matched with Caterpillar 777G dump trucks. In some deposits a selective mining unit (SMU) of 10 x 10 x 3m which based on historical grade control, the deposit type and the mining equipment is used to simulate the expected mining dilution and ore losses.</p>



**Operational infrastructure**

The Siguri Gold Mine includes a processing plant, a TSF and other infrastructure such as a mine village, water supply system, roads power supply by on-site generators and communications systems. Additional infrastructure includes on-site offices, accommodation and workshops to support remote mining. Power to the mine is self-generated.

Siguri can be accessed via a small airfield and a well-paved road connects Siguri to Bamako in the north and Kouroussa in the south. Access to the mine via roads and to Siguri is easily passable through most of the year, although some secondary roads are seasonal with limited access during the wet season.

**Mineral processing**

Processing of the ore is done by a hybrid CIL circuit processing plant converted from CIP in 2018. The plant is capable of treating 50% hard ore post commissioning a new ball mill and three-stage crushing plant in quarter one of 2019.

The original processing facility was designed to process soft ore only and was successfully optimised to reach an average throughput of 11.8Mt per annum.

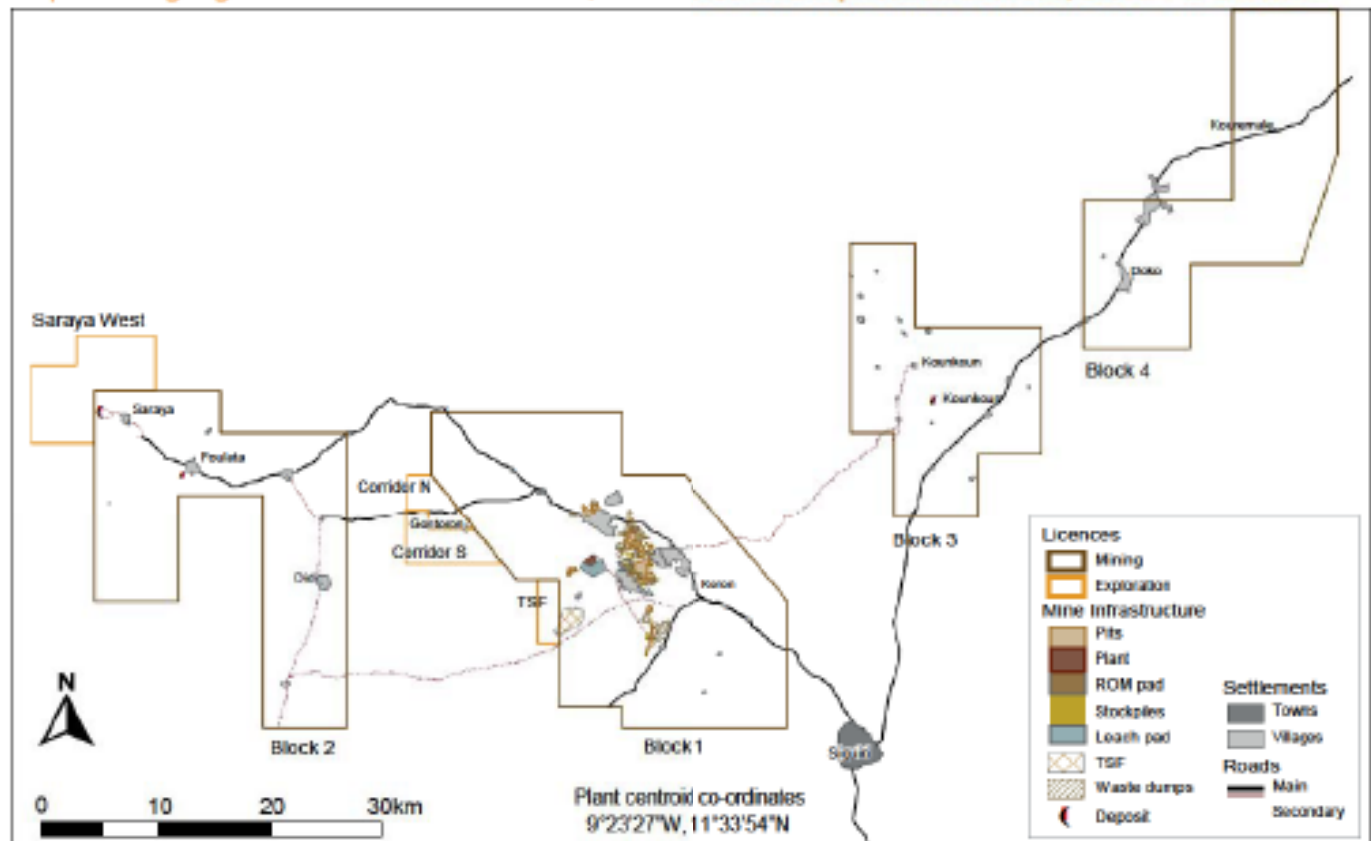
**Risks**

The favourable conclusion of the Convention de Base negotiation during 2016 and its ratification in 2017 by parliament has significantly reduced the risk of the remaining Mineral Resource and Ore Reserve not being covered by a valid mining concession. The current mining concession is now confirmed to be valid until 4 August 2022, with high likelihood of renewal until 2041.

Performance of the newly commissioned combination plant, achievement of plant throughput (crusher and mill) and recovery are seen as a risk until the plant stabilises. There are several action plans in place to address this.

An independent external Mineral Resource and Ore Reserve audit was undertaken in 2019 and found no fatal flaws in process or output.

**Map showing Siguri Gold Mine infrastructure, concession and exploration licences, Block 1 to Block 4**







The orebodies are structurally controlled and the area has undergone at least three distinct phases of deformation, with initial north-south compression developing minor folds, the second and largest deformation event is associated with east-west to east-northeast and west-southwest directed compression leading to north-south structural architecture, and the third event was a northwest and southeast compression that led to refolding of existing structures.

A deep oxidation (weathering) profile is developed in the region, varying between 50 and 150m. Following the completion of the plant upgrade, both soft and hard rock can be fed to the plant.

### Mineralisation style

Primary gold mineralisation occurs in all three lithostratigraphic units of the Siguirí region although most of the known mineralisation is found in the central and more competent Fatoya Formation. In some deposits, the mineralisation shows strong lithological control and is preferentially developed in coarser-grained units that have higher fracture/vein densities relative to fine-grained rocks.

The mineralisation dominantly follows sub-vertical north-south thrusts, northeast to southwest dextral shear zones, and

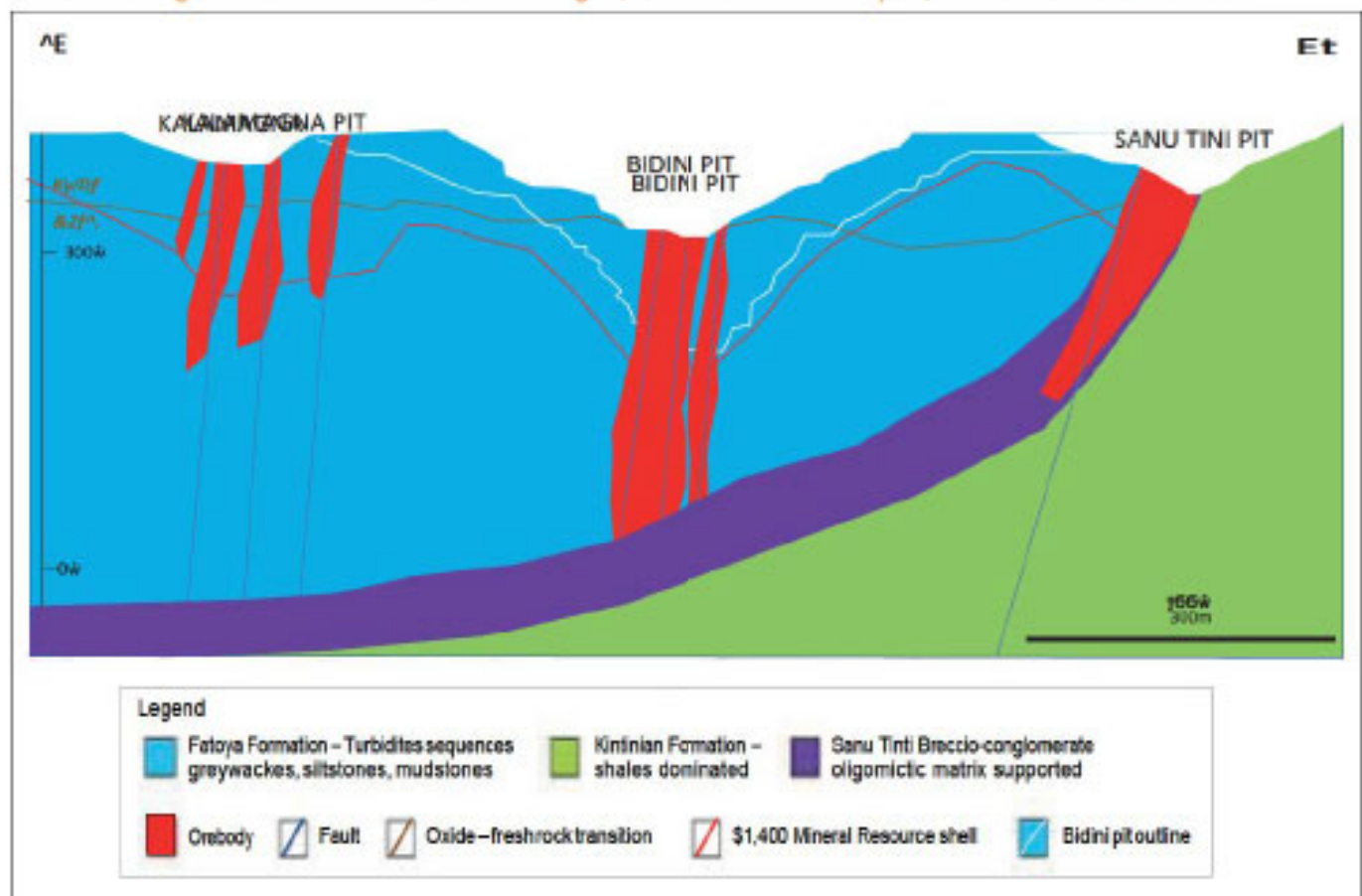
west-northwest to east-southeast sinistral faults associated with the main (D2) deformation event. The mineralised veins are remarkable for the relative consistency of their orientation (northeast), despite the highly variable orientation of bedding and major structures.

Mineralised veins are more intensely developed along major structural trends with quartz-carbonate-sulphide veining developed along structures. Some of these structures have developed as incipient faults and are represented by discrete stockworks of mineralised quartz-carbonate veins occurring along a trend, instead of being clearly defined continuous structures.

### Mineralisation characteristics

Two styles of primary mineralisation have been recognised at Siguirí. The first is characterised by precipitation of gold-bearing pyrite associated with proximal albite and distal carbonate alteration, and opening of carbonate-pyrite veins. The second style corresponds to east-northeast to west-southwest trending native gold bearing quartz veins with carbonate selvages which cross-cut carbonate-pyrite veins and show arsenopyrite (pyrite) halos.

### SE-NW Geological cross-section of the Kalamagna, Bidisi and Sanu Tini pits, elevation in metres AMSL





# SIGUIRI CONTINUED

## Continental Africa

### Exploration

Exploration at Siguiri was historically focused on finding new oxide Mineral Resource in the sepolite and upgrading the confidence in the existing oxide Mineral Resource. This was achieved using geophysics, soil geochemistry and drill hole sampling in the context of the regional and pit-scale geological models. Following the completion of an asset strategy optimisation project in 2012, which indicated the potential economic viability of the fresh rock material, the aim of the exploration has expanded, and the objectives are four-fold. Firstly, to explore for replacement and additional oxide material for short-term mining requirements at Sanu Tinti, Bidini, Tubani South, Kami and Silakoro where 33,065m drilling was completed in 2019. Secondly, to explore new conceptual oxide targets in Block 1, Block 2, Block 4 and the Saraya West exploration licence. Thirdly, to increase the level of confidence in major fresh rock targets below the existing oxide pits at Seguelén, Kami and Bidini. Lastly, drilling to support the Block 2 projects at Saraya and Foulata.

Advanced grade control drilling totalling 27,967m was completed in 2019 and primarily focused (28%) on increasing confidence in the Saraya, and Foulata Mineral Resource to generate Measured Mineral Resource in support of the remote lease PFS project at Block 2. An advanced grade control programme was additionally undertaken at Silakoro and Kozan pushback 3 in Block 1.

Infill drilling comprising 32% of the total drilling occurred on Blocks 1 and 2 over various deposits (Kami, Tubani, Sanu Tinti, Bidini, Silakoro, Saraya and Foulata). Reconnaissance drilling comprised


40% of the total metres (41,796m) and was focused on depth extensions at Seguelén while new oxide targets were drilled at Kami, Silakoro North, Setiguiya West, Niono, Balato North (Block 1) Foulata and Saraya (Block 2), Doko (Block 4) and the Saraya West exploration licence.

### Projects

A FS Investigating the exploitation of fresh rock material was completed in December 2015. Called the Combination Plant project, it investigated the upgrade of the current plant to enable processing a combination of oxides and of fresh rock material. The plant throughput will remain at 12Mtpa with a flexible design allowing up to 6Mtpa of fresh rock material to be processed. Targeted fresh rock pits include Kami, Bidini, Tubani, Sintoko, Seguelén and Sokuno. The FS was approved by the board of AngloGold Ashanti following successful negotiations with the government of Guinea regarding the Convention de Base and having obtained access to Seguelén Area 1. Construction of the combination plant commenced in 2017 and was commissioned during quarter four of 2018.

Conceptual studies were initiated to evaluate the potential of mining in Blocks 2 and 3 with priority placed on the higher value Block 2 deposits. Following the infill drilling, aimed to convert Inferred to Indicated Mineral Resource, a PFS study was initiated in 2019 at Foulata and Saraya and is expected to be complete in early 2020. The project included geometallurgical drilling to test the metallurgical characteristics of Block 2 ore. Furthermore, a grade control programme was also performed during the third quarter of 2019 to test orebody orientation.



 Drilling for paddock blasting in Bidini pit stage 1 oxides waste stripping



## Mineral Resource

### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	10 x 5	✓	✓	-	-	-
Indicated	20 x 40, 25 x 25, 50 x 25	✓	✓	-	-	-
Inferred	20 x 40, 50 x 25, 50 x 50	✓	✓	-	-	-
Grade/ore control	5 x 10, 5 x 12, 10 x 10, 12.5 x 6.25, 12.5 x 7.5	✓	✓	-	-	-

In general, 100 x 200m drill hole spacing is used to define the extent and geometry of anomalies and Indicated Mineral Resource defined by either 50 x 25m or 25 x 25m drilling.

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Bidini (sulphide)	Measured	-	-	-	-
	Indicated	7.92	1.48	11.74	0.38
	Inferred	1.89	1.47	2.78	0.09
	Total	9.81	1.48	14.51	0.47
Bidini (oxide)	Measured	-	-	-	-
	Indicated	2.88	1.33	3.84	0.12
	Inferred	6.11	1.17	7.15	0.23
	Total	8.99	1.22	10.99	0.35
Bidini (transitional)	Measured	-	-	-	-
	Indicated	2.87	1.66	4.77	0.15
	Inferred	0.65	1.52	0.99	0.03
	Total	3.52	1.63	5.75	0.18
Eureka East	Measured	-	-	-	-
	Indicated	0.59	1.20	0.71	0.02
	Inferred	0.19	1.20	0.22	0.01
	Total	0.78	1.20	0.93	0.03
Eureka North	Measured	-	-	-	-
	Indicated	0.48	1.13	0.54	0.02
	Inferred	0.12	1.01	0.12	0.00
	Total	0.60	1.10	0.66	0.02
Foulata	Measured	-	-	-	-
	Indicated	2.48	1.84	4.57	0.15
	Inferred	0.23	2.38	0.54	0.02
	Total	2.71	1.89	5.12	0.16
Kalamagna	Measured	-	-	-	-
	Indicated	4.58	0.95	4.37	0.14
	Inferred	1.24	0.97	1.20	0.04
	Total	5.82	0.96	5.57	0.18
Kami (sulphide)	Measured	-	-	-	-
	Indicated	25.23	1.01	25.45	0.82
	Inferred	2.15	0.95	2.04	0.07
	Total	27.37	1.00	27.49	0.88
Kami (oxide)	Measured	-	-	-	-
	Indicated	3.23	0.65	2.11	0.07
	Inferred	1.06	0.72	0.76	0.02
	Total	4.29	0.67	2.87	0.09

# SIGUIRI CONTINUED

## Continental Africa

### Inclusive Mineral Resource *continued*

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Kami (transitional)	Measured	-	-	-	-
	Indicated	0.95	0.92	0.88	0.03
	Inferred	0.13	0.84	0.11	0.00
	<b>Total</b>	<b>1.09</b>	<b>0.91</b>	<b>0.99</b>	<b>0.03</b>
Kosise	Measured	-	-	-	-
	Indicated	0.66	0.65	0.43	0.01
	Inferred	1.33	0.71	0.95	0.03
	<b>Total</b>	<b>1.99</b>	<b>0.69</b>	<b>1.38</b>	<b>0.04</b>
Kounkoun	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	9.53	1.28	12.19	0.39
	<b>Total</b>	<b>9.53</b>	<b>1.28</b>	<b>12.19</b>	<b>0.39</b>
Kozan North	Measured	-	-	-	-
	Indicated	2.24	0.69	1.54	0.05
	Inferred	0.56	0.70	0.39	0.01
	<b>Total</b>	<b>2.81</b>	<b>0.69</b>	<b>1.93</b>	<b>0.06</b>
Kozan South	Measured	-	-	-	-
	Indicated	6.24	0.65	4.05	0.13
	Inferred	0.42	0.91	0.38	0.01
	<b>Total</b>	<b>6.66</b>	<b>0.67</b>	<b>4.44</b>	<b>0.14</b>
Seguelén (oxide)	Measured	-	-	-	-
	Indicated	2.89	1.02	2.96	0.10
	Inferred	0.41	1.00	0.41	0.01
	<b>Total</b>	<b>3.30</b>	<b>1.02</b>	<b>3.37</b>	<b>0.11</b>
Seguelén (sulphide)	Measured	-	-	-	-
	Indicated	1.66	1.14	1.88	0.06
	Inferred	0.40	1.06	0.42	0.01
	<b>Total</b>	<b>2.06</b>	<b>1.12</b>	<b>2.31</b>	<b>0.07</b>
Seguelén (transitional)	Measured	-	-	-	-
	Indicated	0.36	1.19	0.43	0.01
	Inferred	0.08	1.31	0.10	0.00
	<b>Total</b>	<b>0.44</b>	<b>1.21</b>	<b>0.53</b>	<b>0.02</b>
Saraya (sulphide)	Measured	-	-	-	-
	Indicated	2.72	2.14	5.82	0.19
	Inferred	0.73	2.53	1.85	0.06
	<b>Total</b>	<b>3.45</b>	<b>2.22</b>	<b>7.67</b>	<b>0.25</b>
Saraya (oxide)	Measured	-	-	-	-
	Indicated	1.46	1.74	2.54	0.08
	Inferred	0.26	2.21	0.58	0.02
	<b>Total</b>	<b>1.73</b>	<b>1.81</b>	<b>3.12</b>	<b>0.10</b>
Saraya (transitional)	Measured	-	-	-	-
	Indicated	0.22	2.15	0.48	0.02
	Inferred	0.03	1.56	0.05	0.00
	<b>Total</b>	<b>0.26</b>	<b>2.07</b>	<b>0.53</b>	<b>0.02</b>



Inclusive Mineral Resource *continued*

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Sintroko South	Measured	-	-	-	-
	Indicated	2.14	1.31	2.80	0.09
	Inferred	0.29	1.94	0.57	0.02
	<b>Total</b>	<b>2.43</b>	<b>1.39</b>	<b>3.37</b>	<b>0.11</b>
Silakoro	Measured	-	-	-	-
	Indicated	0.30	1.25	0.37	0.01
	Inferred	1.44	1.64	2.35	0.08
	<b>Total</b>	<b>1.74</b>	<b>1.57</b>	<b>2.73</b>	<b>0.09</b>
Sokunu	Measured	-	-	-	-
	Indicated	4.76	0.84	4.01	0.13
	Inferred	4.71	0.94	4.43	0.14
	<b>Total</b>	<b>9.47</b>	<b>0.89</b>	<b>8.43</b>	<b>0.27</b>
Soloni	Measured	-	-	-	-
	Indicated	0.18	0.70	0.12	0.00
	Inferred	1.36	0.82	1.11	0.04
	<b>Total</b>	<b>1.53</b>	<b>0.81</b>	<b>1.24</b>	<b>0.04</b>
Sorofe (sulphide)	Measured	-	-	-	-
	Indicated	1.31	1.17	1.54	0.05
	Inferred	0.98	1.41	1.38	0.04
	<b>Total</b>	<b>2.29</b>	<b>1.27</b>	<b>2.91</b>	<b>0.09</b>
Sorofe (oxide)	Measured	-	-	-	-
	Indicated	2.91	1.30	3.79	0.12
	Inferred	2.58	1.32	3.41	0.11
	<b>Total</b>	<b>5.49</b>	<b>1.31</b>	<b>7.19</b>	<b>0.23</b>
Sorofe (transitional)	Measured	-	-	-	-
	Indicated	0.43	1.32	0.56	0.02
	Inferred	1.47	1.34	1.97	0.06
	<b>Total</b>	<b>1.90</b>	<b>1.34</b>	<b>2.53</b>	<b>0.08</b>
Stockpile (full grade ore)	Measured	6.11	0.89	5.42	0.17
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>6.11</b>	<b>0.89</b>	<b>5.42</b>	<b>0.17</b>
Stockpile (marginal ore)	Measured	12.09	0.51	6.14	0.20
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>12.09</b>	<b>0.51</b>	<b>6.14</b>	<b>0.20</b>
Stockpile (spent heap leach)	Measured	-	-	-	-
	Indicated	31.95	0.54	17.29	0.56
	Inferred	13.40	0.57	7.61	0.24
	<b>Total</b>	<b>45.35</b>	<b>0.55</b>	<b>24.90</b>	<b>0.80</b>
Siguiri	<b>Total</b>	<b>185.60</b>	<b>0.95</b>	<b>177.21</b>	<b>5.70</b>

The Siguiri inclusive Mineral Resource is reported above the mineralised waste cut-off within economic pit shells, based on a gold price of \$1,400/oz and considering mining, processing and operational costs.

# SIGUIRI CONTINUED

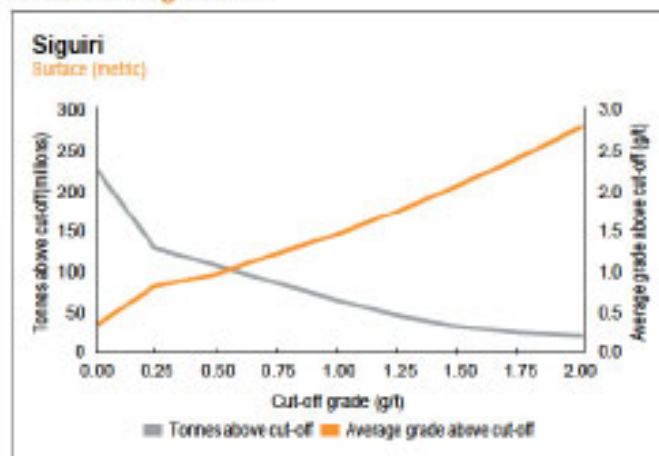
## Continental Africa

### Estimation

Mineral Resource definition drilling is done with aircore drilling (AC), RC and DD. All available geological drill hole information is validated for use in the Mineral Resource models and together with the local geology of the deposit, an understanding of grade variability is used to categorise the drill hole information into appropriate estimation domains. Detailed statistical analyses are conducted on each of these domains which allows for the identification of high-grade outlier values which are capped, with some models post processed using local uniform conditioning (LUC).

The Mineral Resource model is estimated using ordinary kriging into a 3D block model. Geological interpretation is based on geological drill hole data. The dimensions of these Mineral Resource blocks range from 10 x 10 x 2.5m to 50 x 25 x 6m block sizes, guided by the shape of the deposit and the drilling density. The Mineral Resource is declared within an optimised Mineral Resource pit shell using a gold price of \$1,400/oz.

### Grade tonnage curve



The grade tonnage curve does not include stockpiles.

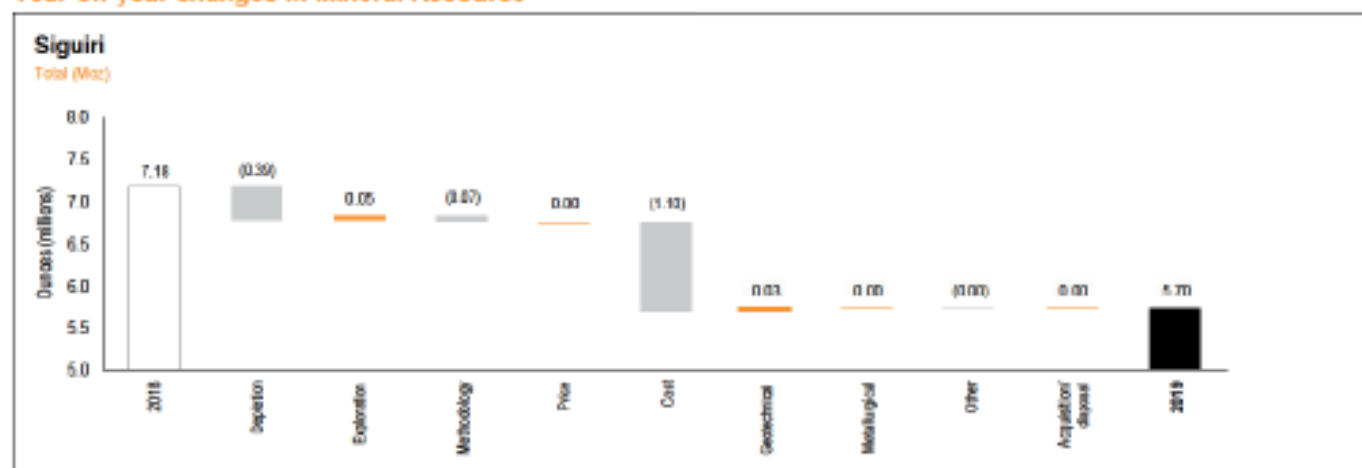
### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Siguiri	Measured	-	-	-	-
	Indicated	49.17	0.95	46.60	1.50
	Inferred	53.89	1.04	56.06	1.80
	<b>Total</b>	<b>103.06</b>	<b>1.00</b>	<b>102.66</b>	<b>3.30</b>

The exclusive Mineral Resource at Siguiri includes:

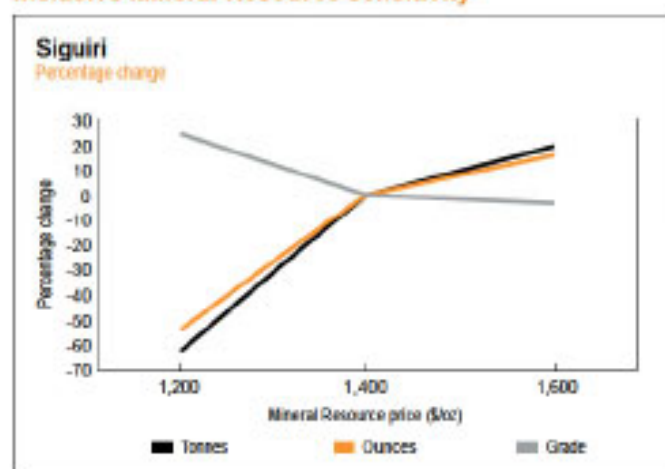
- Indicated and Inferred Mineral Resource that falls outside the Ore Reserve pit shell but within the Mineral Resource optimised shell at \$1,400 gold price
- Inferred Mineral Resource that occurs within the Ore Reserve pit shell
- All Mineral Resource that falls between the Mineral Resource and Ore Reserve cut-offs within the Ore Reserve design

### Year-on-year changes in Mineral Resource



The Siguiri Mineral Resource decreased by 15% after depletion in 2019. The Mineral Resource decrease is mainly driven by the cost which increased by approximately 16%.

## Inclusive Mineral Resource sensitivity



As a low grade deposit, Sigiri is very sensitive to gold price changes, particularly with a drop in price. There is a 16% upside in ounces at a higher Mineral Resource price and 53% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

## Ore Reserve

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
Bidini (sulphide)	Proved	-	-	-	-
	Probable	4.52	1.38	6.22	0.20
	<b>Total</b>	<b>4.52</b>	<b>1.38</b>	<b>6.22</b>	<b>0.20</b>
Bidini (oxide)	Proved	-	-	-	-
	Probable	2.33	1.01	2.35	0.08
	<b>Total</b>	<b>2.33</b>	<b>1.01</b>	<b>2.35</b>	<b>0.08</b>
Bidini (transitional)	Proved	-	-	-	-
	Probable	1.65	1.48	2.44	0.08
	<b>Total</b>	<b>1.65</b>	<b>1.48</b>	<b>2.44</b>	<b>0.08</b>
Kami (sulphide)	Proved	-	-	-	-
	Probable	12.51	1.09	13.62	0.44
	<b>Total</b>	<b>12.51</b>	<b>1.09</b>	<b>13.62</b>	<b>0.44</b>
Kami (oxide)	Proved	-	-	-	-
	Probable	0.01	1.14	0.01	0.00
	<b>Total</b>	<b>0.01</b>	<b>1.14</b>	<b>0.01</b>	<b>0.00</b>
Kami (transitional)	Proved	-	-	-	-
	Probable	0.27	1.12	0.30	0.01
	<b>Total</b>	<b>0.27</b>	<b>1.12</b>	<b>0.30</b>	<b>0.01</b>
Sorofe (sulphide)	Proved	-	-	-	-
	Probable	0.80	1.18	0.95	0.03
	<b>Total</b>	<b>0.80</b>	<b>1.18</b>	<b>0.95</b>	<b>0.03</b>
Sorofe (oxide)	Proved	-	-	-	-
	Probable	0.02	0.94	0.02	0.00
	<b>Total</b>	<b>0.02</b>	<b>0.94</b>	<b>0.02</b>	<b>0.00</b>
Sorofe (transitional)	Proved	-	-	-	-
	Probable	0.06	1.15	0.07	0.00
	<b>Total</b>	<b>0.06</b>	<b>1.15</b>	<b>0.07</b>	<b>0.00</b>
Stockpile (full grade ore)	Proved	6.11	0.89	5.42	0.17
	Probable	-	-	-	-
	<b>Total</b>	<b>6.11</b>	<b>0.89</b>	<b>5.42</b>	<b>0.17</b>
Stockpile (marginal ore)	Proved	12.09	0.51	6.14	0.20
	Probable	-	-	-	-
	<b>Total</b>	<b>12.09</b>	<b>0.51</b>	<b>6.14</b>	<b>0.20</b>
Stockpile (spent heap leach)	Proved	-	-	-	-
	Probable	31.95	0.54	17.29	0.56
	<b>Total</b>	<b>31.95</b>	<b>0.54</b>	<b>17.29</b>	<b>0.56</b>
<b>Sigiri</b>	<b>Total</b>	<b>72.33</b>	<b>0.76</b>	<b>54.82</b>	<b>1.76</b>



# SIGUIRI CONTINUED

## Continental Africa

### Estimation

The Mineral Resource models for each pit are depleted with surveys of actual mining to the end of September 2019 and forecast depletions to the end of 2019. Costs are assigned on a pit-by-pit basis, reflecting the existing cost structure of the operation. The relevant dilution and ore-loss factors are applied and pit optimisation is then performed. The relevant modifying factors such as metallurgical recoveries, geotechnical parameters, cut-off grades and economics are applied to generate the mine designs that are used to estimate the final Ore Reserve.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	Dilution %	Dilution g/t	RMF % (based on tonnes)	RMF % (based on g/t)	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	NetRF %
Bidini (sulphide)	1,100	0.70	14.2	0.1	91.1	94.9	84.8	90.1	100.0	93.0
Bidini (oxide)	1,100	0.55	34.9	0.1	89.9	95.6	75.0	83.1	100.0	93.0
Bidini (transitional)	1,100	0.70	19.1	0.1	91.1	95.6	81.9	83.1	100.0	93.0
Kami (sulphide)	1,100	0.75	1.1	0.5	100.0	95.0	99.9	99.9	100.0	93.0
Kami (oxide)	1,100	0.60	0.0	0.0	100.0	95.0	74.0	74.0	100.0	93.0
Kami (transitional)	1,100	0.50	6.0	0.5	100.0	95.0	96.4	96.9	100.0	93.0
Sorofe (sulphide)	1,100	0.70	11.8	0.1	86.6	96.8	83.0	88.6	100.0	93.0
Sorofe (oxide)	1,100	0.55	41.0	0.1	91.3	94.5	65.0	78.2	100.0	93.0
Sorofe (transitional)	1,100	0.70	29.1	0.1	87.8	96.2	75.5	82.6	100.0	93.0
Stockpile (full grade ore)	1,100	-	-	-	100.0	100.0	100.0	100.0	100.0	88.0
Stockpile (marginal ore)	1,100	-	-	-	100.0	100.0	100.0	100.0	100.0	91.0
Stockpile (spent heap leach)	1,100	-	-	-	100.0	100.0	100.0	100.0	100.0	90.0

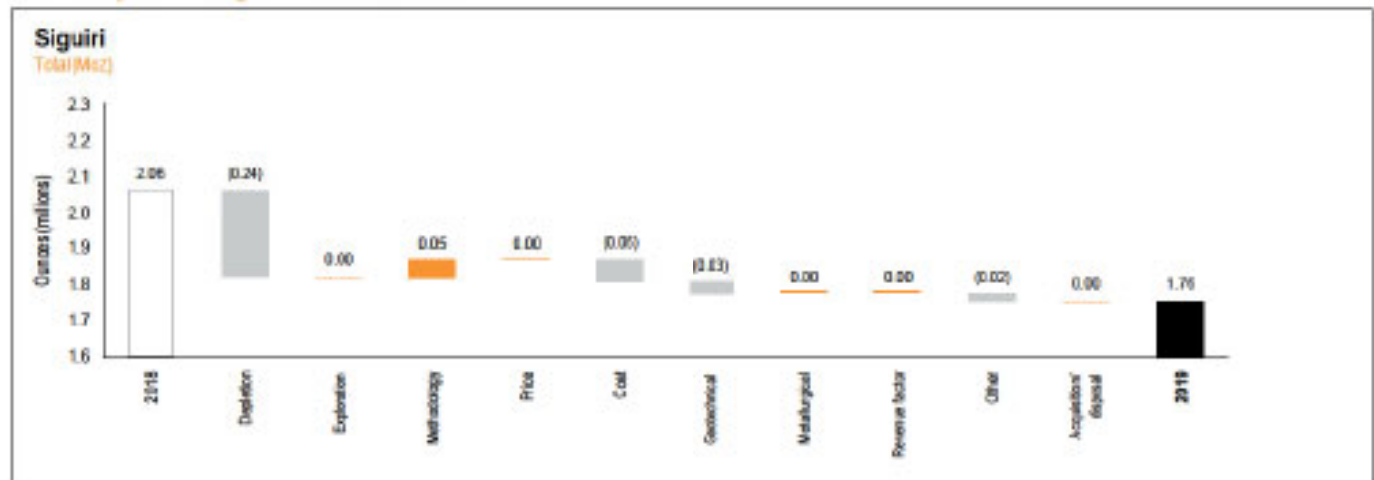
### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Bidini (sulphide)	0.77	1.31	1.01	0.03
Bidini (oxide)	0.86	0.98	0.85	0.03
Bidini (transitional)	0.19	1.29	0.25	0.01
Kami (sulphide)	0.20	0.86	0.18	0.01
Sorofe (sulphide)	0.19	1.28	0.24	0.01
Sorofe (transitional)	0.01	1.86	0.01	0.00
<b>Total</b>	<b>2.22</b>	<b>1.14</b>	<b>2.54</b>	<b>0.08</b>

Ore Reserve does not include Inferred Mineral Resource, but within the pit design, Inferred Mineral Resource is included. For the optimisation, the impact of excluding Inferred Mineral Resource is tested to determine if the pit design will still generate a positive cash flow at a \$1,100/oz gold price.

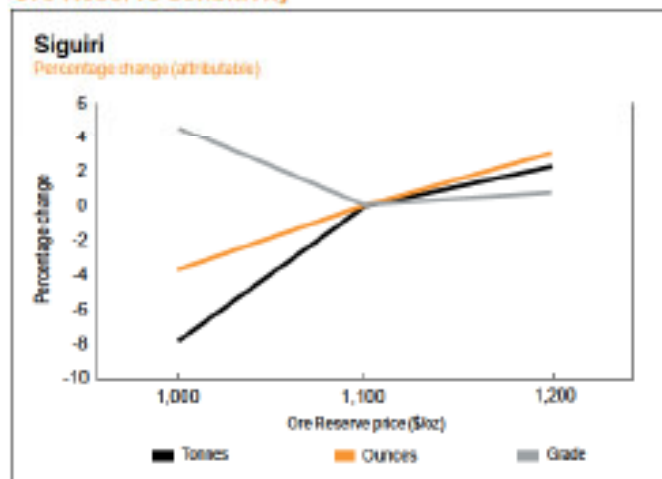
The Inferred Mineral Resource within the Ore Reserve design is 4% of the total ore scheduled. The major contributor of Inferred Mineral Resource material is the Bidini pit. Inferred Mineral Resource exists as pockets located within the Bidini stage 1 design and will be converted to Indicated and Measured once access to drill is provided (conversion costs are covered in the 2020/2021 exploration and grade control budgets).

### Year-on-year changes in Ore Reserve



Positive model changes in the Ore Reserve from Tubani and Bidini Mineral Resource modelling, offset by depletion due to mining and processing operations, change to geotechnical designs for Bidini and Tubani (Sorofe) pits and Seguelén wall stability, and an increase in general and administration costs as well as processing costs.

### Ore Reserve sensitivity



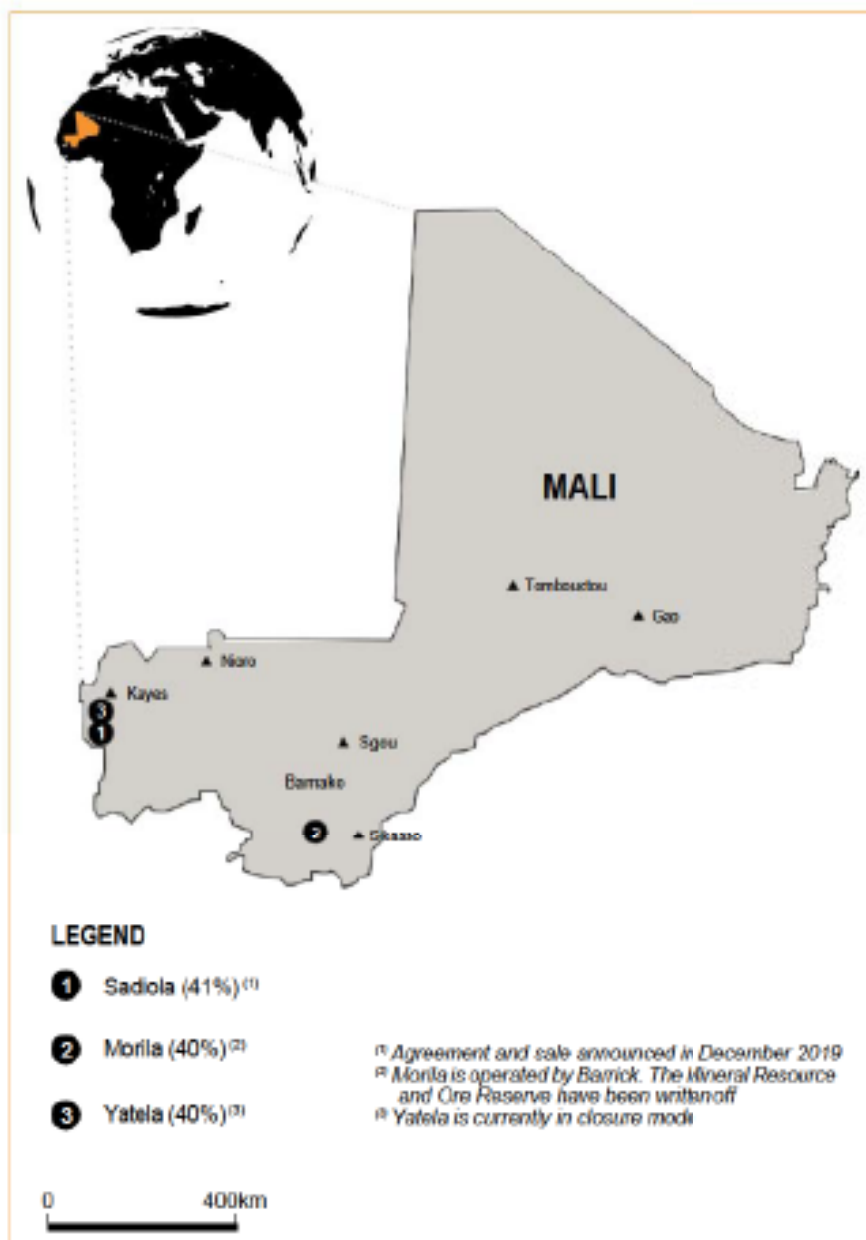
Sigiri is sensitive to gold price changes. An increase in gold price to \$1,200/oz has minimal impact as pits remain constrained and a large percentage of Ore Reserve comes from stockpiles. A decrease in gold price to \$1,000/oz causes marginal stockpiles to be excluded from the Ore Reserve.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Adama Sissoko	MAusIMM	224 835	26 years	BSc Hons (Geology)
Ore Reserve	Desiderius Kamugisha	MAusIMM	227 181	18 years	BSc (Mining Engineering)

# MALI

## Continental Africa



AngloGold Ashanti has interests in three mines in the west African country of Mali, with Sadiola, operated by AngloGold Ashanti, being in a limited operating phase and Morila and Yatela undergoing closure. Sadiola and Yatela are JV operations with IAMGOLD and the state of Mali. Morila is a JV with Barrick and the state of Mali.

Sadiola ceased mining during 2018 and transitioned to a stockpile treatment operation. An agreement and sale was announced for Sadiola in December 2019, subject to the fulfilment, or waiver, of a number of conditions precedent, including the receipt of certain approvals and releases from the government of Mali. Morila, operated by Barrick, is in the final phase of closure and as such it was decided to write off the remaining Mineral Resource and Ore Reserve as it will no longer be brought to account. Yatela has entered into a sale agreement with the state of Mali, subject to several conditions precedent being fulfilled<sup>1</sup>.

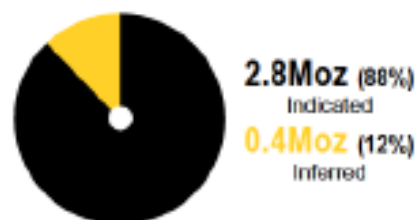
There is no Mineral Resource or Ore Reserve reported for Yatela or Morila.

Attributable production from Mali was 78koz of gold in 2019, or 5% of the region's production.

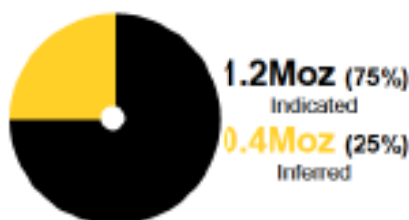
As at December 2019, the Mineral Resource (Inclusive of Ore Reserve) for Mali was 3.2Moz (2018: 3.3Moz) and the Ore Reserve was 1.6Moz (2018: 1.7Moz).

<sup>1</sup> Refer to the IR for more information

### Inclusive Mineral Resource



### Exclusive Mineral Resource




### Ore Reserve







 Aerial view of the FV pit complex, north of the Gadolla FV main pit

# SADIOLA

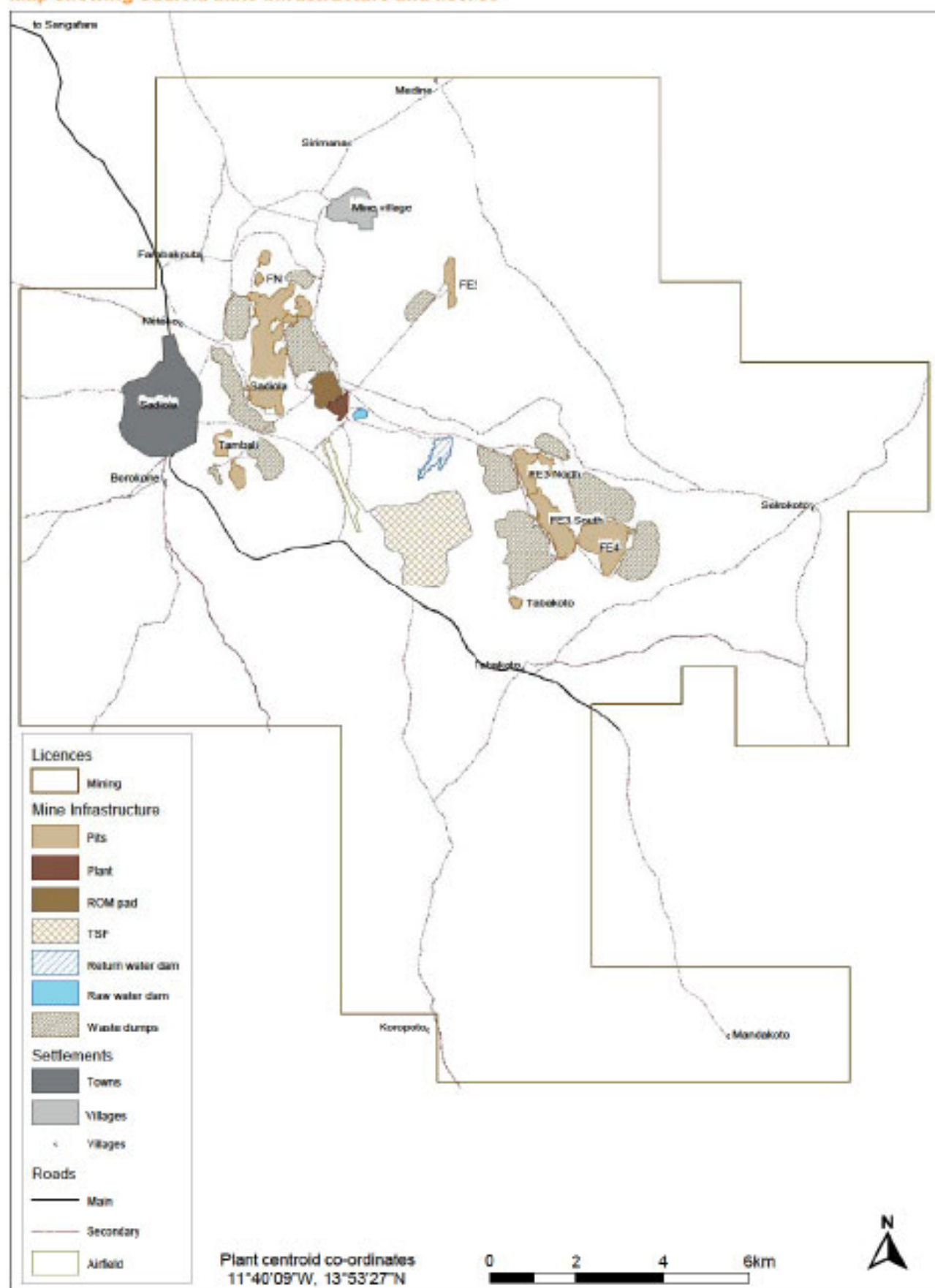
## Continental Africa

### Introduction

<b>Property description</b>	The Sadiola gold deposit is mined by the Société d'Exploration des Mines d'Or de Sadiola SA (SEMOS) that is a JV between AngloGold Ashanti (41%), IAMGOLD Corporation (41%) and the state of Mali (18%).
<b>Location</b>	Sadiola is situated in western Mali, 77km to the south of the regional capital of Kayes and about 440km northwest of the capital city of Bamako. The property lies within the Galam Bambouk gold area, which straddles the Mali-Senegal border close to the border with Guinea.
<b>History</b>	<p>Sadiola has a history of alluvial gold working dating back to the 11th century. In 1991/1992 IAMGOLD acquired the rights to the concession and explored the area and in 1993 Anglo American entered into an earn-in option for the property. In 1994, a FS was completed on the property and accepted by the Malian government. Construction started in 1995 and on 20 December 1996 the first gold was poured.</p> <p>In November 2009, IAMGOLD and AngloGold Ashanti announced that they were acquiring the International Finance Corporations 5% interest for a total of \$14.5 million.</p> <p>A FS for the Sadiola Sulphide Project (SSP) which investigated mining and processing sulphide ore was completed in 2016. However, a decision to proceed remains on hold while awaiting the conclusion of negotiations with the government. The oxide mining activities were completed in early 2018. While awaiting the decision, the operation continues to process stockpiled oxide material.</p>
<b>Legal aspects and tenure</b>	SEMOS is bound by the original prospecting and exploitation agreement (including its subsequent legal modifications) entered into on 5 April 1990 between AGEM Limited and the state of Mali, valid for the original mineral commodities until 5 April 2020. The identity number of the current exploitation area, DECRET No 00-080/PM-RM DU 06 MARS 2000 is a modification of all previous exploitation areas. Sadiola is operated under the license DECRET No 00-080/PM-RM DU 06 MARS 2000 valid from 1 August 1994 to 1 August 2024 covering a total area of 303km <sup>2</sup> . The SSP project will extend operations beyond 2024. Dialogue with the government of Mali has been ongoing throughout the project study phase and, as such, there are no foreseeable reasons why the amended environmental and social impact assessment (ESIA) and associated approvals should not be approved. An agreement and sale was announced for Sadiola in December 2019 subject to the fulfilment, or waiver, of a number of conditions precedent, including the receipt of certain approvals and releases from the government of Mali.
<b>Mining method</b>	<p>Open pit mining operations ceased at Sadiola in 2018. The operation is currently based on stockpile reclaim with ore feed scheduled until the end of March 2020.</p> <p>The stockpile reclaim is undertaken using a mining fleet consisting of a loader and rear dump trucks. The planned mining method for the SSP is conventional open pit mining, using a combination of hydraulic face shovels and rear dump trucks working on 10m benches.</p>
<b>Operational infrastructure</b>	<p>Sadiola includes a main pit and several smaller satellite pits, a processing plant, a TSF and other infrastructure such as a mine village water supply system, roads, airstrip and communications systems.</p> <p>Since the beginning of the operation mining activities have been outsourced. All mining occurs within the mining licence boundaries. Power to the Sadiola Mine is self-generated.</p>
<b>Mineral processing</b>	<p>Ore is treated in a 4.9Mtpa CIP processing plant. The plant was originally designed to treat only soft oxide ore, but has been progressively adapted to include a blend of hard oxides as well as batch feeding of a sulphide ore blend. Any hard material making up the blend currently undergoes preconditioning through separate primary crushers.</p> <p>The SSP aims to mine the underlying sulphide material in the Sadiola main pit and modify the existing oxide plant to process the sulphide ore. The modified plant will treat both sulphide stockpiles and the run-of-mine (ROM) sulphide material. This project will extend the life of Sadiola and leverage any further sulphide exploration successes in the region.</p>
<b>Risks</b>	<p>The oxide ore from pits was finished in March 2018. Since then, only low grade oxide stockpiles are available and can feed the processing plant until March 2020.</p> <p>The SSP project has been re-evaluated based on the current economic climate. As part of the revision, an amended ESIA was completed in 2017 and approved by the government of Mali.</p> <p>The project is paused pending favourable conclusion of discussions with the government of Mali on fiscal agreements.</p>



Map showing Sadiola Mine infrastructure and licence





# SADIOLA CONTINUED

## Continental Africa

### Geology

The Sadiola gold deposits are located within the Malian portion of the Kenieba-Kedougou Inlier, a major early Paleoproterozoic-Birimian window along the northeast margin of the Kenema-Man shield. The deposits are in the north of the inlier and positioned in the Kofi Formation, just east of the Senegalo-Malian Shear Zone terrane boundary. Greenschist facies regional metamorphism is predominant with amphibolite facies metamorphism observed in the contact aureoles around major intrusions.

### Deposit type

The Sadiola deposit is considered a mesothermal shear-hosted gold deposit and can be correlated with an Ashanti-type orogenic gold model.

### Mineralisation style

The Sadiola gold system displays the Sadiola Hill-style Au-As-Sb mineralisation. Within the Sadiola main pit, the bulk of the ore is hosted within the brittle-ductile Sadiola Fracture Zone (SFZ) and impure footwall carbonates. Mineralisation also occurs along the array of north-northeast-trending shears although gold grade decreases with increasing distance from the SFZ.

Mineralisation is shear-hosted and associated with a polyphase hydrothermal alteration history comprising an early calc-silicate phase followed by a potassic alteration stage. The metal associations of the ore typically comprise As-Au-Sb and minor to trace amounts of Cu-W-Mo-Ag-Bi-Zn-Pb-Te-Fe-bearing mineral species.

Structural controls on primary mineralisation in the FE satellite pits are similar to that of Sadiola but later karstification and protracted weathering resulted in the formation of a gold residuum.

Lithostratigraphic contacts also appear to have been an efficient interface for channeling fluids.

### Oxide mineralisation

The geometry of the extensive, soft, oxide deposit and its supergene enrichment of gold relates almost exclusively to the weathering history of the primary mineralisation. Intense tropical weathering has produced deep troughs of white to grey, decarbonated, kaolin-rich saprolite, locally abundant nontronite and relative gold enrichment. Penetration of groundwater has caused oxidation of the primary sulphides and the formation of acidic groundwaters, further promoting deeper argillisation of the bedrock.

### Sulphide mineralisation

Drilling of the (unweathered) primary mineralisation has allowed detailed investigation of major and minor hydrothermal alteration processes that were active during the formation of the deposit. Primary gold is fine grained, dominantly less than 15 microns, with rare grains approaching 50 microns. Visible gold is rare.

Gold mineralisation is associated with both arsenic and antimony dominated sulphide assemblages of arsenopyrite, pyrrhotite, pyrite, stibnite and gudmundite as well as potassic, calc-silicate, propylitic alteration and silicification.

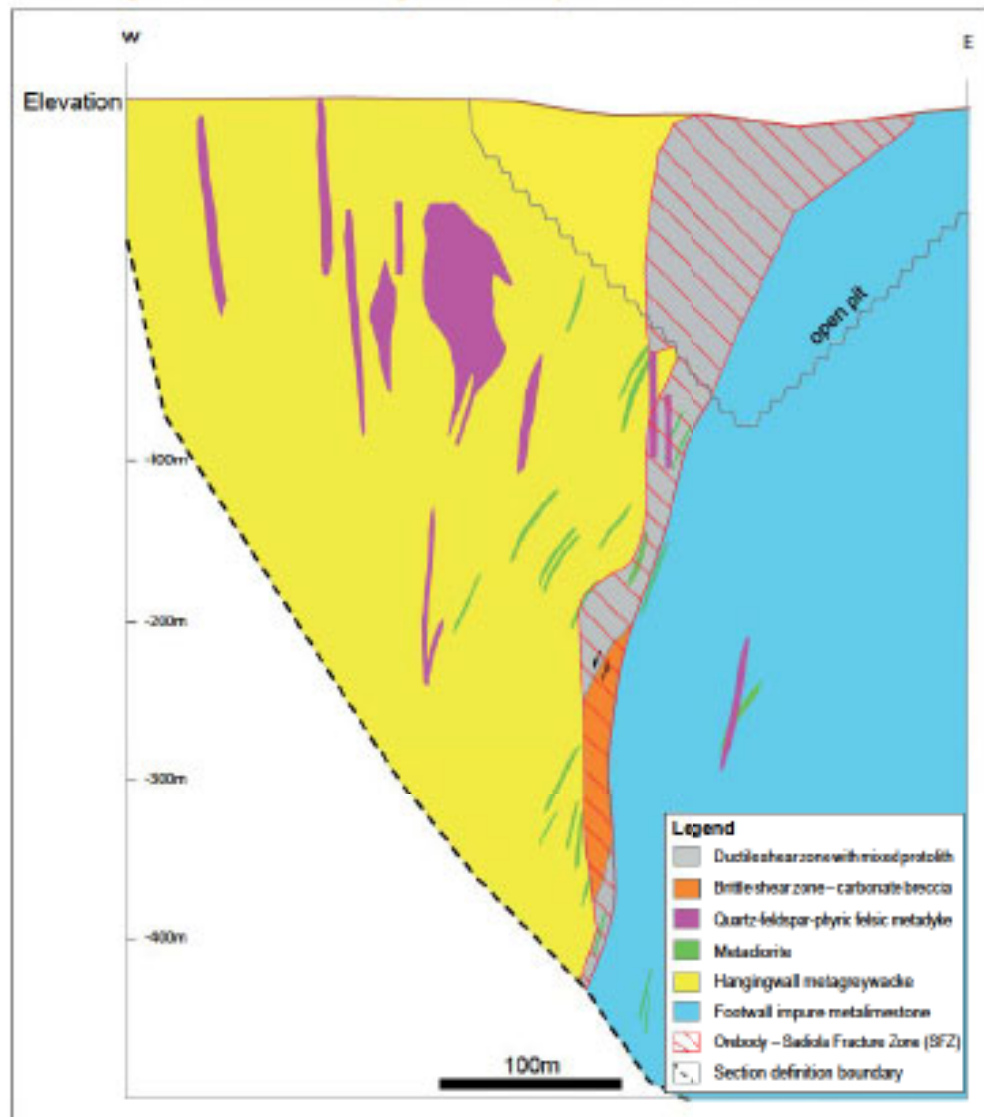
### Mineralisation characteristics

The gold mineralisation in the Sadiola main pit is related to the interaction of the north-striking SFZ and a north-northeast-striking fault array. The SFZ follows the competency contrast between the brittle hangingwall greywacke and the ductile footwall marbles and is mineralised over a drilled strike length of approximately 2,500m. The stratigraphy is intruded by discontinuous diorite and quartz-feldspar porphyry dykes. Mineralisation occurs in all four rock types although most of the mineralisation is hosted in the footwall carbonates adjacent to the SFZ. The deposit has been intensely weathered to a maximum depth of 200m.

At the FE pits, located about 7km to the southeast of the Sadiola main pit, mineralisation is hosted in marbles adjacent to the upper contact with carbon-rich pelites. Gold is associated with north-northeast to northeast striking faults and lens-shaped breccia zones that are broadly parallel to the northwest trending stratigraphy. The FE4 deposit is located in an interbedded sandstone and pelite sequence with mineralisation predominantly hosted in breccia along a northeast striking regional shear and several subsidiary north-northeast trending faults.

At Tambal, located 2km to the south of the Sadiola main pit, the mineralisation is associated with two sets of structures, orientated north-northeasterly (dipping steeply southeast) and northwesterly (dipping southwest). These structures are often related to thin tourmaline-quartz-rich shears/veins or zones of (mostly north-northeast trending) quartz-feldspar porphyry intrusions that have undergone later shearing. A northwest trending graphite-rich brecciated boundary between southwesterly dipping sandstones (in the east) and metapelites (in the west) is also evident. Bedding parallel shearing is also indicated in some areas, possibly accounting for some of the westerly dipping mineralised structures. Tambal mineralisation is similar in style to the Sadiola main pit and it is subjected to similar structural controls.

### W-E Geological cross-section through the Sadiola pit, elevation in metres AMSL



### Exploration

Exploration activities wound down in early 2018 as the mine was heading into restricted operations, pending a decision on the SSP project.

### Projects

The SSP remains our only major project in Mali and is the focus for extension of the LOM. The project has been re-evaluated and optimised in light of the current economic and political climate. The project consists of a new pushback at the Sadiola main pit in order to mine the underlying hard sulphide ore, and an expansion and upgrade of the existing processing plant to be able to treat sulphide ore. The revised project extends operations beyond 2024. As part of the revision, an amended ESIA was completed in 2017 and approved by the government of Mali. Dialogue with the government of Mali has been ongoing throughout the project study phase. The project is paused pending favourable conclusion of discussions with the government of Mali on fiscal agreements.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	6.25 x 12.5, 25 x 25	✓	✓	–	–	–
Indicated	25 x 25, 50 x 25	✓	✓	–	–	–
Inferred	50 x 50	✓	✓	–	–	–
Grade/ore control	5 x 10, 6 x 13, 6.25 x 12.5	–	✓	–	–	–

# SADIOLA CONTINUED

## Continental Africa

### Inclusive Mineral Resource

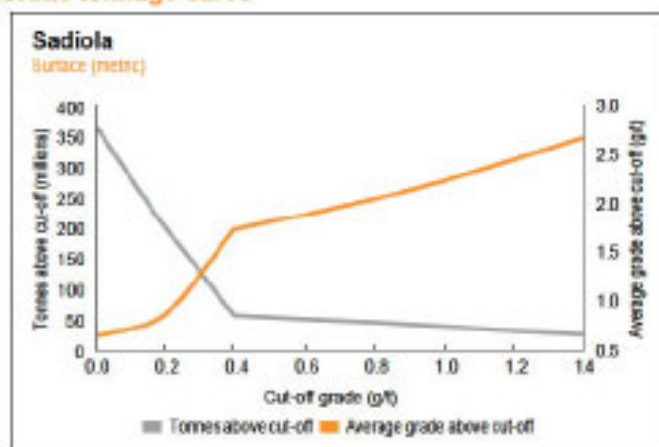
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
FE2	Measured	-	-	-	-
	Indicated	0.14	1.48	0.20	0.01
	Inferred	0.00	1.30	0.00	0.00
	<b>Total</b>	<b>0.14</b>	<b>1.48</b>	<b>0.20</b>	<b>0.01</b>
FE3	Measured	-	-	-	-
	Indicated	1.02	1.88	1.93	0.06
	Inferred	0.03	2.13	0.07	0.00
	<b>Total</b>	<b>1.06</b>	<b>1.89</b>	<b>2.00</b>	<b>0.06</b>
FE4	Measured	-	-	-	-
	Indicated	0.03	2.25	0.06	0.00
	Inferred	0.01	2.84	0.03	0.00
	<b>Total</b>	<b>0.04</b>	<b>2.39</b>	<b>0.09</b>	<b>0.00</b>
FN	Measured	-	-	-	-
	Indicated	2.44	1.35	3.29	0.11
	Inferred	0.30	1.19	0.36	0.01
	<b>Total</b>	<b>2.74</b>	<b>1.33</b>	<b>3.65</b>	<b>0.12</b>
Tabakoto (Sekokoto)	Measured	-	-	-	-
	Indicated	0.33	1.23	0.41	0.01
	Inferred	0.05	1.12	0.05	0.00
	<b>Total</b>	<b>0.38</b>	<b>1.22</b>	<b>0.46</b>	<b>0.01</b>
Tambali	Measured	-	-	-	-
	Indicated	1.70	1.04	1.77	0.06
	Inferred	0.50	1.19	0.59	0.02
	<b>Total</b>	<b>2.20</b>	<b>1.08</b>	<b>2.36</b>	<b>0.08</b>
SSP (oxide)	Measured	-	-	-	-
	Indicated	1.71	1.30	2.24	0.07
	Inferred	0.19	1.05	0.20	0.01
	<b>Total</b>	<b>1.91</b>	<b>1.28</b>	<b>2.44</b>	<b>0.08</b>
SSP (transitional)	Measured	-	-	-	-
	Indicated	1.18	1.89	2.22	0.07
	Inferred	0.14	1.57	0.22	0.01
	<b>Total</b>	<b>1.32</b>	<b>1.85</b>	<b>2.44</b>	<b>0.08</b>
SSP (sulphide)	Measured	-	-	-	-
	Indicated	36.75	1.94	71.44	2.30
	Inferred	6.02	1.77	10.67	0.34
	<b>Total</b>	<b>42.77</b>	<b>1.92</b>	<b>82.11</b>	<b>2.64</b>
Totals stockpiles	Measured	-	-	-	-
	Indicated	1.32	2.31	3.07	0.10
	Inferred	-	-	-	-
	<b>Total</b>	<b>1.32</b>	<b>2.31</b>	<b>3.07</b>	<b>0.10</b>
<b>Sadiola</b>	<b>Total</b>	<b>53.86</b>	<b>1.83</b>	<b>98.82</b>	<b>3.18</b>



### Estimation

The Mineral Resource is taken as the material that falls within the \$1,400/oz economic pit shell optimised for each deposit. A 3D surface is generated to create the outline of the geological model within which grades are estimated. Block sizes are between 25 x 25 x 10m and 30 x 30 x 10m and, where appropriate, selective sub-celling is used for definition on the geological and mineralisation boundaries. All the deposits are estimated by ordinary kriging. Where deemed appropriate, a geostatistical technique called uniform conditioning (UC) or localised uniform conditioning (LUC) is used to estimate the proportion of material that occurs above a cut-off, hence forming a recoverable Mineral Resource model at a specific SMU.

### Grade tonnage curve



The grade tonnage curve does not include stockpiles.



📷 Oxide material stockpile at Sadiola

# SADIOLA CONTINUED

## Continental Africa

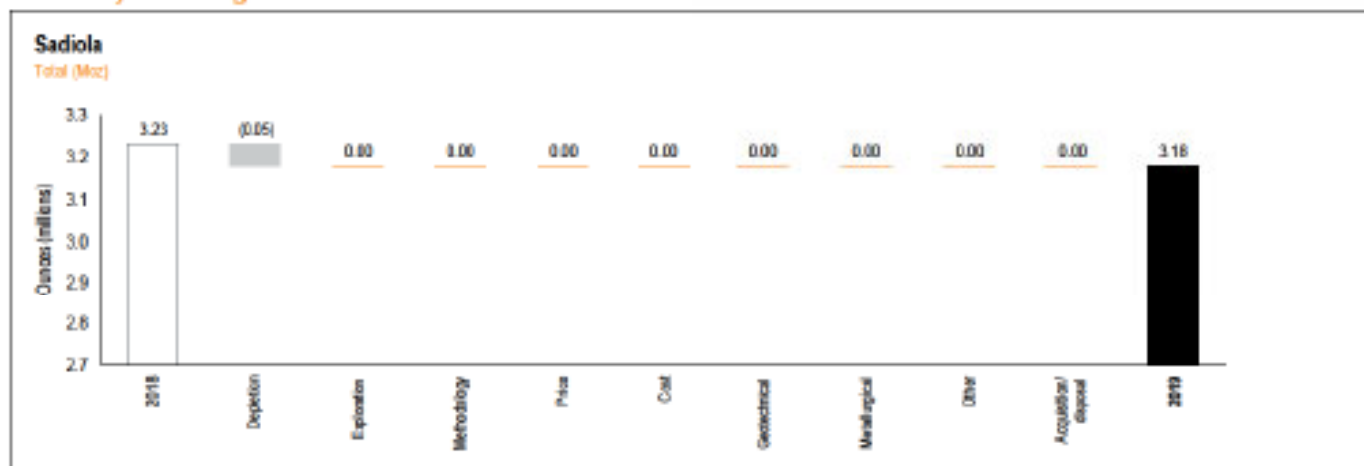
### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Sadiola	Measured	-	-	-	-
	Indicated	21.08	1.72	36.21	1.16
	Inferred	7.23	1.68	12.19	0.39
	<b>Total</b>	<b>28.32</b>	<b>1.71</b>	<b>48.40</b>	<b>1.56</b>

The exclusive Mineral Resource is the part of the Mineral Resource that was not converted to an Ore Reserve. It is defined as the Mineral Resource that is outside the current Ore Reserve designs, but inside the Mineral Resource shells and includes the Inferred Mineral Resource within the Ore Reserve design.

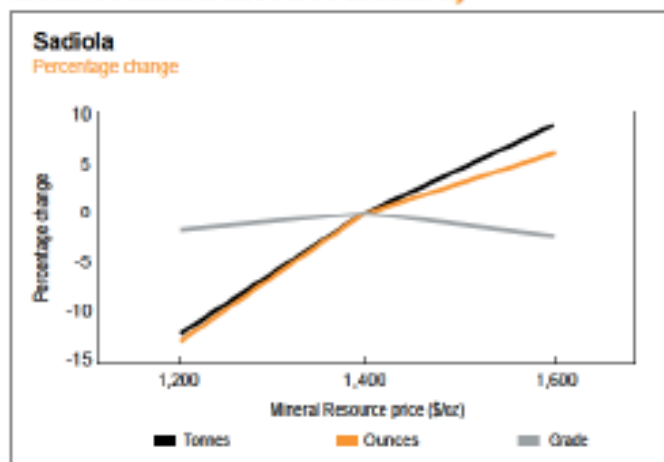
The exclusive Mineral Resource gives an indication of the future potential of the deposit and can be converted to Ore Reserve by an increase in gold price and favourable costs. Inferred Mineral Resource within the Ore Reserve pit design will be converted to an Ore Reserve through drilling.

### Year-on-year changes in Mineral Resource



The Mineral Resource models and inputs used to tabulate the Mineral Resource were the same as the previous year. The main change is due to depletion.

### Inclusive Mineral Resource sensitivity



Sadiola is very sensitive to a drop in gold price due to the low grade nature of the stockpiles. There is a 6% upside in ounces at a higher Mineral Resource price and 13% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
FN	Proved	-	-	-	-
	Probable	0.78	1.48	1.15	0.04
	Total	0.78	1.48	1.15	0.04
SSP (oxide)	Proved	-	-	-	-
	Probable	0.66	1.56	1.03	0.03
	Total	0.66	1.56	1.03	0.03
SSP (transitional)	Proved	-	-	-	-
	Probable	0.70	2.10	1.47	0.05
	Total	0.70	2.10	1.47	0.05
SSP (sulphide)	Proved	-	-	-	-
	Probable	21.03	2.02	42.51	1.37
	Total	21.03	2.02	42.51	1.37
Total stockpiles	Proved	-	-	-	-
	Probable	1.32	2.31	3.07	0.10
	Total	1.32	2.31	3.07	0.10
Sadiola	Total	24.50	2.01	49.23	1.58

### Estimation

The Mineral Resource models are used as the basis for the Ore Reserve. Optimisations are run on the Measured, Indicated and Inferred Mineral Resource. All appropriate costs, metallurgical recovery factors and geotechnical parameters are applied to generate the mine designs that are used to estimate the final Ore Reserve.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	Dilution %	RMF	MRF	MCF %	MeRF %
				% (based on tonnes)	% (based on tonnes)		
FN	1,200	0.77	17.6	85.0	100.0	100.0	76.0
SSP (oxide)	1,200	0.51	0.0	100.0	100.0	100.0	94.0
SSP (transitional)	1,200	0.78	0.0	100.0	100.0	100.0	75.0
SSP (sulphide)	1,200	0.77	0.0	100.0	100.0	100.0	76.0

Sadiola Ore Reserve is quoted at \$1,200/oz.

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
FN	0.02	1.24	0.03	0.00
SSP (oxide)	0.04	1.44	0.06	0.00
SSP (transitional)	0.05	1.70	0.09	0.00
SSP (sulphide)	0.52	1.59	0.82	0.03
Total	0.64	1.58	1.00	0.03

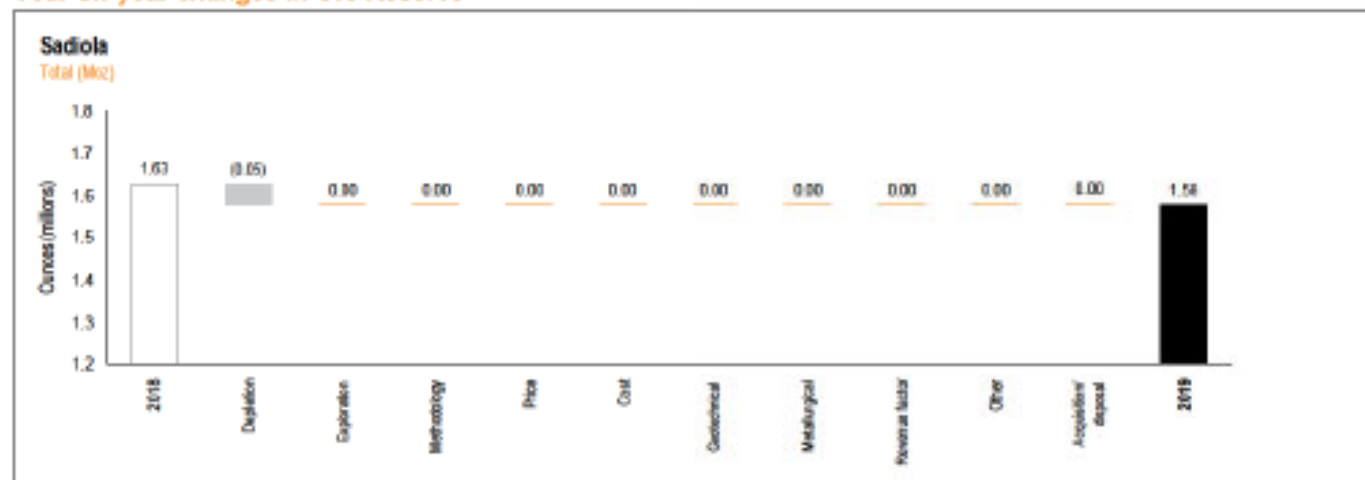
Inferred Mineral Resource has been included in the business plan as incidental material when the pit is mined. Several of the satellite pits that are included in the SSP contain inferred Mineral Resource with the total Inferred Mineral Resource in the business plan being approximately 2%.



# SADIOLA CONTINUED

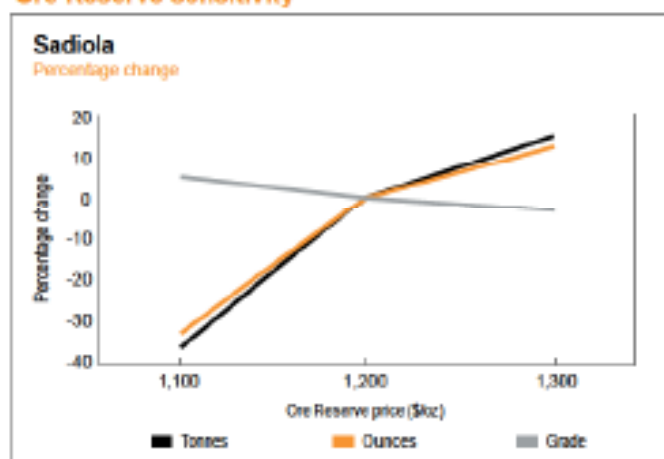
## Continental Africa

### Year-on-year changes in Ore Reserve



The change to the Ore Reserve is due to stockpile depletion.

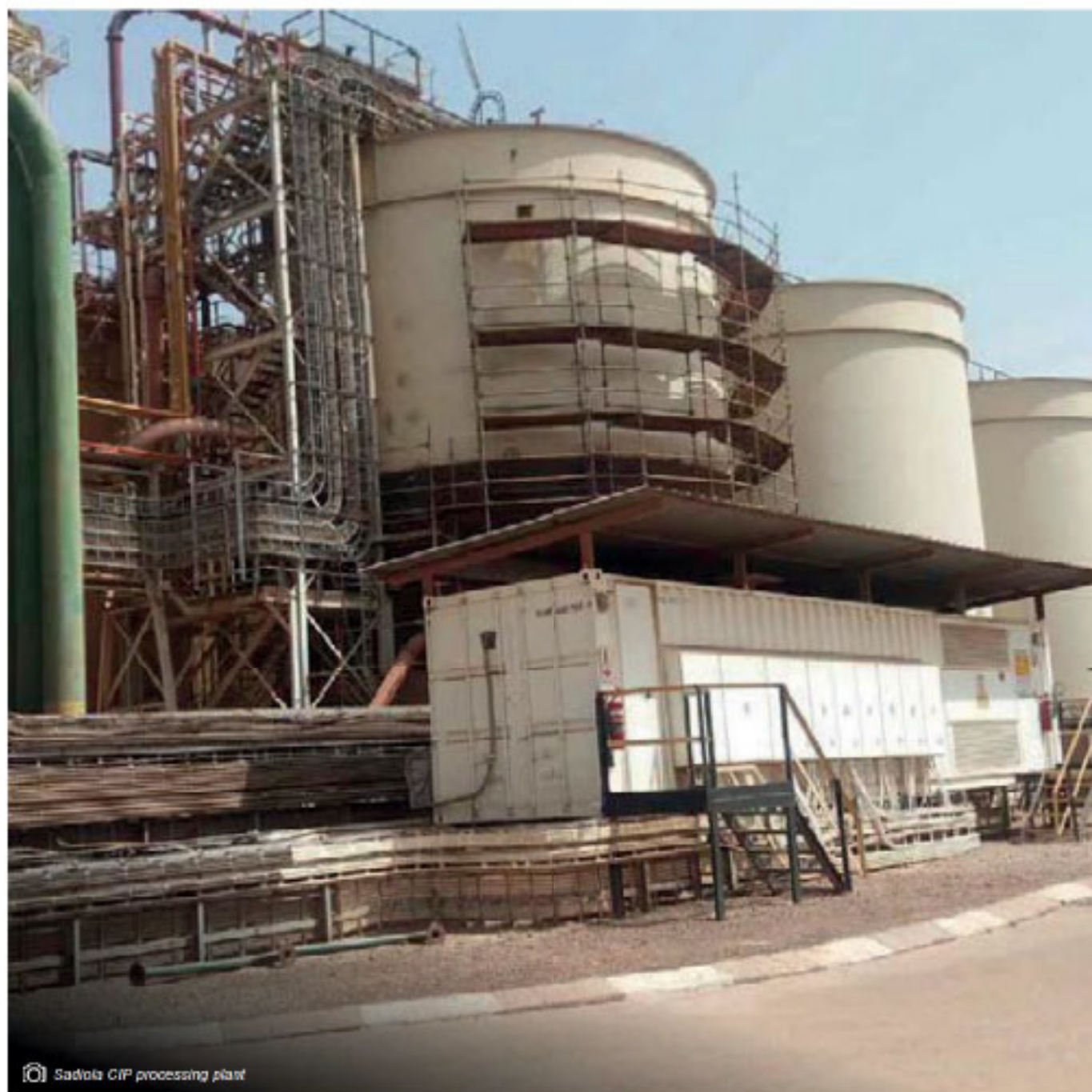
### Ore Reserve sensitivity




Sadiola Ore Reserve is quoted at \$1,200/oz, and therefore the sensitivities are run at \$1,100/oz and \$1,300/oz, representing a change of \$100/oz up and down from the Ore Reserve price. Sadiola is highly sensitive to a drop in gold price due to the low grade nature of the stockpiles. There is a 13% upside in ounces at a higher Ore Reserve price and 33% downside in ounces at a lower Ore Reserve price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Geoffrey Gushee	FAusIMM	207 957	31 years	BA (Geology), GDE (Mining Engineering), MEng (Mineral Resource Management), MDP
Ore Reserve	Andrew Bridges	MAusIMM	300 976	21 years	BSc Hons (Mining Engineering)



 Sadiola CIP processing plant

# TANZANIA

Continental Africa



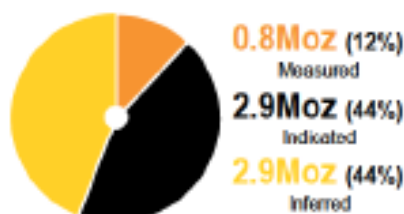
**G**eita, one of our flagship mines, is located in north-western Tanzania, in the Lake Victoria goldfields of the Mwanza region, about 120km from Mwanza and 4km west of the town of Geita. The Geita gold deposits are mined as a multiple open-pit and underground operation, with the underground operation having begun in 2016. The mine will continue to operate as a mixed open-pit and underground operation until the entire economic open-pit Mineral Resource is exhausted. The mine is currently serviced by a CIL processing plant with an annual capacity of 5.2Mt.

In 2016, underground mining successfully commenced at Star and Comet to provide ore to the processing plant. Underground ore is now a significant part of the feed to the plant, with underground operations also having commenced at Nyankanga.

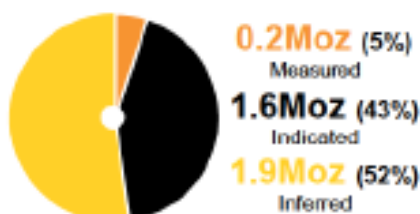
Attributable production from Tanzania was 604koz of gold in 2019, or 39% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for Tanzania was 6.6Moz (2018: 6.3Moz) and the Ore Reserve was 1.5Moz (2018: 1.3Moz).

**Inclusive Mineral Resource**



**Exclusive Mineral Resource**



**Ore Reserve**







 View of the plant and Nyankanga Cut # flowing southwest

# GEITA

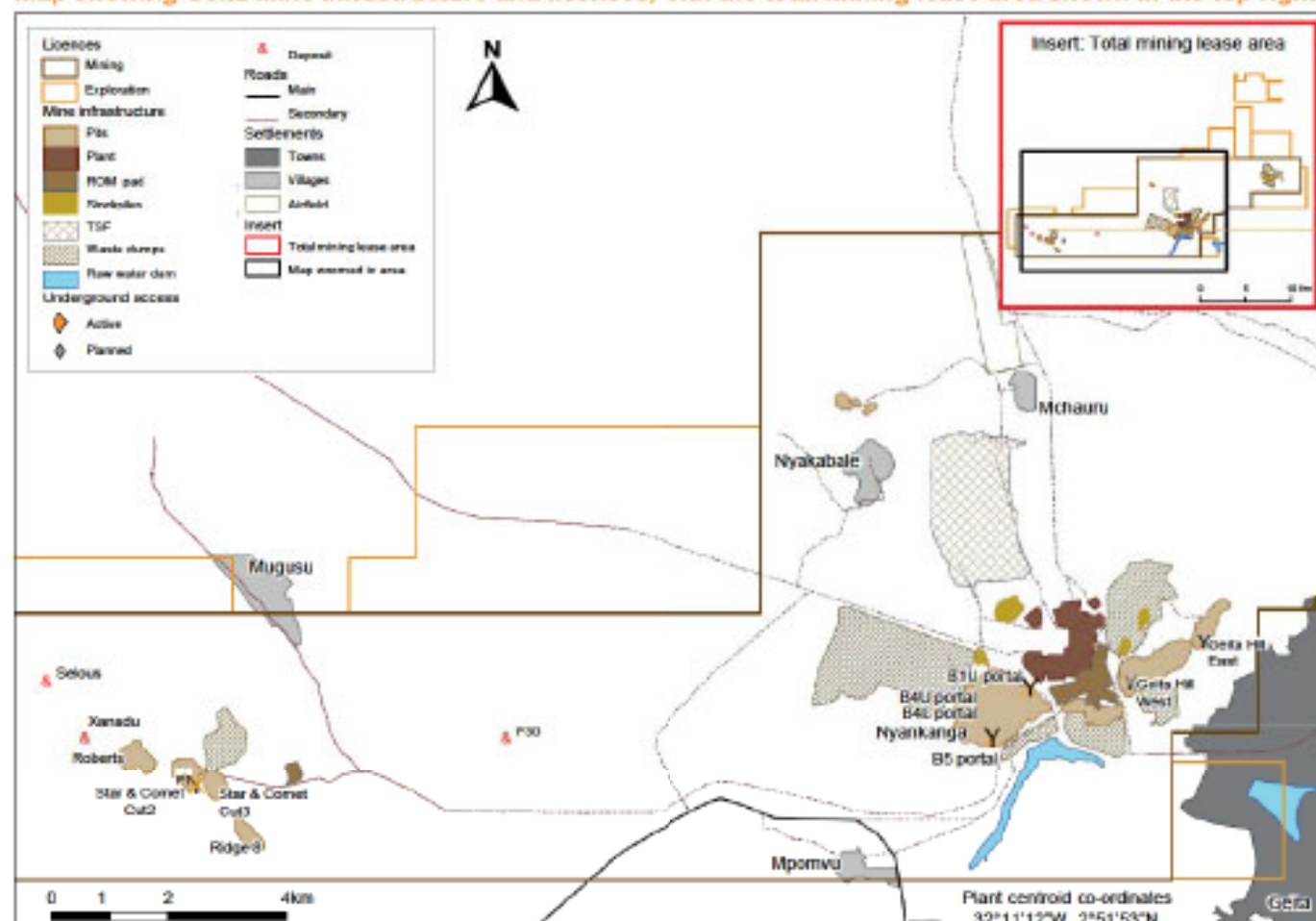
## Continental Africa

### Introduction

<b>Property description</b>	Geita Gold Mine (GGM) is wholly owned by AngloGold Ashanti and currently sources ore from the Nyankanga open pit mine and two underground mines (Star and Comet and Nyankanga). Underground mining commenced at Star and Comet in 2016 and at Nyankanga in 2017.
<b>Location</b>	GGM is located approximately 910km from the Tanzanian capital city of Dar es Salaam. It falls within the Lake Zone of north-western Tanzania, approximately 120km west of Mwanza and 4km away from the town of Geita. The mining lease area falls within the Archaean Sukumaland Greenstone Belt of the Lake Victoria goldfields.
<b>History</b>	<p>In 1936, the first Geita deposits were discovered and by 1966, three mines had produced almost 1Moz.</p> <p>Ashanti acquired the project through acquisition of Cluff Resources in 1996 and in early December 2000, Ashanti reached an agreement to sell AngloGold a 50% interest in Geita for \$324 million. AngloGold added its neighbouring Nyamullima Hill deposits into the JV company. In 2004, the merger of AngloGold and Ashanti resulted in the operation being wholly run by AngloGold Ashanti.</p> <p>In 2015, a decision was taken to go underground at Star and Comet and the underground development started in 2016. In 2017 the Nyankanga underground operation was started.</p>
<b>Legal aspects and tenure</b>	The special mining licence (SML4599) covers approximately 196.17km <sup>2</sup> and expires on 26 August 2024. There are a further 120km <sup>2</sup> of prospecting licences in the immediate vicinity to the special mining licence which do not contain any Ore Reserve.
<b>Mining method</b>	<p>Mining at Geita is by both open pit and underground methods. Open pit mining is currently undertaken by conventional truck-and-shovel open pit mining method on one active pit (Nyankanga) using Geita owned, operated and maintained fleet. A contractor provides drilling and blasting services. Underground mining commenced at Star and Comet in 2016 and subsequently at Nyankanga in 2017 using the services of an underground mining contractor.</p> <p>Ore is hauled from the Star and Comet operation to the central ROM pad by the Geita surface mining fleet.</p>
<b>Operational infrastructure</b>	Geita has an established 5.2Mtpa CIL processing plant capable of processing hard ore. It also has an established TSF with sufficient area to construct wall raises every three years to accommodate planned future production. A full workshop facility is in place to support the maintenance of heavy mining equipment and all light support equipment. Contractor infrastructure supported on the mine site includes workshops for the production and exploration drilling contractor, workshops for the underground mining contractor, as well as a plant for the explosives supplier. Geita has further support infrastructure in place including a mine village, medical clinic, mine store, administration buildings and an airstrip.
<b>Mineral processing</b>	Geita's ore processing method is via conventional CIL process with a throughput capacity of 5.2Mtpa. The circuit contains a primary gyratory crusher, secondary and tertiary crushers, a semi-autogenous mill, ball mill and 12 leach tanks. This is coupled with a gravity circuit using two knelson concentrators. In planning the plant feed blend material, hardness grade and sulphide content are considered in order to optimise throughput and recovery. Power to the mine is self-generated.
<b>Risks</b>	<p>There is regular artisanal and small scale mining activity as well as illegal intrusions into the mine, but there is a holistic mitigation plan in process to manage this.</p> <p>The primary risk remains the changing Ore Reserve profile from open pit to underground. Mitigating actions put in place focus on optimising the exploration and project plans to convert both surface and underground Mineral Resource to Ore Reserve. Other risks include, reduced underground production efficiencies when transitioning to owner mining in selected areas, ball mill and crusher plant integrity, Mineral Resource to Ore Reserve conversion, open pit and underground blasting interaction for Nyankanga Cut 8 and Nyankanga Block 3 underground and the aging fleet for open pit.</p> <p>An independent external Mineral Resource and Ore Reserve audit was undertaken in 2019 and found no fatal flaws in process or output.</p>



Map showing Geita Mine infrastructure and licences, with the total mining lease area shown in the top right corner



## Geology

### Deposit type

The Geita Greenstone Belt (GGB) hosts several world-class shear-hosted Archaean lode gold deposits and forms the northern portion of the regional Sukumaland Greenstone Belt, itself one of several belts that comprise the Lake Victoria goldfields. Other gold mines hosted in the Lake Victoria Goldfields include Golden Pride, Bulyanhulu, Tulawaka, Buzwagi and North Mara.

The east-west oriented GGB is 60km in length and up to 15km wide. The Geita terrain is comprised of upper-to-mid Nyanzian greenschist facies units, made up of clastic sediments, black shales, BIF, volcanoclastics and metabasalts. These have been intruded by a variety of felsic to mafic intrusive bodies, dykes and sills. Gabbro dykes accommodated by regional north-northeasterly structures are also prominent geological features in the area.

Northwest trending deformation corridors divide the GGB into three distinct sub-terrains, namely the Nyamulilima Terrain in the west (hosting the Star and Comet, Ridge 8 and Roberts deposits), the Central Terrain in the central part (hosting the Nyankanga, Geita Hill, Lone Cone and Chipaka deposits) and the Kukuluma Terrain

to the northeast (hosting the Matandeni, Kukuluma and Area 3 West deposits).

### Mineralisation style

Geita's gold mineralisation is preferentially hosted in BIF, cherts and ironstones that have been affected by both ductile and dominant brittle deformation associated with shear zones. The shears preferentially exploit fold axial planes as well as the contacts between the supracrustal and intrusive rocks.

The GGB has been through a protracted history of deformation, which resulted in a large scale synformal configuration in the Central Terrain, with west-northwest trending limbs connected by a northeast trending hinge zone. The deposits of the Central Terrain are mainly located within the relatively low-strain hinge zone.

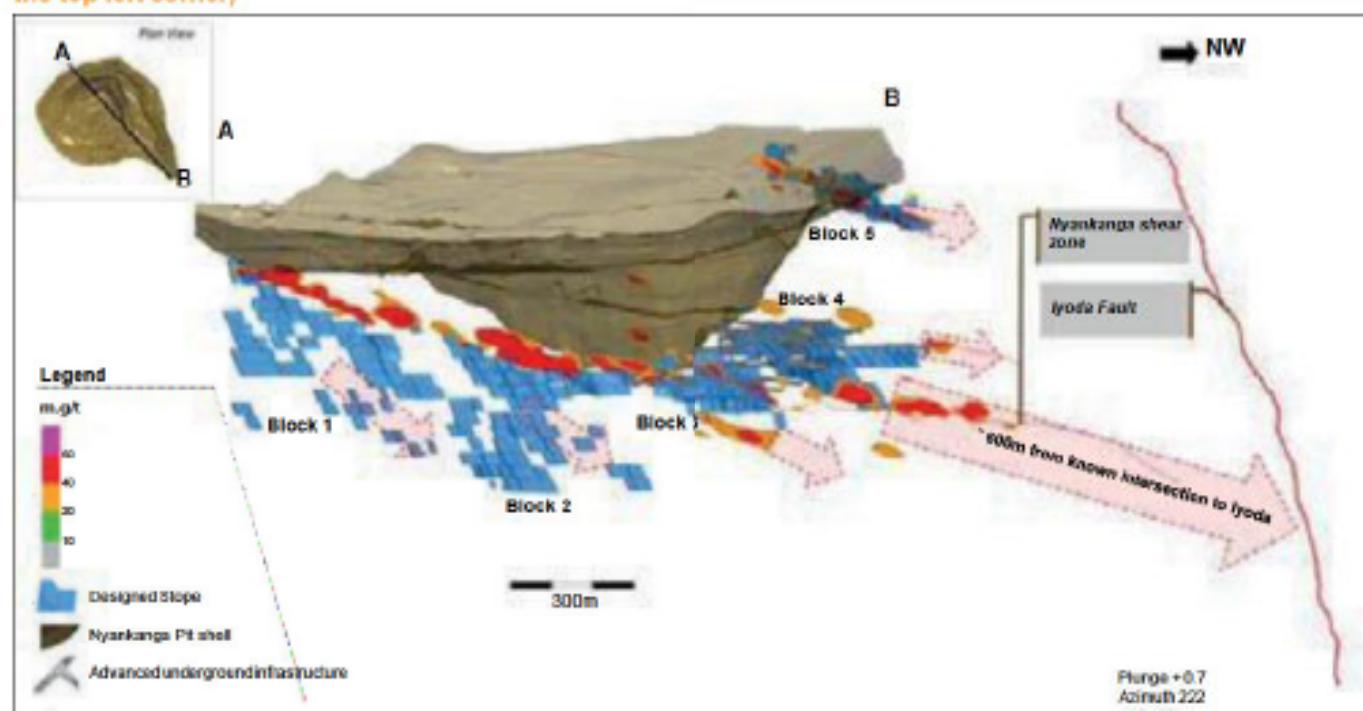
The Nyankanga deposit is hosted in a BIF dominated supracrustal package that is extensively intruded by, and locally forms a roof pendant within the dioritic Nyankanga Intrusive Complex. At Geita Hill, dioritic rocks are present as sills and dykes intruded into a supracrustal sequence that has been subject to extensive polyphase folding.



# GEITA CONTINUED

## Continental Africa

Nyankanga long section: potential plunge continuity of the high grade ore shoots (view looking south), plan view insert in the top left corner)



To the west, the Nyamulima Terrain comprises a semi-circular structure surrounding intrusive centers, which internally encompasses structural systems of variable scale that locally control gold mineralisation. At Star and Comet, a folded sedimentary package of BIF intercalated with clastic and tuffaceous metasediments is intruded by a tonalitic complex.

The Kukuluma Terrain trends west-northwesterly, with sub-vertical limbs being dominant over compressed, multiphase folded zones. The three major deposits in the area (Kukuluma, Matandani and Area 3) are located along a 5km long east-southeast mineralisation trend. The geology of the deposits is dominated by volcanosedimentary rocks that are polydeformed and intruded by syn-to-late folding diorite bodies. Host rocks for mineralisation are fine-grained iron-rich clastic sediments, cherts, BIF and tuffaceous rocks, with local intercalated carbonaceous shales.

### Mineralisation characteristics

Gold mineralisation at Nyankanga occurs within a northeast trending and northwest dipping anastomosing shear system, typically along the lowermost shears, with higher grade mineralisation mainly proximal to the basal contact of BIF packages. Mineralisation is associated with chlorite-carbonate-silica alteration and pyrite dominant sulphide in the damage zones surrounding the shear surfaces as veins, veinlets, local

breccias and sulphide replacement of magnetite layers. At Geita Hill, mineralisation at the deposit scale is controlled by a narrow northeast trending and northwest dipping shear zone that exploits the axial surfaces of F3 folds. Ore is also hosted by damage zones adjacent to the main shear.

At Star and Comet, a major mineralised shear zone runs north-northwest to south-southeast through the deposit where it is localised along the contact of BIF and tonalite. An envelope of mostly brittle deformation up to 10m thick (which affects both lithologies) occurs either side of the shear zone and controls distribution of mineralisation. Most of the gold mineralisation is hosted in pyrrhotite patches associated with strong silicification together with carbonate alteration.

Within the Kukuluma Terrain, steeply dipping ductile/brittle gold-fertile shear zones are developed along, or close to, the edges of an elongate diorite body, hosted in iron-rich host rocks and locally exploiting axial surfaces of tight folds. Gold mineralisation in the Kukuluma terrain is strongly associated with pyrrhotite, pyrite and arsenopyrite concentrations, accompanied by strong carbonate and silica alteration of host rocks. Gold is present in gold minerals and sulphides, dominantly in arsenopyrite.

## Exploration

Geita's exploration strategy is focused on securing near-term ounces as well as extending the LOM beyond 2030. In 2019, Mineral Resource development drilling was carried out at Star and Comet and Nyankanga underground projects and Geita Hill Blocks 1 and 2 and Nyankanga Cut 6 from surface. Exploration drilling for extensions occurred at Star and Comet Cuts 2 and 3 and Nyankanga Block 3 underground. Surface drilling on exploration targets took place at Selous, Mabe, Star and Comet NW, Geita Hill and Roberts. A total of 77km of DD and 18km of RC drilling were completed in the year.

Mineral Resource development drilling at Star and Comet Cut 2 returned significant intersections, upgraded the level of Mineral Resource confidence and provided a better understanding of the limits of the ore zones for slope designs. At Star and Comet Cut 3 drilling was done to upgrade material to Indicated Mineral Resource classification and test downdip projections. Intersections within the Cut 2-Cut 3 gap confirmed the presence of a high-grade mineralisation.

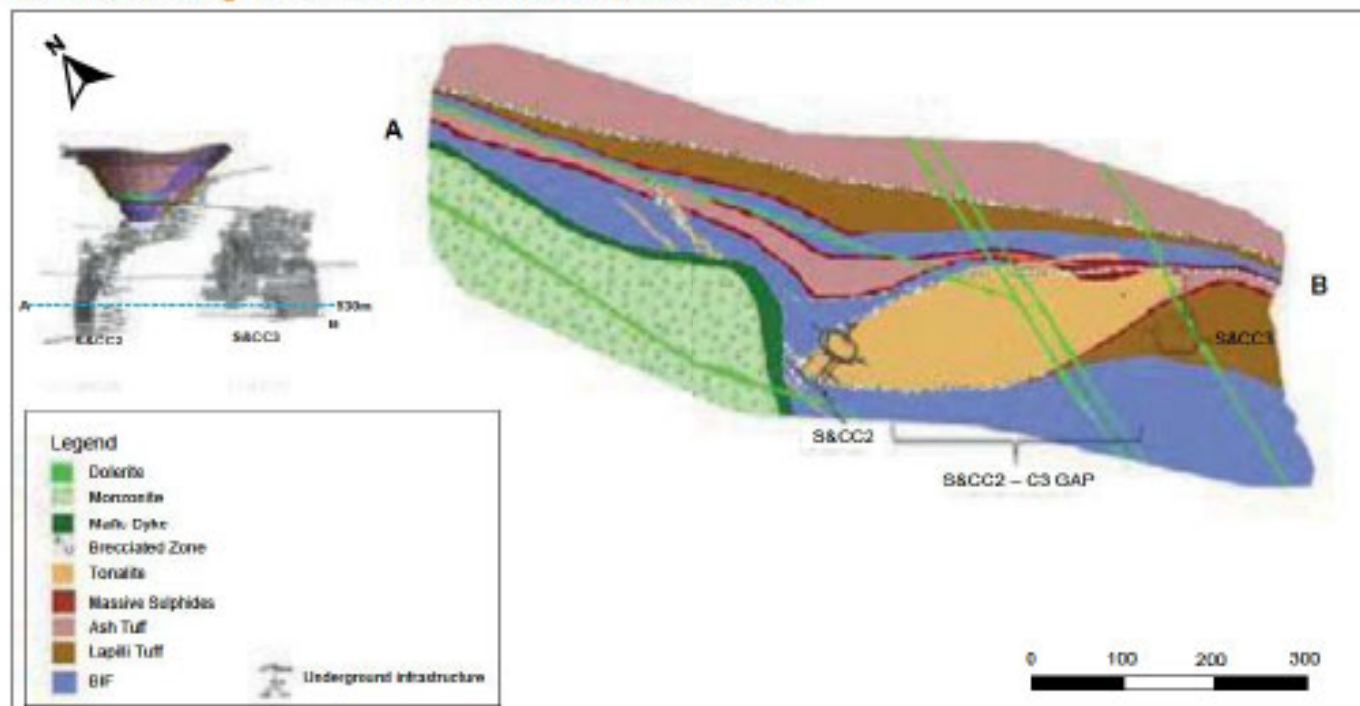
The drilling programmes at Nyankanga Blocks 3, 4 and 5 underground projects aimed to convert the current Inferred to Indicated Mineral Resource and further delineate the potential strike, down-dip and down-plunge continuities.

Mineral Resource conversion drilling from surface at Nyankanga aimed to increase the Mineral Resource confidence of material within the pit shell as well as in the Blocks 1 and 2 underground designs.

Several exploration targets were tested during the year. Building on the exploration success in 2017 and 2018 at Selous target, a 3D geological model was developed and subsequently a Mineral Resource was declared in 2019. Drilling was carried out at Mabe target to further test the fertile northwest-southeast shear zones. Assay results point to localised ore zones of medium to high grade at Mabe. Drilling was carried out at the Roberts deposit to define the geometry, possible extensions and controls of gold mineralisation. Six RC holes reported significant intersections, including several parallel zones outside of the main Roberts mineralised zone.

Drilling at Roberts will continue in 2020. Drilling from surface was conducted at Star and Comet northwest extension target to follow up on near surface mineralisation, interpreted from a 2018 geophysical downhole electromagnetic survey to be a parallel ore shoot to that of the main ore zone. Further geological interpretation will be completed. A surface soil sampling programme was conducted at Xanadu West to follow up on the eastern continuity of the historical northwest-southeast trending soil geochemical anomaly which extends from Kibugwe West. The results confirmed the continuity and extended the strike of the anomaly over 2km.

Plan view showing Star and Comet Cut 2 and Cut 3, at 930m AMSL





# GEITA CONTINUED

## Continental Africa

### Projects

GGM's exploration strategy is focused in three key areas. The first is to increase the Mineral Resource/Ore Reserve base of the main producing deposits while transitioning to underground. The second key area is aggressive exploration of the satellite targets within GGM's tenement holdings to bring them into production and the third is exploration activities to support major long lead projects.

Underground mining successfully started at Star and Comet Cut 2 in 2016. Development at Star and Comet Cut 3 was initiated from the Cut 2 platform and was ramped up as planned in 2017. Detailed mine design, planning and permitting for Nyankanga underground was completed in 2016 and underground development commenced at Blocks 4 and 5 in 2017. Underground exploration drilling has successfully converted exploration targets and Inferred Mineral Resource to Indicated Mineral Resource in these deposits. Following the successful implementation of underground operations at Star and Comet and Nyankanga underground, exploration and development will be expanded to include Geita Hill and the Ridge 8 deposits in 2020.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling					Comments
		Diamond	RC	Blasthole	Channel	Other	
Measured	5 x 10, 10 x 10, 10 x 15	-	-	-	-	-	Underground: diamond fan drilling Open pit: RC grid
Indicated	10 x 10, 20 x 20, 25 x 15, 25 x 25, 40 x 20, 40 x 40	✓	✓	-	-	-	-
Inferred	40 x 40, 50 x 50, 80 x 40	✓	✓	-	-	-	-
Grade/ore control	5 x 10, 10 x 10, 10 x 15	✓	✓	-	-	-	Underground: diamond fan drilling Open pit: RC grid

There are approximately 50 conceptual exploration targets within GGM's leases. Resourcing this exploration programme, termed the satellite target exploration programme, has lagged following the gold price decline in 2013 and associated reduction in spending. The programme was replanned and re-evaluated in 2017 and dedicated work plans have been put in place to support a more aggressive exploration programme. Consistent with previous years, the targets that have the potential to provide near term value in the LOM plan have been prioritised. The most recent has been the regrading of the Nymulilima district, with Xanadu, Roberts and Xanadu West/Kibugwe West now high priority targets in 2020.

The refractory ore project which encompasses, Matandani, Kukuluma, Area 3W and Area 3CS was postponed due to high capital costs related to plant modifications to treat the refractory ore and the transition to underground mining. Drilling was completed in 2015 within the Matandani pit, which contains the largest Mineral Resource potential. Metallurgical scoping test work was successfully concluded in 2016 and the PFS that was planned to commence in 2017 was put on hold.



RC drill rig at Geita



## Inclusive Mineral Resource

As at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Area 3 West (oxide)	Measured	-	-	-	-
	Indicated	0.29	2.63	0.76	0.02
	Inferred	0.00	2.22	0.01	0.00
	<b>Total</b>	<b>0.29</b>	<b>2.62</b>	<b>0.77</b>	<b>0.02</b>
Chipaka	Measured	-	-	-	-
	Indicated	0.25	2.23	0.55	0.02
	Inferred	0.43	2.49	1.06	0.03
	<b>Total</b>	<b>0.67</b>	<b>2.40</b>	<b>1.62</b>	<b>0.05</b>
Geita Hill (open pit)	Measured	-	-	-	-
	Indicated	0.01	3.17	0.03	0.00
	Inferred	0.04	1.84	0.07	0.00
	<b>Total</b>	<b>0.05</b>	<b>2.11</b>	<b>0.10</b>	<b>0.00</b>
Kalondwa Hill	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	0.53	3.75	1.98	0.06
	<b>Total</b>	<b>0.53</b>	<b>3.75</b>	<b>1.98</b>	<b>0.06</b>
Kukuluma (oxide)	Measured	-	-	-	-
	Indicated	0.02	3.82	0.08	0.00
	Inferred	0.00	2.68	0.01	0.00
	<b>Total</b>	<b>0.03</b>	<b>3.67</b>	<b>0.09</b>	<b>0.00</b>
Kukuluma (transitional)	Measured	-	-	-	-
	Indicated	0.08	4.87	0.40	0.01
	Inferred	0.02	5.04	0.11	0.00
	<b>Total</b>	<b>0.10</b>	<b>4.91</b>	<b>0.51</b>	<b>0.02</b>
Kukuluma (sulphide)	Measured	-	-	-	-
	Indicated	0.02	5.08	0.12	0.00
	Inferred	0.32	4.18	1.34	0.04
	<b>Total</b>	<b>0.34</b>	<b>4.24</b>	<b>1.45</b>	<b>0.05</b>
Lone Cone	Measured	-	-	-	-
	Indicated	0.65	3.02	1.95	0.06
	Inferred	0.56	3.10	1.73	0.06
	<b>Total</b>	<b>1.20</b>	<b>3.06</b>	<b>3.68</b>	<b>0.12</b>
Matandani (oxide)	Measured	-	-	-	-
	Indicated	1.37	2.26	3.09	0.10
	Inferred	0.70	2.27	1.60	0.05
	<b>Total</b>	<b>2.07</b>	<b>2.26</b>	<b>4.69</b>	<b>0.15</b>
Matandani (transitional)	Measured	-	-	-	-
	Indicated	0.10	3.39	0.36	0.01
	Inferred	0.11	4.09	0.44	0.01
	<b>Total</b>	<b>0.21</b>	<b>3.74</b>	<b>0.80</b>	<b>0.03</b>
Matandani (sulphide)	Measured	-	-	-	-
	Indicated	0.05	4.47	0.23	0.01
	Inferred	2.71	4.30	11.65	0.37
	<b>Total</b>	<b>2.76</b>	<b>4.30</b>	<b>11.88</b>	<b>0.38</b>
Nyankanga (open pit) – Cut 8	Measured	-	-	-	-
	Indicated	2.85	5.13	14.59	0.47
	Inferred	0.39	2.36	0.91	0.03
	<b>Total</b>	<b>3.23</b>	<b>4.79</b>	<b>15.50</b>	<b>0.50</b>
Ridge 8 (open pit)	Measured	-	-	-	-
	Indicated	0.91	2.26	2.07	0.07
	Inferred	0.00	1.20	0.00	0.00
	<b>Total</b>	<b>0.92</b>	<b>2.26</b>	<b>2.07</b>	<b>0.07</b>
Roberts	Measured	-	-	-	-
	Indicated	6.81	1.67	11.38	0.37
	Inferred	0.29	4.26	1.24	0.04
	<b>Total</b>	<b>7.10</b>	<b>1.78</b>	<b>12.62</b>	<b>0.41</b>

# GEITA CONTINUED

## Continental Africa

### Inclusive Mineral Resource *continued*

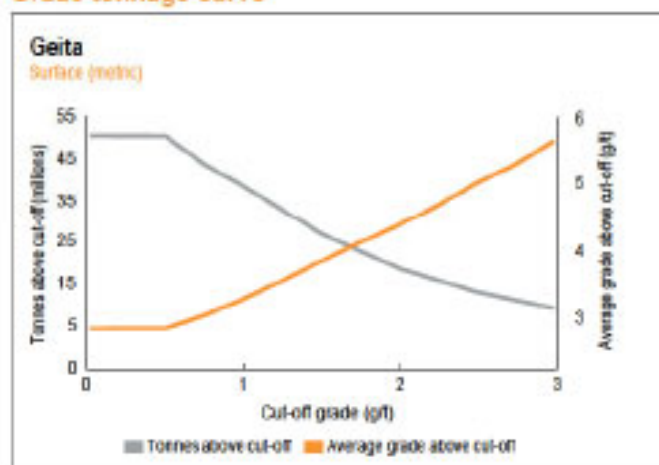
As at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Selous (open pit)	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	0.94	2.17	2.05	0.07
	<b>Total</b>	<b>0.94</b>	<b>2.17</b>	<b>2.05</b>	<b>0.07</b>
Star and Comet (open pit)	Measured	-	-	-	-
	Indicated	0.24	2.44	0.58	0.02
	Inferred	0.02	2.10	0.05	0.00
	<b>Total</b>	<b>0.26</b>	<b>2.41</b>	<b>0.63</b>	<b>0.02</b>
Stockpile (full grade ore)	Measured	1.09	3.01	3.29	0.11
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>1.09</b>	<b>3.01</b>	<b>3.29</b>	<b>0.11</b>
Stockpile (marginal ore)	Measured	-	-	-	-
	Indicated	11.57	0.90	10.35	0.33
	Inferred	-	-	-	-
	<b>Total</b>	<b>11.57</b>	<b>0.90</b>	<b>10.35</b>	<b>0.33</b>
Stockpile (refractory ore)	Measured	-	-	-	-
	Indicated	0.56	2.80	1.57	0.05
	Inferred	-	-	-	-
	<b>Total</b>	<b>0.56</b>	<b>2.80</b>	<b>1.57</b>	<b>0.05</b>
Geita Hill (underground) – Blocks 1 and 2	Measured	-	-	-	-
	Indicated	1.91	3.75	7.17	0.23
	Inferred	1.32	4.13	5.45	0.18
	<b>Total</b>	<b>3.23</b>	<b>3.91</b>	<b>12.61</b>	<b>0.41</b>
Geita Hill (underground) – East	Measured	-	-	-	-
	Indicated	1.98	4.14	8.19	0.26
	Inferred	7.00	4.39	30.76	0.99
	<b>Total</b>	<b>8.98</b>	<b>4.34</b>	<b>38.95</b>	<b>1.25</b>
Nyankanga (underground) – Blocks 1 and 2	Measured	-	-	-	-
	Indicated	0.30	8.23	2.45	0.08
	Inferred	2.09	5.49	11.46	0.37
	<b>Total</b>	<b>2.39</b>	<b>5.83</b>	<b>13.92</b>	<b>0.45</b>
Nyankanga (underground) – Blocks 3 and 4	Measured	0.65	7.30	4.71	0.15
	Indicated	3.73	5.01	18.67	0.60
	Inferred	1.61	4.10	6.61	0.21
	<b>Total</b>	<b>5.99</b>	<b>5.01</b>	<b>29.99</b>	<b>0.96</b>
Nyankanga (underground) – Block 5	Measured	1.32	4.75	6.26	0.20
	Indicated	0.23	3.70	0.86	0.03
	Inferred	0.01	6.01	0.09	0.00
	<b>Total</b>	<b>1.57</b>	<b>4.60</b>	<b>7.21</b>	<b>0.23</b>
Ridge 8 (underground)	Measured	-	-	-	-
	Indicated	0.57	5.13	2.93	0.09
	Inferred	1.53	5.81	8.88	0.29
	<b>Total</b>	<b>2.10</b>	<b>5.62</b>	<b>11.81</b>	<b>0.38</b>
Star and Comet (underground) – Cut 2	Measured	0.72	4.52	3.25	0.10
	Indicated	0.39	3.82	1.49	0.05
	Inferred	0.45	3.62	1.63	0.05
	<b>Total</b>	<b>1.56</b>	<b>4.09</b>	<b>6.37</b>	<b>0.20</b>
Star and Comet (underground) – Cut 3	Measured	1.11	5.58	6.19	0.20
	Indicated	0.39	4.78	1.86	0.06
	Inferred	0.39	4.77	1.86	0.06
	<b>Total</b>	<b>1.89</b>	<b>5.25</b>	<b>9.92</b>	<b>0.32</b>
<b>Geita</b>	<b>Total</b>	<b>61.63</b>	<b>3.35</b>	<b>206.42</b>	<b>6.64</b>

## Estimation

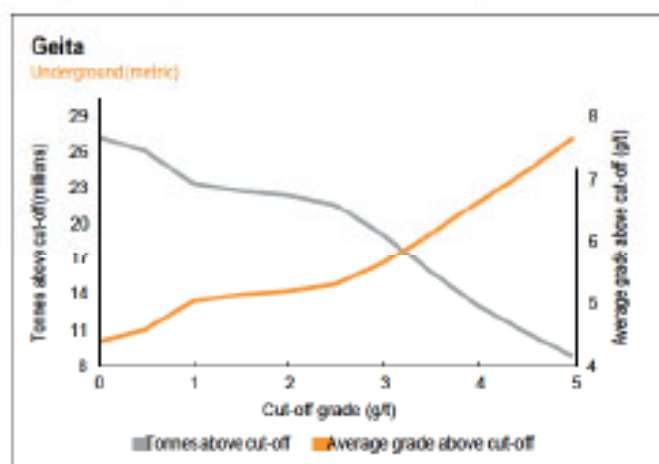
For the open pits, the mineralisation boundaries for the individual deposits are defined from detailed logging of all geological drill holes. This information is validated and then used to create a 3D model. The geological model is subsequently populated with an appropriately dimensioned block model. Ordinary kriging is used to interpolate values into the blocks. UC is used to generate a recoverable Mineral Resource model which estimates the proportion of ore that occurs above the Mineral Resource cut-off grade assuming a specified SMU. The open pit Mineral Resource is reported within a \$1,400/oz optimised pit shell and above the calculated mineralised waste cut-off grade per pit. Stockpiled material above mineralised waste cut-off grade is included in the Mineral Resource.

For the underground Mineral Resource, the geological model and the mineralised boundary are generated in the same way as for the open pits. However, a high grade wireframe is delineated within the broader, lower grade mineralised envelope. In this instance, all geological controls are adhered to when determining this domain. Ordinary kriging models are then constructed within the low and high grade domains and numerous validation exercises are completed to ensure robust estimates are achieved. The ultimate open pit designs are used as the limiting boundaries between open pit and underground during model compilation. The underground Mineral Resource is reported inside a mineable shape optimiser (MSO) volume generated using a unique underground cut-off grade for each deposit. The underground stopes and development are evaluated using the ordinary kriging models and the open pit designs are evaluated using the UC models.

## Grade tonnage curve



The grade tonnage curves do not include stockpiles.



## Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
Geita	Measured	1.97	3.18	6.27	0.20
	Indicated	25.10	1.95	48.87	1.57
	Inferred	14.48	4.16	60.31	1.94
	<b>Total</b>	<b>41.55</b>	<b>2.78</b>	<b>115.45</b>	<b>3.71</b>

The exclusive Mineral Resource at Geita consists of: underground Mineral Resource within the Mineable Shape Optimiser (MSO) Mineral Resource constraining shape, but outside of the Ore Reserve design, and Inferred Mineral Resource within the Ore Reserve design. Ore Reserve has been declared at Star and Comet Cuts 2 and 3 and Nyankanga Blocks 1 to 5. All open pit Mineral Resource that is located between the Ore Reserve pit shell (at a gold price of \$1,100/oz) and the Mineral Resource pit shell (at a gold price of \$1,400/oz).

Material within the Ore Reserve pit shell that is Inferred Mineral Resource or falls below the Ore Reserve cut-off grade and above the Mineral Resource cut-off grade, and material within the Nyankanga Block 5 and Star and Comet Cuts 2 and 3 underground mine designs that is classified as Inferred Mineral Resource.

This material forms potential extensions to the current LOM if it can be converted to Ore Reserve. A significant portion of this material is in the Inferred Mineral Resource category and infill drilling programmes are planned to upgrade potentially economical areas to Indicated Mineral Resource.



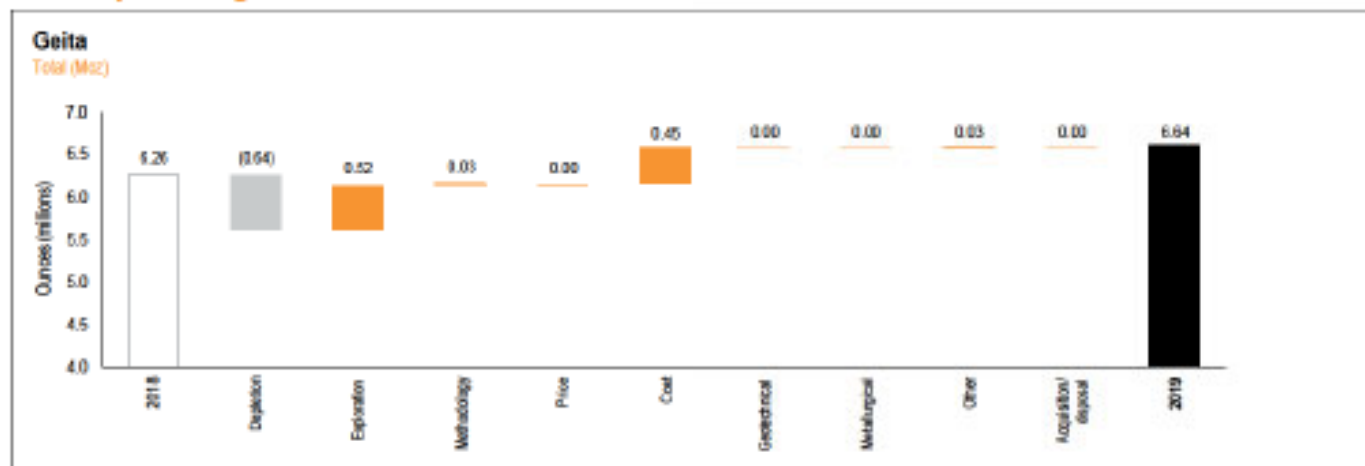
# GEITA CONTINUED

## Continental Africa

### Mineral Resource below infrastructure

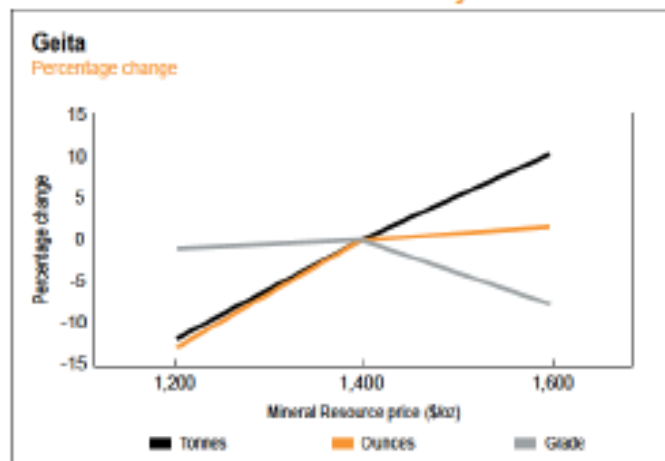
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
Geita				tonnes	Moz
	Measured	–	–	–	–
	Indicated	4.46	4.10	18.28	0.59
	Inferred	9.85	4.58	45.09	1.45
	<b>Total</b>	<b>14.31</b>	<b>4.43</b>	<b>63.37</b>	<b>2.04</b>

### Year-on-year changes in Mineral Resource



Mineral Resource depletion has been offset by gains from exploration due to Mineral Resource development drilling on potential underground and surface targets. Reduced costs also increased the Mineral Resource.

### Inclusive Mineral Resource sensitivity



Geita is very sensitive to a drop in gold price as it is transitioning from an open pit to an underground operation. There is minimal upside in ounces at a higher Mineral Resource price and 13% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Nyankanga (open pit) – Cut 8	Proved	-	-	-	-
	Probable	2.92	4.99	14.56	0.47
	<b>Total</b>	<b>2.92</b>	<b>4.99</b>	<b>14.56</b>	<b>0.47</b>
Stockpile (full grade ore)	Proved	-	-	-	-
	Probable	1.09	2.98	3.25	0.10
	<b>Total</b>	<b>1.09</b>	<b>2.98</b>	<b>3.25</b>	<b>0.10</b>
Stockpile (marginal ore)	Proved	-	-	-	-
	Probable	2.99	1.04	3.12	0.10
	<b>Total</b>	<b>2.99</b>	<b>1.04</b>	<b>3.12</b>	<b>0.10</b>
Nyankanga (underground) – Blocks 1 and 2	Proved	-	-	-	-
	Probable	0.33	5.67	1.85	0.06
	<b>Total</b>	<b>0.33</b>	<b>5.67</b>	<b>1.85</b>	<b>0.06</b>
Nyankanga (underground) – Blocks 3 and 4	Proved	-	-	-	-
	Probable	3.47	3.70	12.82	0.41
	<b>Total</b>	<b>3.47</b>	<b>3.70</b>	<b>12.82</b>	<b>0.41</b>
Nyankanga (underground) – Block 5	Proved	-	-	-	-
	Probable	1.19	3.89	4.63	0.15
	<b>Total</b>	<b>1.19</b>	<b>3.89</b>	<b>4.63</b>	<b>0.15</b>
Star and Comet (underground) – Cut 2	Proved	-	-	-	-
	Probable	0.50	4.08	2.05	0.07
	<b>Total</b>	<b>0.50</b>	<b>4.08</b>	<b>2.05</b>	<b>0.07</b>
Star and Comet (underground) – Cut 3	Proved	-	-	-	-
	Probable	0.95	4.98	4.75	0.15
	<b>Total</b>	<b>0.95</b>	<b>4.98</b>	<b>4.75</b>	<b>0.15</b>
<b>Geita</b>	<b>Total</b>	<b>13.44</b>	<b>3.50</b>	<b>47.03</b>	<b>1.51</b>

### Estimation

The Mineral Resource models are used as the basis for Ore Reserve estimation. Input parameters for estimating the Ore Reserve include gold price, mining dilution and recovery, geotechnical information, stay in business capital, operating costs, metallurgical recovery, processing capacity and mining equipment capacities.

Appropriate Ore Reserve cut-off grades are applied and optimised pit shells are generated for the open pit sources. Pit designs are then done on selected shells and signed off by all relevant parties to ensure compliance to specifications. Underground designs are completed and evaluated. These designs are incorporated into the

production and treatment scheduling stages to yield ore tonnes and grades. Financial evaluations are completed for production and treatment schedules to check cash flow analysis from the estimated Ore Reserve.

The Ore Reserve for Geita operating, prospective pits and underground mine areas was estimated using updated economic factors, latest Mineral Resource models, geological, geotechnical, mining engineering and metallurgical parameters. Environmental, socio-political, legal and regulatory factors are also considered.

# GEITA CONTINUED

## Continental Africa

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Cut-off grade g/t Au	RMF % based on tonnes	RMF % (based on g/t)	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MeRF %
Nyankanga (open pit) – Cut 8	1,100	1.25	130.0	90.0	105.0	95.0	99.0	92.7
Nyankanga (underground) – Blocks 1 and 2	1,100	3.95	100.0	100.0	95.0	95.0	99.0	90.0
Nyankanga (underground) – Blocks 3 and 4	1,100	2.96	100.0	100.0	95.0	95.0	99.0	90.0
Nyankanga (underground) – Block 5	1,100	2.80	100.0	100.0	95.0	95.0	99.0	90.0
Star and Comet (underground) – Cut 2	1,100	2.67	100.0	100.0	95.0	95.0	99.0	86.6
Star and Comet (underground) – Cut 3	1,100	2.67	100.0	100.0	95.0	95.0	99.0	77.8
Stockpile (full grade ore)	1,100	1.25	–	–	–	–	99.0	90.0
Stockpile (marginal ore)	1,100	0.95	–	–	–	–	99.0	90.0

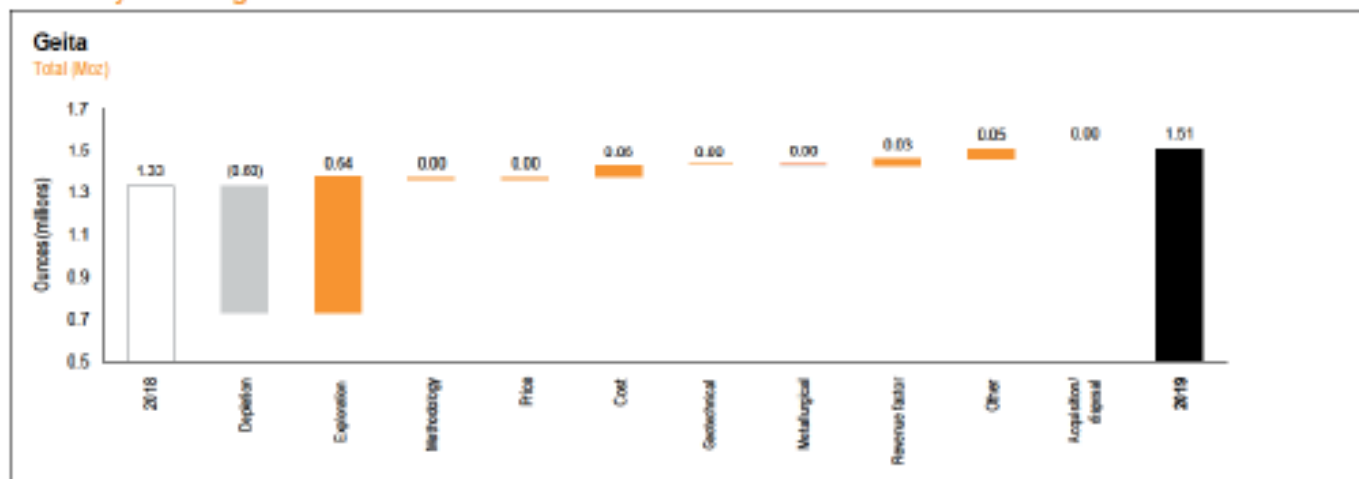
### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonne: million	Grade g/t	Contained gold	
			tonnes	Moz
Nyankanga (open pit) – Cut 8	0.17	1.81	0.32	0.01
Geita Hill (underground) – Blocks 1 and 2	0.56	4.65	2.70	0.09
Geita Hill (underground) – East	4.00	4.48	17.92	0.58
Nyankanga (underground) – Blocks 1 and 2	2.20	3.65	8.01	0.26
Nyankanga (underground) – Blocks 3 and 4	1.05	2.25	2.36	0.08
Star and Comet (underground) – Cut 2	0.33	3.01	1.00	0.03
Star and Comet (underground) – Cut 3	0.32	3.30	1.10	0.04
<b>Total</b>	<b>8.66</b>	<b>3.86</b>	<b>33.41</b>	<b>1.07</b>

No Inferred Mineral Resource is included in the final Ore Reserve reporting. However, Inferred Mineral Resource within the Ore Reserve pit shell is included in the business plan. This material forms potential extensions to the current LOM if it is converted to Ore Reserve and infill drilling programmes are planned to upgrade potentially economic areas to Indicated Mineral Resource. This accounts for less than 10% of the business plan.

For Nyankanga, Inferred Mineral Resource is not included in the pit optimisation and therefore does not contribute to the economic assessment of the optimised pit. The Inferred Mineral Resource in the business plan is present within the final pit shell as exclusive Mineral Resource. Inferred Mineral Resource is included in the Star and Comet underground mine design however it is not included in the Ore Reserve estimation process and therefore it does not contribute to the economic assessment of the underground Ore Reserve.

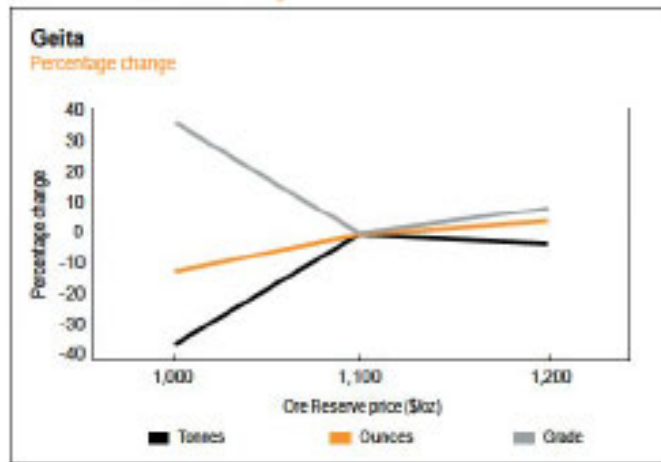
### Year-on-year changes in Ore Reserve



As at 31 December 2019, there was an increase in Ore Reserve in comparison to the previous year's declaration, which was driven primarily by the introduction of Nyankanga Block 4 underground Ore Reserve and offset by depletion.



### Ore Reserve sensitivity



Geita is highly sensitive to a drop in gold price as it is transitioning from an open pit to an underground operation. There is minimal upside in ounces at a higher Ore Reserve price and 12% downside in ounces at a lower Ore Reserve price.

### Competent Persons

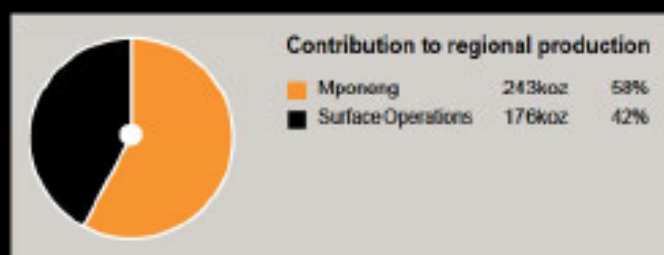
Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Brad Catto	MAusIMM	222 721	13 years	MDP, BSc (Geology)
Ore Reserve	Ryan Ecclestone	MAusIMM	334 298	16 years	BEng (Mining Engineering)



© Cutting of drill hole core at Geita

## SECTION 3

# SOUTH AFRICA



Regional overview 98

Mponeng 100

Surface Operations 110

# 13%

contribution to group production\*

\* Group including South African Operations

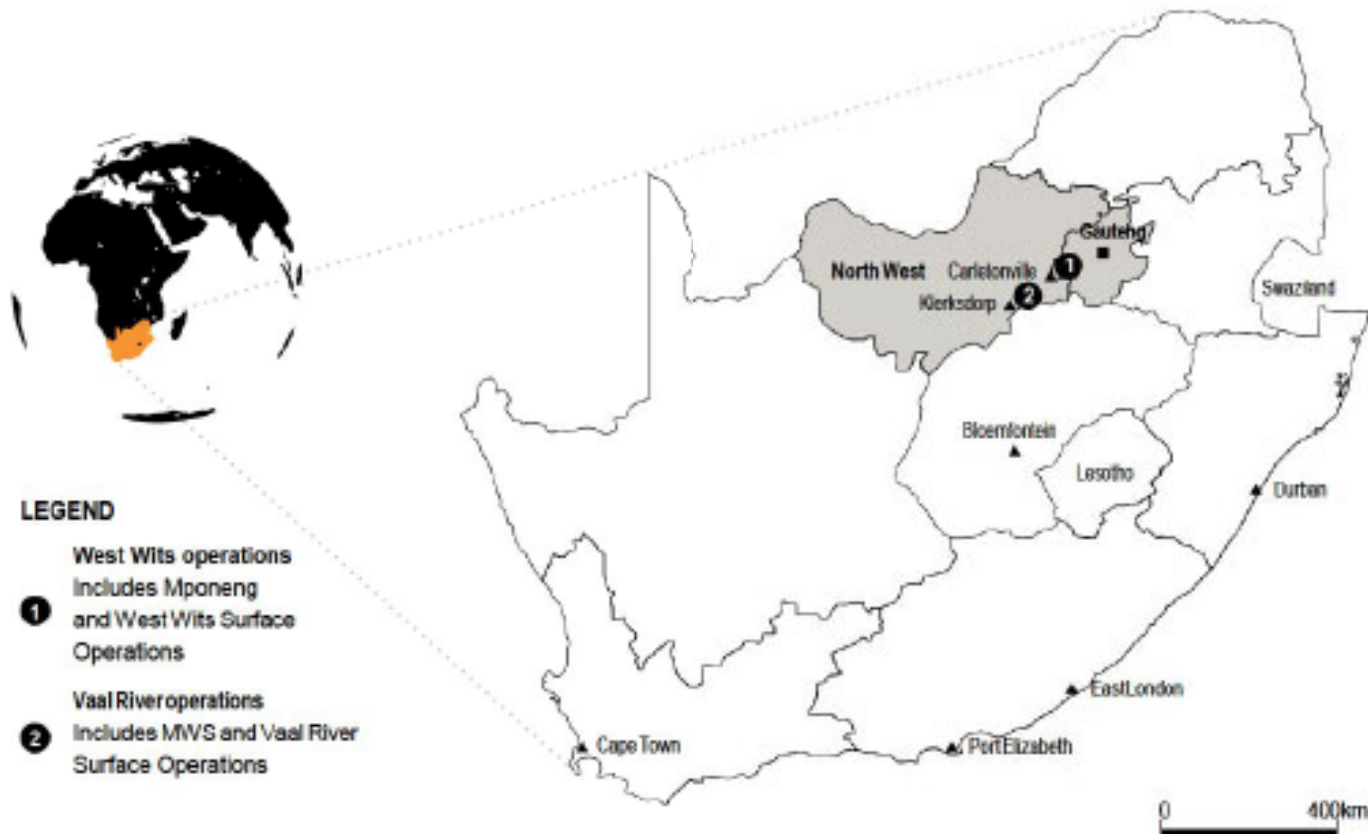






# REGIONAL OVERVIEW

## South Africa



### LEGEND

- 1** West Wits operations  
Includes Mponeng and West Wits Surface Operations
- 2** Vaal River operations  
Includes MVS and Vaal River Surface Operations

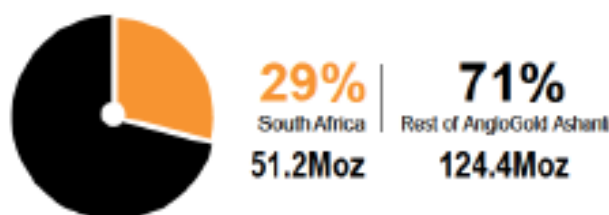
An agreement and sale was announced post year end in February 2020 for Mponeng and the Surface Operations

### Key statistics

	Units	2019	2018	2017
<b>Operational performance</b>				
Tonnes treated/milled	Mt	35.1	34.9	34.9
Recovered grade <sup>(1)</sup>	oz/t	0.183	0.210	0.202
	g/t	5.69	6.82	6.93
Gold production	000oz	419	487	903
Total cash costs	\$/oz	981	1,032	1,084
All-in sustaining costs	\$/oz	1,182	1,162	1,251
Capital expenditure	\$m	57	73	150

<sup>(1)</sup> Refers to underground operations only. 2017 and 2018 includes discontinued operations (Kopanang, Moab Khotsong, TauTona and Technology)

### Contribution to group Mineral Resource



### Contribution to group Ore Reserve



As at December 2019, AngloGold Ashanti's operations in South Africa had a Mineral Resource (inclusive of Ore Reserve) of 51.2Moz (2018: 51.8Moz) and an Ore Reserve of 15.5Moz (2018: 16.8Moz).

This is equivalent to 29% and 35% of the group's Mineral Resource and Ore Reserve respectively. The South African operations produced 419koz of gold in 2019, or 13% of group production<sup>1</sup>. Our South Africa operations comprise one deep level underground mine and three surface processing operations, collectively referred to as Surface Operations.

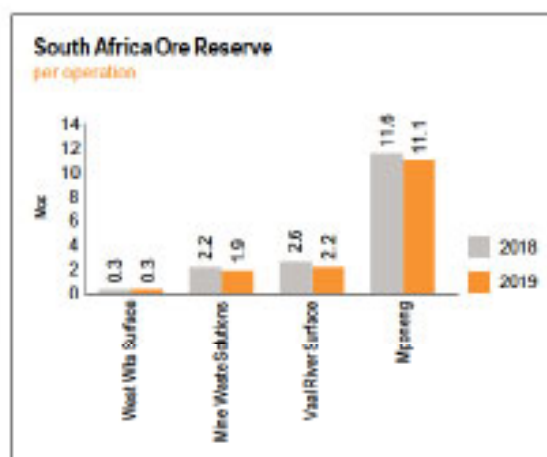
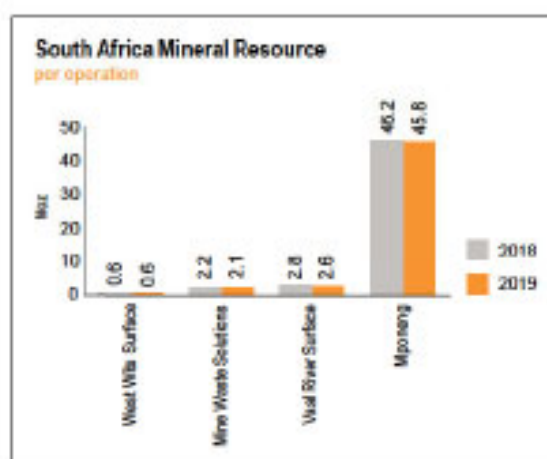
The underground mine, Mponeng, is 100% owned by AngloGold Ashanti. It is situated near the town of Carletonville and is included as part of the West Wits operations. The primary reef mined is the Ventersdorp Contact Reef (VCR). The CLR, that was historically mined at the now closed TauTona Mine, is planned to be mined in the Mponeng LOM extension project. A sequential grid mining method is employed to extract the gold from the deep, narrow, tabular orebody. The grid is predeveloped through a series of haulages and crosscuts. Stopping takes place by means of breast mining using conventional hand held drill and blast techniques. The SMU is 100 x 100m.

The Surface Operations are located in both the Vaal River and West Wits Operations and include the Vaal River Surface, Mine Waste Solutions (MWS) and the West Wits Surface processing operations. They rework low grade stockpiles and retreat TSFs which resulted from the mining and processing of primary and secondary reef horizons.

Both Mponeng and the Surface Operations are wholly owned by AngloGold Ashanti. An agreement and sale was announced in February 2020 for Mponeng and the Surface Operations in South Africa<sup>2</sup>.

<sup>1</sup> Group including South African Operations

<sup>2</sup> Refer to the IR for more information



### Inclusive Mineral Resource

		Tonnes	Grade	Contained gold	
as at 31 December 2019		million	g/t	tonnes	Moz
South Africa	Measured	104.63	1.64	171.13	5.50
	Indicated	596.87	1.91	1,142.09	36.72
	Inferred	24.70	11.25	277.85	8.93
	<b>Total</b>	<b>726.21</b>	<b>2.19</b>	<b>1,591.07</b>	<b>51.15</b>

### Exclusive Mineral Resource

		Tonnes	Grade	Contained gold	
as at 31 December 2019		million	g/t	tonnes	Moz
South Africa	Measured	7.37	18.83	138.81	4.46
	Indicated	61.63	9.64	593.96	19.10
	Inferred	17.88	15.36	274.73	8.83
	<b>Total</b>	<b>86.88</b>	<b>11.60</b>	<b>1,007.49</b>	<b>32.39</b>

### Ore Reserve

		Tonnes	Grade	Contained gold	
as at 31 December 2019		million	g/t	tonnes	Moz
South Africa	Proved	65.00	0.36	23.49	0.76
	Probable	493.05	0.93	457.83	14.72
	<b>Total</b>	<b>558.05</b>	<b>0.86</b>	<b>481.32</b>	<b>15.47</b>

# MPONENG

## South Africa

### Introduction

<b>Property description</b>	Mponeng Mine is a deep level underground gold mine operating between 3,160m and 3,740m below mine datum (BMD*) and is currently the deepest mine in the world with development at 3,841m BMD. Future mining is planned to deepen the shaft bottom to 4,227m BMD. All production is currently from the VCR with future expansion planned on both the VCR and the CLR horizons.
<b>Location</b>	Mponeng, situated in the West Wits Operations, is south of the town of Carletonville and is approximately 65km west of Johannesburg.
<b>History</b>	<p>Mponeng was previously known as the Western Deep Levels South Shaft, or No.1 Shaft. The original twin shaft sinking from surface commenced in 1981 and was commissioned along with the gold plant complex in 1986 when mining began. Production started through the use of two hoisting shafts, a sub-shaft and two service shafts. The name changed to Mponeng Mine in 1999.</p> <p>In 2017, Savuka and TauTona Mines commenced orderly closure and the remaining TauTona Mineral Resource and Ore Reserve were transferred to Mponeng Mine.</p>
<b>Legal aspects and tenure</b>	<p>We hold the following mining rights in the Mponeng area which have been successfully converted, executed and registered as new order mining rights at the Mineral and Petroleum Resource Titles Office (MPRTO).</p> <ul style="list-style-type: none"> <li>GP30/5/1/2/2(01)MR valid from 14 February 2006 to 13 February 2036, covering 64.8km<sup>2</sup></li> <li>GP30/5/1/2/2(11)MR valid from 11 July 2006 to 1 July 2016, covering 0.3km<sup>2</sup> (application for extension pending)</li> <li>GP30/5/1/2/2(248)MR valid from 16 October 2012 to 15 October 2022, covering 1.96km<sup>2</sup></li> </ul> <p>An S102 application was submitted in March 2017 to consolidate the three mining rights into a single mining right (GP30/5/1/2/2(01)MR).</p> <p>An agreement and sale was announced in February 2020 for Mponeng. The transaction is subject to a number of conditions precedent.</p>
<b>Mining method</b>	For the exploitation of the ever deepening Mineral Resource, and the need for flexibility in a mine of this nature, the sequential grid mining method was adopted. This has been proven as the best method suited to safe, deep level gold mining associated with seismicity.
<b>Operational infrastructure</b>	Mponeng comprises a twin-shaft system housing two surface shafts and two sub-shafts. Mponeng has its own processing plant situated adjacent to the mine. Ore and waste material are hoisted separately with ore being delivered to the plant by means of a conveyor belt and the waste rock going to the low grade stockpile. Operations are powered by electricity from Eskom Holdings SOC Limited.
<b>Mineral processing</b>	Ore is treated and smelted at the Mponeng Gold Plant, which also processes low grade ore from stockpiles adjacent to the shaft. Ore is initially ground down by means of semi-autogenous milling, after which a conventional gold leach process incorporating liquid oxygen injection is applied. The gold is then extracted by means of CIP technology. The plant conducts electro-winning and smelting using induction furnaces. The plant has a monthly capacity of 160,000t and operated at 111,000t for 2019.
<b>Risks</b>	<p>Upgrading of the Mineral Resource confidence in the deeper parts of Mponeng continues to be challenging. Surface exploration and underground exploration targets are slowly being completed but access to ground ahead of the mining front is often limited. New information, once obtained, has the potential to affect the future of Mponeng Mine. Exploration drilling on the VCR at depth indicates that there might be an evolution of the current geological understanding. This will be further quantified and understood as exploration work continues.</p> <p>Seismicity, which is associated with ultra deep level mining, remains the most significant risk to the execution of the mine plan. The risk is managed through ongoing seismic risk management, which then informs the mining strategy and execution schedule.</p>

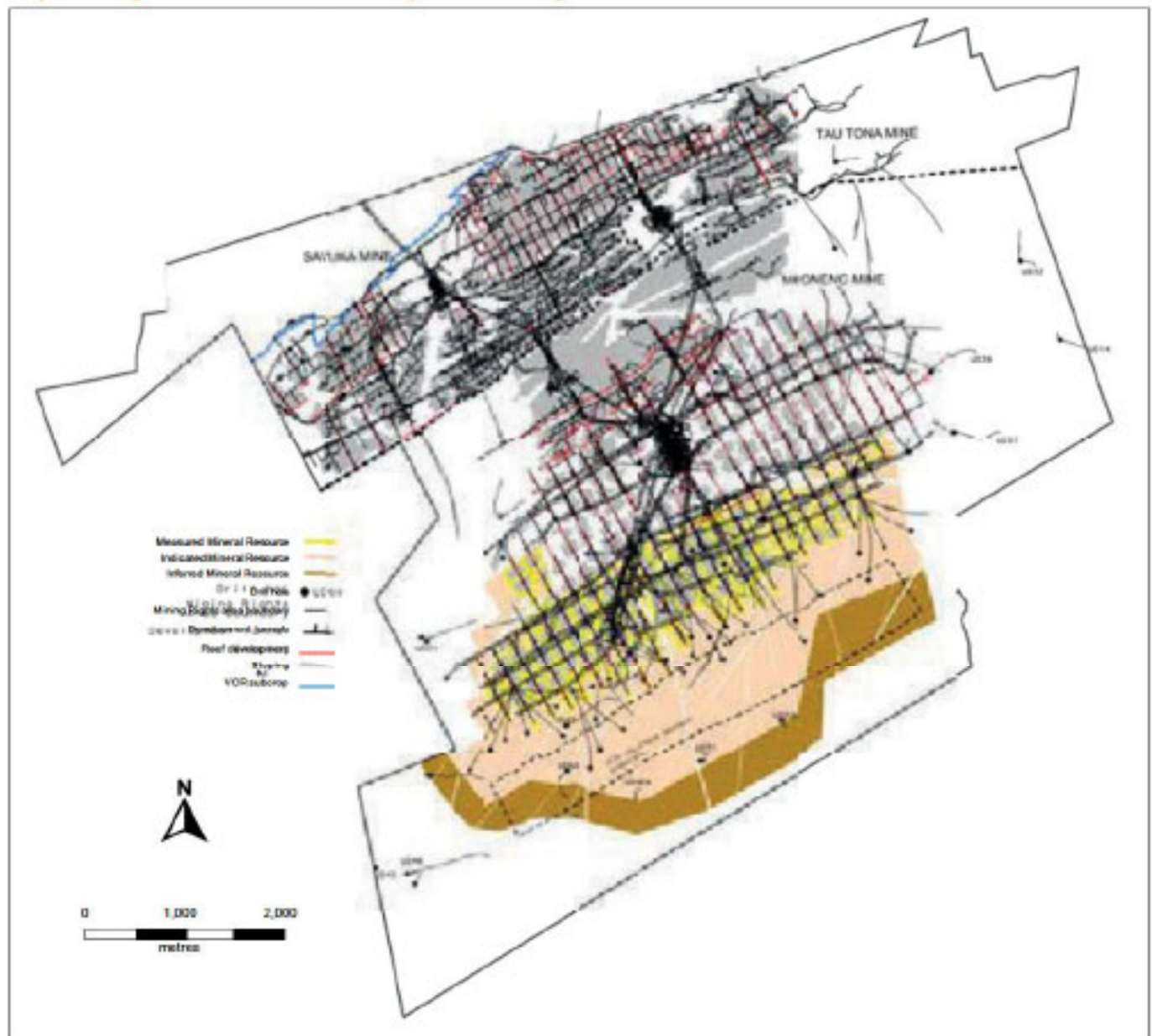
\* BMD is 1,828.8m AMSL. Mponeng's collar elevation (surface) is 275.8m BMD

### Map showing Mponeng Mine infrastructure and licences

Refer to the map showing Mponeng Mine infrastructure and licences on page 112.



Map showing the VCR West Wits underground workings



## Geology

Mponeng Mine is located on the northwestern rim of the Witwatersrand Basin. The VCR is the main reef horizon mined at Mponeng Mine. The VCR forms the base of the Ventersdorp Supergroup, which caps the Witwatersrand Supergroup through an angular unconformity. The overlying Ventersdorp Lavas halted the deposition of the VCR, preserving it in its current state. The CLR, previously mined at TauTona and Savuka Mines, is found within the Witwatersrand Supergroup and lies 800m beneath the VCR at Mponeng. The VCR is preserved across the Mponeng lease area and dips approximately 22° in a south-southeast direction. The VCR was deposited on the uneven footwall strata due to uplift

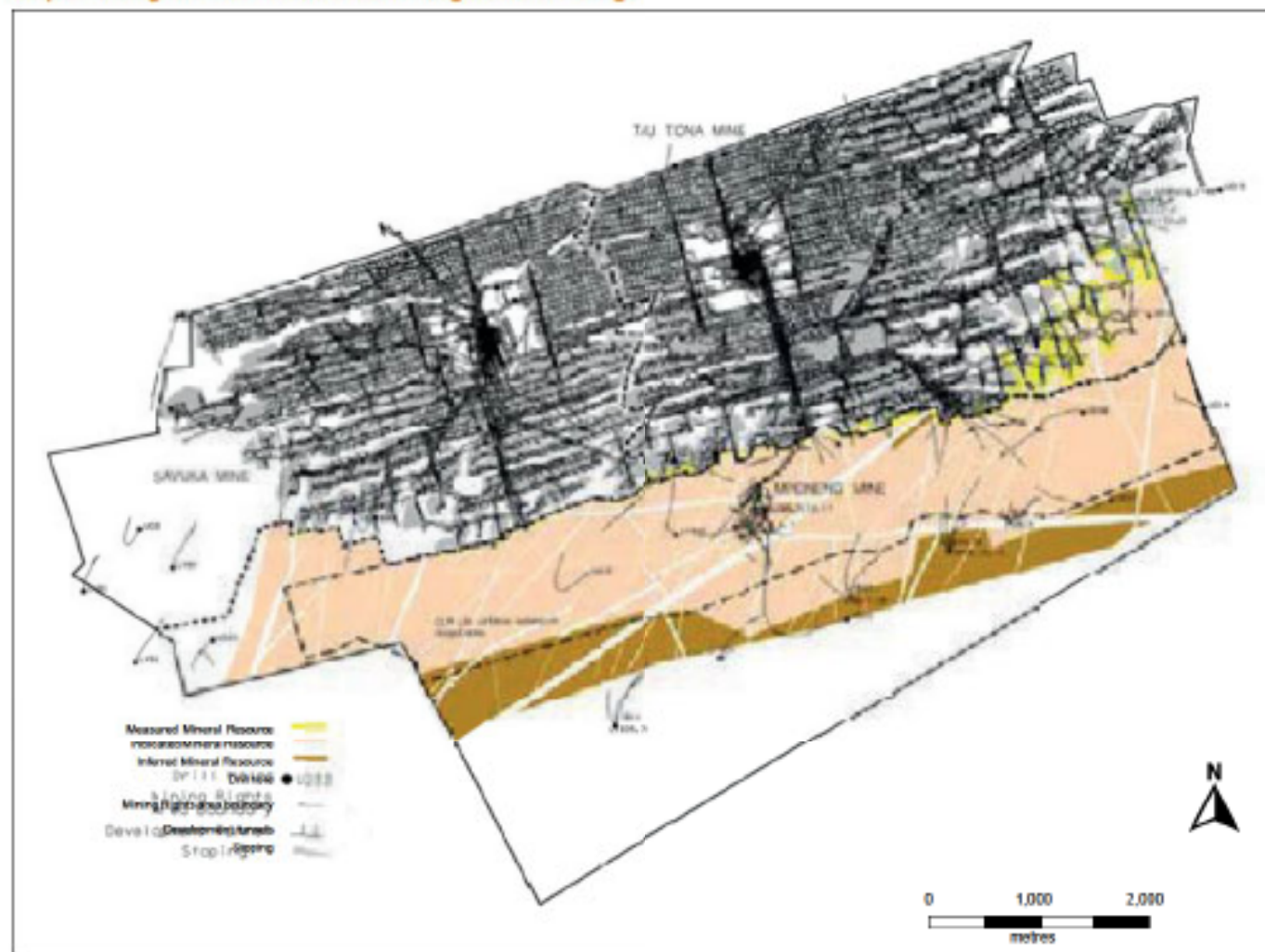
and is now represented by a shallow angular unconformity. The footwall lithologies to the VCR therefore vary across Mponeng Mine as the unconformity cuts deeper in an easterly direction into older strata of the Witwatersrand Supergroup. Fluvial action during deposition of the VCR continually eroded and reworked the conglomerate, creating steep slopes and embayments between relatively undisturbed terraces.

The CLR conglomerate was deposited by a number of sedimentary cycles. Erosion and reworking of the conglomerate and quartzite sediments has resulted in the preservation of the CLR within the Central Rand Group of the Witwatersrand Supergroup.

# MPONENG CONTINUED

South Africa

Map showing the CLR West Wits underground workings



## Deposit type

The VCR consists of a quartz pebble conglomerate, which can be up to 3m thick in places. The footwall stratigraphy, following periods of uplift and erosion, controlled the development and preservation of the VCR. This is characterised by a series of channel terraces preserved at different relative elevations, and the highest gold values are preserved in these channel deposits. The different channel terraces are divided by zones of thinner slope reef, which are of lower value and become more prevalent on the higher terraces and on the harder footwall units. The relatively argillaceous protoquartzites of the Kimberley Formation in the central portion of Mponeng are covered by the best preserved VCR conglomerates. The Elsburg Formation in the west is relatively more durable while the eastern side of the mine is dominated by shales and siltstones of the Booyens Formation. No VCR is preserved on the Krugersdorp Formation on the far eastern side of Mponeng.

The CLR is the other gold bearing reef reported as part of the Mineral Resource for Mponeng. The CLR is located near the base of the Johannesburg Subgroup, which forms part of the Central Rand Group of the Witwatersrand Supergroup. The CLR was historically mined extensively at Savuka and Tau Tona Mines and the remaining portions thereof have now been transferred to Mponeng Mine. The CLR consists of, on average, a 20cm thick, tabular, auriferous quartz pebble conglomerate and three sedimentary facies. Economically, the most important facies is Unit 1, which overlies Unit 2. Unit 1 is a complex channel deposit that is only present along the eastern side of the lease area. Unit 2 can be up to 2m thick. Unit 3 is exposed in the southern edges of the lease area and is the oldest of the conglomerates.



### Mineralisation style

Gold mineralisation followed an episode of deep burial, fracturing and alteration. A variant of Archaean gold bearing hydrothermal fluid was introduced into the conglomerates and circulated throughout in hydrothermal cells. The fluids precipitated gold and other elements through reactions that took place at elevated temperatures along the reef horizon, which was the more favourable fluid conduit. In the case of the VCR, the resulting gold grades are mostly uniformly distributed throughout the reef package.

CLR mineralisation associated with the conglomerate occurs in the form of fine layers and stringers of pyrite rather than finely disseminated pyrite around the pebbles. Flyspeck carbon can be frequently found at the base of the conglomerate. The hydrocarbon also precipitated in thin, flat veins, usually at the base of the Carbon Leader conglomerate where the majority of the gold is concentrated.

### Mineralisation characteristics

The VCR displays strong alteration features, which can be explained by the hydrothermal fluids that infiltrated the reef and have overprinted the original mineral assemblage. Portions of the reef contain authigenic sulphides such as pyrite, pyrrhotite, chalcopyrite, sphalerite and galena, incorporated in the conglomerate matrix. Gold associations with these mineral assemblages indicate a strong correlation of gold mobilisation and redistribution at the time of the hydrothermal fluid influx. There is also a strong association of gold with a chloritisation event focused along the reef horizon. The chlorite alteration gives a dark colouration to the reef. Gold was precipitated by cooling and reactions between the fluids and wallrock, in this case pyritic conglomerates. Gold mineralisation was enhanced in certain areas of high fluid throughput, which were often the sites of high carbon precipitation and early alteration in the case of the CLR.

Both the VCR and the CLR have been subjected to faulting and are intruded by a series of igneous dykes and sills of various ages that cross-cut the reefs. There is an inherent risk in mining through these faults and intrusives and a key objective of Mponeng Mine geologists is to identify these geological features ahead of the working face to assist with deciding on the best way to approach and mine through these structures.

### Exploration

Underground exploration in 2019 continued to target the VCR areas from underground platforms on 120, 123 and 126 Levels and targets areas below 126 to 129 Level depths, so as to improve project area confidence. New reef intersections were achieved during 2019 and have been included in the evaluation of the geological model. No CLR exploration was undertaken in 2019 and the surface exploration programme was stopped in 2019 before the project was completed.

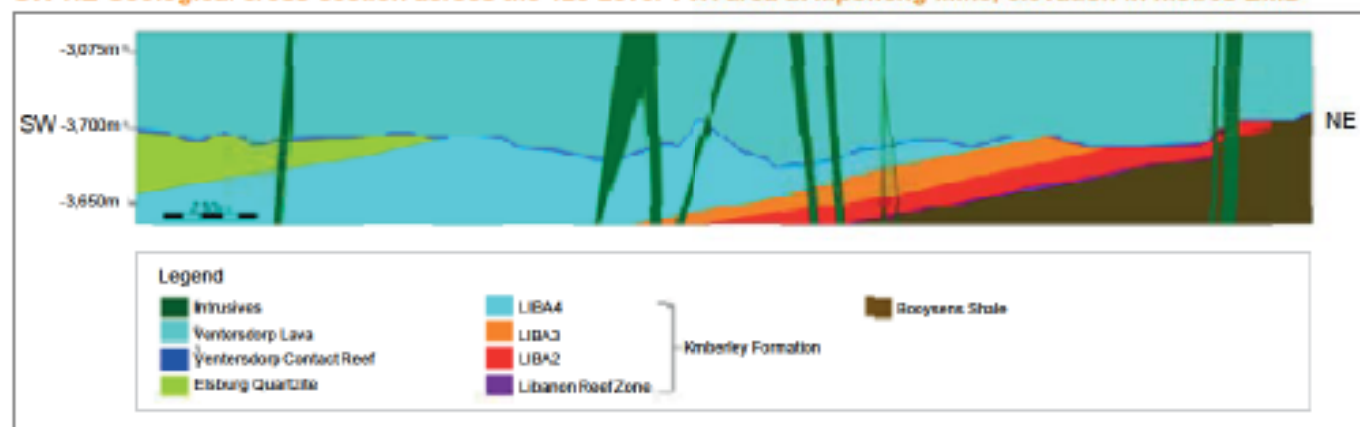
### Projects

The Phase 1 VCR project is in production on 123 Level and gold production on 126 Level commenced in 2019. On-reef development continues east and west on 123 and 126 Levels and total production is expected to reach 12,000m<sup>3</sup> per month.

The LOM extension project scope of work replaced the phased project approach by combining the Phase 2 project with Phases 3 and 4 into one project to access 9.5Moz and to extend the LOM.

The FS was completed in 2019. Post the stage gate review it was decided to not proceed with the project at that time.

### SW-NE Geological cross-section across the 123 Level VCR area at Mponeng Mine, elevation in metres BMD\*



\* BMD is 1,628.8m AMSL. Mponeng's collar elevation (surface) is 275.8m BMD.



# MPONENG CONTINUED

## South Africa

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling					Comments
		Diamond	RC	Blasthole	Channel	Other	
Measured	5 x 5	-	-	-	✓	-	Channel chip sampling
Indicated	100 x 100	✓	-	-	-	-	Underground drilling
Inferred	1,000 x 1,000	✓	-	-	-	-	Surface and underground drilling
Grade/ore control	-	-	-	-	✓	-	See Measured category

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
VCR Block 3	Measured	0.01	8.23	0.11	0.00
	Indicated	1.17	6.63	7.76	0.25
	Inferred	-	-	-	-
	<b>Total</b>	<b>1.18</b>	<b>6.54</b>	<b>7.86</b>	<b>0.25</b>
VCR above 109 Level	Measured	1.06	13.55	14.32	0.46
	Indicated	0.44	8.87	3.91	0.13
	Inferred	-	-	-	-
	<b>Total</b>	<b>1.50</b>	<b>12.18</b>	<b>18.23</b>	<b>0.59</b>
VCR 109 to 120 Level	Measured	3.99	18.71	74.67	2.40
	Indicated	2.40	9.65	23.15	0.74
	Inferred	-	-	-	-
	<b>Total</b>	<b>6.39</b>	<b>15.31</b>	<b>97.83</b>	<b>3.15</b>
VCR below 120 Level	Measured	1.14	18.03	20.64	0.66
	Indicated	8.40	16.81	141.15	4.54
	Inferred	0.66	4.66	3.10	0.10
	<b>Total</b>	<b>10.21</b>	<b>16.16</b>	<b>164.89</b>	<b>5.30</b>
VCR LOM extension 128 Level	Measured	0.00	3.72	0.01	0.00
	Indicated	2.75	16.89	46.39	1.49
	Inferred	0.10	4.40	0.44	0.01
	<b>Total</b>	<b>2.85</b>	<b>16.44</b>	<b>46.84</b>	<b>1.51</b>
VCR WUDLs	Measured	-	-	-	-
	Indicated	9.58	15.99	153.18	4.92
	Inferred	9.35	14.67	137.14	4.41
	<b>Total</b>	<b>18.93</b>	<b>15.34</b>	<b>290.32</b>	<b>9.33</b>
TauTona CLR Eastern block	Measured	1.33	23.38	31.09	1.00
	Indicated	1.79	22.39	40.16	1.29
	Inferred	-	-	-	-
	<b>Total</b>	<b>3.12</b>	<b>22.81</b>	<b>71.24</b>	<b>2.29</b>
CLR LOM extension project	Measured	0.35	23.93	8.30	0.27
	Indicated	27.28	20.76	566.33	18.21
	Inferred	7.77	17.25	134.06	4.31
	<b>Total</b>	<b>35.40</b>	<b>20.02</b>	<b>708.68</b>	<b>22.78</b>
CLR Savuka	Measured	0.01	15.44	0.14	0.00
	Indicated	1.40	13.53	18.90	0.61
	Inferred	-	-	-	-
	<b>Total</b>	<b>1.41</b>	<b>13.54</b>	<b>19.04</b>	<b>0.61</b>
<b>Mponeng</b>	<b>Total</b>	<b>80.99</b>	<b>17.59</b>	<b>1,424.94</b>	<b>45.81</b>

### Inclusive Mineral Resource by-product: uranium

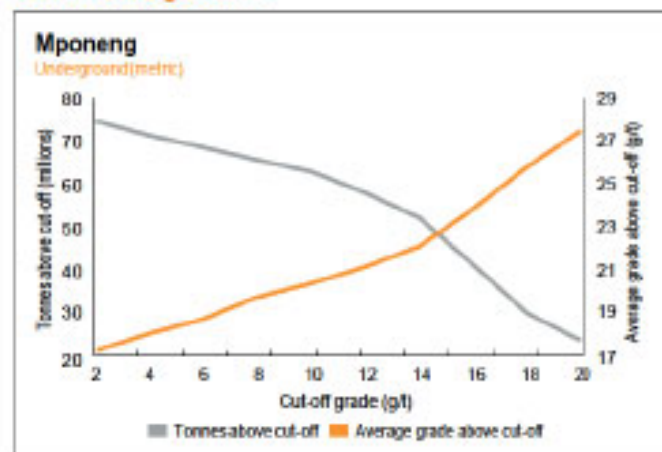
as at 31 December 2019	Category	Tonnes million	Grade kg/t	Contained uranium	
				tonnes	pounds million
Mponeng	Measured	-	-	-	-
	Indicated	32.16	0.31	10,013	22.08
	Inferred	7.77	0.29	2,290	5.06
	<b>Total</b>	<b>39.93</b>	<b>0.31</b>	<b>12,304</b>	<b>27.13</b>

#### Estimation

For the VCR, gold values have been shown to be intimately related to conglomerate preservation and form an integral part of the geological model, as does the footwall lithology.

Mixed support co-kriging is used in the estimation of the Mineral Resource. This a technique that enables the use of mixed support data, allowing both drill hole and underground sampling data to be used together. Estimation is performed on the VCR into large block sizes, generally 210 x 210m in size, which fully capture the within-block variance, allowing co-kriging of data of different support sizes over long ranges. Estimation is done per geological homogeneous zone, in logarithmic space, because of the highly skewed gold distribution. The final gold estimates are then calculated by back transforming the estimates, using lognormal four parameter distribution models. Simple kriging is used for grade control and Measured Mineral Resource at a 30 x 30m block size and constrained by the weight of the mean value. A similar process is followed for the CLR estimation.

#### Grade tonnage curve



### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Mponeng	Measured	7.37	18.83	138.81	4.46
	Indicated	33.85	17.31	586.05	18.84
	Inferred	17.88	15.36	274.73	8.63
	<b>Total</b>	<b>59.10</b>	<b>16.91</b>	<b>999.58</b>	<b>32.14</b>

The current mining practice at Mponeng leaves behind a large portion of the Mineral Resource as stability pillars. Rock engineering design models require stability to minimise the effects of mining induced seismicity on the deep underground workings. Bracket pillars are also placed around all major geological structures to improve regional stability and to minimise the structure associated risks. In future, the majority of the exclusive Mineral Resource will be taken up in stability pillars to reduce the impact of seismicity. Other areas of the Mineral Resource that do not form part of the LOM include the areas between the Ore Reserve cut-offs and all Inferred Mineral Resource.

### Mineral Resource below infrastructure

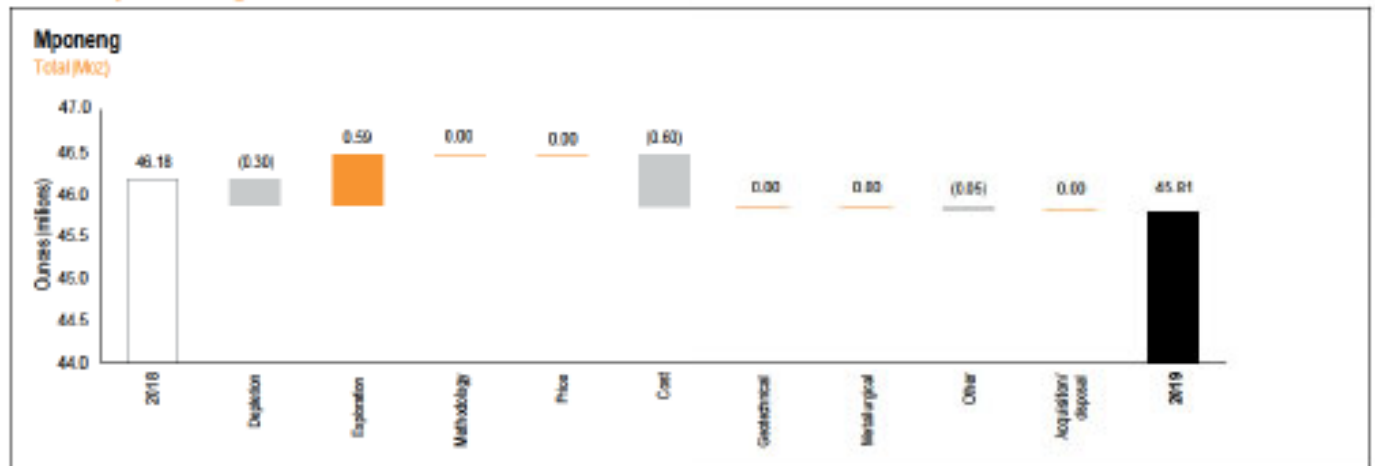
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Mponeng	Measured	0.36	23.75	8.31	0.27
	Indicated	39.61	19.33	765.90	24.62
	Inferred	17.22	15.78	271.63	8.73
	<b>Total</b>	<b>57.18</b>	<b>18.29</b>	<b>1,045.84</b>	<b>33.62</b>

The portion of the Mineral Resource below infrastructure includes those in the VCR Western Ultra-deep Levels (WUDLs) and the CLR Mineral Resource areas. Mponeng Mine infrastructure has only been developed to access the orebody to 126 Level on the VCR and 120 Level on the CLR. Access to CLR orebody from 109 to 120 Levels from the existing TauTona infrastructure will start in 2020.

# MPONENG CONTINUED

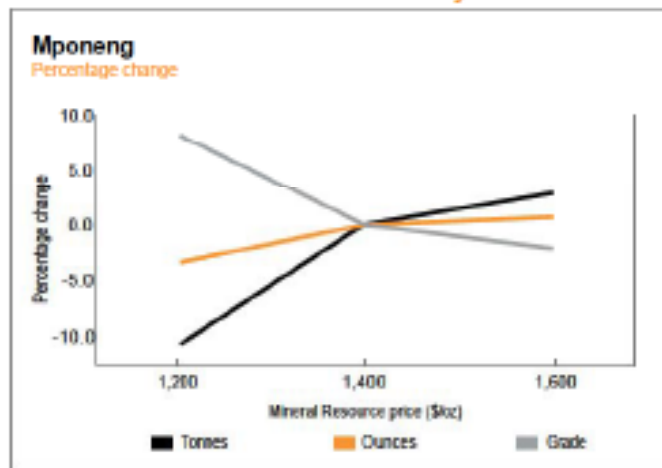
## South Africa

### Year-on-year changes in Mineral Resource



Year-on-year, Mponeng's published Mineral Resource for 2019 has decreased. The reduction is inclusive of depletion as well as a small area of CLR that was transferred to inventory as it will not be extracted. This is slightly offset by an increase in value in some of the VCR areas.

### Inclusive Mineral Resource sensitivity



As a deep underground mine, the Mineral Resource at Mponeng is sensitive to a drop in gold price. There is minimal upside in ounces at a higher Mineral Resource price and 3.5% downside in ounces at a lower Mineral Resource price.



Mponeng core yard



## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
VCR 109 to 120 Level	Proved	0.08	11.54	0.91	0.03
	Probable	0.29	7.29	2.09	0.07
	Total	0.37	8.21	3.01	0.10
VCR below 120 Level	Proved	0.46	9.48	4.32	0.14
	Probable	5.96	11.94	71.17	2.29
	Total	6.41	11.77	75.49	2.43
VCR LOM extension 128 Level	Proved	-	-	-	-
	Probable	1.71	9.11	15.59	0.50
	Total	1.71	9.11	15.59	0.50
VCR WUDLs	Proved	-	-	-	-
	Probable	6.18	8.75	54.07	1.74
	Total	6.18	8.75	54.07	1.74
TauTona CLR Eastern block	Proved	0.47	6.04	2.66	0.09
	Probable	1.11	8.99	9.94	0.32
	Total	1.58	8.10	12.60	0.41
CLR LOM extension project	Proved	0.02	9.17	0.22	0.01
	Probable	19.91	9.25	184.14	5.92
	Total	19.94	9.25	184.36	5.93
Mponeng	Total	36.19	9.54	345.31	11.10

### Estimation

The mine design process delineates the mining areas and supporting development for each mining level and section, usually by extrapolating the existing mining design using the latest geological structure models and taking all relevant mine design recommendations into consideration. The *in situ* Mineral Resource is scheduled monthly for the full LOM plan. The value estimates for these schedules are derived from the Mineral Resource model.

Modifying factors are applied to the *in situ* Mineral Resource to arrive at an Ore Reserve estimate. These factors include a dilution factor to accommodate the difference between milling width and stoping width, as well as the Mine Call Factor (MCF).

### Ore Reserve modifying factors

as at 31 December 2019	Gold price ZAR/kg	Cut-off grade g/t Au	Cut-off value cm.g/t Au	Stoping width cm	Dilution %	RMF % (based on g/t)	MRF % (based on g/t)	MCF %	MetRF %
VCR 109 to 120 Level	541,501	5.72	900	157.5	32.0	100.0	100.0	81.9	97.5
VCR below 120 Level	541,501	6.88	900	130.7	41.2	100.0	100.0	81.1	97.9
VCR LOM extension 128 Level	541,501	6.71	900	134.2	48.4	100.0	100.0	82.8	97.5
VCR WUDLs	541,501	6.80	900	132.4	49.4	100.0	100.0	82.8	97.8
TauTona CLR Eastern block	541,501	7.83	900	115.0	57.0	100.0	100.0	76.0	97.2
CLR LOM extension project	541,501	8.18	900	110.0	48.7	100.0	100.0	81.0	97.1

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold tonnes	Moz
VCR WUDLs	3.30	11.06	36.46	1.17
CLR LOM extension project	0.20	9.68	1.98	0.06
Total	3.50	10.98	38.44	1.24

The Inferred Mineral Resource is used for optimisation purposes and forms part of the business plan but is not included in the Ore Reserve. These portions of the Mineral Resource are located in the WUDLs area beyond current infrastructure on the VCR (LOM extension project and Phase 5) and also make up part of the CLR Mineral Resource which is included in the CLR LOM extension and Phase 6 project. This accounts for 9.4% of the business plan.

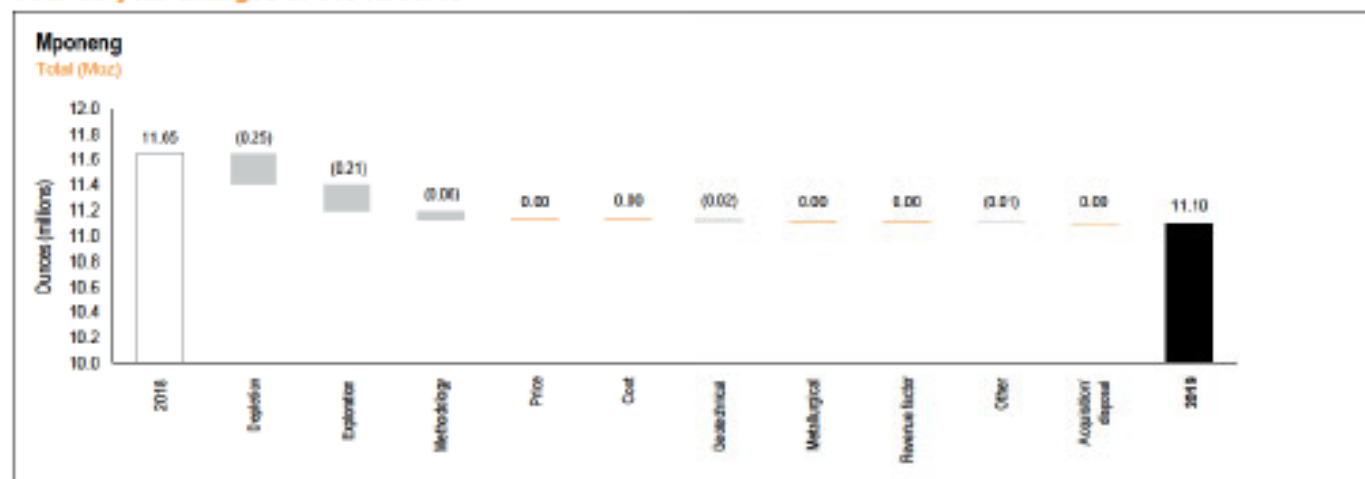
# MPONENG CONTINUED

## South Africa

### Ore Reserve below infrastructure

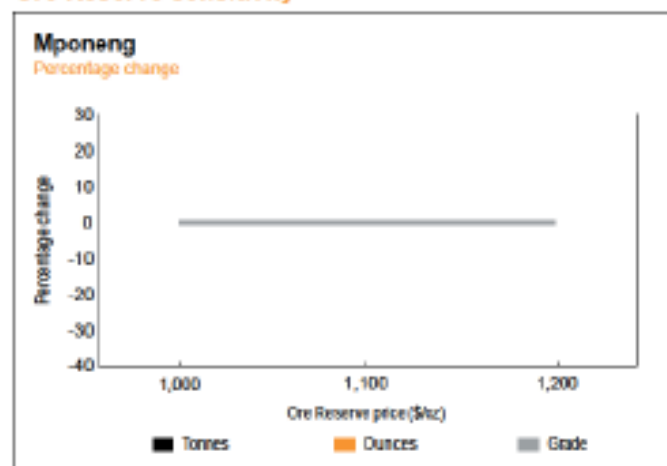
as at 31 December 2019		Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Mponeng	Proved	0.02	9.17	0.22	0.01
	Probable	27.80	9.13	253.80	8.16
	<b>Total</b>	<b>27.83</b>	<b>9.13</b>	<b>254.02</b>	<b>8.17</b>

### Year-on-year changes in Ore Reserve



The decrease of 4.2% in Ore Reserve is mainly due to depletion, a revised estimation model for the VCR, the impact of the removal of Savuka shaft pillars as well as the removal of certain high risk areas in the TauTona mining front.

### Ore Reserve sensitivity



The Ore Reserve is not sensitive to changes in gold price. Even with a higher gold price the opportunities within both the VCR and the CLR are minimal due to limited development in areas beyond the existing footprint.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Gareth Flitton	SACNASP	400 019/15	16 years	BSc Hons (Geology), GDE (Mineral Economics)
Ore Reserve	William Olivier	SAGC	MS 0136	29 years	GDE (Mining Engineering)



© Offices and shaft infrastructure at Mponeng Mine



# SURFACE OPERATIONS

## South Africa

### Introduction

Property description	Surface Operations comprise Vaal River, West Wits Surface operations and MWS. Surface Operations in South Africa produce gold by processing surface material such as low grade stockpiles and TSFs.
Location	The Vaal River Surface operations are located immediately to the north and south of the Vaal River, close to the town of Orkney in the North West province. These operations extract gold from low grade stockpile material emanating as a by-product of the reef mining activities within the mines of the Vaal River area. The MWS operations are located approximately 8km from the town of Klerksdorp near Stilfontein, within 20km of the Vaal River Surface operations. The MWS feed sources (TSFs) are scattered over an area that stretches approximately 13.5km north to south and 14km east to west. The West Wits Surface operations are located on the West Wits Line, near the town of Carletonville, straddling the border between the North West and Gauteng provinces.
History	Gold from the surface material has been produced routinely since 2002 from the Vaal River and West Wits Surface operations. AngloGold Ashanti acquired the MWS Mineral Resource and tailings retreatment operations recovering uranium and gold in the Vaal River region in July 2012. The MWS uranium plant and flotation plants were commissioned in 2014. Changes were made to the configuration of the flotation and uranium processes, to allow for greater efficiency, after which the float plant was recommissioned in July 2016 and October 2016 respectively. As part of the optimisation, the uranium and flotation plants were discontinued in 2017 resulting in MWS only producing gold.
Legal aspects and tenure	<p>MWS's license to mine is covered by the environmental authorisation under the National Environmental Management Act No. 107 of 1998. In terms of the current legislation, the Mineral and Petroleum Resources Development Act No. 28 of 2002 (the MPRDA), a mining right is not required to reclaim TSFs. MWS can prove ownership and tenure of the operations. There was pending legislation that, once passed, would require a mining right to be obtained in order to mine TSFs. This Amendment Bill has subsequently been withdrawn by the Minister of Mineral Resources until further notice.</p> <p>Following the sale of the Vaal River underground operations, the Vaal River mining rights were transferred to Harmony, who acquired the Moab Khotsong operations and to Village Main Reef, who acquired the Kopanang operations.</p> <p>Current mining rights for the West Wits operations cover both underground and surface horizons. TSFs falling outside the mining right area are accommodated in the approved EMP and financial provision for rehabilitation for the West Wits mining rights, as well as under historic surface rights permits for West Wits, which are still valid.</p> <p>An S102 application was submitted in March 2017 to consolidate the three mining rights into a single mining right (GP30/5/1/2/2/01)MR).</p> <p>An agreement and sale was announced in February 2020 for the Surface Operations. The transaction is subject to fulfillment of a number of conditions precedent.</p>
Mining method	<p><b>Low grade stockpiles</b></p> <p>Bulldozers are used to create safe bading faces. Material is then loaded from the face onto rail hoppers or trucks by means of front-end loaders and transported to the relevant gold plants for processing.</p> <p><b>TSFs</b></p> <p>Tailings are reclaimed using a number of hydraulic, high-pressure, water monitoring guns to deliver water at pressure, typically 27-30 bar, to the face. The tailings material is reclaimed by blasting the TSF face with the high-pressure water, resulting in the slurry gravitating towards pump stations. These monitoring guns can be positioned to selectively reclaim required areas from the TSFs. Bench heights are constrained by the force delivered from the monitoring gun nozzle and safety constraints. With sufficient pressure, face lengths of up to 25m can be reclaimed.</p> <p>The pump stations are located at the lowest point of the dams to ensure that the slurry from the dams gravitates towards the pump station from where it is pumped to the processing plants.</p>

**Operational infrastructure**

Low grade stockpiles in the Vaal River area are processed through the Kopanang Gold Plant which is a dedicated surface sources metallurgical plant. All our tailings material in the Vaal River and MWS areas is processed through the three metallurgical streams at the MWS metallurgical operations. At West Wits, material from both low grade stockpiles and TSF is processed through the Savuka Gold Plant. Low grade stockpile material is processed through the Mponeng Gold Plant to fill the processing gap and to ensure adequate supply of backfill material to Mponeng shaft. Adequate deposition capacity for the Surface Operations exists in all areas.

Operational infrastructure – road, rail, offices, security services, water and power supply is adequate, and is shared with the AngloGold Ashanti operations in the relevant areas. Operations are powered by electricity from Eskom Holdings SCC Limited.

**Mineral processing**

The mineral process is dependent on the source material: tailings material is pumped directly to a conventional CIL plant while hard rock material goes through comminution first, and then is processed through leach followed by CIP.

MWS comprises three separate streams namely Stream 1, Stream 2 and Stream 3. Hydraulically reclaimed material from several TSF sites is pumped via the three pump stations to the MWS plant streams for gold extraction.

The West Wits Surface Operations process low grade stockpile material sourced from mining of the CLR and the VCR that were mined by the West Wits mines in the Carletonville/Fochville area, as well as hydraulically reclaimed material from the Old North TSF.


Within the Vaal River area, the Kopanang Gold Plant is a dedicated surface operation plant. In the West Wits area, the Savuka Gold Plant is dedicated to process surface sources material, while low grade stockpile material is processed through both the Savuka and Mponeng Gold Plants, with the latter used to fill the processing gap.

**Risks**

There are no known unmanaged risks that may affect reclamation activities.

The increased recovery over MWS LOM is associated with the project to introduce Aachen Reactors in the three streams.



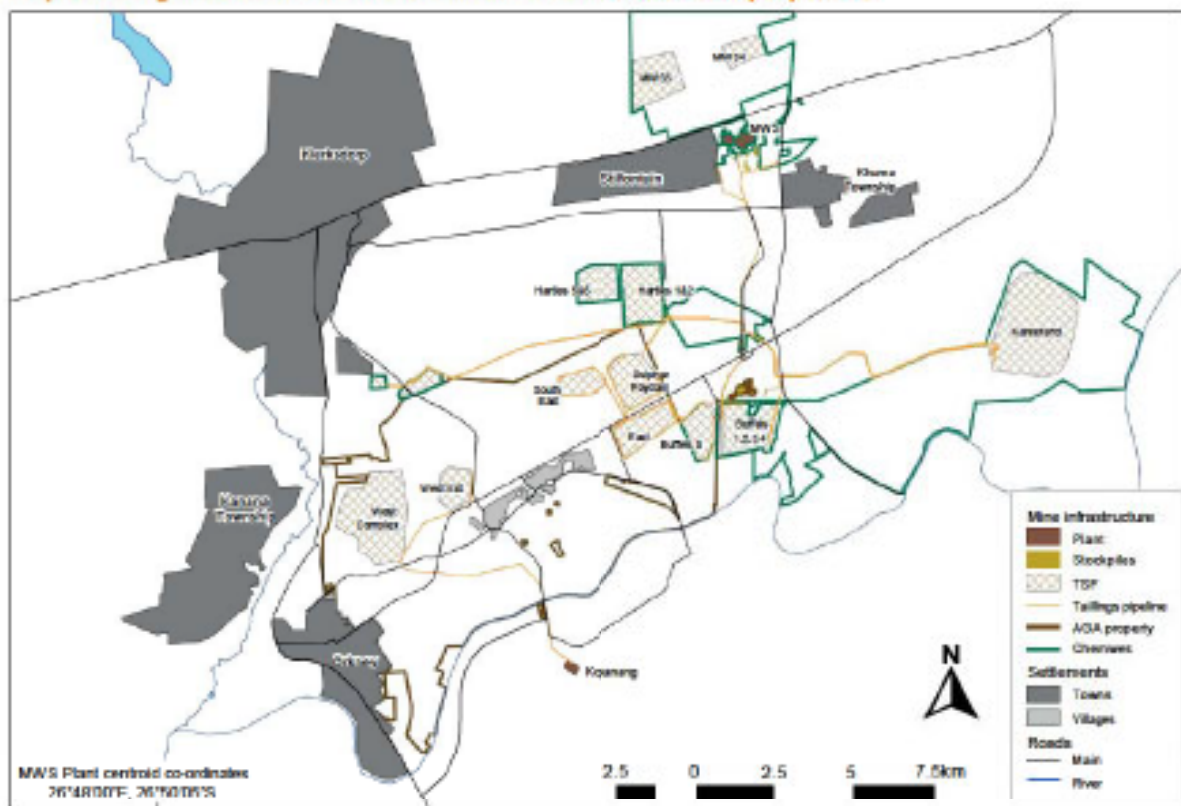
 Sulphur Paydorm stockpiling for TSF base lifting



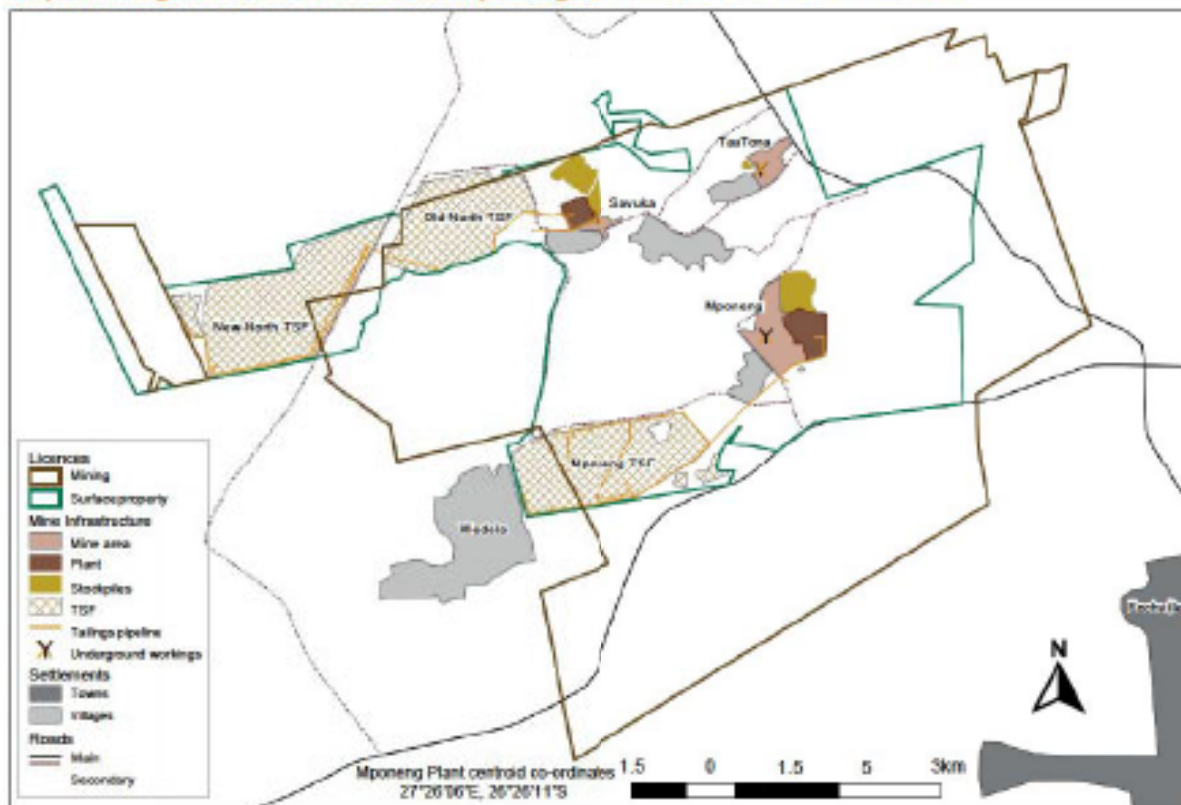
# SURFACE OPERATIONS CONTINUED

## South Africa

Map showing MWS and Vaal River Surface infrastructure and properties



Map showing West Wits Surface and Mponeng Mine infrastructure and licences





## Geology

The material contained in the TSFs and low grade stockpiles originates from historic ore-bearing reefs mined by the West Wits, Vaal River, Buffelsfontein, Hartebeestfontein and Stilfontein gold mines.

### Low grade stockpiles

The low grade stockpiles consist of waste rock mined from underground workings, hoisted, transported and deposited via conveyor belts. The gold contained within these dumps was sourced from three areas namely:

- Minor reef intersected while accessing the primary reef
- Gold-bearing reef that was contained within small fault blocks that were exposed by off-reef development
- Cross-tramming of gold-bearing reef material to the waste tips

### Tailings storage facilities

The TSFs consist of tailings material which originated from processing of underground ore from various operations in the Vaal River area, various operations in West Wits area, and Buffelsfontein, Hartebeestfontein and Stilfontein gold mines. These gold mines are deep level gold mines, which predominantly extract the tabular, conglomeratic Vaal Reef (VR), CLR and VCR. The VR has been predominantly mined for gold in the past although it also contains uranium oxide. The same is true, but to a lesser extent, with the CLR and VCR. The material contained in the TSFs is fine in nature. The footprints of the MWS TSFs and Vaal River Surface operations TSFs cover an area of approximately 1,100ha.

## Projects

MWS plant deposition takes place on the Kareerand TSF. The existing Kareerand TSF was commissioned in 2011 with a design life of 14 years to 2025 at a tailings throughput rate of 1.9 Mt/pm.

Since commissioning, MWS has ramped up production and has targeted a total tailings throughput rate of 2.5Mt/pm until 2042. The increased deposition on the existing facility means that the TSF will reach its limiting rate of rise sooner than 2025, with consequent loss of tailings storage capacity. A FS has been concluded to establish the best option for expanding the capacity, and confirming the technical and financial viability of the project. Work on applying for the permits required to construct the TSF extension has begun and the application process will commence in 2021.

The Savuka Gold Plant deposits tailings onto active Dams 5A, 5B, 7A and 7B at 290,000t/pm throughout the LOM. Savuka Gold Plant processes low grade stockpiles and tailings from the ongoing hydraulic re-mining of Dams 1, 2, 3, 4A, 4B and 6. The Savuka Complex will no longer have capacity in 2027. This is as a result of the 60m height restriction on the dams, as well as the limitation on rate-of-rise on Dams 5A and 5B. The Mponeng Gold Plant deposits its tailings at a rate which varies over its LOM onto the Mponeng Complex TSFs, consisting of the Upper Dam with two compartments. The historic Lower Dam is not used as a tailings dam but serves as a water dam. The Mponeng Upper Dam will reach its maximum allowable 60m height in 2032.

Kopanang Gold Plant processes low grade stockpiles and deposits tailings onto the West Complex active Compartment 4 at 320,000t/pm throughout the LOM and the plant will cease to operate at the end of 2021. No deposition takes place onto Grass Dam and Compartment 1, as both have run out of capacity. West Extension and Dam 2 received tailings from West Gold Plant (now owned by Village Main Reef) at 150,000 tonnes per month. West Extension will reach maximum allowable height in 2021 when tailings deposition will be redirected onto Compartment 4, when Kopanang Gold Plant ceases to operate. The tailings from West Gold Plant will continue until 2028.

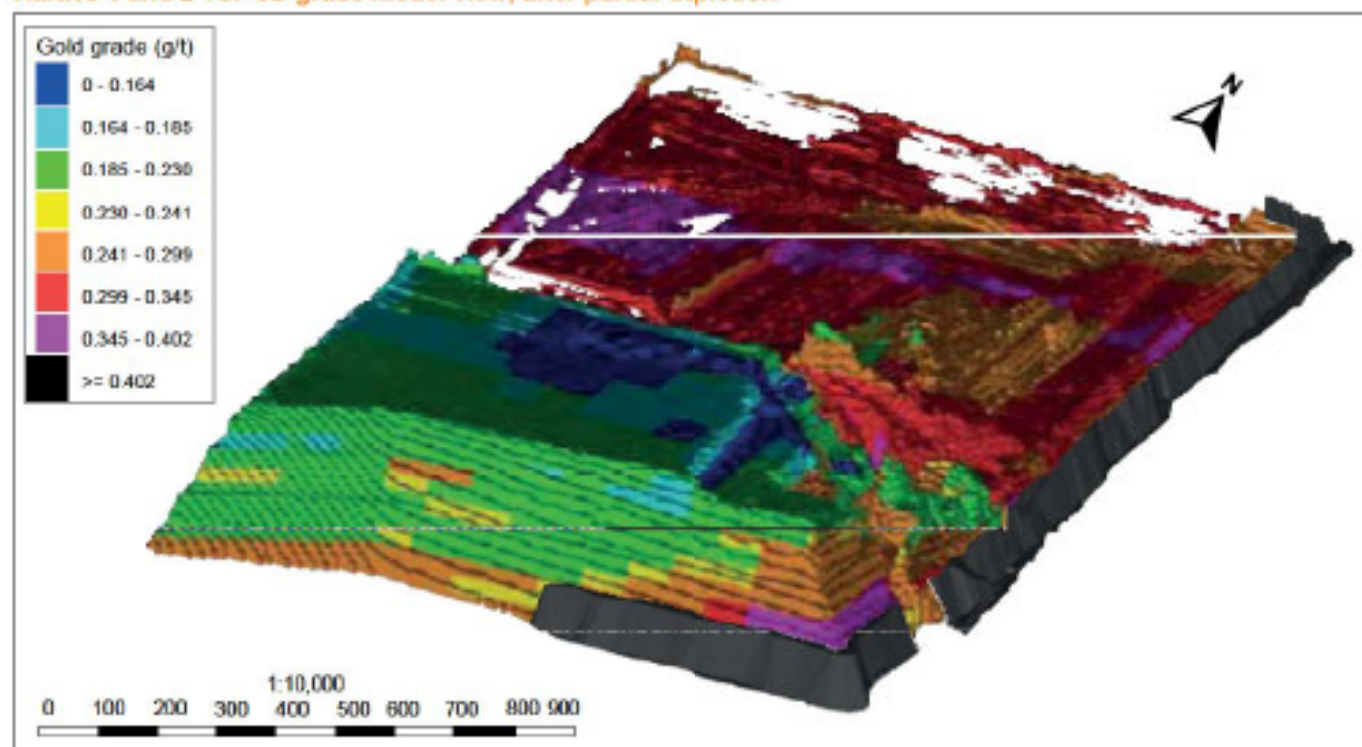


Monitor gun on East TSF

# SURFACE OPERATIONS CONTINUED

## South Africa

Harties 1 and 2 TSF 3D grade model view, after partial depletion



### Mineral Resource

Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other*
<b>Vaal River Surface</b>						
Measured	50 x 50	-	-	-	-	✓
Indicated	100 x 100 to 150 x 150	-	-	-	-	✓
Inferred	-	-	-	-	-	-
Grade/ore control	50 x 50 to 100 x 100	-	-	-	-	✓
<b>Mine Waste Solutions</b>						
Measured	100 x 100 to 320 x 250	-	-	-	-	✓
Indicated	100 x 100 to 300 x 375	-	-	-	-	✓
Inferred	-	-	-	-	-	-
Grade/ore control	50 x 50 to 100 x 100	-	-	-	-	✓
<b>West Wits Surface</b>						
Measured	-	-	-	-	-	-
Indicated	150 x 150	-	-	-	-	✓
Inferred	-	-	-	-	-	-
Grade/ore control	150 x 150	-	-	-	-	✓

\* Auger drilling for Vaal River Surface, MWS and West Wits Surface TSFs.

Note: In the case of TSFs, additional sampling information is available in the form of residue sampling data collected during deposition on the TSFs.



### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Vaal River Surface TSFs	Measured	-	-	-	-
	Indicated	311.81	0.25	78.44	2.52
	Inferred	-	-	-	-
	<b>Total</b>	<b>311.81</b>	<b>0.25</b>	<b>78.44</b>	<b>2.52</b>
Low grade stockpiles	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	6.82	0.46	3.12	0.10
	<b>Total</b>	<b>6.82</b>	<b>0.46</b>	<b>3.12</b>	<b>0.10</b>
Mine Waste Solutions TSFs	Measured	96.74	0.23	21.84	0.70
	Indicated	172.54	0.26	44.94	1.44
	Inferred	-	-	-	-
	<b>Total</b>	<b>269.28</b>	<b>0.25</b>	<b>66.78</b>	<b>2.15</b>
West Wits Surface TSFs	Measured	-	-	-	-
	Indicated	53.27	0.30	15.74	0.51
	Inferred	-	-	-	-
	<b>Total</b>	<b>53.27</b>	<b>0.30</b>	<b>15.74</b>	<b>0.51</b>
Low grade stockpiles	Measured	-	-	-	-
	Indicated	4.03	0.51	2.06	0.07
	Inferred	-	-	-	-
	<b>Total</b>	<b>4.03</b>	<b>0.51</b>	<b>2.06</b>	<b>0.07</b>
Surface Operations	<b>Total</b>	<b>645.22</b>	<b>0.26</b>	<b>166.13</b>	<b>5.34</b>

### Inclusive Mineral Resource by-product: uranium

as at 31 December 2019	Category	Tonnes million	Grade kg/t	Contained uranium	
				tonnes	pounds million
Surface Operations	Measured	96.74	0.07	6,604	14.56
	Indicated	484.35	0.08	37,865	83.48
	Inferred	-	-	-	-
	<b>Total</b>	<b>581.09</b>	<b>0.08</b>	<b>44,468</b>	<b>98.04</b>

### Estimation

#### TSFs

Prior to 2011, grade estimations for the Vaal River and West Wits TSF operations were based on residue grades obtained from the process plants, as well as various ad hoc sampling projects in selected areas. Most of the TSFs in Vaal River, MWS and West Wits have since been resampled by means of an extensive auger drilling exercise which commenced in 2011. The remaining TSFs will be re-sampled once they become dormant. A stringent quality assurance/quality control (QA/QC) process was applied to the sampling and assay processes to ensure a high level of confidence in the results. Auger drilling typically took place on a 150 x 150m

grid (Mineral Resource model) as well as a minimum of a 50 x 50m grid (grade control model). A vertical sampling interval of 1.5m was implemented and where possible all drill holes were drilled into the underlying strata to allow for the estimation of the base of the TSF. The estimation technique used is 3D ordinary kriging.

The variograms used for grade estimation consist of both horizontal and downhole variograms. The methodology used for construction of the grade model constitutes well defined 3D wireframes which are constructed using drill holes, results from monthly surveys on currently reclaimed TSFs, and annual aerial surveys for TSFs which are planned to for reclamation. These models are regularly updated during the grade control process.



# SURFACE OPERATIONS CONTINUED

## South Africa

### Low grade stockpiles

In the West Wits and Vaal River Surface Operations, grade estimation is based on grades obtained from reclaimed tonnages from the different stockpiles, grades obtained from rock deposited on these facilities and grades from various other sampling projects carried out on some of the stockpiles. These sampling exercises involved a pit being dug on a predetermined grid on the low

grade stockpiles from which samples were taken. Samples were then split into different size fractions and assayed to determine gold distribution for the different size fractions. The profiles of the stockpiles are also updated by means of aerial surveys carried out on an annual basis. Sampling is done by means of mechanical stop belt samplers on the feed belts at the metallurgical plants.

### Exclusive Mineral Resource

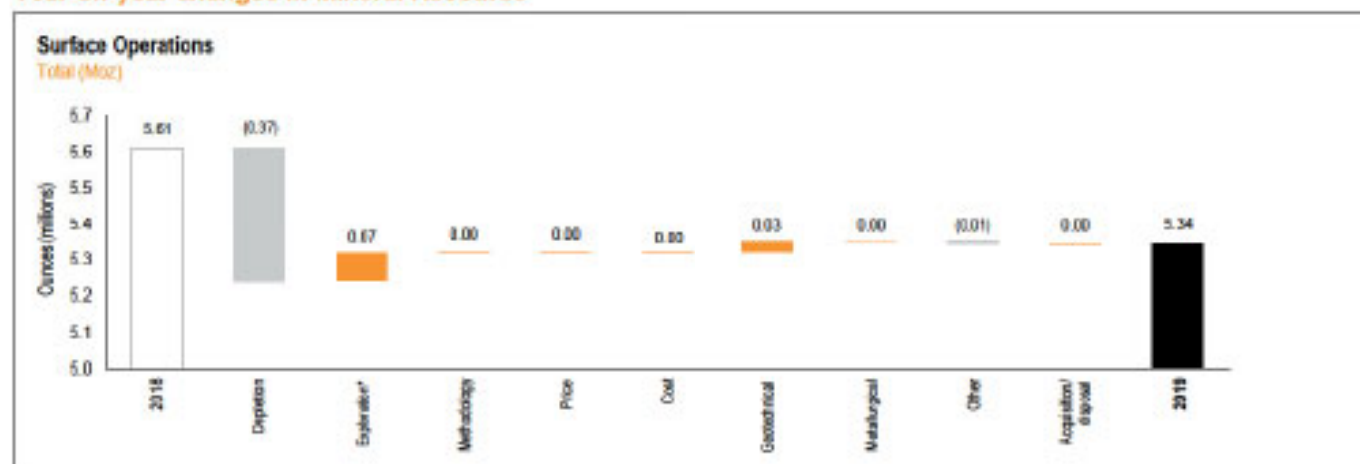
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Surface Operations	Measured	-	-	-	-
	Indicated	27.78	0.28	7.91	0.25
	Inferred	-	-	-	-
	<b>Total</b>	<b>27.78</b>	<b>0.28</b>	<b>7.91</b>	<b>0.25</b>

The exclusive Mineral Resource includes the West Wits Old North TSF which is not included in the Ore Reserve as a result of the deposition strategy.



East pump station

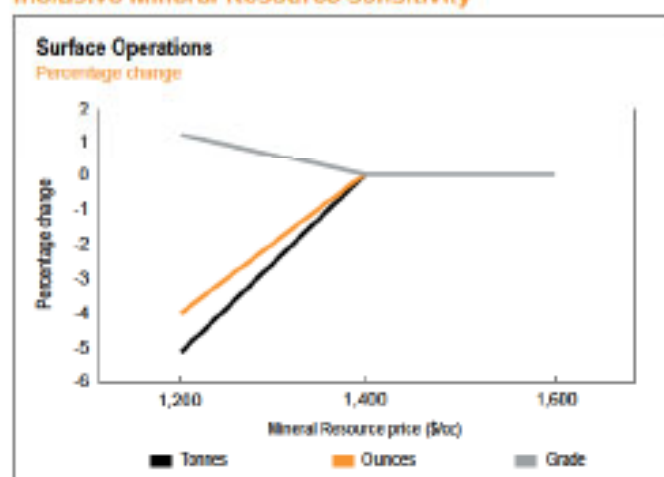
## Year-on-year changes in Mineral Resource



\* This is not exploration, but drill out of the TSF

Year-on-year changes in the Mineral Resource are mainly due to depletion from all Surface Operations. In addition, Harties 2 TSF and Old North TSF model updates resulted in an increase to the Mineral Resource for Surface Operations.

## Inclusive Mineral Resource sensitivity



The Mineral Resource is sensitive to changes in gold price as a result of gold recovery. There is no upside at a higher Mineral Resource price and 4% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold		
				tonnes	Moz	
Vaal River Surface						
TSFs						
	Proved	-	-	-	-	
	Probable	259.88	0.26	67.64	2.17	
	<b>Total</b>	<b>259.88</b>	<b>0.26</b>	<b>67.64</b>	<b>2.17</b>	
Mine Waste Solutions						
TSFs						
	Proved	63.97	0.24	15.18	0.49	
	Probable	172.81	0.26	44.94	1.44	
	<b>Total</b>	<b>236.78</b>	<b>0.25</b>	<b>60.11</b>	<b>1.93</b>	
West Wits Surface						
TSFs						
	Proved	-	-	-	-	
	Probable	21.95	0.31	6.74	0.22	
	<b>Total</b>	<b>21.95</b>	<b>0.31</b>	<b>6.74</b>	<b>0.22</b>	
Low grade stockpiles						
	Proved	-	-	-	-	
	Probable	3.26	0.47	1.51	0.05	
	<b>Total</b>	<b>3.26</b>	<b>0.47</b>	<b>1.51</b>	<b>0.05</b>	
<b>Surface Operations</b>		<b>Total</b>	<b>521.86</b>	<b>0.26</b>	<b>136.01</b>	<b>4.37</b>



# SURFACE OPERATIONS CONTINUED

## South Africa

### Estimation

#### TSFs

Mine design models delineate areas that will be reclaimed over the life of the operations. All relevant mine design recommendations were taken into consideration. The *in situ* Mineral Resource is scheduled for the full LOM plan. The value estimates for these schedules are derived from Mineral Resource block models. The benefit of the reclamation of the surface sources and subsequent rehabilitation of the relevant areas is included in the evaluation of the feasibility of the project.

#### Low grade stockpiles

Planned reclamation from the low grade stockpiles is scheduled to ensure an average blend. The *in situ* Mineral Resource is scheduled for the full LOM plan. The value estimates for these schedules are derived from the Mineral Resource with an 18 month reconciliation factor applied.

### Ore Reserve modifying factors

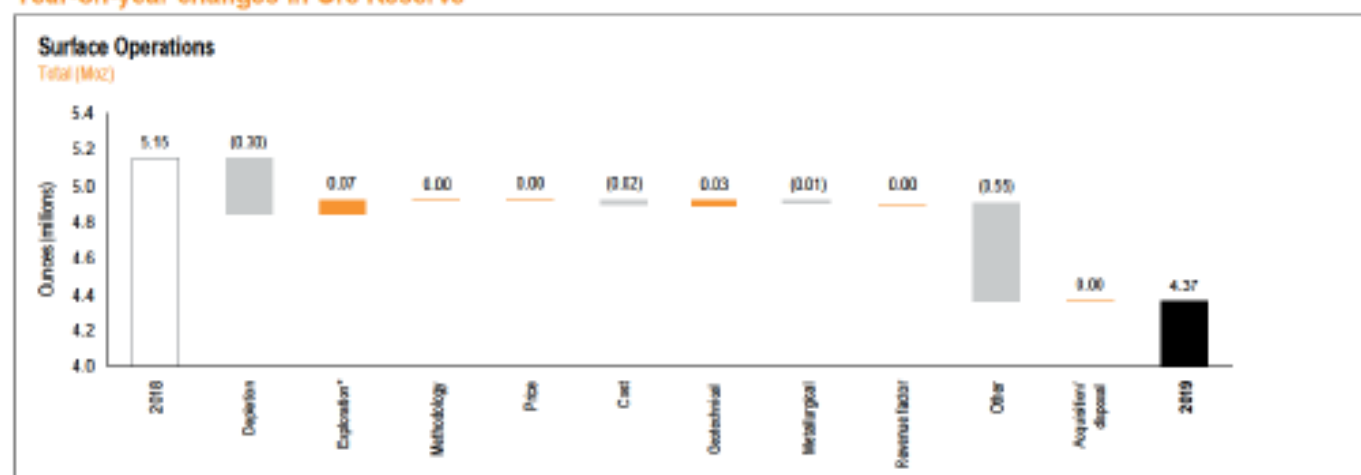
as at 31 December 2019	Gold price ZAR/kg	Cut-off grade g/t Au	RMF % (based on tonnes)	RMF % (based on g/t)	MCF %	NetRF %
Vaal River Surface						
TSFs	541,501	0.20	100.0	100.0	100.0	50.3
Mine Waste Solutions						
TSFs	541,501	0.23	100.0	100.0	100.0	44.5
West Wits Surface						
TSFs	541,501	0.31	100.0	100.0	100.0	44.0
Low grade stockpile	541,501	0.34	100.0	90.0	100.0	90.9

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Vaal River Surface				
Low grade stockpiles	6.82	0.38	2.61	0.08
Total	6.82	0.38	2.61	0.08

Inferred Mineral Resource was included in the business plan. This accounted for 6% of the plan.

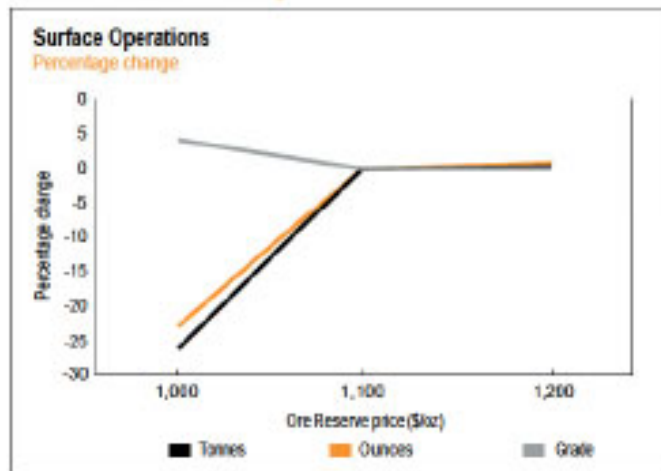
### Year-on-year changes in Ore Reserve



\* This is not exploration, but drill out of the TSF

In addition to normal depletion in all areas during 2019, the West Extension and Harties 5 and 6 TSFs were excluded due to them now being below cut-off, as a result of the Aachen Reactor benefit reducing by 5%.

### Ore Reserve sensitivity



The Ore Reserve is highly sensitive to a drop in price as a result of gold recovery. There is minimal upside at a higher Ore Reserve price and 23% downside in ounces at a lower Ore Reserve price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Mmatseing Maipushi	SACNASP	114 390	9 years	BSc Hons (Geology)
Ore Reserve	Joseph Selebogo	SAGC	GTgMS 0151	10 years	MSCC, HND (Mineral Resource Management)



Reclamation of Savuka low grade stockpile



## SECTION 4

# AMERICAS



#### Contribution to regional production

■ Cerro Vanguardia	225koz	32%
■ AGA Mineração	362koz	51%
■ Serra Grande	123koz	17%

# 22%

contribution to group production\*

\* Group including South African Operations

Regional overview	122
Argentina	126
Brazil	136
Colombia	184





# REGIONAL OVERVIEW

## Americas



### LEGEND

- ① **Argentina**  
Cerro Vanguardia (92.5%)<sup>(1)</sup>
- Brazil**
- ② Serra Grande
- ③ AGA Mineração
- ④ **Colombia**  
Gramalote (51%)  
La Colosa  
Quebradona <sup>(2)</sup>

● Operation ○ Project

0 400km

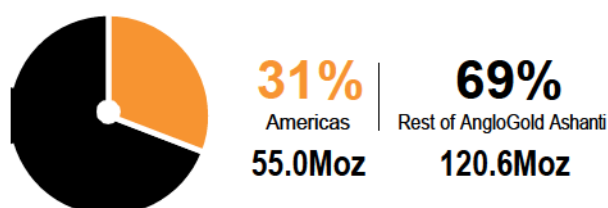
<sup>(1)</sup> Sale at an advanced stage

<sup>(2)</sup> Change in ownership to 100% as B2Gold's shareholding has been converted to a share of profits

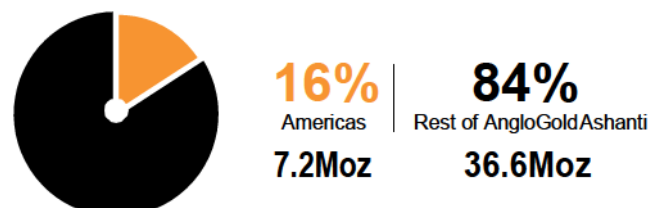
### Key statistics

	Units	2019	2018	2017
Operational performance				
Tonnes treated/milled	Mt	7.2	6.8	7.5
Recovered grade	oz/t	0.089	0.103	0.102
	g/t	3.04	3.55	3.49
Gold production	000oz	710	776	840
Total cash costs	\$/oz	736	624	638
All-in sustaining costs	\$/oz	1,032	855	943
Capital expenditure	\$m	195	176	234

### Contribution to group Mineral Resource



### Contribution to group Ore Reserve



Americas contributes 100% to the group copper Mineral Resource of 9,677Mlb and Ore Reserve of 3,068Mlb.

As at 31 December 2019, the Mineral Resource (inclusive of Ore Reserve) for the Americas region was 55.0Moz (2018: 57.5Moz) and the Ore Reserve was 7.2Moz (2018: 7.1Moz).

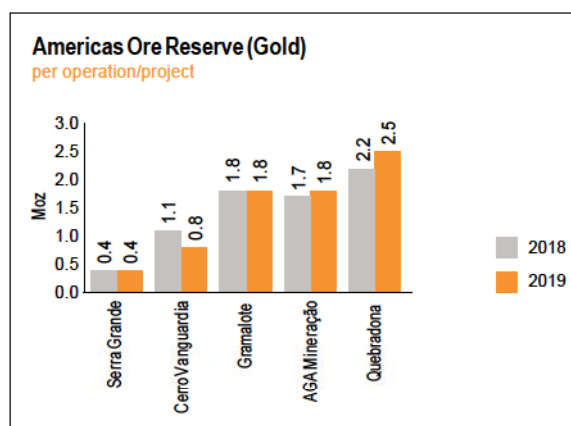
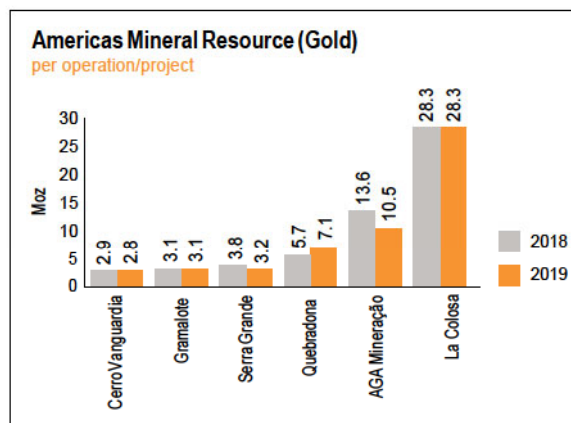
This is equivalent to 31% and 16% of the group's Mineral Resource and Ore Reserve respectively. Combined production for the Americas was 710koz in 2019, equivalent to 22% of group production<sup>1</sup>.

The Americas region incorporates two mining jurisdictions, Brazil and Argentina and greenfields projects in Colombia. AngloGold Ashanti has three operations in the Americas, the Cerro Vanguardia Mine in Argentina (AngloGold Ashanti 92.5% and Formicruz 7.5%), AngloGold Ashanti Córrego do Sítio Mineração operations (referred to as AGA Mineração) which includes the Cuiabá, Lamego and CdS Mines, and Serra Grande, both in Brazil, and greenfields projects in Colombia.

The projects in Colombia form a significant contribution to AngloGold Ashanti's Mineral Resource with the three projects, La Colosa, Quebradona and Gramalote (AngloGold Ashanti 51% and B2Gold 49%) contributing 38.5Moz.

Gramalote declared a maiden Ore Reserve in 2017 and Quebradona declared a maiden Ore Reserve in 2018. Quebradona and Gramalote contribute 4.3Moz to AngloGold Ashanti's gold Ore Reserve and Quebradona has a copper Ore Reserve of 3,068Mlb. Both Quebradona and Gramalote are at various stages of FS. Quebradona is a copper mine with gold and silver as by-products.

<sup>1</sup> Group including South African Operations



## GOLD

### Inclusive Mineral Resource

		Tonnes	Grade	Contained gold	
as at 31 December 2019 Americas	Category				
	Measured	83.91	1.58	132.97	4.28
	Indicated	1,170.40	0.92	1,073.30	34.51
	Inferred	677.38	0.75	504.74	16.23
	<b>Total</b>	<b>1,931.69</b>	<b>0.89</b>	<b>1,711.01</b>	<b>55.01</b>

### Exclusive Mineral Resource

as at 31 December 2019		Tonnes	Grade	Contained gold	
Category		million	g/t	tonnes	Moz
Americas	Measured	74.29	1.38	102.49	3.30
	Indicated	971.71	0.86	831.96	26.75
	Inferred	675.56	0.74	500.64	16.10
	<b>Total</b>	<b>1,721.56</b>	<b>0.83</b>	<b>1,435.09</b>	<b>46.14</b>

### Ore Reserve

as at 31 December 2019		Tonnes	Grade	Contained gold	
Category		million	g/t	tonnes	Moz
Americas	Proved	8.27	2.36	19.49	0.63
	Probable	194.87	1.05	205.22	6.60
	<b>Total</b>	<b>203.15</b>	<b>1.11</b>	<b>224.72</b>	<b>7.22</b>



# REGIONAL OVERVIEW CONTINUED

## Americas

### COPPER

#### Inclusive Mineral Resource

as at 31 December 2019	Americas	Category	Tonnes million	Grade %Cu	Contained copper	
					tonnes million	pounds million
		Measured	57.90	1.10	0.64	1,406
		Indicated	203.77	0.89	1.81	3,981
		Inferred	340.43	0.57	1.95	4,290
		<b>Total</b>	<b>602.10</b>	<b>0.73</b>	<b>4.39</b>	<b>9,677</b>

#### Exclusive Mineral Resource

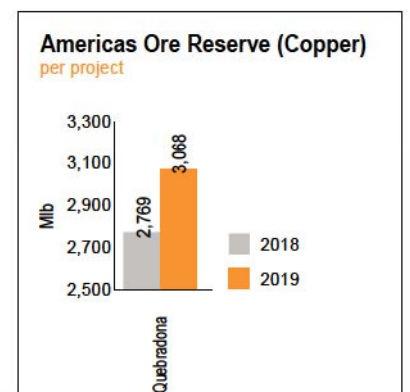
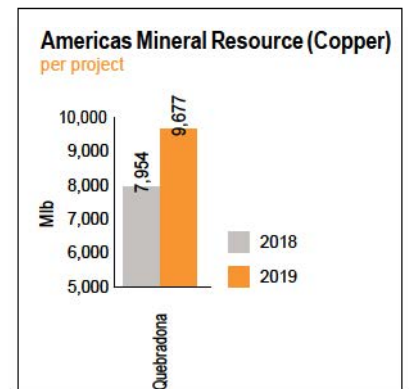
as at 31 December 2019	Americas	Category	Tonnes million	Grade %Cu	Contained copper	
					tonnes million	pounds million
		Measured	57.90	1.10	0.64	1,406
		Indicated	92.53	0.45	0.41	913
		Inferred	340.43	0.57	1.95	4,290
		<b>Total</b>	<b>490.86</b>	<b>0.61</b>	<b>3.00</b>	<b>6,609</b>

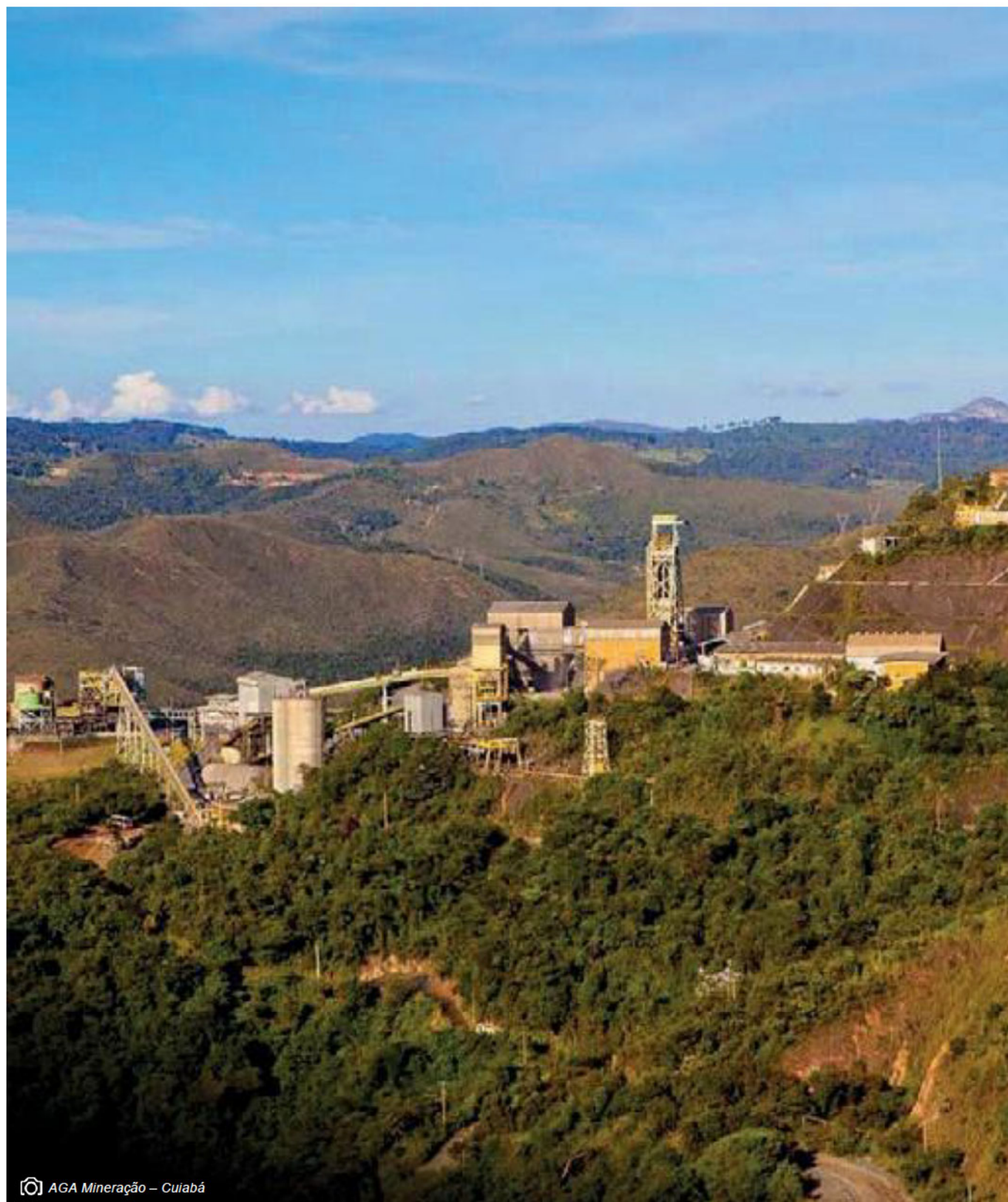
#### Ore Reserve

as at 31 December 2019	Americas	Category	Tonnes million	Grade %Cu	Contained copper	
					tonnes million	pounds million
		Proved	-	-	-	-
		Probable	111.24	1.25	1.39	3,068
		<b>Total</b>	<b>111.24</b>	<b>1.25</b>	<b>1.39</b>	<b>3,068</b>



Quebradona





AG A Mineração – Cuiabá



# ARGENTINA

## Americas



Cerro Vanguardia, in which we have a 92.5% stake, is our sole operation in Argentina. Fomicruz, a state company, owns the remaining 7.5%. Located to the northwest of Puerto San Julián, in the province of Santa Cruz, Cerro Vanguardia operates multiple small open pits with high stripping ratios and multiple narrow-vein underground mines. The metallurgical plant, which includes a cyanide recovery facility, has a daily capacity of 3,000t. Cerro Vanguardia has been in operation for more than 20 years.

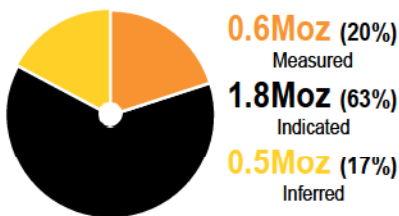
Silver is produced as a by-product.

The sale process at Cerro Vanguardia is at an advanced stage.

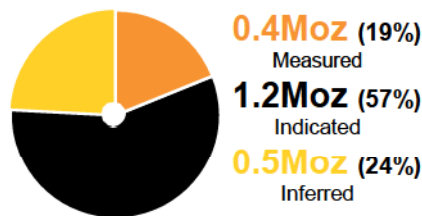
Attributable production from Argentina totalled 225koz of gold in 2019, or 32% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for Argentina was 2.8Moz (2018: 2.9Moz) and the Ore Reserve was 0.8Moz (2018: 1.1Moz).

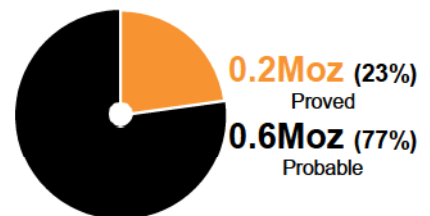
### Inclusive Mineral Resource



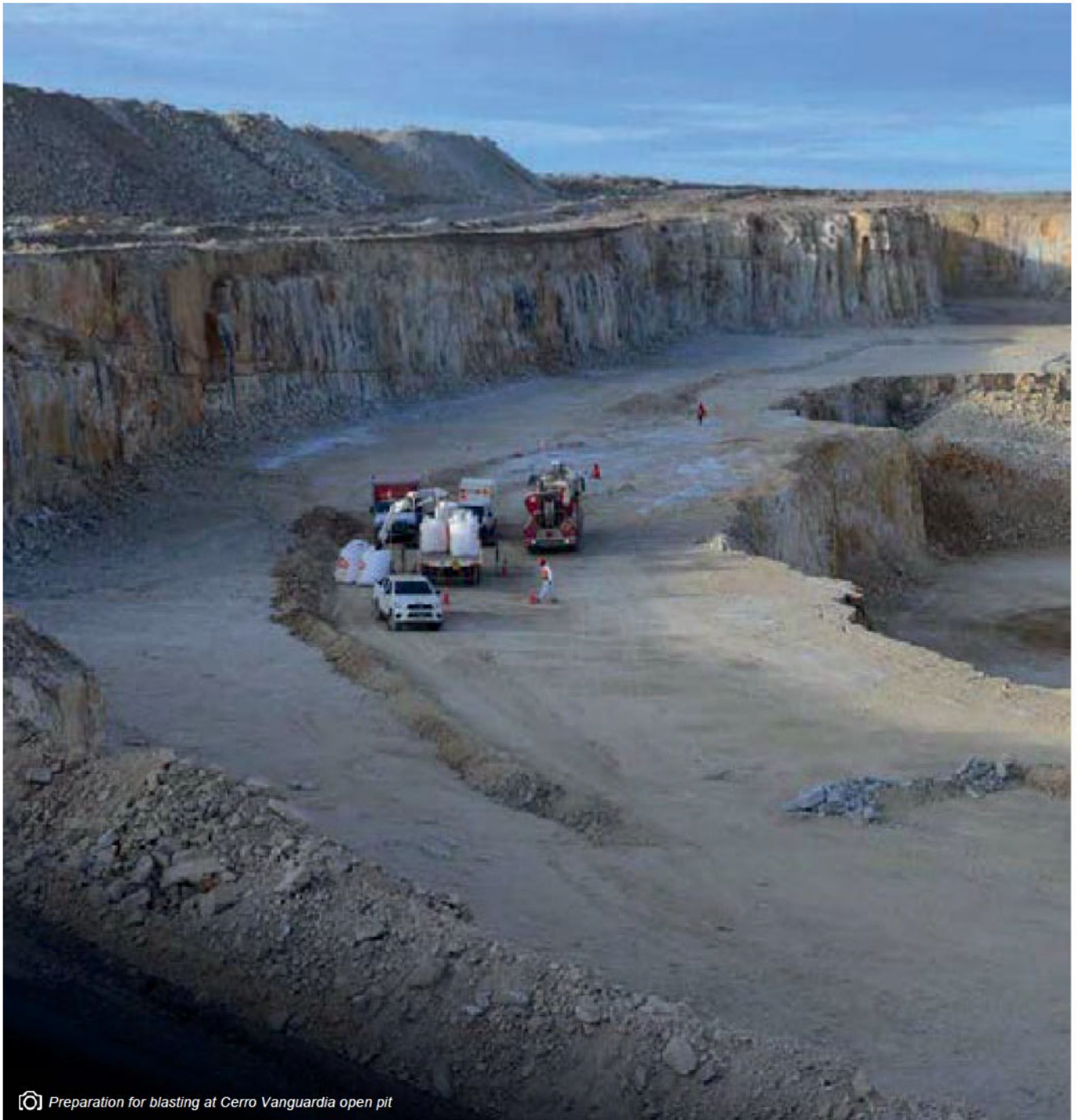
### Exclusive Mineral Resource



### Ore Reserve







# CERRO VANGUARDIA

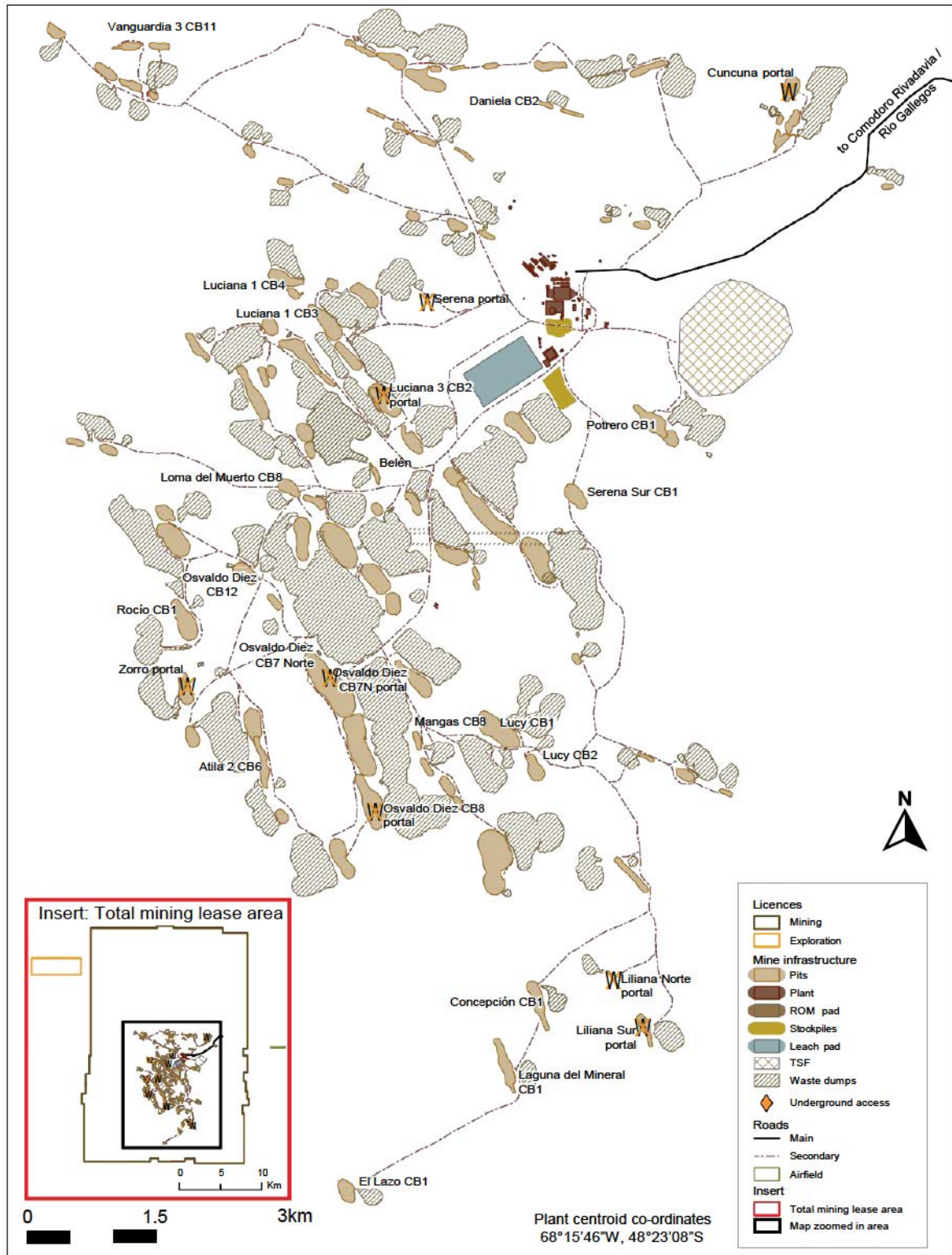
## Americas

### Introduction

<b>Property description</b>	Cerro Vanguardia is a gold-silver mine with multiple open pit and underground mines located within the property but mined simultaneously. AngloGold Ashanti has a 92.5% stake in Cerro Vanguardia, the company's sole operation in Argentina, with Fomicruz, a state company operating in the province of Santa Cruz, owning the remaining 7.5%. The climate is semi-arid and although snow does occur, winter is mild and exploration activities are normally possible all year round.
<b>Location</b>	Cerro Vanguardia is located in Santa Cruz province, southern Patagonia, Argentina, approximately 110km north-northwest of the coastal town of Puerto San Julian. Access to the area is by aircraft from Buenos Aires to Comodoro Rivadavia (380km) or Rio Gallegos (510km) and then by road to the mine site.
<b>History</b>	Gold exploration at the site was started in late 1980s by the state owned Fomicruz and Minera Mincorp (JV between Anglo American Argentina Holdings Limited and a local private company Perez Compac). Cerro Vanguardia commenced as an open pit operation in 1998 and this was supplemented in 2010 with the start of shallow underground mining to access high-grade material. To complement the already existing gold plant, a heap-leaching operation was started in 2012. The mine has been operated by AngloGold Ashanti since 1998.
<b>Legal aspects and tenure</b>	The mining lease encompasses an area of approximately 543km <sup>2</sup> . The licence 402642/CV/97 covers the full Ore Reserve and was issued on 27 December 1996 and expires on 26 December 2036.
<b>Mining method</b>	Cerro Vanguardia uses both underground and open pit mining. Open pit is conventional open pit mining with a doubled bench height of 20m while in the underground, longhole stoping is the mining method. Open pit mining is distributed between multiple operating pits, typically 5 to 10 at any one time, depending on the plant feed requirements. Currently, there are four underground mines that are operated at the same time, located on the Osvaldo 8, Cuncuna, Serena and Zorro veins. Three more are in development (Liliana, Osvaldo 7 and Loma del Muerto CB6). Underground mining represents around 40% of total production, a percentage that will increase in the coming years. Lower grade material is stockpiled and processed on the heap leach.
<b>Operational infrastructure</b>	<p>Most of the infrastructure is located on-site. It includes a camp site with capacity for more than 1,000 people, a Merrill Crowe plant, heap-leaching facilities, cyanide recycling plant, mine laboratory, maintenance facilities, warehouses and sewage processing plant. Four natural gas power generators, fed by a 40km long pipeline, provide electricity to the operation. Natural gas is also used for heating. Mine office facilities are located in the main mining area.</p> <p>Dewatering supplies water for use both as processing water and camp consumption. Due to the particular features of the mine, and in order to optimise hauling, all pits have local, single or multiple, waste dumps. The tailings dam is located in, and is contained by a natural depression.</p>
<b>Mineral processing</b>	<p>Waste dumps and heap-leach stockpiles are located adjacent to each pit. Plant grade ore feed is trucked to either to the long-range or the short-range stockpiles in order to smooth out the head grades and avoid recovery losses due to higher than planned silver grades.</p> <p>The metallurgical plant has a daily capacity of 3,400t and includes a cyanide recovery facility. Production capacity of the heap-leach facility, which was commissioned in Q4 2012 and processes lower-grade material, is around 1.6Mtpa at gold and silver grades of around 0.65g/t and 17g/t respectively.</p>
<b>Risks</b>	<p>The Mineral Resource and Ore Reserve is sensitive to gold and silver prices as well as to local exchange rate fluctuations.</p> <p>The low grades from the open pits and difficult hydrogeological and geotechnical conditions for underground are ongoing risks that are managed on a day-to-day basis.</p>



Map showing Cerro Vanguardia Mine infrastructure, with the total mining lease area insert shown in the bottom left corner



# CERRO VANGUARDIA CONTINUED

## Americas

### Geology

The Cerro Vanguardia district is located within the southern Deseado Massif in the Santa Cruz province of Patagonia, Argentina. The Deseado Massif is an extensive rhyolite province of Middle to Upper Jurassic age. The most important geological feature in the Deseado Massif is an extended plateau formed by pyroclastic, epiclastic and extrusive rocks which were part of a strong explosive volcanic event associated with regional extensional tectonics developed during the Middle Upper Jurassic and related to the opening of the Atlantic Ocean. The rocks representing this magmatism are termed the Bajo Pobre Formation and Bahia Laura Group. The Bajo Pobre Formation comprises andesites, basalts and mafic volcanic agglomerates. The Bahia Laura Group includes both the Chon Aike Formation (ignimbrites, tuffs, volcanic breccias, agglomerates, lavas and domes) and the La Matilde Formation (tuffs and epiclastic volcanics interlayered with ignimbrites).

### Deposit type

The Middle-Upper Jurassic ignimbrites and volcanic rocks from Chon Aike Formation host the low-sulphidation epithermal gold and silver deposits. The thickness of the ignimbrite sequence is estimated to have exceeded 1,000m but some lateral variations have been identified across the district. Epithermal gold-silver bearing structures cut across all Jurassic rocks in the stratigraphy. The two main ignimbrite units, the Masiva-Lajosa and Granosa, host the majority of the mineralised veins.

The Masiva-Lajosa ignimbrite occurs at the top of the sequence while the Granosa ignimbrite occurs towards the bottom. These two ignimbrites are separated by two thinner, polymictic ignimbrite units (Brechosa and Brechosa Base) and a sequence of stratified

crystal to ash-rich tuffs (Estratificada unit). The base of the sequence is a mixed unit of stratified ignimbrite intercalated with fine-grained tuffs (Estratificada Inferior ignimbrite).

### Mineralisation style

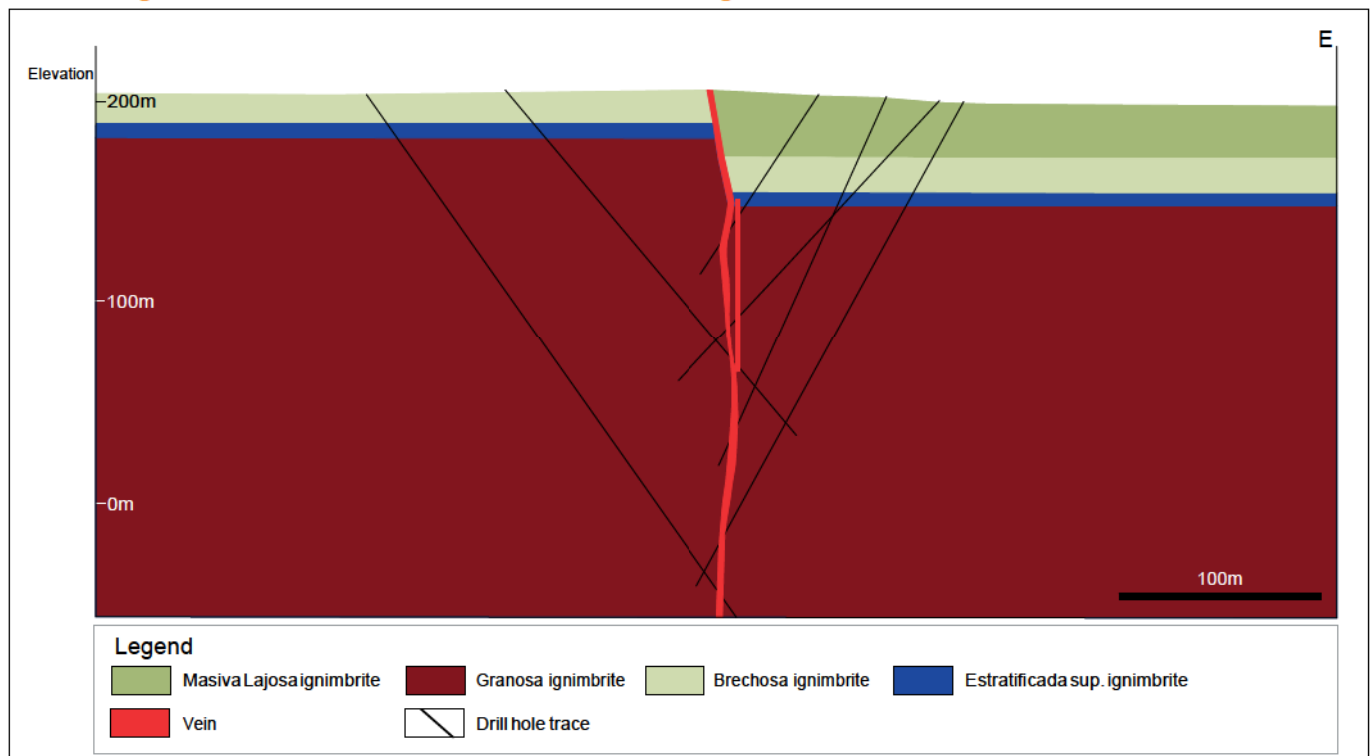
Cerro Vanguardia is located in the core of the 60,000km<sup>2</sup> Deseado Massif, one of the most extensive volcanic complexes in southern Patagonia. The Deseado Massif is an extensive rhyolite province of Middle to Upper Jurassic age deposited over Paleozoic low-grade metamorphic basement rocks. These rocks are exposed in erosional windows through overlying Cretaceous sediments and Tertiary to Quaternary basalts. The orebodies comprise a series of low-sulphidation epithermal vein deposits containing gold and large quantities of silver which is produced as a by-product.

### Mineralisation characteristics

The mineralisation is concentrated in steeply-dipping quartz veins that cut the flat-lying ignimbrites and volcanoclastic rocks. The Cerro Vanguardia district contains around 100 gold and silver-bearing epithermal veins for a cumulative exposed vein strike extension of more than 240km, of which 57 veins are currently known to contain economic gold and silver mineralisation.

The veins at Cerro Vanguardia consist mainly of quartz and adularia and contain minor electrum, native gold, silver sulphides and native silver as fine-grained disseminations. Vein textures are mainly characterised by colloform-crustiform banding, pseudomorphic quartz-lattice textures, massive-to-vuggy quartz veins and vein breccias. <sup>40</sup>Ar/<sup>39</sup>Ar dating on adularia from the Osvaldo Diez vein yielded ages of around 153Ma while the age of the thick sequence of ignimbrites hosting the veins has been dated between 166Ma and 150Ma.

### W-E Geological cross-section of the Atila vein at Cerro Vanguardia, elevation in metres AMSL





## Exploration

Exploration in 2019 was focused on mapping, surface sampling and geophysics, with no drilling completed. The less explored portion of the northern Cerro Vanguardia district was reviewed. Reconnaissance activities covered an area of 95km<sup>2</sup> and 216 chip samples were collected for geochemical analyses, with the information being used to update and improve the 1:5,000 scale geological map. An extensive channel sampling programme was designed to develop new targets within the district. More than 13km of trenches were excavated and 5.2km of new channels were cut. Ground magnetic surveys, carried out between the end

of May and early September, covered 53km<sup>2</sup> of ground in areas such as Laguna del Mineral in the south, Colo and Trinidad in the west, and the northern extension of El Trío vein in the north. These surveys added substantial geophysical data to help develop new targets for drill-testing.

## Projects

A new three-year drilling project is being initiated in order to test the remaining potential of the district, considering extensions of known veins, new exploration areas and geophysical targets. The first stage of this programme is scheduled to start early in 2020.

## Mineral Resource

### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	6 x 10, 12 x 5	✓	✓	–	✓	–
Indicated	40 x 40	✓	✓	–	✓	–
Inferred	80 x 80	✓	✓	–	✓	–
Grade/ore control	6 x 10, 12 x 5	✓	✓	–	✓	–

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Vein (open pit)	Measured	2.14	4.74	10.13	0.33
	Indicated	7.72	4.71	36.38	1.17
	Inferred	2.37	3.48	8.25	0.27
	<b>Total</b>	<b>12.23</b>	<b>4.48</b>	<b>54.76</b>	<b>1.76</b>
<i>In situ</i> heap leach stockwork material	Measured	2.89	0.59	1.71	0.05
	Indicated	10.67	0.50	5.32	0.17
	Inferred	2.75	0.50	1.37	0.04
	<b>Total</b>	<b>16.31</b>	<b>0.51</b>	<b>8.40</b>	<b>0.27</b>
Heap leach stockpiles	Measured	2.71	0.51	1.39	0.04
	Indicated	–	–	–	–
	Inferred	–	–	–	–
	<b>Total</b>	<b>2.71</b>	<b>0.51</b>	<b>1.39</b>	<b>0.04</b>
Vein (underground)	Measured	0.50	8.86	4.40	0.14
	Indicated	1.81	7.21	13.02	0.42
	Inferred	0.59	9.11	5.38	0.17
	<b>Total</b>	<b>2.89</b>	<b>7.88</b>	<b>22.79</b>	<b>0.73</b>
Cerro Vanguardia	<b>Total</b>	<b>34.13</b>	<b>2.56</b>	<b>87.34</b>	<b>2.81</b>

### Inclusive Mineral Resource by-product: silver

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained silver	
				tonnes	Moz
Cerro Vanguardia	Measured	8.23	54.25	447	14.36
	Indicated	20.19	66.44	1,342	43.13
	Inferred	5.71	100.26	572	18.40
	<b>Total</b>	<b>34.13</b>	<b>69.15</b>	<b>2,360</b>	<b>75.89</b>

# CERRO VANGUARDIA CONTINUED

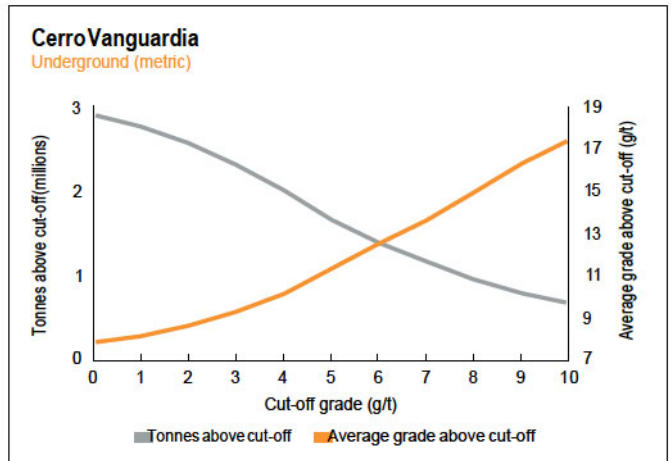
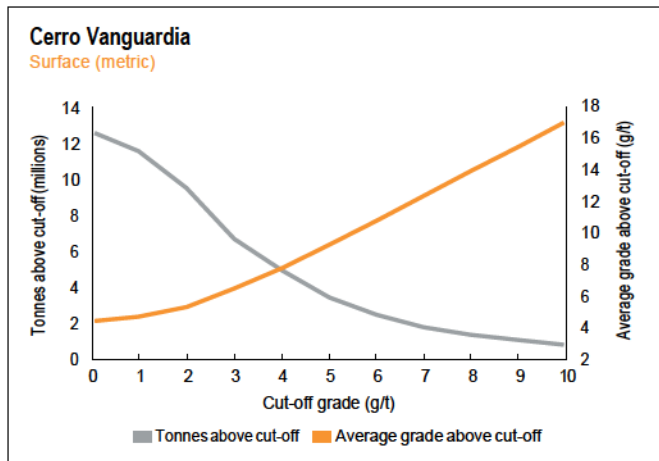
## Americas

### Estimation

The mineralisation boundaries for each geological entity (veins, stockwork and wall rock) are defined from detailed logging of all geological drill holes. This data is validated and the information used to create a 3D model with cell block sizes of 5 x 25 x 5m. Volumetric measurements of the deposit are then determined using relevant block dimensions. Ordinary kriging is used to perform grade interpolation and field tests are conducted to determine appropriate *in situ* densities.

Conditional simulations are performed in the main deposits for uncertainty assessment and the Mineral Resource is then classified into Measured, Indicated and Inferred Mineral Resource categories according to the internal AngloGold Ashanti guidelines. For the veins where simulations are not done, drill density is used to classify the Mineral Resource.

### Grade tonnage curves



The grade tonnage curves do not include stockpiles.

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Cerro Vanguardia	Measured	3.80	3.17	12.05	0.39
	Indicated	12.80	2.86	36.65	1.18
	Inferred	4.81	2.91	14.01	0.45
	<b>Total</b>	<b>21.41</b>	<b>2.93</b>	<b>62.72</b>	<b>2.02</b>

The open pit exclusive Mineral Resource is primarily located between the pit design and the Mineral Resource shell and exists due to the difference in the economic parameters that have been used.

Where the grades of gold and silver are above the Mineral Resource cut-off but below the Ore Reserve cut-off, significant zones of exclusive Mineral Resource will be generated. Very deep Mineral Resource will not be converted in the near term to Ore Reserve and is therefore listed as exclusive Mineral Resource.

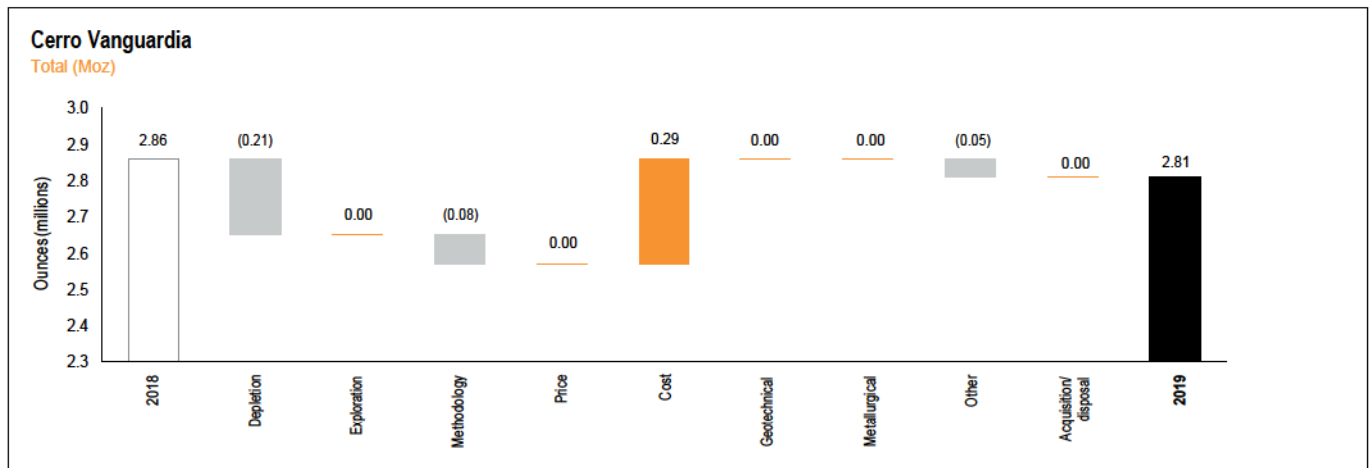


### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Cerro Vanguardia (Moz)	Measured	–	–	–	–
	Indicated	0.23	7.21	1.65	0.05
	Inferred	0.59	9.11	5.38	0.17
	<b>Total</b>	<b>0.82</b>	<b>8.58</b>	<b>7.02</b>	<b>0.23</b>

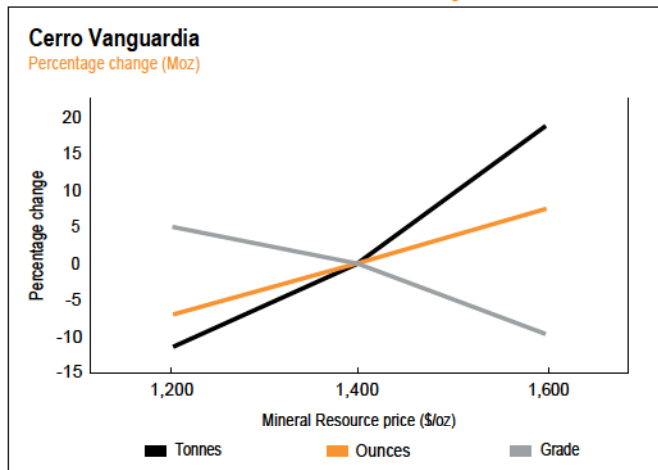
All the Inferred Mineral Resource that has no ramp designed as yet is considered to be below infrastructure.

### Year-on-year changes in Mineral Resource



Year-on-year changes are due to depletion and methodology, offset by positive changes due to cost reductions.

### Inclusive Mineral Resource sensitivity



The Mineral Resource is sensitive to changes in gold price. Significant amounts of low-grade material are present in the deposit which is reflected in the large tonnage increase and grade decrease at elevated gold prices. There is a 7.5% upside in ounces at a higher Mineral Resource price and 7% downside in ounces at a lower Mineral Resource price.

# CERRO VANGUARDIA

CONTINUED

## Americas

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Vein (open pit)	Proved	0.77	3.38	2.61	0.08
	Probable	2.36	3.90	9.20	0.30
	<b>Total</b>	<b>3.13</b>	<b>3.77</b>	<b>11.81</b>	<b>0.38</b>
<i>In situ</i> heap leach stockwork material	Proved	0.80	0.36	0.29	0.01
	Probable	3.85	0.33	1.26	0.04
	<b>Total</b>	<b>4.64</b>	<b>0.33</b>	<b>1.55</b>	<b>0.05</b>
Heap leach stockpiles	Proved	2.71	0.51	1.39	0.04
	Probable	–	–	–	–
	<b>Total</b>	<b>2.71</b>	<b>0.51</b>	<b>1.39</b>	<b>0.04</b>
Vein (underground)	Proved	0.20	6.59	1.31	0.04
	Probable	1.48	5.31	7.84	0.25
	<b>Total</b>	<b>1.68</b>	<b>5.46</b>	<b>9.15</b>	<b>0.29</b>
Cerro Vanguardia	<b>Total</b>	<b>12.16</b>	<b>1.97</b>	<b>23.89</b>	<b>0.77</b>

#### Ore Reserve by-product: silver

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained silver	
				tonnes	Moz
Cerro Vanguardia	Proved	4.47	26.60	119	3.83
	Probable	7.68	60.45	464	14.93
	<b>Total</b>	<b>12.16</b>	<b>47.99</b>	<b>583</b>	<b>18.76</b>

#### Estimation

The appropriate Mineral Resource models are used as the basis for estimating the Ore Reserve. All relevant modifying factors such as mining dilution and costs are used in the Ore Reserve conversion process. This is based on the original block grades and tonnage, and includes waste material (both internal and external).

Appropriate Ore Reserve cut-off grades are applied and all blocks above this cut-off are reported.

It is important to emphasise the importance of silver during the optimisation of the pits, since silver is a significant by-product at Cerro Vanguardia. The ratio of silver to gold commonly ranges from 20g/t to 30g/t of silver per 1g/t of gold.

Ore Reserve depletion includes material that comes from operational dilution, which constitutes an additional low grade tonnage that is mined as part of the ongoing operation. Mineral Resource is estimated *in situ* and thus does not include this dilution.

#### Ore Reserve modifying factors

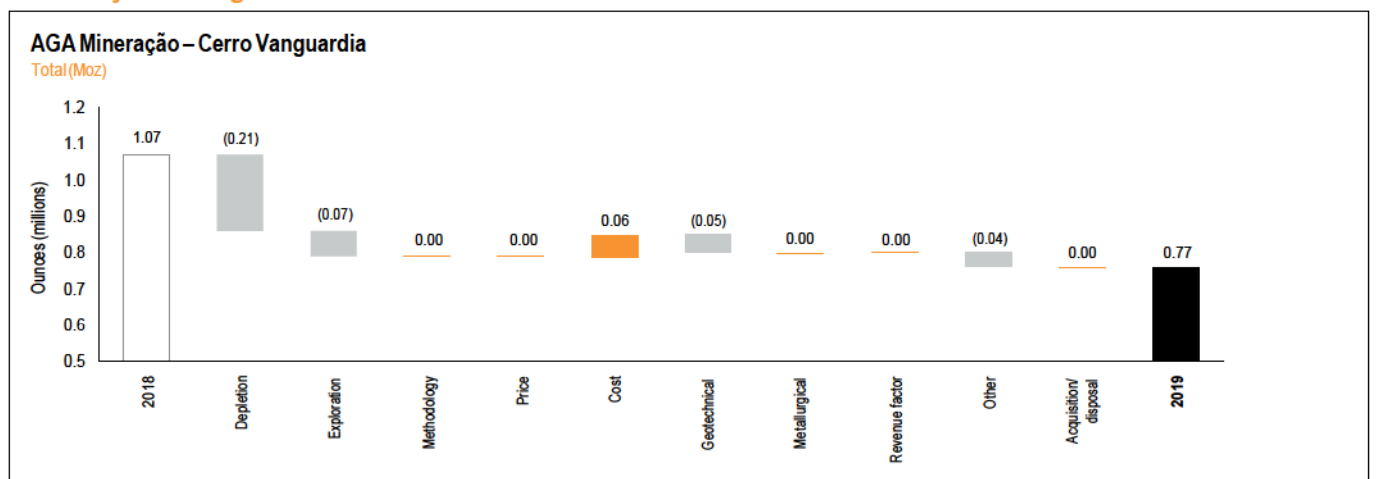
as at 31 December 2019	Gold price US\$/oz	Exchange rate US\$/ARS	Cut-off grade g/t Au	Dilution %	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MetRF %
Vein (open pit)	1,100	51.89	3.77	35.0	97.0	96.0	95.0	95.8
<i>In situ</i> heap leach stockwork material	1,100	51.89	0.33	35.0	97.0	96.0	95.0	65.8
Heap leach stockpiles	1,100	51.89	0.51	–	–	–	–	65.8
Vein (underground)	1,100	51.89	5.46	45.0	97.0	96.0	95.0	95.8

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Vein (open pit)	0.48	1.80	0.86	0.03
<i>In situ</i> heap leach stockwork material	0.45	0.27	0.12	0.00
Vein (underground)	0.51	4.36	2.23	0.07
<b>Total</b>	<b>1.44</b>	<b>2.23</b>	<b>3.22</b>	<b>0.10</b>

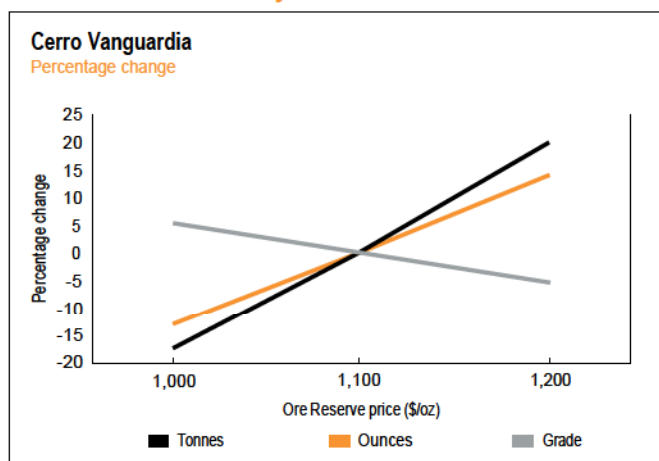
The Inferred Mineral Resource is normally located in the deeper parts of the orebody, such as the bottom of the open pits and deeper portions of the underground Mineral Resource. The Inferred Mineral Resource is used in the business plan in order to delineate the final designs of the open pits, improving efficiency in Mineral Resource utilisation. In the current business plan, around 15% of the open pits and 20% of the underground designs contain Inferred Mineral Resource. The Inferred Mineral Resource is excluded for Ore Reserve reporting.

### Year-on-year changes in Ore Reserve



Year-on-year changes were due to depletion, exploration and geotechnical offset by updated economic parameters.

### Ore Reserve sensitivity



The Ore Reserve at Cerro Vanguardia is very sensitive to a change in gold price. There is a 14% upside in ounces at a higher Ore Reserve price and 13% downside in ounces at a lower Ore Reserve price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Juan Paredes	MAusIMM	227 738	23 years	PhD (Geology)
Ore Reserve	Martin Cesca	MAusIMM	333 864	6 years	BEng (Mining Engineering)



# BRAZIL

## Americas



Our operations in Brazil comprise AngloGold Ashanti Córrego do Sítio Mineração (AGA Mineração) in the Quadrilátero Ferrífero, Minas Gerais state and Mineração Serra Grande in Goiás state. AGA Mineração consists of several operations, namely Cuiabá, Lamego, and CdS.

Ore from the Cuiabá and Lamego underground mines is processed at the Cuiabá Gold Plant. The concentrate produced is transported by aerial ropeway to the Queiroz Plant for processing and refining. The Queiroz hydrometallurgical plant also produces sulphuric acid as a by-product.

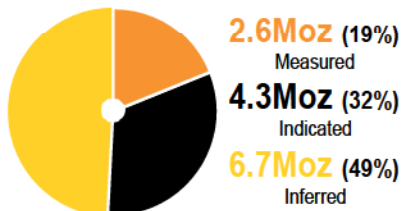
Córrego do Sítio consists of one open-pit mine and one underground mine. The oxide ore mined is treated by heap leach and a pressure leaching plant treats sulphide ore. The distance from the main underground mine (Mina I) to the metallurgical plant is around 15km.

Serra Grande comprises three mechanised underground mines, Mina III, Mina Nova and Mina Palmeiras, and an open pit as well as a dedicated metallurgical plant.

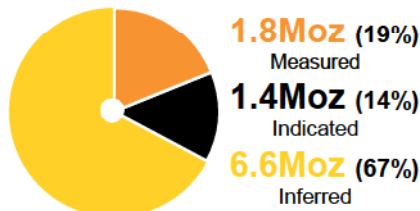
Attributable production from Brazil totalled 485koz of gold in 2019, or 68% of the region's production.

As at December 2019, the Mineral Resource (inclusive of Ore Reserve) for Brazil was 13.7Moz (2018: 17.5Moz) and the Ore Reserve was 2.2Moz (2018: 2.1Moz).

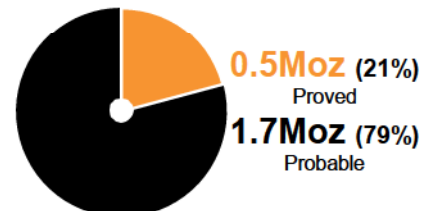
### Inclusive Mineral Resource




### Exclusive Mineral Resource



### Ore Reserve





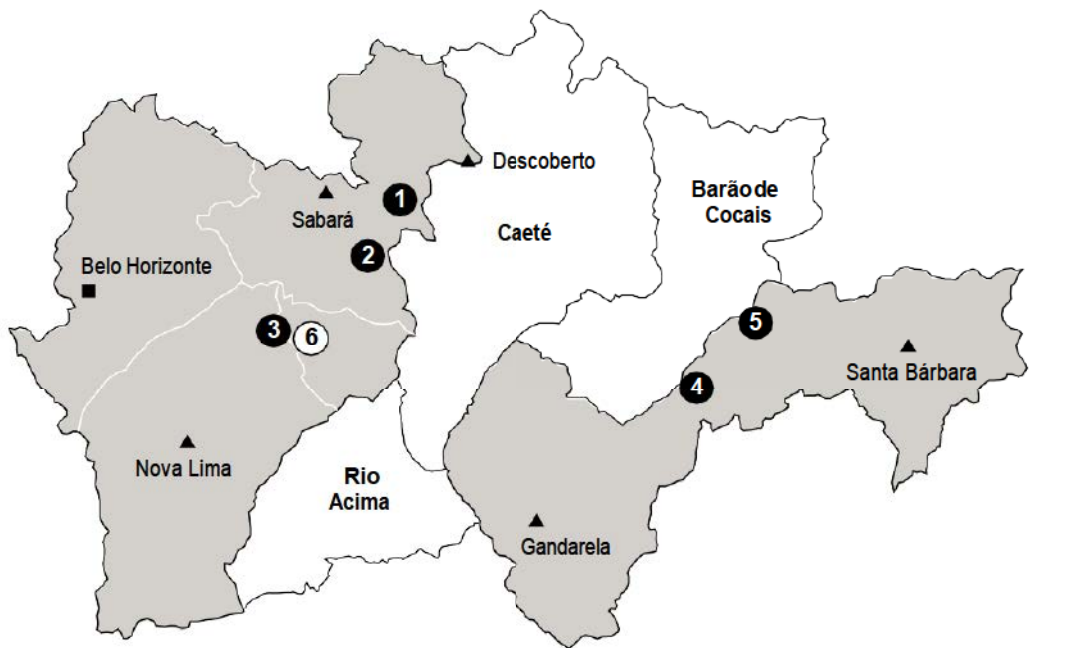
 View of the plant at Serra Grande

# AGA MINERAÇÃO

## Americas

### Introduction

<b>Property description</b>	AGA Mineração encompasses mining operations at Cuiabá, Lamego and CdS. The Nova Lima Sul project is currently in care and maintenance pending a decision around its future.
<b>Location</b>	The AGA Mineração mining complex is located in south-eastern Brazil in the state of Minas Gerais. Operations are 30km from the capital of the state (Belo Horizonte) in the case of Cuiabá and Lamego, and approximately 100km in the case of CdS, in the municipalities of Nova Lima, Sabará and Santa Bárbara respectively.
<b>Legal aspects and tenure</b>	Under the current Brazilian mining code and pertinent complementary legislation, mining concessions and mining "manifests" are valid up to the depletion of the Ore Reserve and Mineral Resource, provided that all obligations and the required periodic reporting to the federal government are met.



### LEGEND

**AGA Mineração Cuiabá complex**

- 1 Cuiabá
- 2 Lamego
- 3 Queiroz plant/refinery

**Córrego do Sítio complex**

- 4 CdS I
- 5 CdS II

**Nova Lima Sul**

- 6 Raposos

- Operation
- Project





## Mineral Resource

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração	Measured	10.98	5.21	57.20	1.84
	Indicated	21.20	4.98	105.61	3.40
	Inferred	35.18	4.61	162.36	5.22
	<b>Total</b>	<b>67.37</b>	<b>4.83</b>	<b>325.18</b>	<b>10.45</b>

The inclusive Mineral Resource is made up (by ounces) of 33% CdS, 50% Cuiabá, 11% Lamego and 6% Nova Lima Sul.

### Inclusive Mineral Resource by-product: sulphur

as at 31 December 2019	Category	Tonnes million	Grade %S	Contained sulphur	
				tonnes million	pounds million
AGA Mineração	Measured	7.34	5.1	0.38	827
	Indicated	12.26	5.1	0.63	1,379
	Inferred	14.46	4.5	0.65	1,427
	<b>Total</b>	<b>34.06</b>	<b>4.8</b>	<b>1.65</b>	<b>3,632</b>

Sulphur is a by-product of the Cuiabá and Lamego mining operations (71% Cuiabá and 29% from Lamego by ounces).

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração	Measured	7.63	4.94	37.69	1.21
	Indicated	8.46	3.23	27.35	0.88
	Inferred	34.93	4.62	161.55	5.19
	<b>Total</b>	<b>51.02</b>	<b>4.44</b>	<b>226.59</b>	<b>7.28</b>

The exclusive Mineral Resource is made up (by ounces) of 41% CdS, 39% Cuiabá, 12% Lamego and 8% Nova Lima Sul.

### Mineral Resource below infrastructure

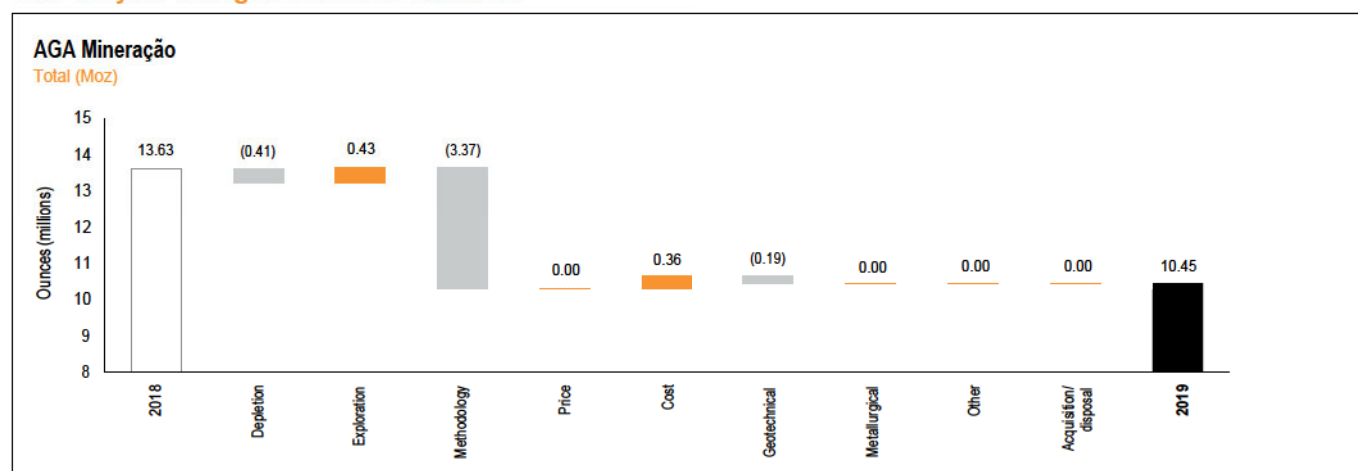
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração	Measured	0.45	4.19	1.87	0.06
	Indicated	11.92	5.99	71.35	2.29
	Inferred	29.28	4.96	145.14	4.67
	<b>Total</b>	<b>41.64</b>	<b>5.24</b>	<b>218.36</b>	<b>7.02</b>

The Mineral Resource below infrastructure is made up (by ounces) of 35% CdS, 50% Cuiabá, 7% Lamego and 8% from Nova Lima Sul.

# AGA MINERAÇÃO CONTINUED

## Americas

### Year-on-year changes in Mineral Resource



At Cuiabá, Lamego and CdS, the decrease is predominantly due to the application of a mining constraint on the underground Mineral Resource in order to better meet the requirement for eventual economic extraction. This requirement was also met by removal of historic crown pillars. Further reductions resulted from depletion. While at CdS, the open pit Mineral Resource grade and tonnage reduced due to model changes. Additions resulted from reduced costs and exchange rates as well as exploration additions.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
AGA Mineração	Proved	2.25	4.23	9.50	0.31
	Probable	9.69	4.68	45.33	1.46
	<b>Total</b>	<b>11.94</b>	<b>4.59</b>	<b>54.84</b>	<b>1.76</b>

The Ore Reserve is made up (by ounces) of 17% CdS, 74% Cuiabá and 9% Lamego.

#### Ore Reserve by-product: sulphur

as at 31 December 2019	Category	Tonnes	Grade	Contained sulphur	
		million	%S	tonnes million	pounds million
AGA Mineração	Proved	1.55	5.0	0.08	172
	Probable	6.89	4.6	0.31	694
	<b>Total</b>	<b>8.44</b>	<b>4.7</b>	<b>0.39</b>	<b>866</b>

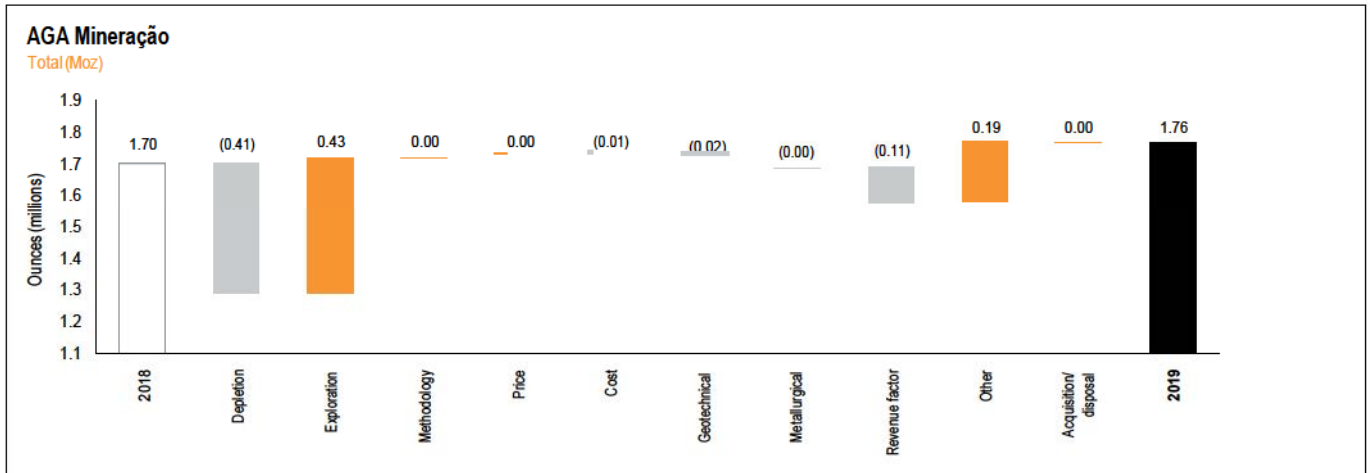
Sulphur is a by-product of the Cuiabá and Lamego mining operations (89% Cuiabá and 11% Lamego by ounces).

#### Ore Reserve below infrastructure

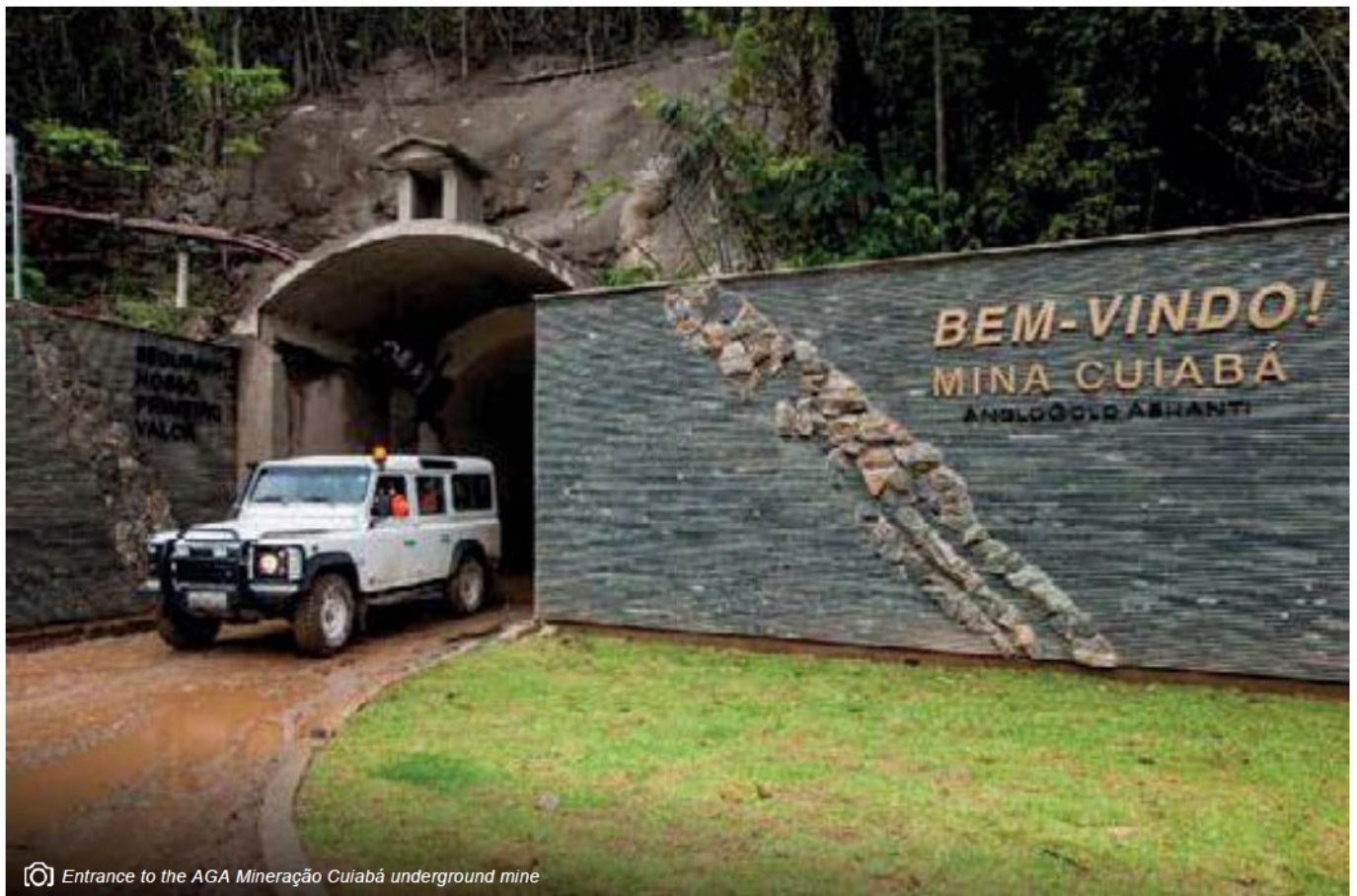
as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
AGA Mineração	Proved	0.33	2.47	0.81	0.03
	Probable	5.42	5.10	27.68	0.89
	<b>Total</b>	<b>5.75</b>	<b>4.96</b>	<b>28.49</b>	<b>0.92</b>

The Ore Reserve below infrastructure is made up (by ounces) of 18% CdS, 70% Cuiabá and 12% Lamego.

Year-on-year changes in Ore Reserve



At all three mines, depletion was offset by exploration (Mineral Resource conversion drilling). At Cuiabá increases resulted from mine design updates while general and administration costs impacted negatively. At Lamego cost and geotechnical changes caused minor change. At CdS a change in revenue factor (based on incremental NPV) negatively impacted on Ore Reserve.



Entrance to the AGA Mineração Cuiabá underground mine



# AGA MINERAÇÃO – CÓRREGO DO SÍTIO

## Americas

### Introduction

<b>Property description</b>	CdS is wholly owned by AngloGold Ashanti Corrego do Sítio Mineração (AGACSM). It has been in operation since 1989 and consists of open pit and underground mines.
<b>Location</b>	The CdS complex is located in the municipalities of Santa Barbara and Barão de Cocais that are located 90km east of the city of Belo Horizonte in Minas Gerais State, in the southeast of Brazil. These operations are included in an important mining district referred to as the Quadrilatero Ferrifero (Iron Quadrangle) the second biggest Brazilian area for the production of iron, gold and manganese.
<b>History</b>	<p>Gold has been intermittently mined in the Santa Barbara and Barão de Cocais region since the 19<sup>th</sup> Century. Modern exploration was undertaken across the CdS area in the 1980s by Morro Velho and São Bento Mineração.</p> <p>An AGA FS for the oxide Ore Reserve, to be mined by open pit and treated in a heap leach plant, was approved in 1987. The CdS open pit operations started in the 1990s, with the first phase of production between 1990 and 1998.</p> <p>In 2002 development of underground exploration drifts began at CdS I and in 2007 the São Bento Mine was acquired from Eldorado Gold Corporation. A FS for the sulphide Ore Reserve, to be mined underground and treated in a sulphide plant, was concluded in 2010. Implementation followed and the ramp-up was concluded in 2012. In 2011, there were major renovations to the structure of the São Bento metallurgical plant that were completed in 2012. In 2013, the crushing circuit was improved to optimise the throughput.</p>
<b>Legal aspects and tenure</b>	<p>CdS is covered by four Brazilian National Mining Agency (ANM) concessions, namely 930.556/2000; 930.181/2008; 830.129/1982 and 833.472/2003, held by AGACSM, covering a total of 5,461.07ha. All concessions are currently active, in good legal and operational standing, and free of liabilities and/or major obligations.</p> <p>According to Brazilian mining law, the expiry of claims, licenses, and other tenure rights coincide with the depletion of Ore Reserve, cessation of mining operations and legally required post-operational activities (such as mine closure), provided all annual reports have been approved by the ANM. A new Brazilian mining code is currently under discussion. However, it is not anticipated to change the company's rights, which are already established.</p>
<b>Mining method</b>	<p>The underground mining method for CdS is sub-level stoping. Each panel consists of three levels with secondary development drives approximately 300m along strike in the northeast/southwest direction and cross-cuts of 300m in a southwest direction. The stopes are 15m high and use a top-down mining sequence. Geotechnical parameters require that sill pillars are 4 to 6m high, and rib pillars 4m wide. Stope drilling is drilled upwards using a fan design. The load and haul operations are performed by 8t front-end loaders and 30t articulated trucks, at an approximate rate of 1,500tpd.</p> <p>The open pit operation uses conventional bench mining, with 8m individual benches and 3.2m berms.</p>
<b>Operational infrastructure</b>	<p>CdS infrastructure consists of two treatment plants, namely, the sulphide plant at CdS II used to process underground material, and the heap leach plant at CdS I for oxide ore mined by open pit. The site has a tailings dam for the sulphide plant, a neutralised tailings deposit for the oxide material and numerous waste dumps for the open pit mines at CdS I.</p> <p>Ancillary facilities comprise a water treatment facility, effluent treatment facilities, equipment workshops, laboratory, warehouses, explosives and accessories magazines, fuel stations, electric substations as well as offices, medical clinic, cafeteria, dressing rooms, bathrooms, storerooms, garage, fuel stations, a centre of environmental studies, nursery and other facilities required to operate the mine.</p> <p>Water is primarily sourced from recycling the underground mine water and supplementary water catchment wells. The power for the operations is supplied and purchased in the open market.</p> <p>Good communication infrastructure is available in the area.</p>

<b>Mineral processing</b>	<p>There are two metallurgical plants in CdS: the heap-leach plant for oxide ore and the sulphide plant. The sulphide process consists of crushing, grinding and gravity concentration, flotation, thickening, pressure oxidation (POX autoclave), CIL extraction, elution, neutralisation, electro-winning and tailings disposal. The plant and POX circuit have a capacity of 600ktpa.</p> <p>The heap leaching process consists of crushing, agglomeration, stacking, leaching, adsorption, elution and electro-winning.</p>
<b>Risks</b>	<p>The Inferred Mineral Resource and conceptual material projections within the mine plan are seen as a risk but there are drilling programmes in place to address this.</p> <p>The major risk to the operation is the lack of Ore Reserve flexibility. This risk is controlled and mitigated by integrated planning with the exploration team and monitoring of the execution of the plan.</p> <p>An independent external Mineral Resource and Ore Reserve audit was undertaken in 2019 and found no fatal flaws in process or output.</p>

## Geology

The CdS gold deposit is located in the eastern part of the Rio das Velhas Archaean greenstone belt, in the Quadrilátero Ferrero region, on the southern margin of the São Francisco Craton in Brazil.

### Deposit type

CdS is an orogenic gold deposit hosted in intensely deformed clastic, volcanoclastic, carbonaceous schists and metagraywackes in an approximately 30km northeast/southwest striking shear zone. Hydrothermal alteration phases associated with the mineralisation are dominated by sericite and carbonate.

### Mineralisation style

CdS is located in the eastern part of the lower to middle greenschist facies of the Archaean Rio das Velhas greenstone belt. The CdS I, II and III gold deposits and associated targets are located in a gold trend that extends for approximately 14km in a northeasterly direction, from Grota Funda (CdS I) in the south to Jambreiro (CdS III) in the north and which developed in a compressional tectonic regime. Gold is associated with quartz and fine grained acicular arsenopyrite. The main gold targets and deposits are distributed over three trends, namely the CdS Trend, the Donana Trend and the Cristina Trend. At CdS I, the main orebodies are Rosalino, Cachorro Bravo, Laranjeiras and Carvoaria, which constitute the current production sources and most of the Mineral Resource.

At CdS II, the main orebodies are São Bento, Pinta Bem (both BIF hosted) and Sangue de Boi (metapelite hosted). At CdS III where exploration has been limited, the Anomalia I orebodies are the best understood and have the highest potential.

### Mineralisation characteristics

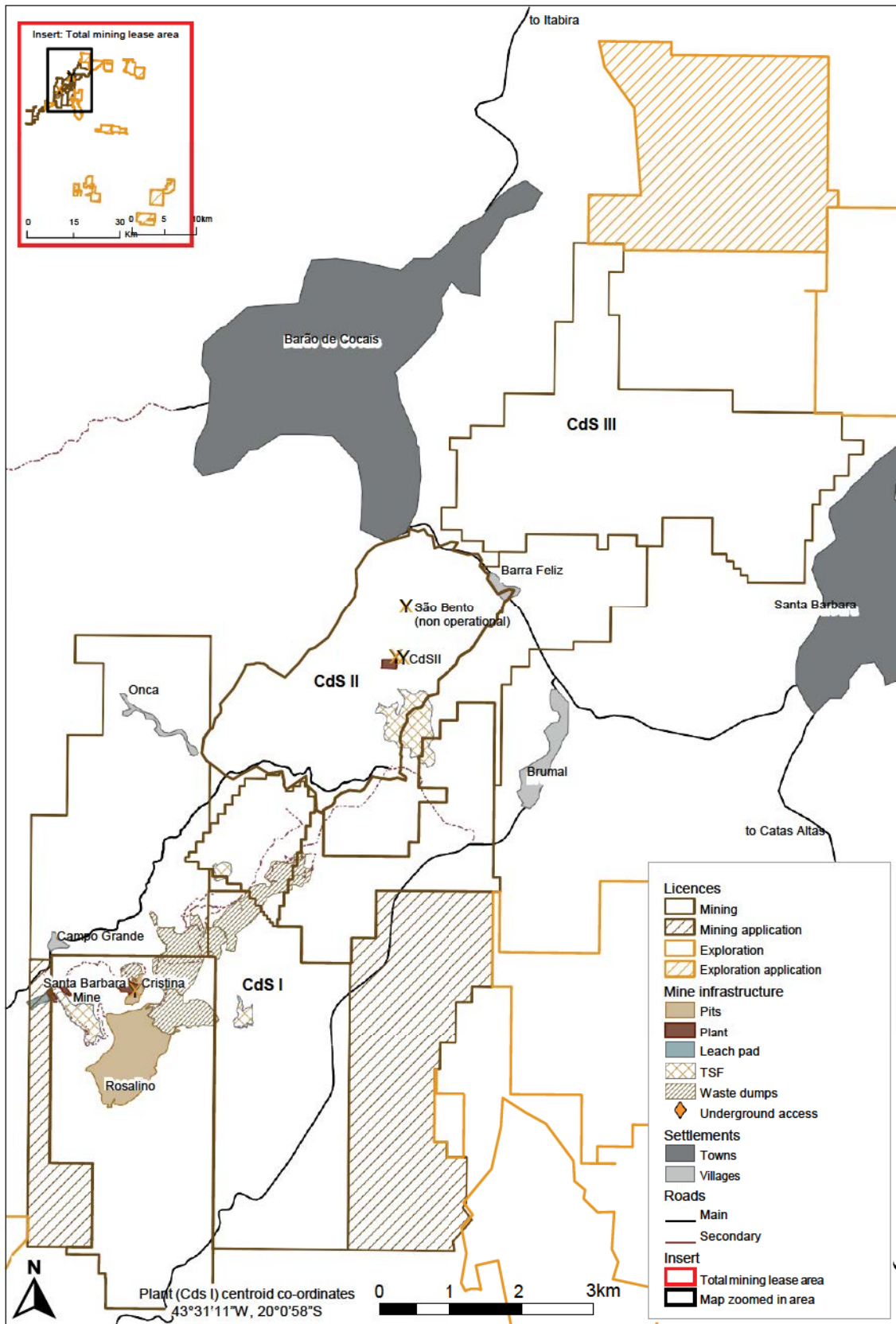
The CdS deposits consist of narrow northeast to southwest elongated and folded lenses of mineralisation, parallel to the main regional deformational structure (S2), dipping 60° to 70° to the southeast and plunging 20° to 30° to the northeast. The orebodies are consistently folded, boudinaged and locally disrupted by younger structures. CdS is an orogenic type deposit which is comprised of many hydrothermal lodes with quartz veins and low grade sulphide disseminated in the wall rocks. In general, the mineralisation consists of sericitic zones and quartz veinlets hosted in metapelite and BIF. The sedimentary sequence, and consequently the mineralised deposits, are cross-cut by a swarm of basic dykes of uncertain age, with a general orientation north-northeast to south-southwest dipping to the southeast, with thicknesses varying from 20cm to 20m.

The gold occurs as native gold in smoky quartz veins and as microscopic or sub-microscopic inclusions in arsenopyrite (the main mineralisation style). It may also occasionally be associated with berthierite (FeSb<sub>2</sub>S<sub>4</sub>). Other typical sulphide minerals are pyrrhotite, pyrite, stibnite, sphalerite and chalcopyrite.

# AGA MINERAÇÃO – CÓRREGO DO SÍTIO CONTINUED

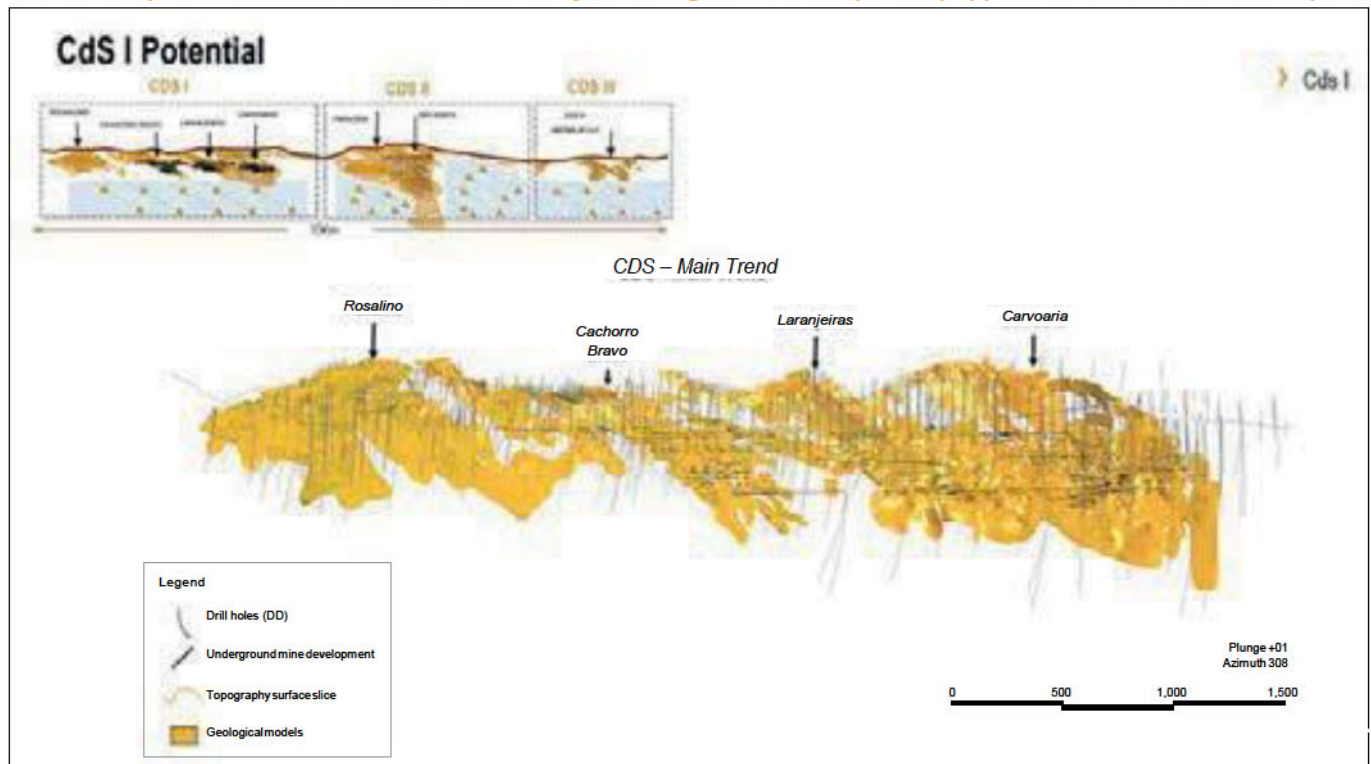
Americas

Map showing the AGA Mineração – CdS Mine infrastructure and licences, with the total mining lease area insert shown in the top left corner





## SE-NW Simplified view across the AGA Mineração Córrego do Sítio deposits (top) and the CDS I Main trend (bottom)



### Exploration

During 2019, 77.5km were drilled along the CdS trends with the exploration focused on:

- Mineral Resource addition and conversion in support of the production plan for the open pit and underground mines (mainly CdS I)
- Assessing high grade targets
- Evaluating the potential of near-mine and broader lease targets

Drilling at CdS was executed as part of our operational excellence plan. The intent was to decrease risk in the production plan by removing low confidence Mineral Resource within the first five years of the plan as well as having 240m of depth below current mining proved up to Indicated Mineral Resource level of confidence. As a result of this strategy, there were large exploration programmes in 2019.

Principal surface drilling programmes and the results are related to:

- Fast tracking oxide Mineral Resource opportunities at CdS I, particularly at the Rosalino and Cachorro Bravo targets, with the intention of adding ounces to the short- and medium-term plan
- Detailing the down-plunge continuity of Mutuca orebody and confirming its suitability for underground mining
- Exploring the southern portion of Cachorro Bravo underground for sulphides, and unlocking Mineral Resource potential at the Candeias-Cristina and Pneu Orebodies which is important for added flexibility at the CdS I underground operations
- Confirm the continuity at São Bento northeast

Furthermore, underground drilling from the exploration development to test down-dip and down-plunge continuity of Carvoaria and Laranjeiras orebodies required to support the underground production plan for the next three years at CdS I. Results have confirmed mineralisation along structures thus improving model quality and spatial reliability. Mineral Resource addition from underground also occurred as a result of drilling secondary lenses.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	25 x 25	✓	-	-	✓	-
Indicated	25 x 40, 30 x 25, 50 x 30, 50 x 50	✓	✓	-	✓	-
Inferred	40 x 100, 100 x 50, 100 x 100, 200 x 200	✓	✓	-	✓	-
Grade/ore control	3 x 3, 5 x 5	✓	✓	✓	✓	-

# AGA MINERAÇÃO – CÓRREGO DO SÍTIO CONTINUED

## Americas

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
CdS I (sulphide) Rosalino underground	Measured	–	–	–	–
	Indicated	1.65	3.48	5.72	0.18
	Inferred	4.28	3.26	13.93	0.45
	<b>Total</b>	<b>5.92</b>	<b>3.32</b>	<b>19.65</b>	<b>0.63</b>
CdS I (sulphide) Secondary underground	Measured	0.00	2.58	0.01	0.00
	Indicated	0.05	3.14	0.16	0.01
	Inferred	1.12	3.38	3.78	0.12
	<b>Total</b>	<b>1.17</b>	<b>3.36</b>	<b>3.94</b>	<b>0.13</b>
CdS I (sulphide) Cachorro Bravo underground	Measured	1.04	3.24	3.37	0.11
	Indicated	0.60	3.75	2.24	0.07
	Inferred	0.49	3.67	1.80	0.06
	<b>Total</b>	<b>2.13</b>	<b>3.48</b>	<b>7.40</b>	<b>0.24</b>
CdS I (sulphide) Laranjeiras underground	Measured	1.14	3.33	3.81	0.12
	Indicated	1.23	3.92	4.80	0.15
	Inferred	0.98	4.40	4.32	0.14
	<b>Total</b>	<b>3.35</b>	<b>3.86</b>	<b>12.94</b>	<b>0.42</b>
CdS I (sulphide) Carvoaria underground	Measured	0.32	3.99	1.29	0.04
	Indicated	0.68	4.93	3.34	0.11
	Inferred	0.78	6.32	4.96	0.16
	<b>Total</b>	<b>1.79</b>	<b>5.37</b>	<b>9.59</b>	<b>0.31</b>
CdS I (transitional) Rosalino underground	Measured	0.00	1.46	0.00	0.00
	Indicated	0.03	3.04	0.10	0.00
	Inferred	0.08	2.86	0.22	0.01
	<b>Total</b>	<b>0.11</b>	<b>2.91</b>	<b>0.33</b>	<b>0.01</b>
CdS I (sulphide) Rosalino open pit	Measured	–	–	–	–
	Indicated	0.19	2.79	0.52	0.02
	Inferred	0.08	2.34	0.18	0.01
	<b>Total</b>	<b>0.26</b>	<b>2.66</b>	<b>0.70</b>	<b>0.02</b>
CdS I (oxide) Rosalino open pit	Measured	0.56	1.20	0.67	0.02
	Indicated	1.24	1.06	1.31	0.04
	Inferred	0.79	0.96	0.76	0.02
	<b>Total</b>	<b>2.60</b>	<b>1.06</b>	<b>2.75</b>	<b>0.09</b>
CdS I (oxide) Secondary open pit	Measured	0.07	2.46	0.17	0.01
	Indicated	0.25	1.98	0.49	0.02
	Inferred	0.26	2.01	0.53	0.02
	<b>Total</b>	<b>0.58</b>	<b>2.05</b>	<b>1.19</b>	<b>0.04</b>
CdS I (transitional) Rosalino open pit	Measured	0.14	1.25	0.18	0.01
	Indicated	0.38	1.35	0.51	0.02
	Inferred	0.36	1.12	0.40	0.01
	<b>Total</b>	<b>0.89</b>	<b>1.24</b>	<b>1.10</b>	<b>0.04</b>
CdS I (transitional)	Measured	0.00	3.36	0.00	0.00
	Indicated	0.01	3.53	0.02	0.00
	Inferred	0.03	2.28	0.06	0.00
	<b>Total</b>	<b>0.04</b>	<b>2.56</b>	<b>0.09</b>	<b>0.00</b>

**Inclusive Mineral Resource** *continued*


as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
CdS II (sulphide) Sangue de Boi underground	Measured	0.08	6.90	0.54	0.02
	Indicated	0.37	6.67	2.44	0.08
	Inferred	1.40	4.85	6.77	0.22
	<b>Total</b>	<b>1.84</b>	<b>5.30</b>	<b>9.75</b>	<b>0.31</b>
CdS II (sulphide) São Bento Mine underground	Measured	0.04	5.07	0.22	0.01
	Indicated	0.69	4.73	3.26	0.10
	Inferred	4.48	4.60	20.63	0.66
	<b>Total</b>	<b>5.22</b>	<b>4.62</b>	<b>24.12</b>	<b>0.78</b>
CdS II (sulphide) Pinta Bem underground	Measured	–	–	–	–
	Indicated	0.03	2.74	0.08	0.00
	Inferred	0.52	2.66	1.39	0.04
	<b>Total</b>	<b>0.55</b>	<b>2.67</b>	<b>1.47</b>	<b>0.05</b>
CdS II (sulphide) Secondary underground	Measured	–	–	–	–
	Indicated	–	–	–	–
	Inferred	1.66	3.87	6.43	0.21
	<b>Total</b>	<b>1.66</b>	<b>3.87</b>	<b>6.43</b>	<b>0.21</b>
CdS II (oxide)	Measured	0.05	1.13	0.05	0.00
	Indicated	1.13	1.42	1.60	0.05
	Inferred	0.83	1.97	1.63	0.05
	<b>Total</b>	<b>2.00</b>	<b>1.64</b>	<b>3.28</b>	<b>0.11</b>
CdS II (transitional)	Measured	–	–	–	–
	Indicated	0.03	2.72	0.08	0.00
	Inferred	0.33	2.98	0.98	0.03
	<b>Total</b>	<b>0.36</b>	<b>2.96</b>	<b>1.05</b>	<b>0.03</b>
AGA Mineração – Córrego do Sítio	<b>Total</b>	<b>30.46</b>	<b>3.47</b>	<b>105.78</b>	<b>3.40</b>

**Estimation**

Gold grades are estimated by ordinary kriging while density and sulphur may also be kriged if there is enough data. The data set consists of DD samples, RC drilling samples and channel samples where all information is used for both geological modelling and estimation. The estimation parameters are defined for each target

and are based on variography as the main driver for the definition of the maximum estimation distances. Domaining is determined differently for each orebody and it is mainly based on structural features, dyke positioning, grade distribution and oxidation features. Classification is based on a combination of conditional simulation and grid sample spacing.



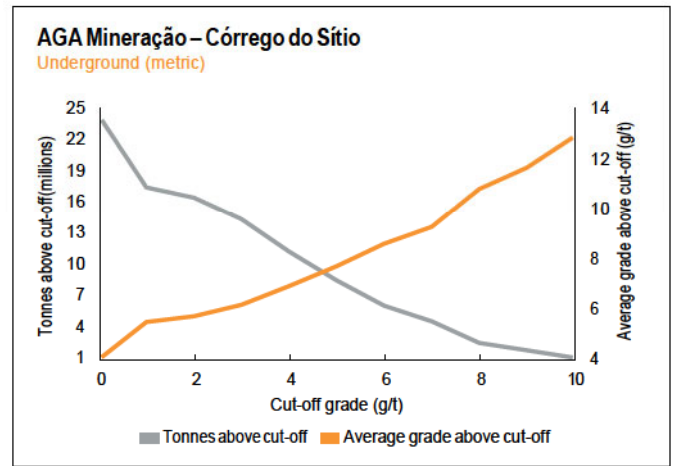
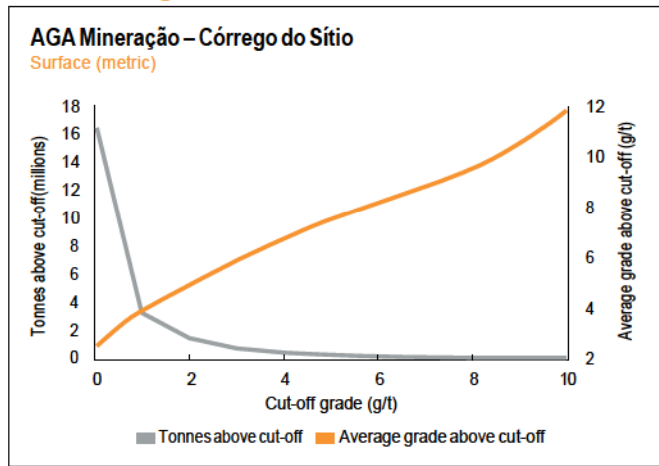
 Underground truck at Córrego do Sítio



# AGA MINERAÇÃO – CÓRREGO DO SÍTIO CONTINUED

## Americas

### Grade tonnage curves



### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Córrego do Sítio	Measured	2.75	2.92	8.03	0.26
	Indicated	5.73	2.89	16.57	0.53
	Inferred	18.21	3.73	67.96	2.18
	<b>Total</b>	<b>26.70</b>	<b>3.47</b>	<b>92.56</b>	<b>2.98</b>

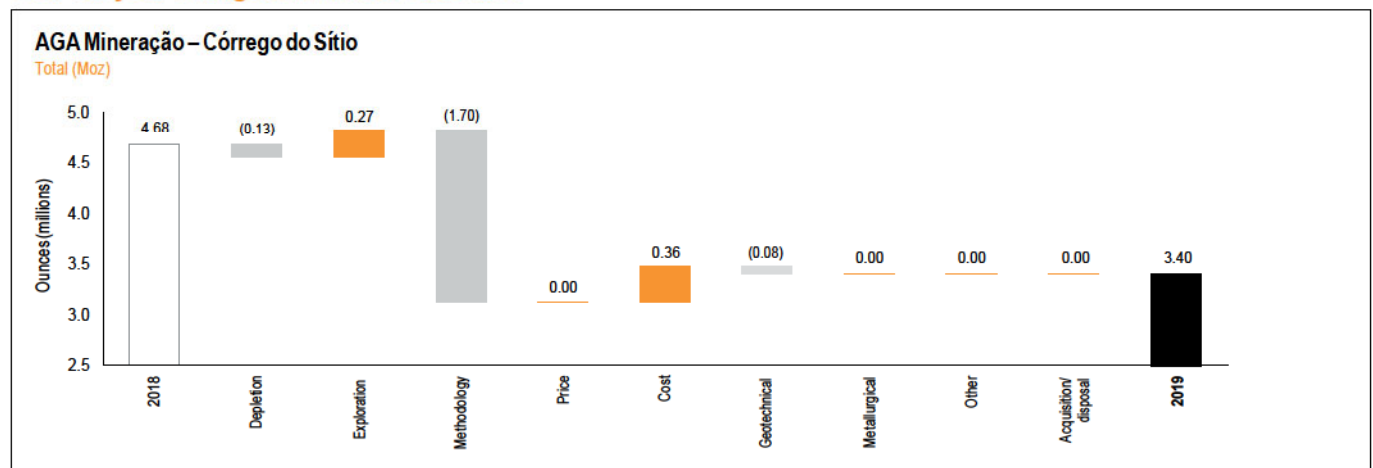
The exclusive Mineral Resource is mainly in São Bento and Rosalino underground. Only 8% exclusive Mineral Resource is from open pit.

### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Córrego do Sítio	Measured	0.35	4.41	1.55	0.05
	Indicated	3.56	4.09	14.57	0.47
	Inferred	14.77	4.05	59.87	1.92
	<b>Total</b>	<b>18.68</b>	<b>4.07</b>	<b>75.99</b>	<b>2.44</b>

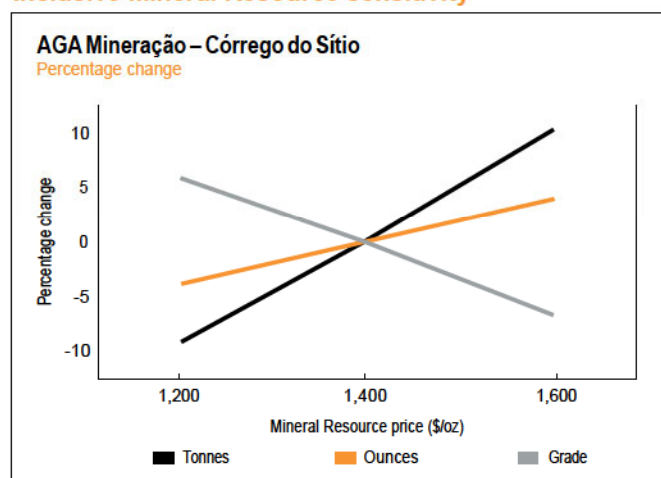
The Mineral Resource below infrastructure is the Mineral Resource that cannot be accessed from the primary access development, based on the expected position of the access at the end of 2019.

### Year-on-year changes in Mineral Resource



The Mineral Resource changed mainly due to the introduction of the underground constraining volumes applied by the use of MSO.

### Inclusive Mineral Resource sensitivity



The CdS Mineral Resource is sensitive to changes in gold price as it is a low grade mine with thin orebodies. There is a 3% upside in ounces at a higher Mineral Resource price and 4% downside in ounces at a lower Mineral Resource price.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019		Tonnes	Grade	Contained gold	
Category		million	g/t	tonnes	Moz
CdS I (sulphide) Rosalino underground	Proved	–	–	–	–
	Probable	0.35	3.78	1.31	0.04
	<b>Total</b>	<b>0.35</b>	<b>3.78</b>	<b>1.31</b>	<b>0.04</b>
CdS I (sulphide) Cachorro Bravo underground	Proved	0.02	3.40	0.08	0.00
	Probable	0.03	4.81	0.15	0.00
	<b>Total</b>	<b>0.05</b>	<b>4.21</b>	<b>0.23</b>	<b>0.01</b>
CdS I (sulphide) Laranjeiras underground	Proved	0.14	3.47	0.49	0.02
	Probable	0.31	3.87	1.19	0.04
	<b>Total</b>	<b>0.45</b>	<b>3.74</b>	<b>1.69</b>	<b>0.05</b>
CdS I (sulphide) Carvoaria underground	Proved	0.08	4.55	0.37	0.01
	Probable	0.36	3.53	1.27	0.04
	<b>Total</b>	<b>0.44</b>	<b>3.72</b>	<b>1.64</b>	<b>0.05</b>
CdS I (sulphide) Rosalino open pit	Proved	0.00	0.65	0.00	0.00
	Probable	0.01	4.17	0.06	0.00
	<b>Total</b>	<b>0.01</b>	<b>4.15</b>	<b>0.06</b>	<b>0.00</b>
CdS I (oxide) Rosalino open pit	Proved	0.34	1.10	0.37	0.01
	Probable	0.35	1.09	0.38	0.01
	<b>Total</b>	<b>0.69</b>	<b>1.09</b>	<b>0.76</b>	<b>0.02</b>
CdS I (transitional) Rosalino open pit	Proved	0.11	1.16	0.12	0.00
	Probable	0.11	1.26	0.14	0.00
	<b>Total</b>	<b>0.22</b>	<b>1.21</b>	<b>0.27</b>	<b>0.01</b>
CdS II (sulphide) Sangue de Boi underground	Proved	–	–	–	–
	Probable	0.35	5.07	1.75	0.06
	<b>Total</b>	<b>0.35</b>	<b>5.07</b>	<b>1.75</b>	<b>0.06</b>
CdS II (sulphide) São Bento Mine underground	Proved	–	–	–	–
	Probable	0.13	3.57	0.48	0.02
	<b>Total</b>	<b>0.13</b>	<b>3.57</b>	<b>0.48</b>	<b>0.02</b>
CdS II (oxide)	Proved	–	–	–	–
	Probable	0.80	1.10	0.88	0.03
	<b>Total</b>	<b>0.80</b>	<b>1.10</b>	<b>0.88</b>	<b>0.03</b>
<b>AGA Mineração – Córrego do Sítio</b>	<b>Total</b>	<b>3.50</b>	<b>2.59</b>	<b>9.06</b>	<b>0.29</b>

# AGA MINERAÇÃO – CÓRREGO DO SÍTIO CONTINUED

## Americas

### Estimation

The estimation process considers price and exchange rate inputs from AngloGold Ashanti's guidelines as well as cost studies based on current and future scenarios. Underground estimation uses MSO and open pit uses a scheduling tool to perform optimisation, applying modifying factors that were validated by peer review.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price BRL/oz	Cut-off grade g/t Au	Stopeing width cm	Dilution %	RMF % (based on tonnes)	RMF % (based on g/t)	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MetRF %
Open pit										
CdS I (oxide) Rosalino	4,230	0.33	–	–	100.0	100.0	100.0	100.0	100.0	78.0
CdS I (transitional) Rosalino	4,230	0.47	–	–	100.0	100.0	100.0	100.0	100.0	53.0
CdS I (sulphide) Rosalino	4,230	1.20	–	–	100.0	100.0	100.0	100.0	100.0	93.0
CdS II (oxide)	4,230	0.44	–	–	100.0	100.0	100.0	100.0	100.0	75.0
Underground										
CdS I (sulphide) Cachorro Bravo	4,230	3.20	264.4	25.0	100.0	100.0	90.0	100.0	90.4	93.4
CdS I (sulphide) Carvoaria	4,230	3.20	224.6	25.0	100.0	100.0	90.0	100.0	90.4	93.4
CdS I (sulphide) Laranjeiras	4,230	3.20	312.9	25.0	100.0	100.0	90.0	100.0	90.4	93.4
CdS I (sulphide) Rosalino	4,230	3.20	400.9	25.0	100.0	100.0	90.0	100.0	90.4	93.4
CdS II (sulphide) Sangue de Boi	4,230	3.20	233.4	25.0	100.0	100.0	90.0	100.0	90.4	93.4
CdS II (sulphide) São Bento Mine	4,230	3.20	337.2	25.0	100.0	100.0	90.0	100.0	90.4	93.4

The main modifying factors were reviewed based on historical performance and projected scenarios. Stope dilution increased from 20 to 25% due to narrow orebodies, MCF slightly increased from 90 to 90.4% based on a new 12 month average. Metallurgical recovery was reviewed based on geometallurgy studies. For the open pit, a regularised model is used for Ore Reserve estimation, with sizes of 2.5 x 2.5 x 4m, compatible with mining equipment. It is therefore not necessary to consider additional dilution or mining recovery as these have already been included in the regularised block model.

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
CdS I (sulphide) Rosalino underground	0.18	3.09	0.56	0.02
CdS I (sulphide) Cachorro Bravo underground	0.07	3.38	0.23	0.01
CdS I (sulphide) Laranjeiras underground	0.32	3.77	1.21	0.04
CdS I (sulphide) Carvoaria underground	0.39	4.70	1.85	0.06
CdS I (sulphide) Rosalino open pit	0.00	2.59	0.00	0.00
CdS I (oxide) Rosalino open pit	0.11	1.46	0.17	0.01
CdS I (transitional) Rosalino open pit	0.02	1.94	0.03	0.00
CdS II (sulphide) Sangue de Boi underground	0.52	6.24	3.23	0.10
CdS II (sulphide) São Bento Mine underground	0.00	3.62	0.01	0.00
<b>Total</b>	<b>1.62</b>	<b>4.51</b>	<b>7.29</b>	<b>0.23</b>

The Inferred Mineral Resource is located in the mining panels in the lower areas of some sulphide deposits such as Rosalino, Cachorro Bravo, Laranjeiras and Carvoaria underground mines in CdS I and the Sangue de Boi underground mine in CdS II. Rosalino open pit also contains some Inferred Mineral Resource in the business plan. In all cases, the Inferred Mineral Resource is removed for both the financial modelling and reporting of the Ore Reserve. An aggressive drilling strategy is being executed by CdS geology team aiming to increase confidence level in the first three years of the business plan.

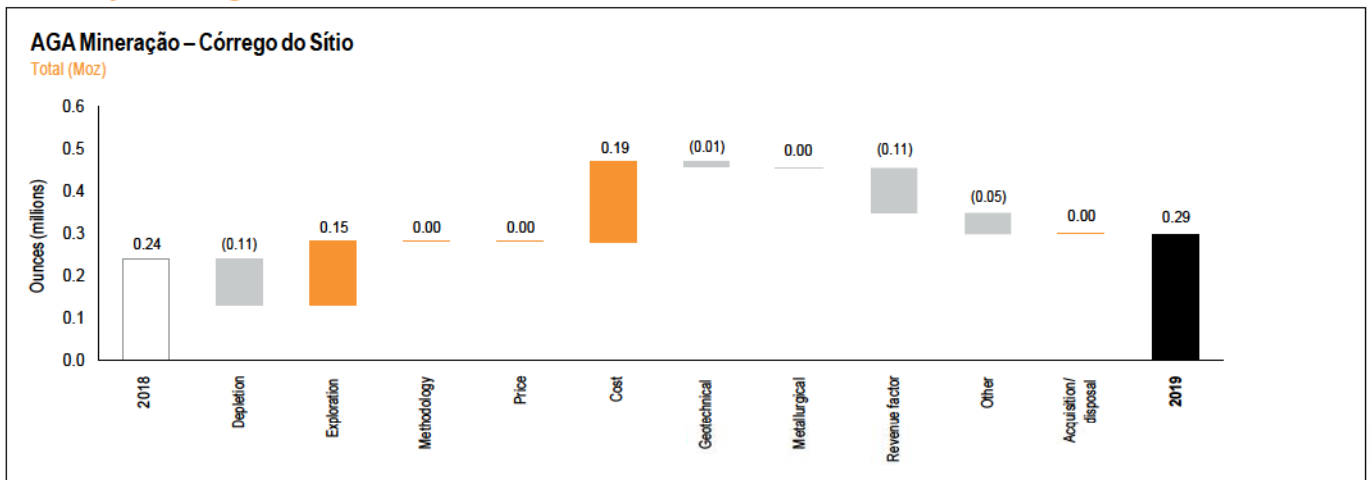


Ore Reserve below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Córrego do Sítio	Proved	0.05	3.30	0.16	0.01
	Probable	1.25	4.16	5.18	0.17
	<b>Total</b>	<b>1.29</b>	<b>4.13</b>	<b>5.34</b>	<b>0.17</b>

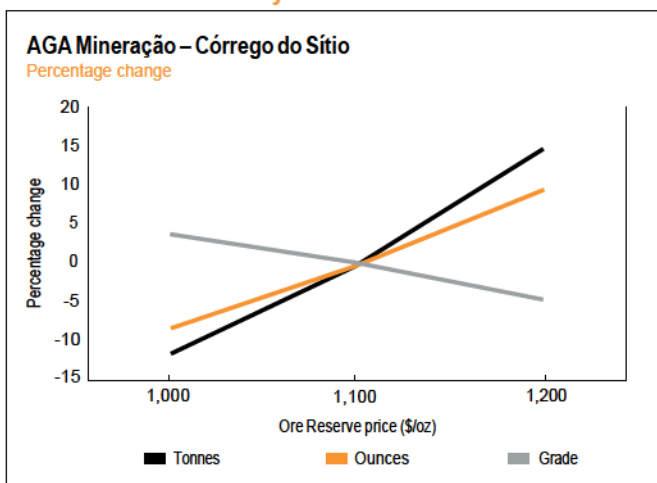
There is no open pit Ore Reserve below infrastructure. All the underground Ore Reserve below infrastructure needs primary development to be accessed.

Year-on-year changes in Ore Reserve



The new drilling strategy is already showing results as shown by the Ore Reserve increase. In addition, the updated exchange rate also caused an increase in the Ore Reserve, although at a lower cut-off grade.

Ore Reserve sensitivity



The CdS Ore Reserve is very sensitive to price changes which is supported by a site based, well managed, cost management programme. There is a 9% upside in ounces at a higher Ore Reserve price and 8% downside at a lower Ore Reserve price.

Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Bruno Figuiha	MAusIMM	330 698	8 years	BSc (Geology)
Ore Reserve	Mateus Piermatei	MAusIMM	326 397	9 years	BSc (Mining Engineering)

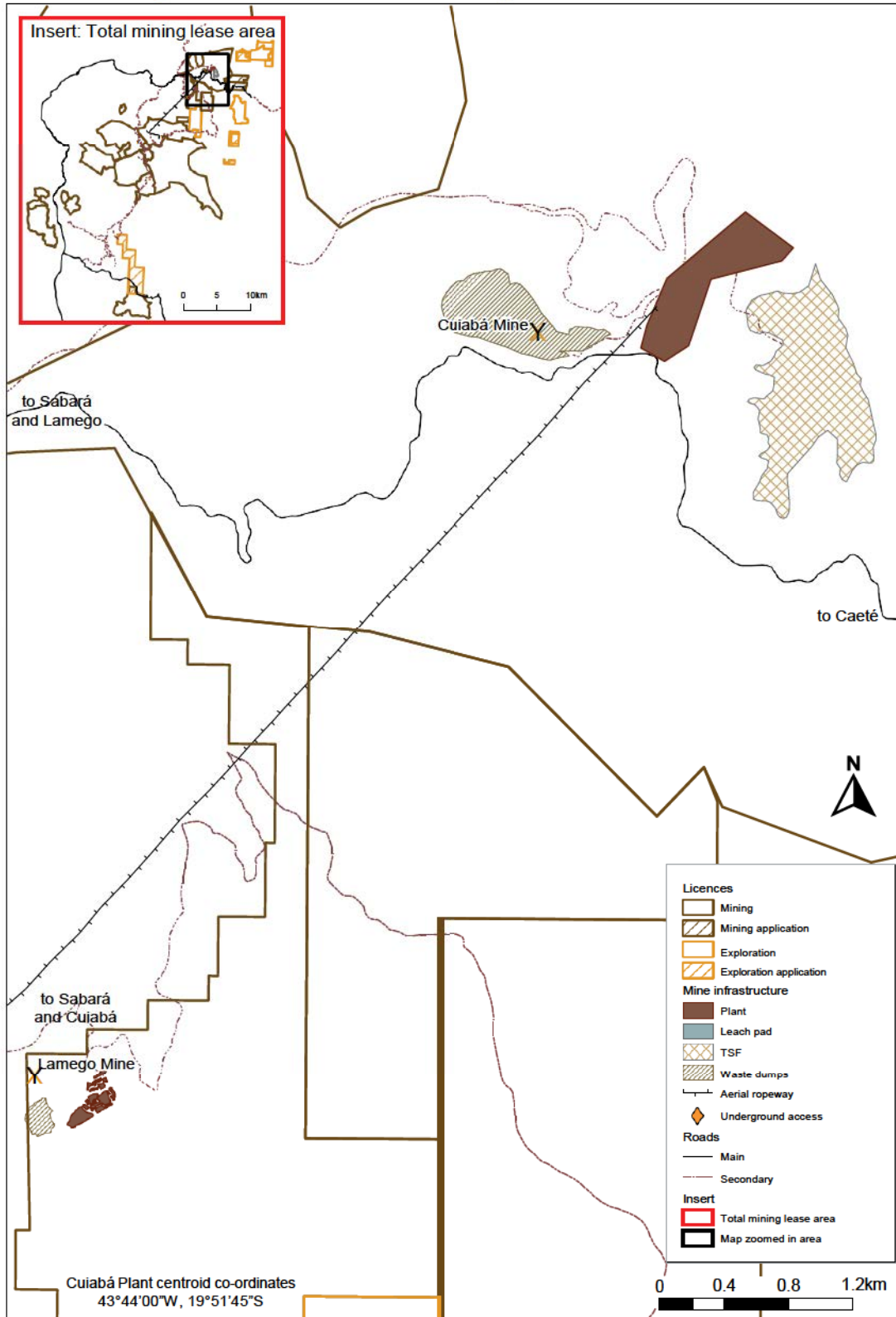
# AGA MINERAÇÃO – CUIABÁ

## Americas

### Introduction

<b>Property description</b>	Cuiabá is an underground operation that is wholly owned by AngloGold Ashanti.
<b>Location</b>	The Cuiabá Mine is located near Sabara, southeast of the city of Belo Horizonte, the capital of Minas Gerais State, in the southeast of Brazil. These operations are located within the mining district referred to as the Iron Quadrangle.
<b>History</b>	In 1740, artisanal miners carried out the first mining in the area. The Saint John Del Rey Mining Company Ltd acquired the mine in 1834. Exploration and development resumed in 1977, culminating with the reopening of the mine in 1985. In 1996, the company became a wholly owned subsidiary of the Anglo American Group, and in 1999, ownership was transferred to the holding company AngloGold (now AngloGold Ashanti), where it remains.
<b>Legal aspects and tenure</b>	<p>Cuiabá is covered by a single concession granted by the ANM, namely 000.323/1973, held by AGACSM, covering a total area of 3,662ha. The concession is currently active, in good legal and operational standing, and free of liabilities and/or major obligations.</p> <p>According to Brazilian mining law, the expiry of claims, licenses, and other tenure rights coincide with the depletion of Ore Reserve, cessation of mining operations and legally required post-operational activities (such as mine closure), provided all annual reports have been approved by the ANM. A new Brazilian mining code is currently under discussion. However, it is not anticipated to change the company's rights, which are already established.</p>
<b>Mining method</b>	Cuiabá Mine utilises two mining methods: cut and fill and longhole stoping. To improve the safety and productivity of the operation, the mining method was changed in 2011 from predominately cut and fill to longhole stoping (sub-level stoping and variations). In the flatter stopes, Cuiabá still uses cut and fill as a mining method.
<b>Operational infrastructure</b>	<p>The two plants (Cuiabá Gold Plant and Queiroz Plant) are connected by an aerial ropeway. Power for the mine is both self-generated (Rio de Peixe hydroelectric complex) and supplied by Cemig, a state-owned company. The Rio de Peixe hydroelectric complex is a set of seven small hydropower plants that generate energy from three dams (Ingleses, Miguelo and Codorna) and connect directly to the Queiroz plant. Cuiabá Mine has a shaft system (846m deep) for production and personal transport. The current nominal airflow capacity is 1,035m<sup>3</sup>/s, of which 320m<sup>3</sup>/s are refrigerated.</p> <p>Tailings deposition is at one of the four sites located at Cuiabá, Calcinado, Rapaunha and Cocuruto.</p>
<b>Mineral processing</b>	<p>Cuiabá and Lamego Mines feed the Cuiabá (flotation) and Queiroz (roaster, carbon circuit and refinery) plants, currently at 1.7Mtpa for a metallurgical recovery of 94.3%. At Cuiabá Gold Plant, crushing and milling of ore is followed by flotation and filtration in order to produce a concentrate, which is transported 15km by aerial ropeway to Queiroz for further treatment. Approximately 25 to 30% of gold is recovered through a gravity circuit at the Cuiabá Plant. The Queiroz Plant is located in Nova Lima and comprises two different circuits for refractory ore (from Cuiabá) and non-refractory ore (used for the Raposos Mine production in the past) with facilities for pyrometallurgy and hydrometallurgy.</p> <p>The concentrate is roasted, and the calcine proceeds to a carbon circuit for further refining. The sulphide gas is captured and processed through the acid plant. Approximately 230ktpa of sulphuric acid is produced as a by-product.</p>
<b>Ore Reserve Risks</b>	<p>No legal or environmental risks are identified. Management plans are in place to address the risks associated with the low level of Ore Reserve, the reliance on Inferred Mineral Resource in the production plan, and rock engineering constraints at depth.</p> <p>An independent external Mineral Resource and Ore Reserve audit was undertaken in 2019 and found no fatal flaws in process or output.</p>

Map showing AGA Mineração – Cuiabá Mine and Lamego Mine infrastructure and licences, with the total mining lease area insert shown in the top left corner

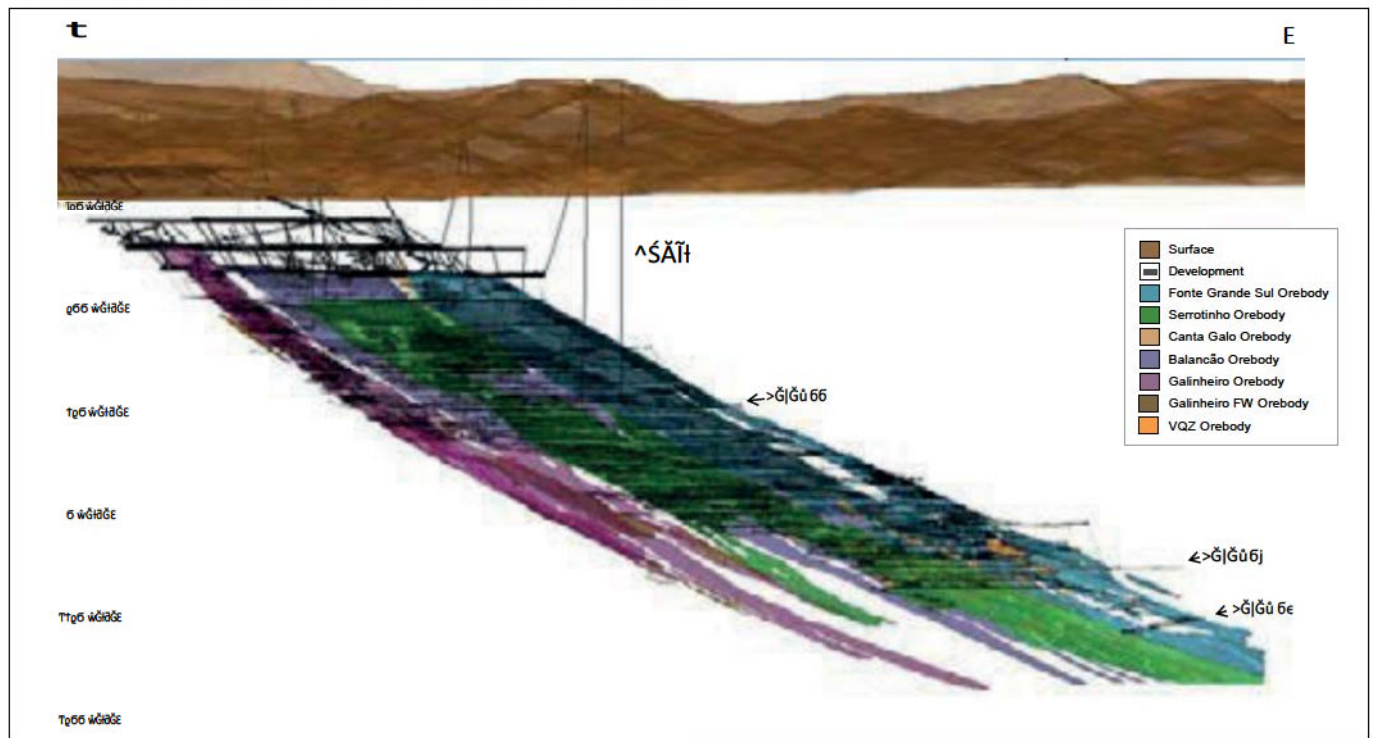




# AGA MINERAÇÃO – CUIABÁ CONTINUED

## Americas

3D View of the underground infrastructure and interpolated orebodies at Cuiabá, elevation in metres AMSL



### Geology

Cuiabá Mine is located in the Iron Quadrangle, which is a geotectonic unit at the southern edge of the São Francisco Craton, comprising Archaean and Proterozoic terrains, and bordered by Neoproterozoic mobile belts. From a regional viewpoint, Cuiabá Mine is located in the eastern extension of the Serra do Curral inverted homocline, located on the northeastern edge of the Iron Quadrangle.

The mine lithostratigraphy consists of an intermediate metamafic sequence of the greenstone belt type and is hosted in the Nova Lima Group which is part of the Rio das Velhas Supergroup. This sequence is characterised by metametabasaltic rocks at the base (MAN), overlain by Algoma Type BIF metasediments, carbonaceous schist and graphitic schist (XG). Above the metasediments is a sequence of metabasalts (MBA) overlain by an alternating sequence of metapelites (X1) and metapsamitic rocks with minor volcanoclastic (XS). The gold mineralisation occurs in sulphide orebodies associated mainly with BIF layers, and subordinate to minor quartz veins hosted in schists.

### Deposit type

Cuiabá is a gold-only Archaean BIF-hosted gold deposit. The deposit consists of an intermediate metamafic sequence of the Archaean greenstone belt type. It is characterised by hydrothermal alteration of the rocks, with the mineralisation occurring mainly in BIF layers, subordinate quartz veins or in schists. The host to the gold mineralisation is the volcano-sedimentary Nova Lima Group that occurs at the base of the Rio das Velhas Supergroup. The upper sequence of the Rio das Velhas Supergroup is the metasedimentary Maquin Group. The gold mineralisation at Cuiabá has features and characteristics that match the epigenetic orogenic gold deposit model typical of Archaean gold-lode deposits.

### Mineralisation style

Cuiabá Mine has gold mineralisation associated with sulphides and quartz veins in BIF and volcanic sequences. Structural control and fluid flow are the most important factors for gold mineralisation with a common association between large-scale shear zones and their associated structures. Where BIF is mineralised, the ore appears strongly stratiform due to the selective sulphidation of the iron rich layers. Steeply plunging shear zones tend to control the ore shoots, which commonly plunge parallel to intersections between the shears and other structures.

### Mineralisation characteristics

Apparent intersections of thrust faults with tight isoclinal folds in a ductile environment, tend to control the mineralisation structures. The host rocks are primarily BIF and secondarily mafic volcanics (mainly basalt). Mineralisation is believed to be due to the interaction of low salinity, carbon dioxide rich gold-bearing fluids with the high-iron BIF, basalts and carbonaceous graphitic schists.

Sulphide mineralisation consists of pyrite and pyrrhotite with subordinate arsenopyrite and chalcopyrite. The latter tends to occur as a late-stage fracture fill and is not associated with gold mineralisation. Wallrock alteration is typically carbonate, potassic and silicic, showing clear zonation in the underground environment. The ore is mainly concentrated in the silicic and sulphidation zones, inside the BIF or in potassic (and sericitic) zones near the basalts. The main orebodies at Cuiabá are as follows:

- Normal limb: Fonte Grande Sul and Serrotinho
- Overturned limb: Balancão, Galinheiro and Canta Galo

Secondary orebodies occur in hydrothermally altered schists in the footwall of Galinheiro (Galinheiro footwall orebody) and hydrothermally altered schists/quartz veins near the footwall of Fonte Grande Sul and Serrotinho (Quartz vein orebody).

## Exploration

In 2019, 81,263m of drilling was completed with underground drilling comprising 75,325m of this total. Underground exploration focused on Mineral Resource conversion and Mineral Resource addition representing 25% (19,083m) and 75% (56,242m) of the underground drilling respectively.

For Mineral Resource conversion, Serrotinho Levels 19 to 20, Fonte Grande Sul Levels 18 to 19, Balancão Levels 16 to 17 and Galinheiro Levels 14 to 15 were the main targets for conversion. Mineral Resource addition was focused on Serrotinho Levels 22 to 23 and Fonte Grande Sul Levels 19 to 20.

Exploration tested the long inclined borehole (LIB) drilling methodology used in South Africa, to potentially lower costs of the surface deep drilling. The results were positive and the methodology will support the directional drilling project aiming at converting Mineral Resource at Fonte Grande Sul and Serrotinho to Level 23.

During 2019, the regional surface exploration drilling campaign completed 3,969m, split into 62% (2,455m) at the Descoberto target and 38% (1,514m) at the Matarelli target. The Descoberto target drilling campaign returned positive results that confirmed the continuity of the mineralisation observed in old excavations.

## Projects

Exploration has an integrated strategy for 2020 for Cuiabá and Lamego, that is based on three main pillars: flexibility, reliability, and

organic growth. The flexibility plan has a potential to add ounces that are close to infrastructure and can be mined in the short term, seen as by the end of 2020 and 2021. It plans to add ounces from the upper levels of the mine (remaining ounces project) and define new orebodies which were not considered in previous Mineral Resource models.

The reliability plan focuses on the main orebodies and narrow veins of Cuiabá and Lamego Mines, in order to meet the mine's production plan that aims for three years without Inferred Mineral Resource and five years without conceptual material. The new directional drilling programme is a key constituent of this plan and consists of drill hole deviations using LIB drilling and other controlled holes to allow for more precise targeting.

The organic growth project focuses on regional targets and opportunities. In 2019, this consisted of a drilling campaign at Descoberto (which returned encouraging gold intersections in the first drill hole) and Arco da Velha oxide that is seen as an opportunity to add Mineral Resource ounces from soft rock for Lamego Mine.

In support of the organic growth project, the team will conduct several surface programmes, such as detailed mapping and geochemical/geophysical surveys on regional targets (focusing on Tingua and Lamego-South), and to continue monitoring mineral rights held by competitors on areas neighbouring our tenements.

## N-S Geological cross-section of the AGA Mineração – Cuiabá orebody perpendicular down plunge (SW)





# AGA MINERAÇÃO – CUIABÁ CONTINUED

## Americas

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	10 x 20, 20 x 30	✓	–	–	✓	✓
Indicated	20 x 40, 40 x 60	✓	–	–	✓	–
Inferred	40 x 60, 80 x 120	–	✓	–	–	–
Grade/ore control	5 x 5	✓	–	–	✓	✓

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Narrow veins – Balancão	Measured	0.92	8.30	7.63	0.25
	Indicated	2.00	10.03	20.09	0.65
	Inferred	0.17	7.32	1.27	0.04
	<b>Total</b>	<b>3.09</b>	<b>9.37</b>	<b>28.99</b>	<b>0.93</b>
Narrow veins – Galinheiro	Measured	0.72	6.25	4.49	0.14
	Indicated	2.11	6.84	14.44	0.46
	Inferred	0.65	5.55	3.60	0.12
	<b>Total</b>	<b>3.48</b>	<b>6.48</b>	<b>22.54</b>	<b>0.72</b>
Narrow veins – Canta Galo	Measured	0.53	6.21	3.28	0.11
	Indicated	0.15	8.13	1.24	0.04
	Inferred	0.19	10.09	1.92	0.06
	<b>Total</b>	<b>0.87</b>	<b>7.39</b>	<b>6.44</b>	<b>0.21</b>
Main deposits – Fonte Grande Sul	Measured	1.27	7.23	9.16	0.29
	Indicated	0.93	6.86	6.40	0.21
	Inferred	5.82	7.91	46.08	1.48
	<b>Total</b>	<b>8.02</b>	<b>7.68</b>	<b>61.64</b>	<b>1.98</b>
Main deposits – Serrotinho	Measured	1.10	9.76	10.69	0.34
	Indicated	2.16	7.62	16.45	0.53
	Inferred	0.53	8.65	4.62	0.15
	<b>Total</b>	<b>3.79</b>	<b>8.38</b>	<b>31.76</b>	<b>1.02</b>
Secondary areas – Galinheiro footwall	Measured	0.01	2.78	0.02	0.00
	Indicated	0.65	4.69	3.05	0.10
	Inferred	1.44	4.05	5.85	0.19
	<b>Total</b>	<b>2.10</b>	<b>4.24</b>	<b>8.91</b>	<b>0.29</b>
Secondary areas – Quartz vein	Measured	–	–	–	–
	Indicated	0.35	5.78	2.05	0.07
	Inferred	0.22	5.31	1.17	0.04
	<b>Total</b>	<b>0.57</b>	<b>5.60</b>	<b>3.22</b>	<b>0.10</b>
AGA Mineração – Cuiabá	<b>Total</b>	<b>21.93</b>	<b>7.45</b>	<b>163.50</b>	<b>5.26</b>

### Inclusive Mineral Resource by-product: sulphur

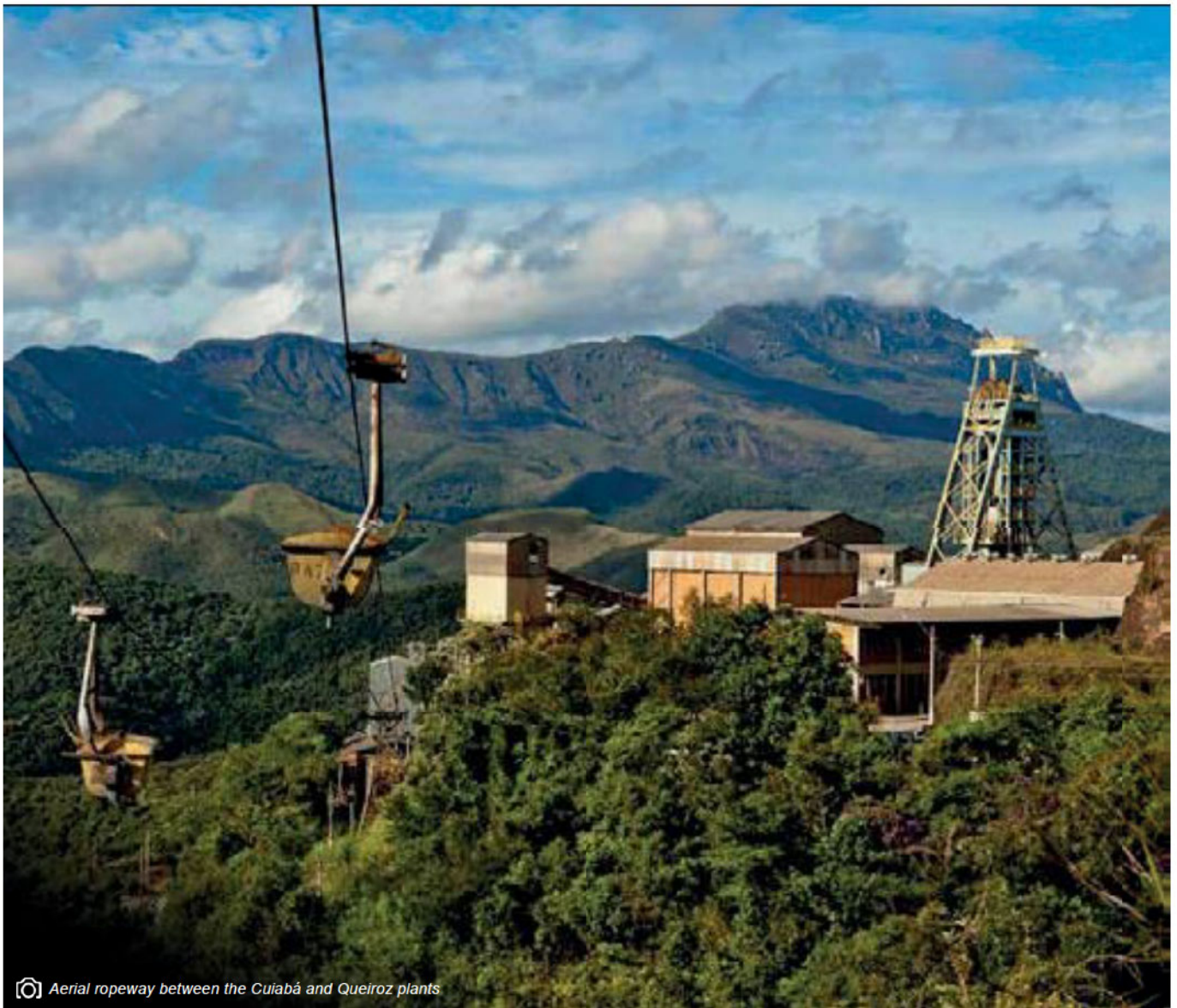
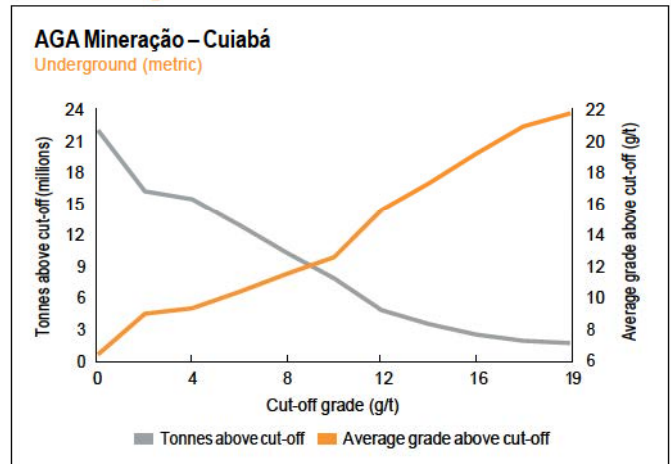
as at 31 December 2019	Category	Tonnes million	Grade %S	Contained sulphur	
				tonnes million	pounds million
AGA Mineração – Cuiabá	Measured	4.54	6.2	0.28	620
	Indicated	8.36	5.8	0.49	1,072
	Inferred	9.04	4.4	0.40	873
	<b>Total</b>	<b>21.93</b>	<b>5.3</b>	<b>1.16</b>	<b>2,565</b>




### Estimation

The Cuiabá dataset consists of both channel samples and drill hole samples. 3D modelling and estimation is performed within two estimation domains, namely the thick mineralisation, comprising of Fonte Grande Sul and Serrotonho, and the narrow-vein domain comprising of Balancão, Galinheiro and Canta Galo. All channel and drill hole samples are used in the creation of 3D geological models and for identifying rock types in order to incorporate lithological proportions into the grade estimates. Conditional simulation is used to estimate the uncertainty in the block models and classify the Mineral Resource into Measured, Indicated and Inferred Mineral Resource, following a standard internal AngloGold Ashanti methodology.

### Grade tonnage curve



 Aerial ropeway between the Cuiabá and Queiroz plants

# AGA MINERAÇÃO – CUIABÁ CONTINUED

## Americas

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Cuiabá	Measured	2.60	7.72	20.10	0.65
	Indicated	0.60	4.78	2.87	0.09
	Inferred	9.04	7.14	64.51	2.07
	<b>Total</b>	<b>12.24</b>	<b>7.15</b>	<b>87.49</b>	<b>2.81</b>

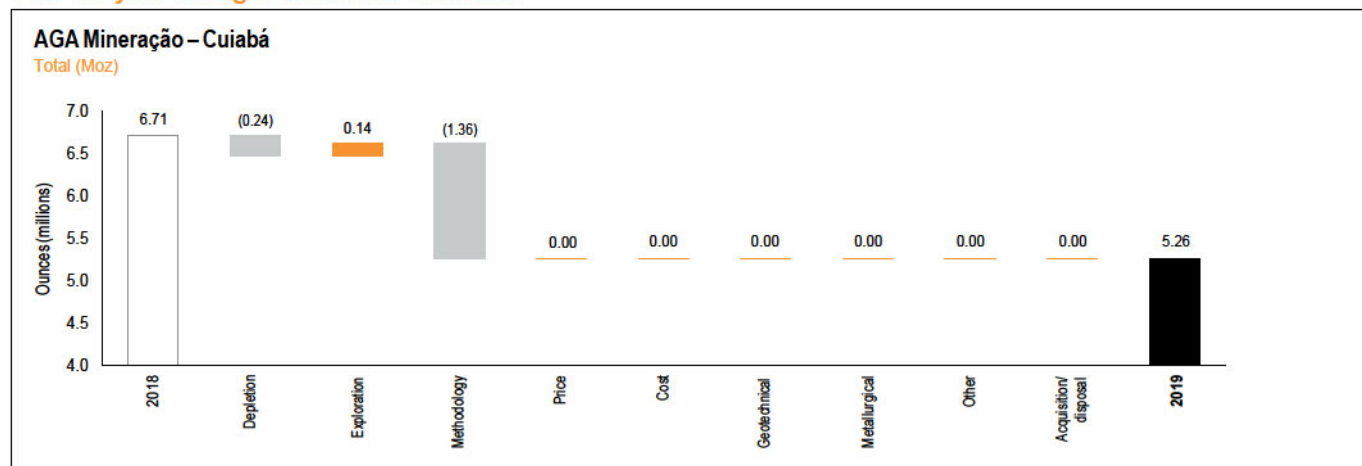
The exclusive Mineral Resource consists primarily of Inferred Mineral Resource that is in the process of being upgraded via infill drilling. The exclusive Mineral Resource is located below infrastructure, starting on Level 18 (Fonte Grande Sul and Serrotinho), Level 15 (Galinheiro), between Level 10 and corresponding sub-levels to Level 14, below Level 16 (Galinheiro footwall), between Levels 15 and 16, below Level 17 (Balancão and Canta Galo), and below Level 21 (Fonte Grande Sul deeps and Serrotinho deeps). In addition, secondary areas consisting of old stoping panels, the Quartz vein orebody and satellite deposits, as well as sill pillars for all orebodies are included.

### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Cuiabá	Measured	0.02	6.25	0.13	0.00
	Indicated	6.21	7.88	48.95	1.57
	Inferred	8.11	7.37	59.78	1.92
	<b>Total</b>	<b>14.34</b>	<b>7.59</b>	<b>108.86</b>	<b>3.50</b>

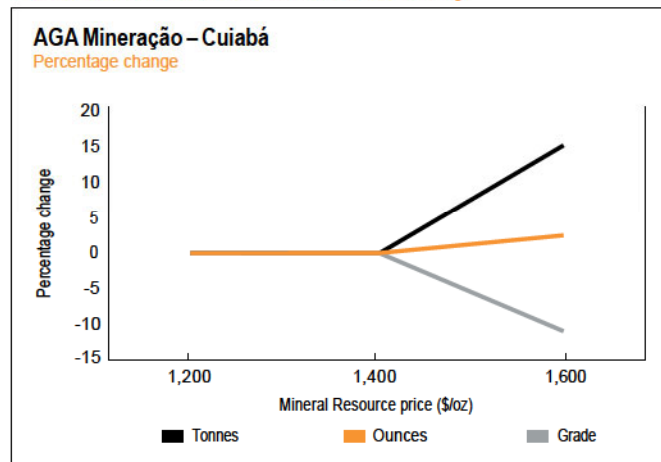
The Mineral Resource below infrastructure is that Mineral Resource below a depth relative to AMSL of 40.25m for Balancão, 41.25m for Galinheiro, 43.25m for Canta Galo, -239.75m for Serrotinho, -239.75m for Fonte Grande Sul, 186.25m for Galinheiro footwall, -119.75m for Sill pillars and -119.75m for Quartz vein.

### Year-on-year changes in Mineral Resource



For 2019 Cuiabá Mine reported a reduction of 1.46Moz in Mineral Resource which included depletion and losses due to the use of the MSO to constrain the Mineral Resource.

### Inclusive Mineral Resource sensitivity



Cuiabá is insensitive to a change in gold price. There is no downside at a lower Mineral Resource price and minimal upside at a higher Mineral Resource price.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Narrow veins – Balancão	Proved	0.49	6.30	3.10	0.10
	Probable	1.84	6.97	12.79	0.41
	<b>Total</b>	<b>2.33</b>	<b>6.83</b>	<b>15.89</b>	<b>0.51</b>
Narrow veins – Galinheiro	Proved	0.12	4.62	0.56	0.02
	Probable	1.35	5.12	6.91	0.22
	<b>Total</b>	<b>1.47</b>	<b>5.08</b>	<b>7.47</b>	<b>0.24</b>
Narrow veins – Canta Galo	Proved	0.11	6.11	0.68	0.02
	Probable	0.15	5.23	0.78	0.03
	<b>Total</b>	<b>0.26</b>	<b>5.61</b>	<b>1.46</b>	<b>0.05</b>
Main deposits – Fonte Grande Sul	Proved	0.22	6.07	1.32	0.04
	Probable	0.43	5.81	2.49	0.08
	<b>Total</b>	<b>0.65</b>	<b>5.90</b>	<b>3.80</b>	<b>0.12</b>
Main deposits – Serrotinho	Proved	0.21	6.99	1.49	0.05
	Probable	1.47	6.07	8.96	0.29
	<b>Total</b>	<b>1.69</b>	<b>6.19</b>	<b>10.45</b>	<b>0.34</b>
Secondary areas – Galinheiro footwall	Proved	–	–	–	–
	Probable	0.15	4.22	0.64	0.02
	<b>Total</b>	<b>0.15</b>	<b>4.22</b>	<b>0.64</b>	<b>0.02</b>
Secondary areas – Quartz vein	Proved	–	–	–	–
	Probable	0.21	5.20	1.09	0.04
	<b>Total</b>	<b>0.21</b>	<b>5.20</b>	<b>1.09</b>	<b>0.04</b>
<b>AGA Mineração – Cuiabá</b>	<b>Total</b>	<b>6.75</b>	<b>6.04</b>	<b>40.81</b>	<b>1.31</b>

#### Ore Reserve by-product: sulphur

as at 31 December 2019	Category	Tonnes million	Grade %S	Contained sulphur	
				tonnes million	pounds million
AGA Mineração – Cuiabá	Proved	1.16	5.8	0.07	147
	Probable	5.60	5.1	0.28	628
	<b>Total</b>	<b>6.75</b>	<b>5.2</b>	<b>0.35</b>	<b>774</b>



# AGA MINERAÇÃO – CUIABÁ CONTINUED

## Americas

### Estimation

The gold price, projected operational performance and costs, as well as metallurgical recoveries are taken into consideration in estimating the Ore Reserve. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are all applied in the process.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price BRL/oz	Cut-off grade g/t Au*	Stoping width cm	Dilution %	MRF % (based on tonnes)	MCF %	MetRF %
Narrow veins – Balancão	4,230	5.31	200.0	12.0	84.0	94.5	94.3
Narrow veins – Galinheiro	4,230	5.31	200.0	12.0	84.0	94.5	94.3
Narrow veins – Canta Galo	4,230	5.31	200.0	12.0	84.0	94.5	94.3
Main deposits – Fonte Grande Sul	4,230	5.31	600.0	15.0	84.0	94.5	94.3
Main deposits – Serrotinho	4,230	5.31	600.0	15.0	84.0	94.5	94.3
Secondary areas – Galinheiro footwall	4,230	5.31	200.0	12.0	84.0	94.5	94.3
Secondary areas – Quartz vein	4,230	5.31	200.0	15.0	84.0	94.5	94.3

\* Note marginal cut-off grade is 0.82g/t

Modifying factors are determined by historical performance.

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Main deposits – Fonte Grande Sul	3.28	8.08	26.54	0.85
Main deposits – Serrotinho	0.13	7.37	0.94	0.03
Total	3.41	8.05	27.48	0.88

These figures represent Inferred Mineral Resource within the operational business plan. This represents 22% of the business plan for the first five years. No Inferred Mineral Resource is considered in Ore Reserve reporting.



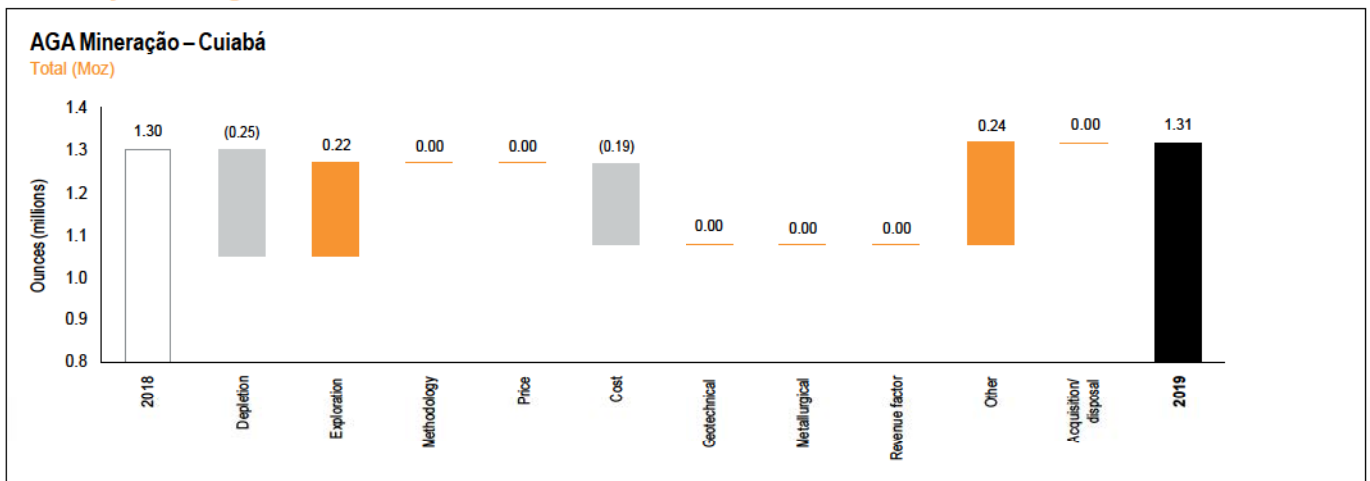
Scaling a development face at Cuiabá

**Ore Reserve below infrastructure**

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Cuiabá	Proved	-	-	-	-
	Probable	3.20	6.19	19.83	0.64
	<b>Total</b>	<b>3.20</b>	<b>6.19</b>	<b>19.83</b>	<b>0.64</b>

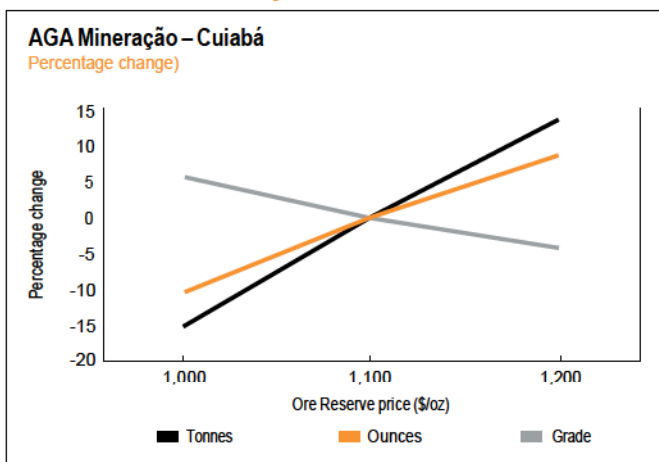
The Ore Reserve below infrastructure is that Ore Reserve below a depth relative to AMSL of 40.25m for Balancão, 41.25m for Galinheiro, 43.25m for Canta Galo, -239.75m for Serrotinho, -239.75m for Fonte Grande Sul, 186.25m for Galinheiro footwall, -119.75m for Sill pillars and -119.75m for Quartz vein.

**Year-on-year changes in Ore Reserve**



Ore Reserve year-on-year was kept almost the same with conversion drilling during the year offsetting depletion.

**Ore Reserve sensitivity**



The Cuiabá Ore Reserve is very sensitive to changes in gold price. There is an 8% upside in ounces at a higher Ore Reserve price and 10% downside in ounces at a lower Ore Reserve price.

**Competent Persons**

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Reuber Cota	MAusIMM	329 257	12 years	BSc (Geology), MSc (Geological Engineering)
Ore Reserve	Rodrigo Fideles	MAusIMM	326 102	9 years	BSc (Mining Engineering), MBA

# AGA MINERAÇÃO – LAMEGO

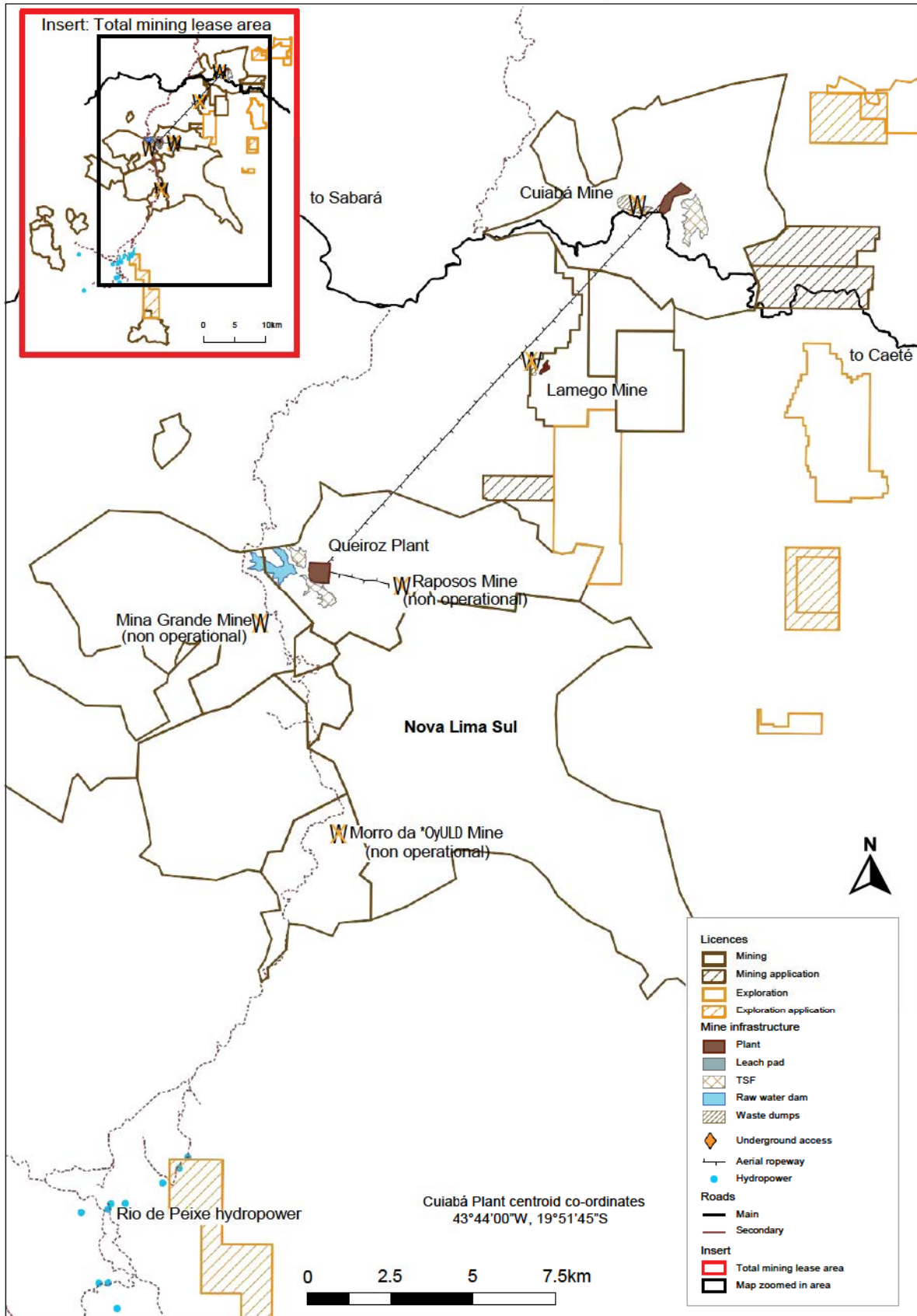
## Americas

### Introduction

<b>Property description</b>	The Lamego Mine is an underground operation, owned by AngloGold Ashanti, within the mining district referred to as the Iron Quadrangle. This region is an important producer of iron ore and gold in Brazil.
<b>Location</b>	Lamego is located to the east of Belo Horizonte, the capital of Minas Gerais State, in the southeast of Brazil.
<b>History</b>	Exploration began in the area in 1985 with a drilling campaign along a 5.7km strike length of iron formation and the opening of 2.5km of development on the Arco da Velha, Queimada and Cabeça de Pedra orebodies. After the successful completion of a FS, project approval was given and implementation began in 2010 with first gold poured soon afterwards.
<b>Legal aspects and tenure</b>	<p>The Lamego mining operation is covered by three geographically contiguous ANM concessions granted to AGA Mineração:</p> <ul style="list-style-type: none"> <li>- The ANM Mining Concession 830.720/1981, covering an area of 577.14ha</li> <li>- The ANM Mining Concession 831.554/1983, covering an area of 462.09ha</li> <li>- The ANM Mining Concession 832.238/2003, covering an area of 583.45ha</li> </ul> <p>All concessions are currently active, in good legal and operational standing, and free of liabilities and/or major obligations. According to Brazilian mining law, the expiry of claims, licenses, and other tenure rights coincide with the depletion of Ore Reserve, cessation of mining operations and legally required post-operational activities (such as mine closure), provided all annual reports have been approved by the ANM. A new Brazilian mining code is currently under discussion. However, it is not anticipated to change the company's rights, which are already established.</p>
<b>Mining method</b>	Three mining methods were considered for Lamego during the PFS: cut and fill, room and pillar and sub-level open stoping. Based on rock engineering and productivity considerations, the mine ultimately settled on blind hole open stoping methods. This is supported by a detailed infill drilling programme. Cut and fill is also used when the orebody exceeds 20m spans. While this method allows for selectivity, it has productivity constraints.
<b>Operational infrastructure</b>	<p>Lamego operates as a satellite mine to Cuiabá Mine. Ore is transported to surface via ramps where it is crushed, stockpiled and transported daily to Cuiabá Plant, where it is blended with Cuiabá ore on the ROM pad.</p> <p>The two plants (Cuiabá Gold Plant and Queiroz Plant) are connected by an aerial ropeway. Power for the mine is both self-generated (Rio de Peixe hydroelectric complex) and supplied by Cemig, a state-owned company. The Rio de Peixe hydroelectric complex, which is a set of seven small hydropower plants that generate energy from three dams (Ingleses, Miguelo and Codoma) and connect directly to the Queiroz Plant. Lamego has a natural water supply system and a plant for water and sewage treatment.</p>
<b>Mineral processing</b>	<p>Cuiabá and Lamego feed the Cuiabá (flotation) and Queiroz (roaster, carbon circuit and refinery) plants, currently at 1.8Mtpa for a metallurgical recovery of 94.3%. At Cuiabá Gold Plant, crushing and milling of the ore is followed by flotation and filtration in order to produce a concentrate, which is transported by aerial ropeway to Queiroz for further treatment.</p> <p>Approximately 25 to 30% of gold is recovered through a gravity circuit at the Cuiabá Plant. The backfill plant is also located at Cuiabá. The Queiroz Plant is located in Nova Lima and comprises two different circuits for refractory ore (from Cuiabá) and non-refractory ore (used for the Raposos Mine production in the past) with facilities for pyrometallurgy and hydrometallurgy. The concentrate is roasted and the calcine proceeds to a carbon circuit for further refining. The sulphide gas is captured for processing through the acid plant. Approximately 230ktpa of sulphuric acid is produced as a by-product.</p>
<b>Risks</b>	<p>There are no material risks. As a low grade operation, the accurate prediction of grade and the management of its variability is critical to ensure a successful operation. Some possible risks such as low level of Ore Reserve and the reliance on Inferred Mineral Resource in the production plan as well as rock engineering constraints at depth are managed by strategic studies which are currently underway.</p> <p>An independent external Mineral Resource and Ore Reserve audit was undertaken in 2019 and found no fatal flaws in process or output.</p>



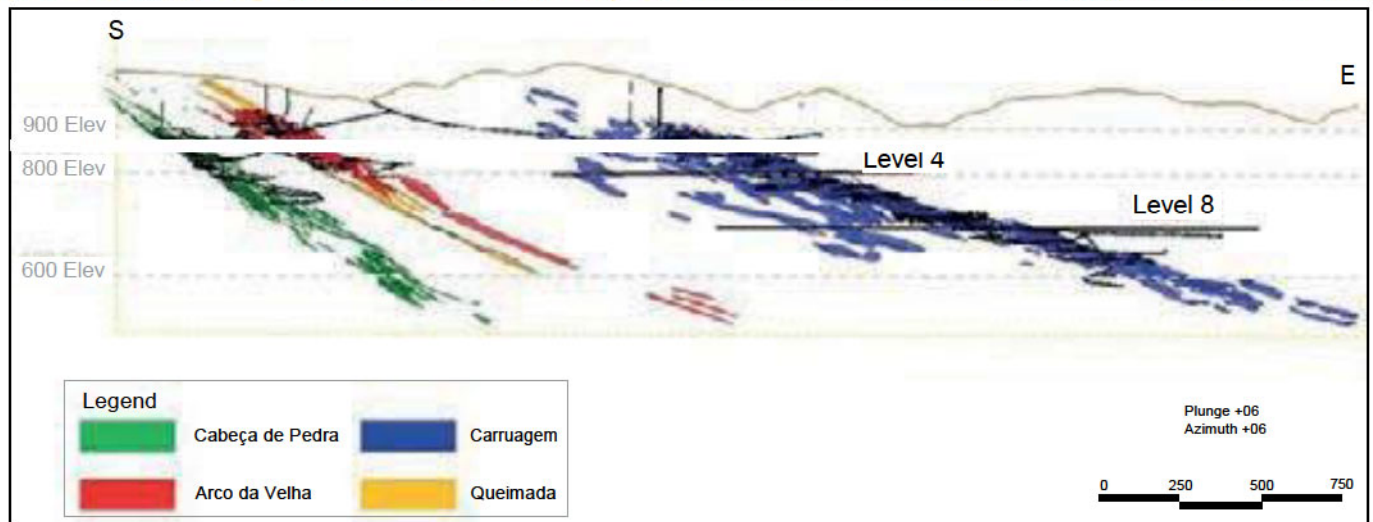
Map showing AGA Mineração – Cuiabá Mine, Lamego Mine and Nova Lima Sul project infrastructure and licences, with the total mining lease area insert shown in the top left corner



# AGA MINERAÇÃO – LAMEGO CONTINUED

## Americas

S-N View of the underground infrastructure and interpolated orebodies at AGA Mineração Lamego, elevation in metres AMSL



### Geology

Lamego Mine is located in the Iron Quadrangle, which is a geotectonic unit at the southern edge of the São Francisco Craton, comprising Archaean and Proterozoic terrains, and bordered by Neoproterozoic mobile belts. From a regional viewpoint, Lamego Mine is located in the eastern extension of the Serra do Curral inverted homocline, located on the northern edge of the Iron Quadrangle.

The mine lithostratigraphy consists of an intermediate metamafic sequence of the greenstone belt type and is hosted in the Nova Lima Group which is part of the Rio das Velhas Supergroup. This sequence is characterised by lower metametabasaltic rocks at the base (MAN), overlain by Algoma Type BIF metasediments, a quartz layer (MCH known as metachert), carbonaceous schist, graphite schist (XG) and a further sequence of sediments consisting of an alternating sequence of metapelites (X1) and metapsamitic rocks with a volcanoclastic contribution (XS).

### Deposit type

Lamego is a gold-only Archaean greenstone BIF-hosted gold deposit. The deposit consists of an intermediate metamafic sequence of the Archaean greenstone belt type. The host to the gold mineralisation is the volcano-sedimentary Nova Lima Group that occurs at the base of the Rio das Velhas Supergroup. The upper sequence of the Rio das Velhas Supergroup is the metasedimentary Maquin Group. The gold mineralisation at

Lamego has features and characteristics that match the epigenetic orogenic gold deposit model presented for Archaean gold-lode deposits.

### Mineralisation style

The gold mineralisation at Lamego is characterised by orebodies associated with two horizons of chemical sedimentary rocks: BIF and MCH, with shear zones containing abundant quartz veinlets. The proportions of these lithotypes vary substantially from one deposit to another. In the BIF, sulphide mineralisation is associated with gold, while in the MCH it is associated with quartz veins. The gold occurs either as native gold or in sulphides. Lamego shows similar rock assemblage to Cuiabá, but with higher structural complexity. The BIF, which contains the mineralisation, is more structurally deformed and contains more silica when compared to Cuiabá, which reacted less with the hydrothermal fluid.

### Mineralisation characteristics

The mineralisation is characterised by sulphidation in the form of disseminated sulphide bands or as fracture filling and, more rarely, as massive sulphide hosted in BIF/MCH. Sulphide bands are rare in MCH. The MCH (or quartz vein) is concentrated in the hinges of the Lamego structure and has free gold as the main mineralisation with a lesser amounts associated with sulphides. The plunge of the mineralised zones coincides with both the fold axis of the first two structural events and the stretching fabric.

## Exploration

In 2019, 15,319m of underground drilling was completed, with Mineral Resource conversion representing 46% (7,119m) and Mineral Resource addition representing 54% (8,200m). Mineral Resource conversion was executed in Carruagem SW Level 4.1 and Queimada Level 5. Mineral Resource addition was focused on Carruagem SW.

## Projects

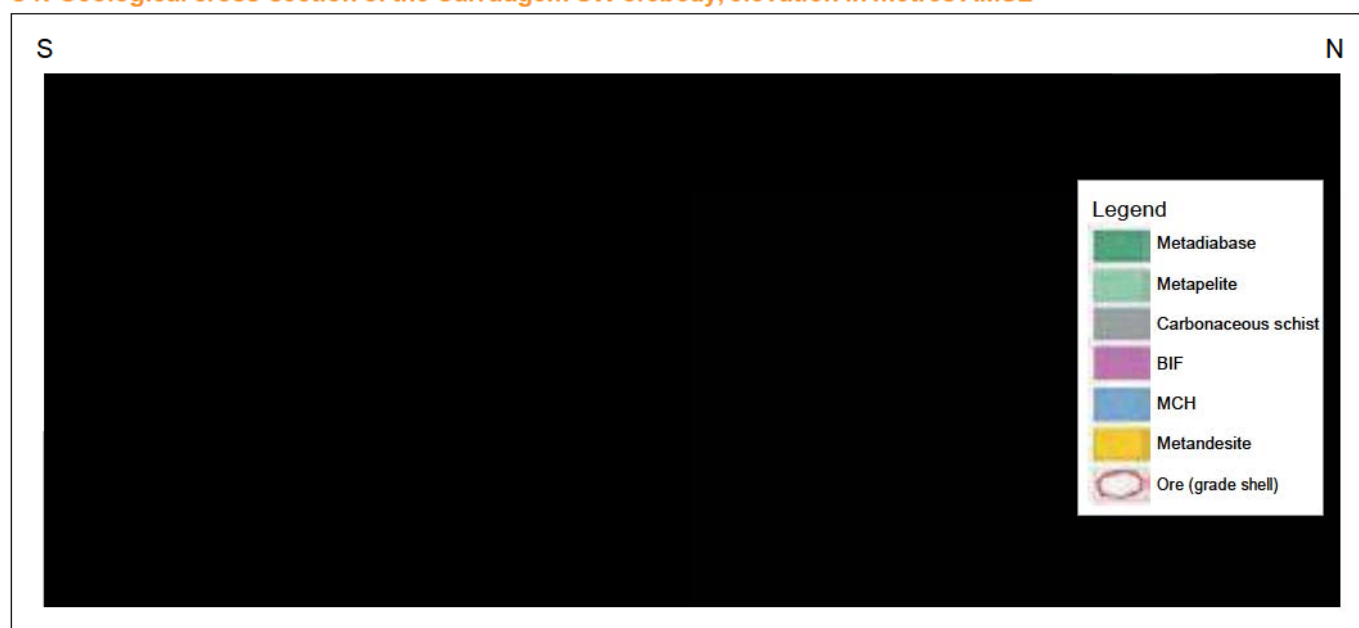
Exploration has an integrated strategy in 2020 for Cuiabá and Lamego that is based on three main pillars: flexibility, reliability and organic growth.

The flexibility plan has a potential to add ounces that are close to infrastructure and can be mined in the short term, seen as by the end of 2020 and 2021. It intends to add ounces from the upper levels of the mine (remaining ounces project) and define new orebodies which were not considered in the previous Mineral Resource models.

The reliability plan focuses on the main orebodies and narrow veins of Cuiabá and Lamego Mines, in order to meet the mine's production plan that aims for three years without Inferred Mineral Resource and five years without conceptual material. The new directional drilling programme is a key constituent of this plan and consists of drill hole deviations using LIB drilling and other controlled holes to allow for more precise targeting.

The organic growth plan's focus is on regional targets and opportunities. In 2019, this included a drilling campaign at Descoberto (which returned encouraging gold intersection in the first drill hole) and at Arco da Velha oxide which is seen as an opportunity to add ounces from oxide rock for the Lamego Mine. In support of the organic growth project, the team will conduct several surface programmes, such as detailed mapping and geochemical/geophysical surveys, on regional targets (focusing on Tingua and Lamego-South), and keep monitoring the mineral rights belonging to competitors neighbouring AngloGold Ashanti tenements.

### S-N Geological cross-section of the Carruagem SW orebody, elevation in metres AMSL



## Mineral Resource

### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	20 x 10	✓	–	–	✓	–
Indicated	60 x 40		✓	–	–	–
Inferred	120 x 60		✓	–	–	–
Grade/ore control	2.7 x 3, 3 x 3	–	–	–	✓	–



# AGA MINERAÇÃO – LAMEGO CONTINUED

## Americas

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Main deposits – Arco da Velha	Measured	0.41	2.49	1.01	0.03
	Indicated	0.43	2.27	0.98	0.03
	Inferred	0.82	1.87	1.53	0.05
	<b>Total</b>	<b>1.66</b>	<b>2.12</b>	<b>3.53</b>	<b>0.11</b>
Main deposits – Cabeça de Pedra	Measured	0.29	2.88	0.84	0.03
	Indicated	0.79	2.47	1.96	0.06
	Inferred	1.26	2.60	3.27	0.11
	<b>Total</b>	<b>2.35</b>	<b>2.59</b>	<b>6.08</b>	<b>0.20</b>
Main deposits – Carruagem	Measured	2.10	4.03	8.45	0.27
	Indicated	2.24	3.53	7.90	0.25
	Inferred	1.59	3.16	5.02	0.16
	<b>Total</b>	<b>5.92</b>	<b>3.61</b>	<b>21.37</b>	<b>0.69</b>
Secondary areas – Queimada	Measured	0.01	2.39	0.02	0.00
	Indicated	0.43	3.63	1.57	0.05
	Inferred	0.59	3.89	2.29	0.07
	<b>Total</b>	<b>1.03</b>	<b>3.77</b>	<b>3.88</b>	<b>0.12</b>
Secondary areas – Arco NE	Measured	–	–	–	–
	Indicated	–	–	–	–
	Inferred	1.17	2.10	2.46	0.08
	<b>Total</b>	<b>1.17</b>	<b>2.10</b>	<b>2.46</b>	<b>0.08</b>
AGA Mineração – Lamego	<b>Total</b>	<b>12.13</b>	<b>3.08</b>	<b>37.31</b>	<b>1.20</b>

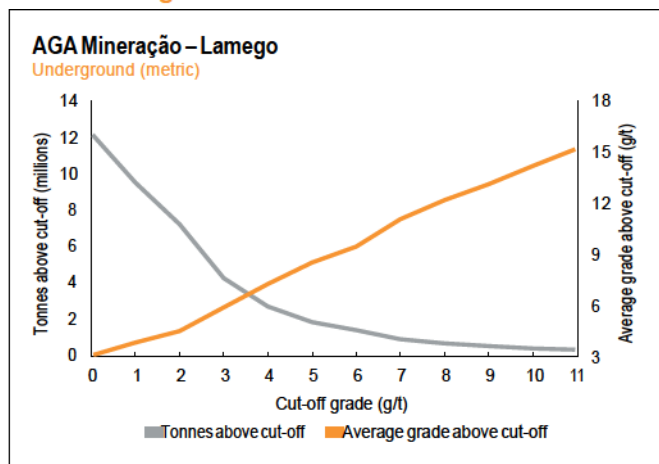
### Inclusive Mineral Resource by-product: sulphur

as at 31 December 2019	Category	Tonnes million	Grade %S	Contained sulphur	
				tonnes million	pounds million
AGA Mineração – Lamego	Measured	2.80	3.3	0.09	207
	Indicated	3.90	3.6	0.14	307
	Inferred	5.43	4.6	0.25	554
	<b>Total</b>	<b>12.13</b>	<b>4.0</b>	<b>0.48</b>	<b>1,068</b>

### Estimation

The geological model is used to subdivide the sampling information into domains for estimation. The estimation method applied at Lamego is ordinary kriging and classification of the Mineral Resource is based on conditional simulation.

### Grade tonnage curve



### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Lamego	Measured	2.10	3.94	8.27	0.27
	Indicated	1.71	2.98	5.11	0.16
	Inferred	5.43	2.69	14.58	0.47
	<b>Total</b>	<b>9.24</b>	<b>3.03</b>	<b>27.96</b>	<b>0.90</b>

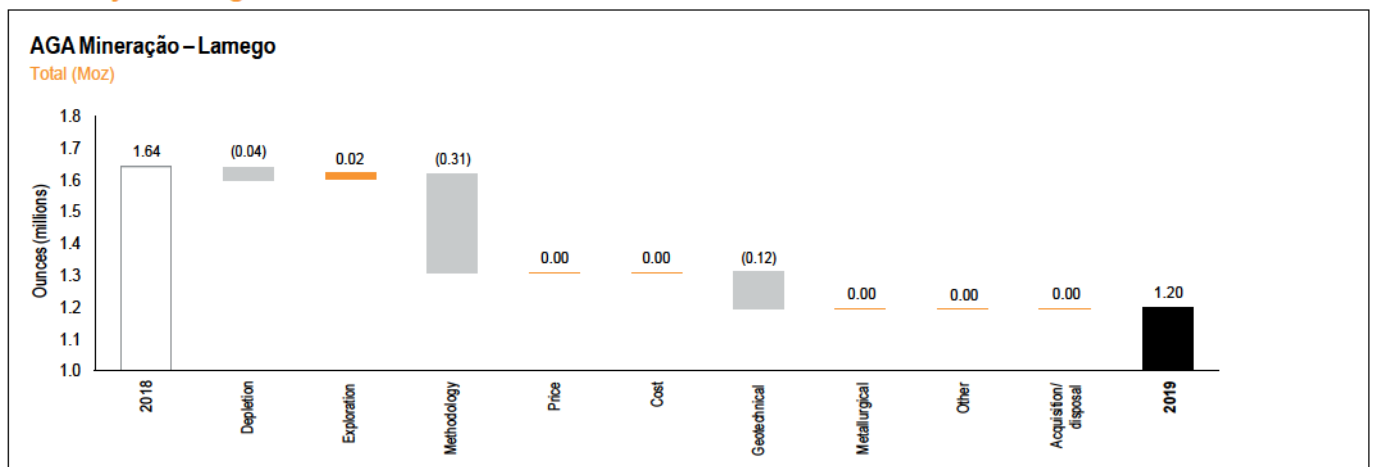
The exclusive Mineral Resource is made up of ore not included in the Ore Reserve due to economic considerations plus the ore contained in the sill and stope pillars. These pillars were designed in the Ore Reserve estimation process according to geomechanical parameters.

### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Lamego	Measured	0.07	2.55	0.19	0.01
	Indicated	1.73	2.91	5.03	0.16
	Inferred	4.15	2.64	10.98	0.35
	<b>Total</b>	<b>5.96</b>	<b>2.72</b>	<b>16.20</b>	<b>0.52</b>

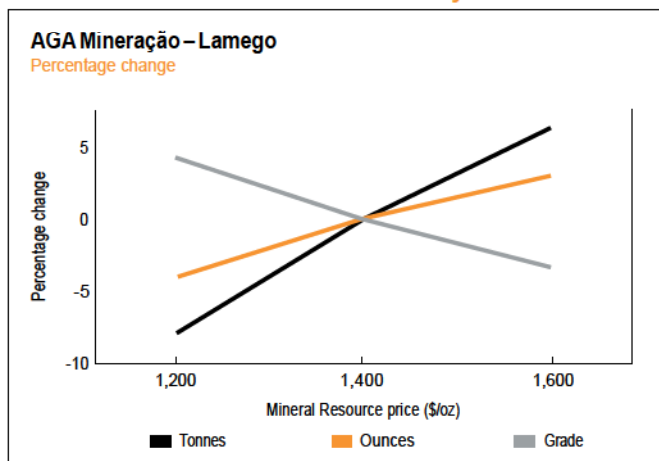
The below infrastructure Mineral Resource consists primarily of Inferred Mineral Resource that is in the process of being upgraded via Mineral Resource conversion drilling.

### Year-on-year changes in Mineral Resource



For 2019, Lamego reported a reduction mainly due to the use of the MSO to constrain the underground Mineral Resource.

### Inclusive Mineral Resource sensitivity



Lamego is sensitive to a change in gold price where variations are due to changes in the cut-off grade. There is a 3% upside in ounces at a higher Mineral Resource price and 4% downside in ounces of a lower Mineral Resource price.

# AGA MINERAÇÃO – LAMEGO CONTINUED

## Americas

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Main deposits – Arco da Velha	Proved	0.22	1.99	0.45	0.01
	Probable	0.11	2.10	0.22	0.01
	<b>Total</b>	<b>0.33</b>	<b>2.03</b>	<b>0.67</b>	<b>0.02</b>
Main deposits – Carruagem	Proved	0.16	2.66	0.44	0.01
	Probable	0.92	3.18	2.93	0.09
	<b>Total</b>	<b>1.09</b>	<b>3.10</b>	<b>3.37</b>	<b>0.11</b>
Secondary areas – Queimada	Proved	0.01	2.70	0.02	0.00
	Probable	0.26	3.46	0.91	0.03
	<b>Total</b>	<b>0.27</b>	<b>3.44</b>	<b>0.92</b>	<b>0.03</b>
<b>AGA Mineração – Lamego</b>	<b>Total</b>	<b>1.69</b>	<b>2.95</b>	<b>4.97</b>	<b>0.16</b>

#### Ore Reserve by-product: sulphur

as at 31 December 2019	Category	Tonnes million	Grade %S	Contained sulphur	
				tonnes million	pounds million
AGA Mineração – Lamego	Proved	0.40	2.9	0.01	25
	Probable	1.29	2.4	0.03	67
	<b>Total</b>	<b>1.69</b>	<b>2.5</b>	<b>0.04</b>	<b>92</b>

### Estimation

The gold price, projected operational performance and costs, as well as metallurgical recoveries are taken into consideration when determining the Ore Reserve. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are all applied in the process.

#### Ore Reserve modifying factors

as at 31 December 2019	Gold price BRL/oz	Cut-off grade g/t Au	Stoping width cm	MRF		MCF %	MetRF %
				Dilution %	% (based on tonnes)		
Main deposits – Arco da Velha	4,230	2.74	513.0	15.7	93.7	94.3	94.1
Main deposits – Cabeça de Pedra	4,230	2.74	513.0	15.7	93.7	94.3	94.1
Main deposits – Carruagem	4,230	2.74	513.0	15.7	93.7	94.3	94.1
Secondary areas – Queimada	4,230	2.74	513.0	15.7	93.7	94.3	94.1

#### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Main deposits – Carruagem	0.33	2.74	0.89	0.03
Secondary areas – Queimada	0.45	3.28	1.48	0.05
<b>Total</b>	<b>0.78</b>	<b>3.05</b>	<b>2.38</b>	<b>0.08</b>

Inferred Mineral Resource is considered in the business plan. The risk is mainly after 2020 and a drilling plan is in place to mitigate this.

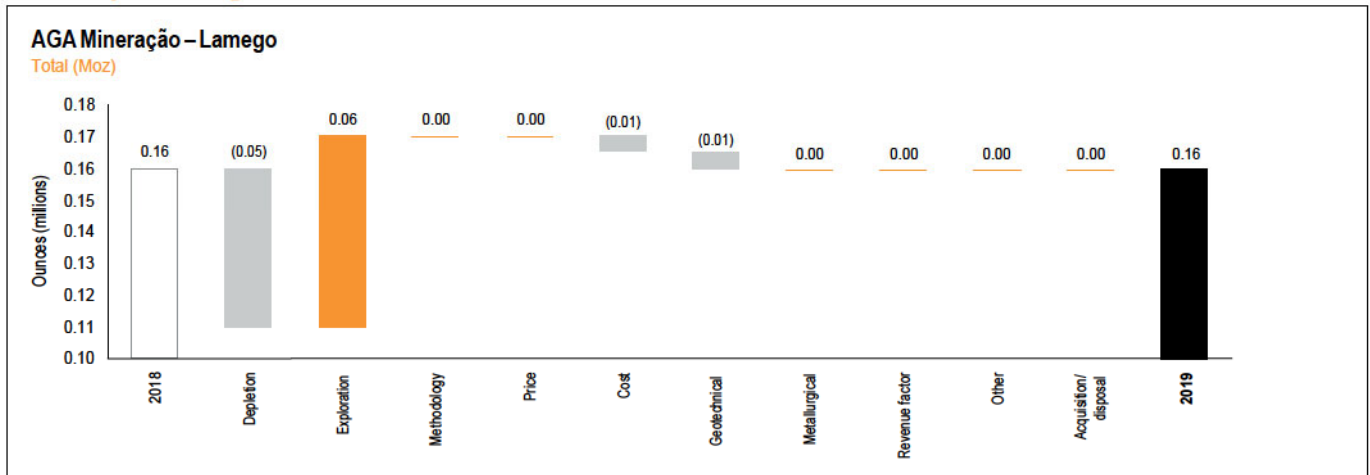
#### Ore Reserve below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Lamego	Proved	0.28	2.33	0.65	0.02
	Probable	0.97	2.74	2.67	0.09
	<b>Total</b>	<b>1.25</b>	<b>2.65</b>	<b>3.32</b>	<b>0.11</b>

The Ore Reserve below infrastructure is that Ore Reserve below Level 8 for Carruagem and Level 4 in Queimada.

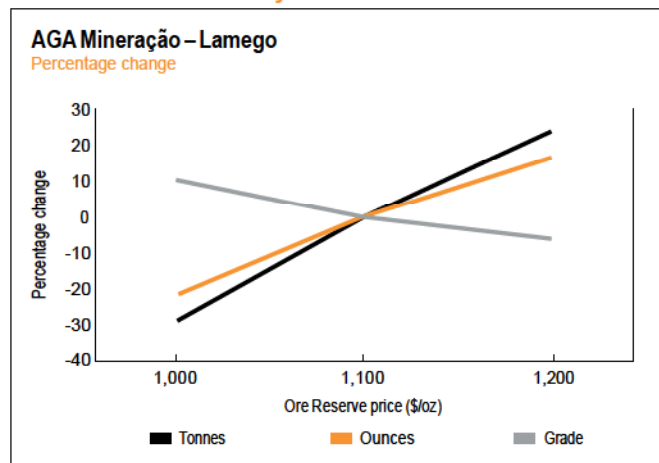


## Year-on-year changes in Ore Reserve



After depletion, the Ore Reserve remained the same mainly due to exploration success coming from Carruagem.

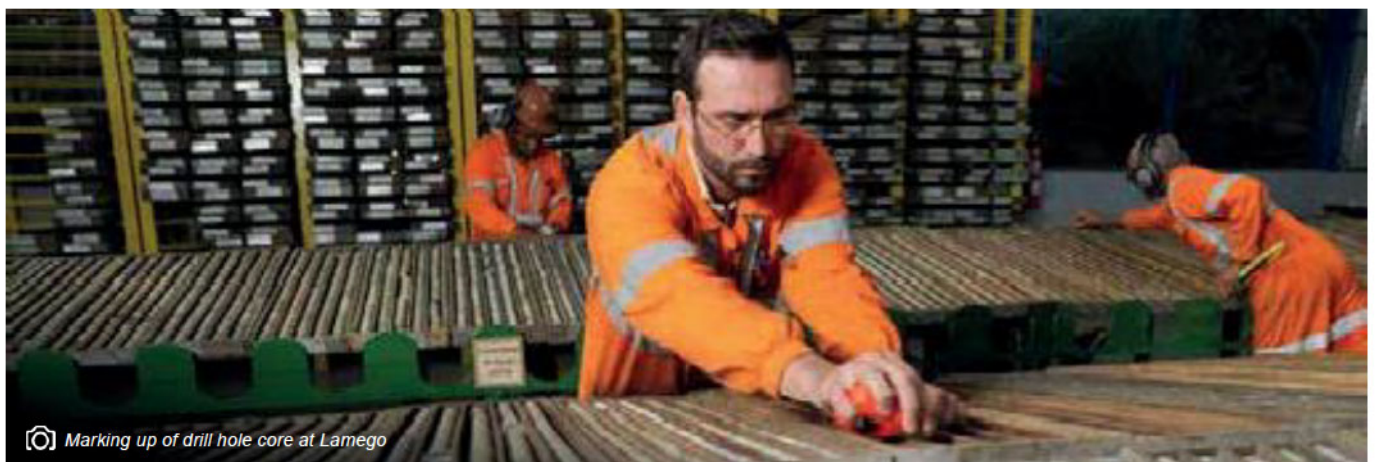
## Ore Reserve sensitivity



Lamego is highly sensitive to a change in gold price as it is a low grade deposit. There is a 17% upside in ounces at a higher Ore Reserve price and 21% downside in ounces at a lower Ore Reserve price.

## Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Reuber Cota	MAusIMM	329 257	12 years	BSc (Geology), MSc (Geological Engineering)
Ore Reserve	Lucas Rodrigues	MAusIMM	321 166	5 years	BSc (Mining Engineering)



Marking up of drill hole core at Lamego

# AGA MINERAÇÃO – NOVA LIMA SUL

## Americas

### Introduction

<b>Property description</b>	The Nova Lima Sul, an exploration project wholly owned by AngloGold Ashanti, contains the underground mine of Raposos which is currently on care and maintenance pending a decision around its future. No Ore Reserve is reported for Nova Lima Sul.
<b>Location</b>	The Nova Lima Sul project is located in the southwestern portion of the Rio das Velhas greenstone belt and all the exploration targets are within a 16km radius of the Queiroz metallurgical plant. The project area consists of an area of 7,000km <sup>2</sup> , close to the cities of Nova Lima, Raposos and Rio Acima.
<b>History</b>	The first formal mining company to start operations in the area was São João Del Rey Mining Company Ltd in 1834. It was acquired by Mineração Morro Velho in the early 1900s. The Raposos Mine reported 1.08Moz production from 1929 to 1999, after which it was put in care and maintenance.
<b>Legal aspects and tenure</b>	<p>Nova Lima Sul is made up of a number of ANM Mining Concessions including:</p> <ul style="list-style-type: none"> <li>- Mining Concession No. 308-II 02/03/1936, ANM 322/1973, covering an area of 2,826.33ha</li> <li>- Mining Concession No. 308-VI 02/03/1936, ANM 326/1973, covering an area of 7,465.22ha</li> <li>- Mining Concession No. 308-V 02/03/1936, ANM 325/1973, covering an area of 1,014.53ha</li> </ul> <p>All three mining concessions are in good standing and as they do not host active producing operations at the moment, they have formally been put on temporary mining suspension status according to the requirements of the current Brazilian mining code. Should AngloGold Ashanti decide to resume underground operations at these concessions, new mining plans will need to be submitted to the ANM. In 2017, the Mineral Resource of Morro da Glória was written-off due to urban growth and environmental restrictions that resulted from the creation of a preservation area, called Serra do Gandarela National Park and which prevents the issuing of mining permits and environmental licences.</p>
<b>Mining method</b>	Raposos Mine operated with a cut and fill method.
<b>Operational infrastructure</b>	Raposos Mine has significant amount of underground development, a shaft and a cableway to take the ore to Queiroz Plant. Morro da Glória has some underground drift developed.
<b>Mineral processing</b>	Raposos Mine circuit was a standard direct 1,000tpd gold-leaching circuit suitable for non-refractory material.
<b>Risks</b>	The project has been on care and maintenance for a number of years.

### Map showing AGA Mineração - Nova Lima Sul project infrastructure and licences

Refer to the map showing AGA Mineração – Cuiabá Mine, Lamego Mine and Nova Lima Sul project infrastructure and licences on page 163.

### Geology

#### Deposit type

Raposos Mine is situated in the southwestern portion of the Iron Quadrangle in the state of Minas Gerais in Brazil. The area is located in the volcano-sedimentary sequence of the Nova Lima Group (Rio das Velhas Supergroup) within the Rio das Velhas greenstone belt.

The Raposos sequence is interpreted as a ductile thrust that occurred during the first deformation event in the structural history and with the main mineralisation also being associated with this event. The stratigraphic sequence, which is repeated by folding, has ultramafics at the base, overlain by komatiitic basalts and andesites with layers of BIF, pelites and metavolcanoclastics at the top of the sequence. The BIF is oxide facies (magnetite and quartz) and occurs with carbonatisation in mineralised areas.

The macro structure at Raposos is an anticline and the mineralisation is associated with these folds and shear zones. Mineralisation is surrounded by concentric hydrothermal alteration zones consisting of sericitisation, carbonisation and chloritisation. The gold is associated with sulphides and quartz veins in the BIF as well as with altered schists.

#### Mineralisation style

The mineralisation in the Rio das Velhas greenstone belt is structurally controlled and associated with hydrothermal alteration along regional D2 thrust shear zones.

The mineralisation is epigenetic and at Nova Lima Sul consists of either massive, banded or disseminated sulphides hosted in BIF and lapa seca (albitised hydrothermal rocks).

#### Mineralisation characteristics

Mapped deposit dimensions vary in thickness from around 0.5 to 20m and can be more than 5,000m in down-plunge. The plunge is defined by the stretching lineation and it is parallel to the fold axis of the first two regional deformation events. The mineralisation is primarily located in the BIF and surrounded by concentric hydrothermal alteration zones consisting of sericitisation, carbonisation and chloritisation.

**Exploration**

No exploration was completed in the Nova Lima Sul region in 2019. Nova Lima Sul exploration targets comprise the Raposos underground mine, Mina Grande, Morro da Glória, Bicalho, Faria, Bela Fama mines, as well as the old prospects (Luzia da Mota, Limoeiro) and several old surface workings (Saboeiro Rasgo, Urubu and Mina Grande).

**Projects**

The Nova Lima Sul project, where the Raposos Mine is located, was stopped in 2010.

**Mineral Resource**

**Details of average drill hole spacing and type in relation to Mineral Resource classification**

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	30 x 30	✓	–	–	✓	✓
Indicated	60 x 60	✓	–	–	–	✓
Inferred	100 x 100	✓	–	–	–	✓
Grade/ore control	3 x 3	✓	–	–	–	✓

**Inclusive Mineral Resource**

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Raposos	Measured	0.18	7.01	1.29	0.04
	Indicated	0.41	6.85	2.80	0.09
	Inferred	2.25	6.44	14.50	0.47
AGA Mineração – Nova Lima Sul	Total	2.84	6.53	18.59	0.60

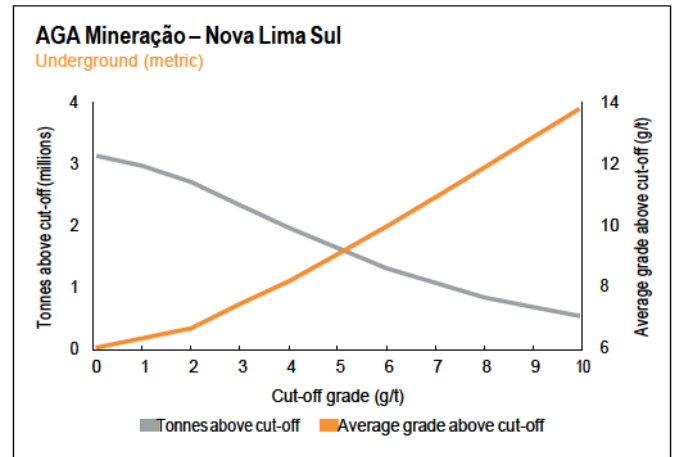
**Estimation**

Raposos Mine was estimated using UC.

**Exclusive Mineral Resource**

The Nova Lima Sul project currently does not have any Ore Reserve and therefore all Mineral Resource is exclusive Mineral Resource.

**Grade tonnage curve**



**Mineral Resource below infrastructure**

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
AGA Mineração – Nova Lima Sul	Measured	–	–	–	–
	Indicated	0.41	6.85	2.80	0.09
	Inferred	2.25	6.44	14.50	0.47
	Total	2.66	6.50	17.30	0.56

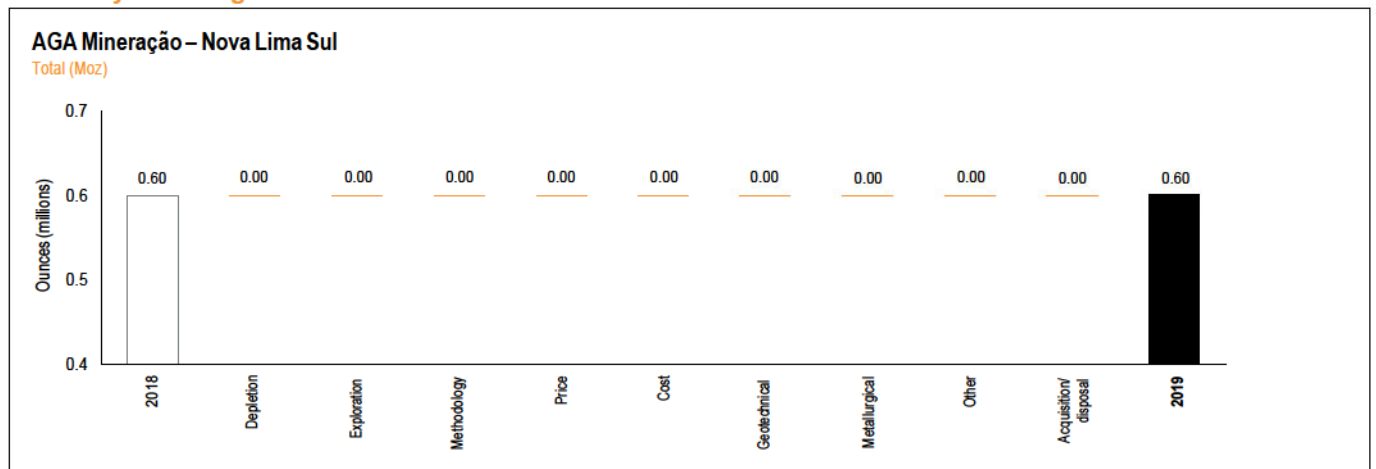
The Mineral Resource below infrastructure is located below Level 36 of Raposos Mine.



# AGA MINERAÇÃO – NOVA LIMA SUL CONTINUED

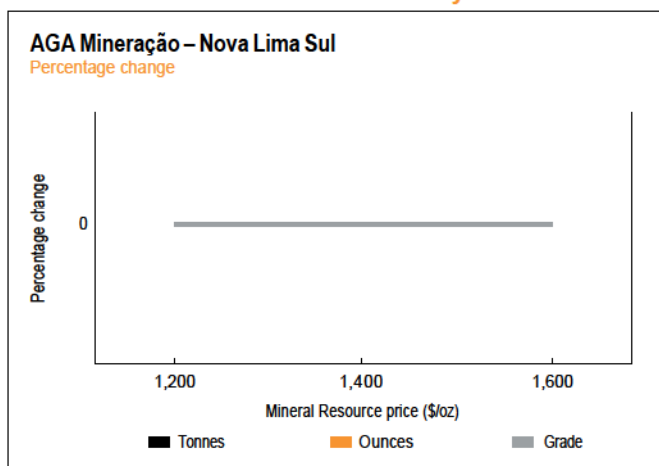
## Americas

### Year-on-year changes in Mineral Resource



There was no change in the Nova Lima Sul Mineral Resource during 2019.

### Inclusive Mineral Resource sensitivity




Nova Lima Sul is not sensitive to changes in gold price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Reuber Cota	MAusIMM	329 257	12 years	BSc (Geology), MSc (Geological Engineering)



 Gold plant at Serra Grande

# AGA MINERAÇÃO – SERRA GRANDE

## Americas

### Introduction

<b>Property description</b>	Mineração Serra Grande (MSG or Serra Grande) is wholly owned by AngloGold Ashanti and is located in the northwest of Goiás State, central Brazil. It operates three underground and two open pit mines.
<b>Location</b>	Serra Grande is located 5km south of the town of Crixás, 420km from the Brazilian capital, Brasília and approximately 350km from the state capital of Goiás, Goiânia. Employing 1,120 persons in this largely rural area means that the mine is the principal economic activity in the region.
<b>History</b>	Exploration began in 1973 with a phase of detailed mapping and DD, which continued until 1976. The mining operation started up in 1986 in Mina III and the metallurgical plant start-up was in 1989. Serra Grande production peaked at 193kozpa in 2006, supported by high grades. In 2009, the metallurgical plant was expanded to 1.3Mtpa to compensate for a declining grade-profile and in 2012 AngloGold Ashanti acquired the 50% stake that belonged to the Kinross Group.
<b>Legal aspects and tenure</b>	<p>Serra Grande has interests or agreements over 61,500ha in the Crixás greenstone belt through a series of ANM mining leases and exploration permits. The mining concessions include:</p> <ul style="list-style-type: none"> <li>- 002.286/1935, covering an area of 4,206.88ha</li> <li>- 960.658/1987, covering an area of 1,946.89ha</li> <li>- 860.746/2005, covering an area of 88.28ha</li> <li>- 862.103/1994, covering an area of 125.41ha</li> <li>- 804.366/1975, covering an area of 196.05ha</li> </ul> <p>All concessions are currently active, in good legal and operational standing, and free of liabilities and/or major obligations. According to Brazilian mining law, the expiry of claims, licenses, and other tenure rights coincide with the depletion of Ore Reserve, cessation of mining operations and legally required post-operational activities (such as mine closure), provided all annual reports have been approved by the ANM. A new Brazilian mining code is currently under discussion. However, it is not anticipated to change the company's rights, which are already established.</p>
<b>Mining method</b>	The Serra Grande operation comprises three underground mines, namely Mina III (including orebody IV, V and Inga), Mina Nova (including Pequizão orebody) and Mina Palmeiras. The open pits mine the outcrop of Mina III Inferior and Structure IV zones, and Pequizão. Three mining methods are used underground: sub-level stoping (bottom-up and top-down), cut and fill, and room and pillar.
<b>Operational infrastructure</b>	Serra Grande operates a single tailings dam, which will support the LOM production with government environmental licensing in place. The water used in metallurgical processing comes from the underground mines. The state road GO-337 passes close to the operation providing access for logistics. The power for the mine is supplied and purchased in the open market.
<b>Mineral processing</b>	The metallurgical plant has the capacity of 1.5Mtpa, combining CIL and gravimetric circuits. The ore is blended to feed the crushing circuit with a capacity of 3,800tpd. There are two mills in operation, and 20 leaching tanks with a capacity of 4,800m <sup>3</sup> divided between preliming and cyanidation stages. Approximately 58% of gold is captured in the parallel gravity circuit. The rest of the gold is recovered by the CIL process to form the bullion that is sent to Nova Lima refining process.
<b>Risks</b>	<p>There is no material risk to the Mineral Resource and Ore Reserve at Serra Grande.</p> <p>An independent external Mineral Resource and Ore Reserve audit was undertaken in 2018 and found no fatal flaws in process or output.</p>

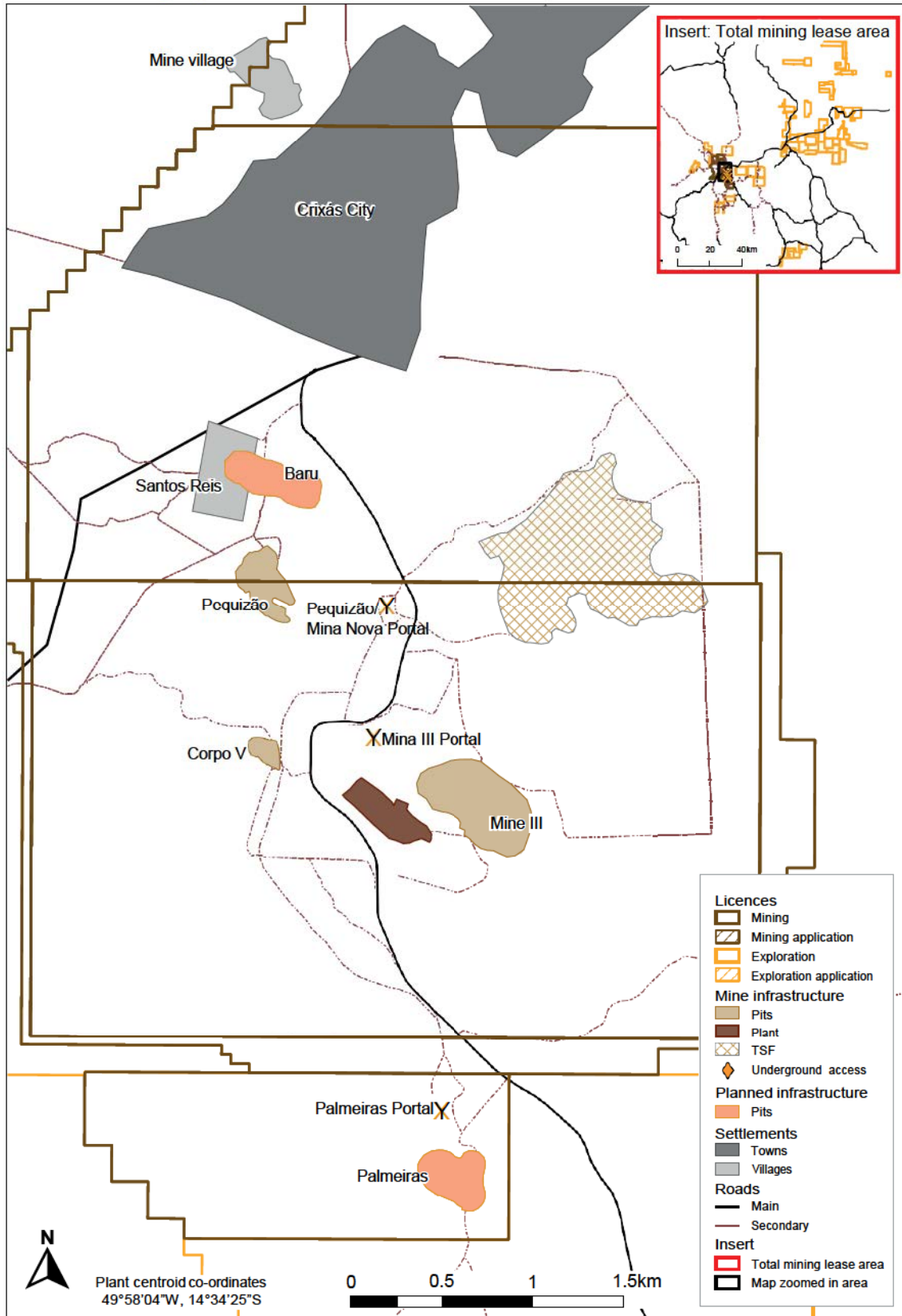
### Geology

The Serra Grande gold deposits are hosted in a typical greenstone belt sequence. Two main deformational events have been identified in the region. The first one is a thrusting event (D1 from west to east) developed with irregular thrust ramp geometry. This event was responsible for stacking and inverting the stratigraphic sequences.

The second event (D2) was the thrusting of the Santa Terezinha sequence over the Crixás greenstone belt, folding the rocks (F2) and generating the structural controls for gold mineralisation, generally parallel to the fold axis.



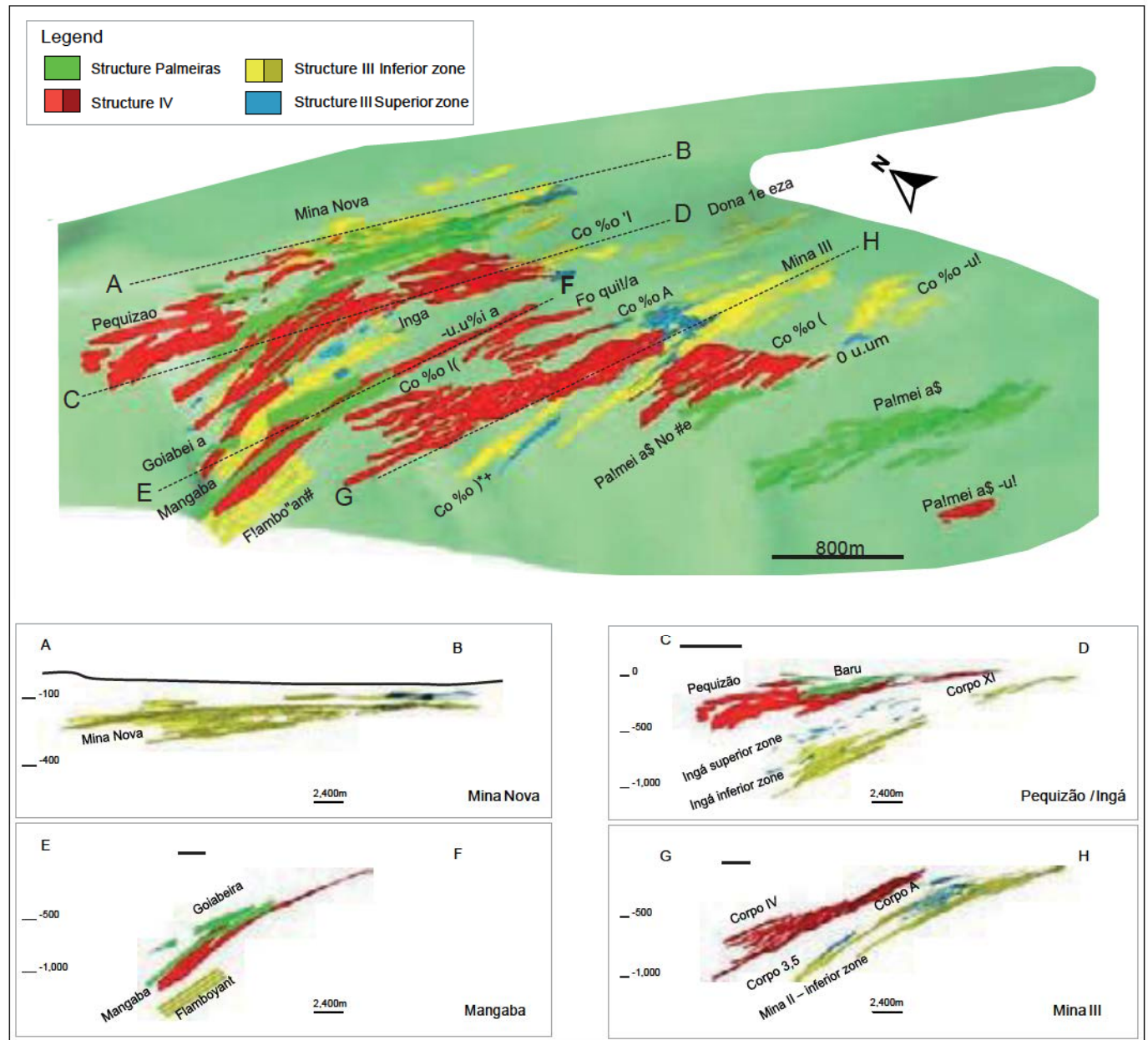
Map showing Serra Grande Mine infrastructure and licences, with the total mining lease area insert shown in the top right corner



# AGA MINERAÇÃO – SERRA GRANDE CONTINUED

## Americas

Plan view of the underground orebodies at Serra Grande (top), with sections across the individual orebodies (bottom four sections), elevation in metres below surface\*



\* Surface is approximately 400m AMSL

### Deposit type

The Serra Grande gold deposit is an orogenic mesothermal deposit, associated with the development of shear zones which belong to the Upper Archaean Crixás Group.

Gold mineralisation is associated with metasediments and metavolcanics from the Ribeirão das Antas and Rio Vermelho formations respectively. The Crixás greenstone belt is surrounded by granitic gneiss terrains from the Ribeirão das Antas and Caiamar complexes and metasedimentary rocks from the Santa Terezinha Group, which is part of the Goiás magmatic arc.

### Mineralisation style

The mine is located in the Crixás greenstone belt sequence, in the central portion of Brazil, and the main host rocks are metasedimentary sequences associated with metavolcanic basic rocks. Mineralisation at Serra Grande is associated with quartz veins and massive to disseminated sulphides in metasedimentary, metavolcanoclastic and metabasalt rocks, with differing degrees of hydrothermal alteration developed over orogenic stacked thrust layers (duplexes).



Two main deformation events control the placement of mineralisation at MSG. The first one is the principal thrust event (east over west, called D1) which develops an irregular thrust ramp geometry with stacked and inverted the stratigraphic sequence. The second event (D2) was the Santa Terezinha sequence (magmatic arc) thrusting over Crixás greenstone belt, folding the rocks (F2) and generating structures that control the gold mineralisation, generally parallel to the fold axis.

### Mineralisation characteristics

Geometry of the mineralised deposits is typically complex with pinch and swell, and folded and boudinage shapes, dipping between 10 and 25° with greatest continuity along northwest plunging structures (azimuth 290°).

The mineralisation has been split into four main domains called structures – Structure II, III, IV and Palmeiras. It occurs as stacked lenses, generally concentrated in the same high deformation positions (with folds and disruptions) in the structures.

In Structure III, the mineralisation is located in quartz veins that are hosted in carbonaceous schists, where gold grades of up to 8g/t can be found. Mina III (inferior zone) and Inga are typical of this. This structure is also associated with massive and disseminated sulphides (mainly pyrrhotite and arsenopyrite) that occur in a sequence of hydrothermally-altered schists, commonly

named superior zones. Other mineralisation includes arsenopyrite associated with quartz as veinlets in carbonaceous metapelite.

In Structure IV, the mineralisation comprises quartz veinlets and disseminated sulphide (pyrrhotite) hosted in graphite schists at Pequizaõ. The mineralised zones are hosted in sericite and chlorite schists with massive and disseminated sulphide concentrated in folded zones. The ore shoots plunge to the northwest and dips vary between 6 and 35°. The Palmeiras structure is associated with hydrothermal alteration of metabasalts, with sericite, chlorite, carbonate and massive sulphides (pyrrhotite).

### Exploration

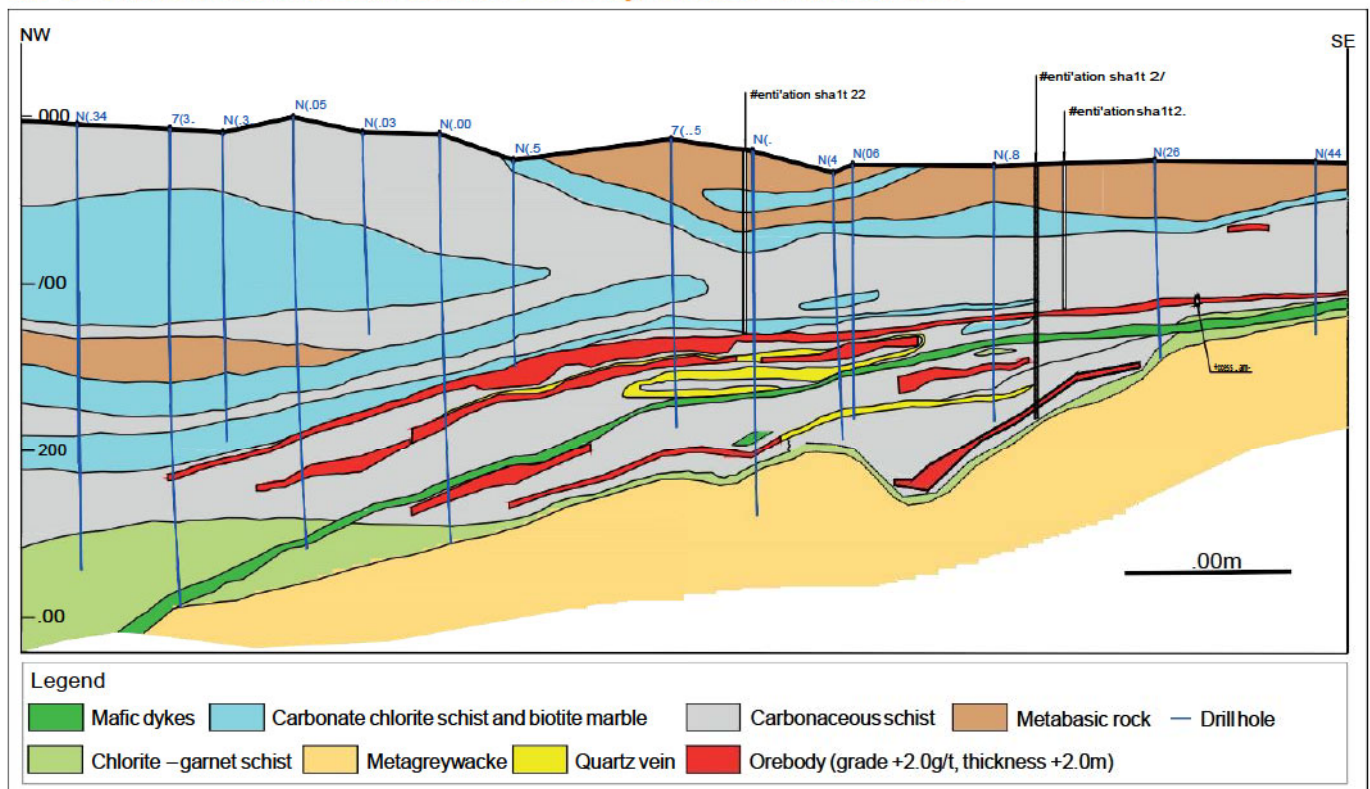
In 2019, 283Koz of Mineral Resource additions, at an average cost of US\$24/oz, occurred through drilling of 63,277m of DD.

Two new discoveries were made: Pitanga orebody hosted in graphitic schists at structure III close to Mina Nova Mine and Palmeiras South 3.5 orebody hosted in dolomites on structure 3.5. Re-interpretation of existing orebodies was done for Corpo IV, Corpo V and Limoeiro which resulted in an increase in ounces.

Target generation was done looking for shallow opportunities and using S2 stacking behavior to find new potential areas to test on 2020.

The 2019 Mineral Resource addition resulted from drilling to a grid of 100 x 50m which delivered primarily Inferred Mineral Resource.

### NW-SE Schematic section of the Mina Nova orebody, elevation in metres AMSL





# AGA MINERAÇÃO – SERRA GRANDE CONTINUED

## Americas



### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	10 x 10, 20 x 10	✓	✓	✓	✓	✓
Indicated	25 x 25, 40 x 20, 40 x 40, 50 x 20	✓	✓	✓	✓	–
Inferred	50 x 100, 100 x 50	✓	–	–	–	–
Grade/ore control	2 x 2, 10 x 10	–	✓	✓	✓	–

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Mina Nova	Measured	1.67	2.89	4.84	0.16
	Indicated	1.45	2.36	3.43	0.11
	Inferred	1.54	2.78	4.28	0.14
	<b>Total</b>	<b>4.66</b>	<b>2.69</b>	<b>12.54</b>	<b>0.40</b>
Mangaba	Measured	–	–	–	–
	Indicated	0.56	3.97	2.23	0.07
	Inferred	1.62	3.49	5.64	0.18
	<b>Total</b>	<b>2.18</b>	<b>3.61</b>	<b>7.88</b>	<b>0.25</b>
Mina III	Measured	2.35	4.22	9.92	0.32
	Indicated	2.22	3.51	7.80	0.25
	Inferred	3.92	3.24	12.72	0.41
	<b>Total</b>	<b>8.50</b>	<b>3.58</b>	<b>30.43</b>	<b>0.98</b>

### Inclusive Mineral Resource *continued*

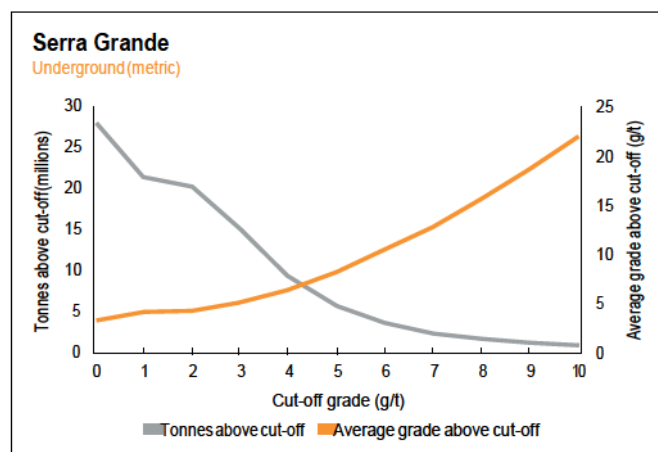
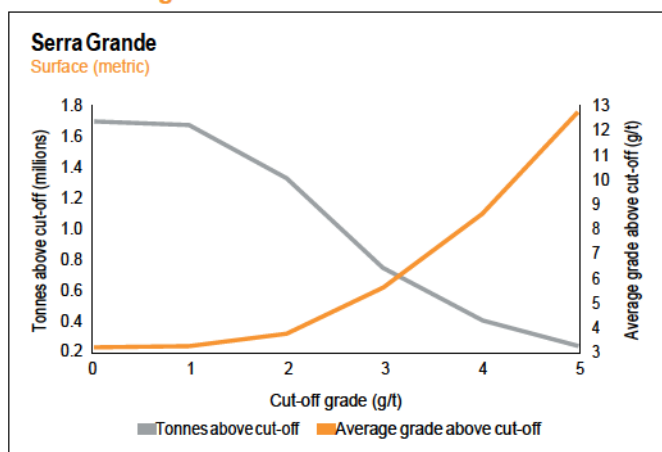
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Palmeiras	Measured	0.28	2.99	0.84	0.03
	Indicated	0.43	2.96	1.28	0.04
	Inferred	0.79	2.68	2.11	0.07
	<b>Total</b>	<b>1.50</b>	<b>2.82</b>	<b>4.23</b>	<b>0.14</b>
Palmeiras Sul	Measured	–	–	–	–
	Indicated	0.08	4.80	0.40	0.01
	Inferred	0.44	6.30	2.74	0.09
	<b>Total</b>	<b>0.52</b>	<b>6.06</b>	<b>3.14</b>	<b>0.10</b>
Pequizão	Measured	0.73	2.85	2.09	0.07
	Indicated	2.01	2.50	5.02	0.16
	Inferred	2.63	2.57	6.76	0.22
	<b>Total</b>	<b>5.37</b>	<b>2.58</b>	<b>13.87</b>	<b>0.45</b>
Cajueiro	Measured	–	–	–	–
	Indicated	–	–	–	–
	Inferred	1.21	2.69	3.25	0.10
	<b>Total</b>	<b>1.21</b>	<b>2.69</b>	<b>3.25</b>	<b>0.10</b>
Inga	Measured	0.54	4.69	2.53	0.08
	Indicated	1.70	4.34	7.37	0.24
	Inferred	2.07	4.44	9.19	0.30
	<b>Total</b>	<b>4.31</b>	<b>4.43</b>	<b>19.09</b>	<b>0.61</b>
Open pit	Measured	1.21	3.35	4.06	0.13
	Indicated	0.37	3.00	1.11	0.04
	Inferred	0.12	2.96	0.36	0.01
	<b>Total</b>	<b>1.70</b>	<b>3.25</b>	<b>5.53</b>	<b>0.18</b>
Stockpiles	Measured	0.01	2.00	0.02	0.00
	Indicated	–	–	–	–
	Inferred	–	–	–	–
	<b>Total</b>	<b>0.01</b>	<b>2.00</b>	<b>0.02</b>	<b>0.00</b>
Serra Grande	<b>Total</b>	<b>29.96</b>	<b>3.34</b>	<b>99.98</b>	<b>3.21</b>

### Estimation

Grade estimation is performed by ordinary kriging using diamond, RC and channel samples from the Serra Grande database. All search distances are based on variographic studies

for each orebody/structure. Classification is done through a combination of conditional simulation and sample spacing studies.

### Grade tonnage curves



# AGA MINERAÇÃO – SERRA GRANDE CONTINUED

## Americas

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Serra Grande	Measured	4.96	3.81	18.91	0.61
	Indicated	5.22	3.24	16.90	0.54
	Inferred	13.66	3.28	44.73	1.44
	<b>Total</b>	<b>23.84</b>	<b>3.38</b>	<b>80.55</b>	<b>2.59</b>

The exclusive Mineral Resource consists of the near mine exclusive Mineral Resource and that from the Cajueiro deposit, which is located 10km from the Serra Grande site. At Serra Grande the exclusive Mineral Resource consists of:

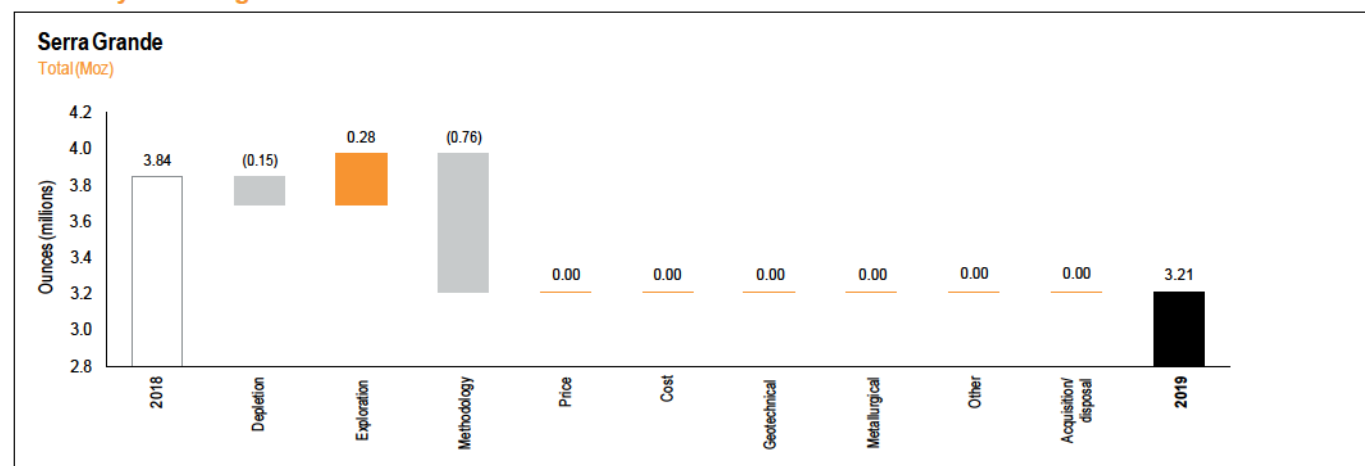
- Inferred Mineral Resource within the operating mines, partially upgraded through infill drilling guided by the production plan
- That portion of the Mineral Resource that is not currently economically feasible at the Ore Reserve price
- That portion of the Mineral Resource that requires economic studies

### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Serra Grande	Measured	2.44	3.16	7.73	0.25
	Indicated	2.68	3.31	8.86	0.28
	Inferred	9.44	3.60	33.94	1.09
	<b>Total</b>	<b>14.56</b>	<b>3.47</b>	<b>50.53</b>	<b>1.62</b>

80% of Inferred Mineral Resource is below infrastructure. In addition, some Indicated and Measured Mineral Resource from Inga, Palmeiras, Pequizão and Mina III orebodies are also below infrastructure.

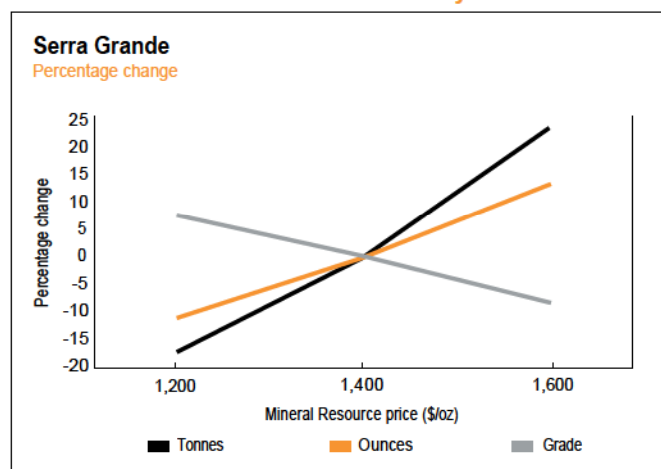
### Year-on-year changes in Mineral Resource



Changes are mainly due to depletions offset by exploration additions at Mangaba, Palmeiras South 3.5 and Pitanga. The MSO method, used to constrain the underground Mineral Resource, reduced the Mineral Resource.



### Inclusive Mineral Resource sensitivity



The Mineral Resource at Serra Grande is very sensitive to changes in gold price. There is a 13% upside in ounces at a higher Mineral Resource price and 11% downside in ounces at a lower Mineral Resource price.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Mina Nova	Proved	0.34	2.64	0.89	0.03
	Probable	0.35	2.72	0.96	0.03
	<b>Total</b>	<b>0.69</b>	<b>2.68</b>	<b>1.85</b>	<b>0.06</b>
Mina III	Proved	0.40	3.70	1.49	0.05
	Probable	0.31	2.82	0.86	0.03
	<b>Total</b>	<b>0.71</b>	<b>3.32</b>	<b>2.35</b>	<b>0.08</b>
Palmeiras	Proved	0.02	3.30	0.07	0.00
	Probable	0.01	3.69	0.05	0.00
	<b>Total</b>	<b>0.04</b>	<b>3.46</b>	<b>0.12</b>	<b>0.00</b>
Palmeiras Sul	Proved	-	-	-	-
	Probable	0.03	4.22	0.14	0.00
	<b>Total</b>	<b>0.03</b>	<b>4.22</b>	<b>0.14</b>	<b>0.00</b>
Pequizaõ	Proved	0.26	2.44	0.64	0.02
	Probable	0.30	2.89	0.86	0.03
	<b>Total</b>	<b>0.56</b>	<b>2.68</b>	<b>1.50</b>	<b>0.05</b>
Inga	Proved	0.13	2.68	0.34	0.01
	Probable	1.13	3.97	4.47	0.14
	<b>Total</b>	<b>1.25</b>	<b>3.84</b>	<b>4.82</b>	<b>0.15</b>
Open pit	Proved	0.39	2.41	0.95	0.03
	Probable	0.42	2.33	0.97	0.03
	<b>Total</b>	<b>0.81</b>	<b>2.37</b>	<b>1.92</b>	<b>0.06</b>
Total stockpiles	Proved	0.01	2.00	0.02	0.00
	Probable	-	-	-	-
	<b>Total</b>	<b>0.01</b>	<b>2.00</b>	<b>0.02</b>	<b>0.00</b>
Serra Grande	<b>Total</b>	<b>4.10</b>	<b>3.10</b>	<b>12.71</b>	<b>0.41</b>

#### Estimation

Serra Grande Ore Reserve is estimated using the Mineral Resource and by applying modifying factors based on historic performance. The gold price, projected operational performance and costs, as well as metallurgical recoveries, are taken into consideration in determining the Ore Reserve. Mining parameters such as the mining method, minimum mining width, MCF, dilution and recovery are all applied in the process.

# AGA MINERAÇÃO – SERRA GRANDE CONTINUED

## Americas

### Ore Reserve modifying factors

as at 31 December 2019	Gold price US\$/oz	Exchange rate US\$/BRL	Cut-off grade g/t Au	Stoping width cm	Dilution %	Dilution g/t	MRF % (based on tonnes)	MCF %	MetRF %
Mina Nova	1,100	3.85	1.77	300.0	21.0	0.0	86.0	95.0	93.3
Mina III	1,100	3.85	1.77	180.0	21.0	0.0	86.0	95.0	94.6
Palmeiras	1,100	3.85	1.77	400.0	21.0	0.0	86.0	95.0	94.8
Palmeiras Sul	1,100	3.85	1.77	500.0	21.0	0.0	86.0	95.0	95.7
Pequizão	1,100	3.85	1.77	300.0	21.0	0.0	86.0	95.0	93.3
Inga	1,100	3.85	1.77	400.0	21.0	0.0	86.0	95.0	95.3
Open pit	1,100	3.85	0.92	500.0	10.0	0.0	90.0	95.0	92.4
Total stockpiles	1,100	3.85	0.60	–	–	–	–	–	60.0

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Mina Nova	0.52	3.11	1.63	0.05
Mina III	1.29	3.78	4.88	0.16
Palmeiras	0.15	3.31	0.50	0.02
Palmeiras Sul	0.50	3.77	1.88	0.06
Pequizão	0.82	2.37	1.94	0.06
Inga	0.35	4.99	1.77	0.06
Open pit	0.10	2.73	0.27	0.01
Total	3.74	3.44	12.87	0.41

These figures represent Inferred Mineral Resource within the operational business plan. This represents 44% of the business plan for the first five years. No Inferred Mineral Resource is considered in Ore Reserve reporting.



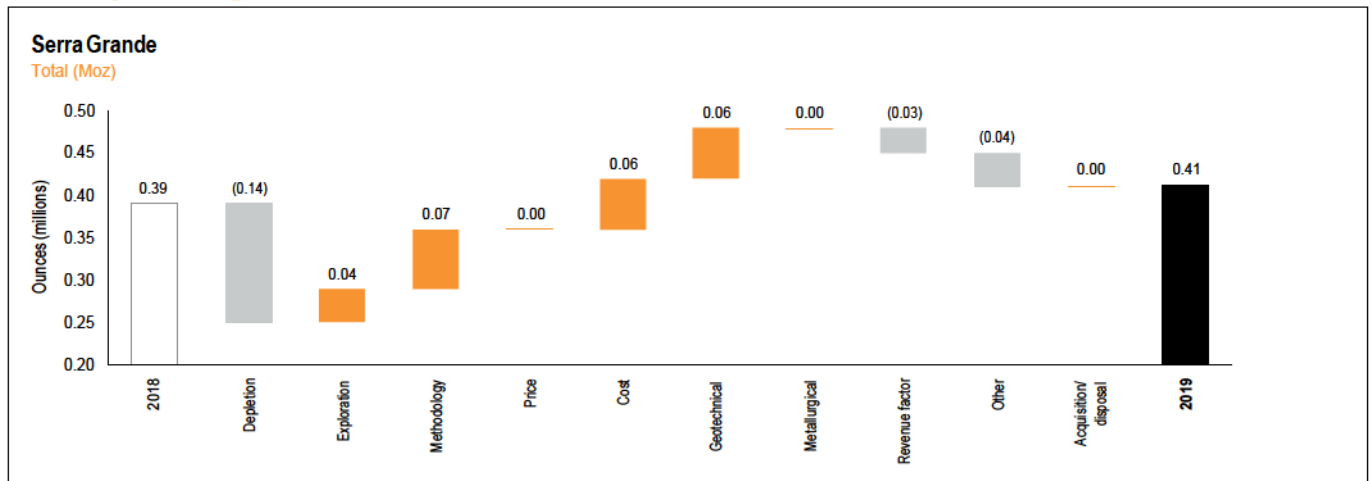
Visible gold at Mina III, Serra Grande

### Ore Reserve below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Serra Grande	Proved	0.29	2.28	0.65	0.02
	Probable	1.69	3.59	6.07	0.20
	<b>Total</b>	<b>1.98</b>	<b>3.40</b>	<b>6.73</b>	<b>0.22</b>

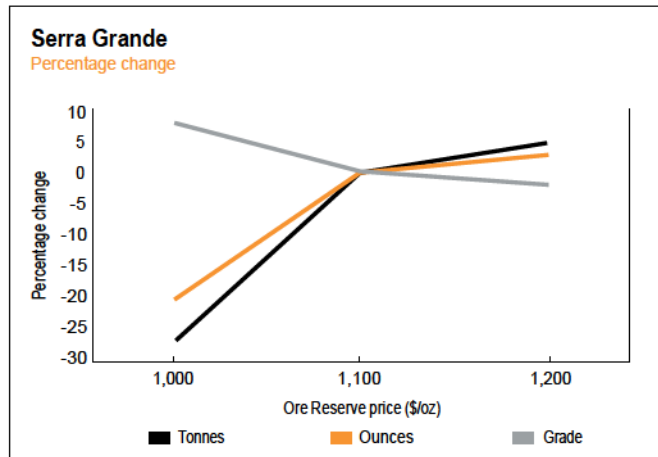
The Ore Reserve below infrastructure is the Ore Reserve below the main decline and inter-levels.

### Year-on-year changes in Ore Reserve



There is a year-on-year increase in the Ore Reserve. The main changes were due to depletions offset by exploration, lower cost, model changes and geotechnical changes.

### Ore Reserve sensitivity



The Serra Grande Ore Reserve is highly sensitive to a reduction in gold price. There is a 3% upside in ounces at a higher Ore Reserve price and 21% downside in ounces at a lower Ore Reserve price.

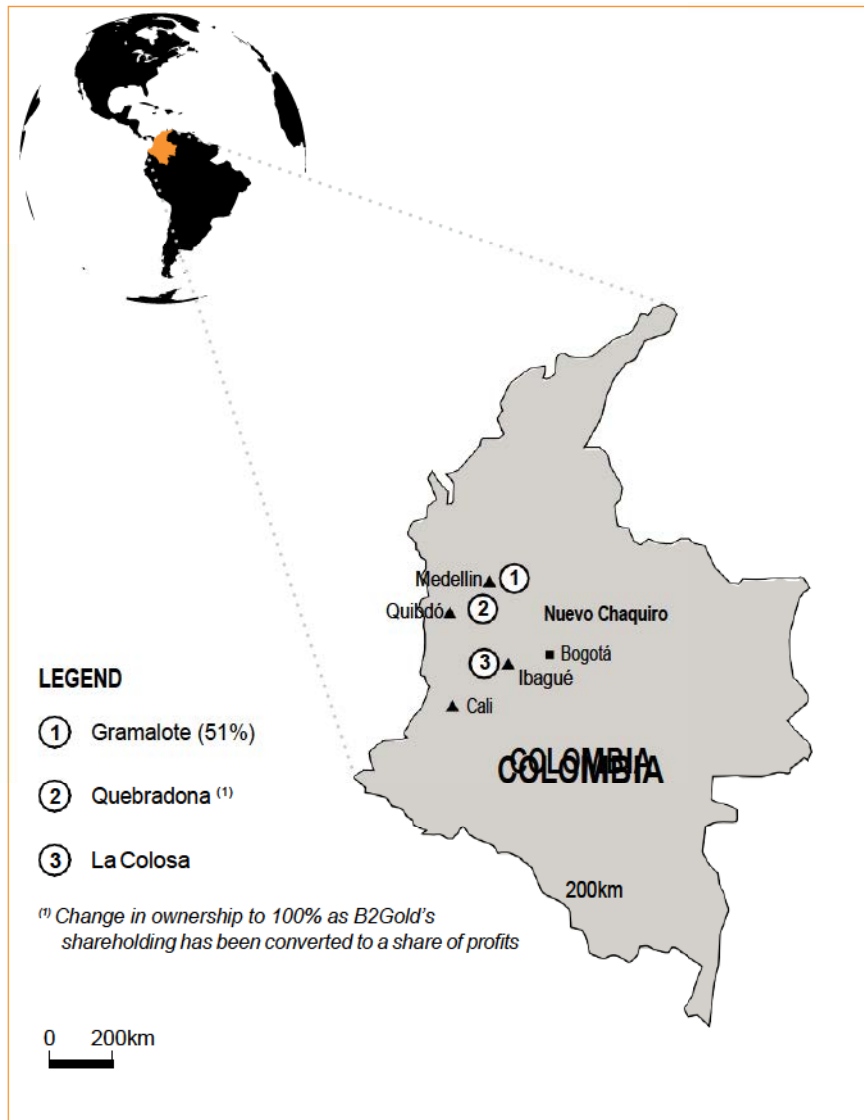
### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Marcelo Campos	MAusIMM	328 667	14 years	BA (Geology), MSc
Ore Reserve	Paulo Belo	FAusIMM	333 747	6 years	BSc Eng (Mining)



# COLOMBIA

## Americas



Colombia has three greenfields projects: La Colosa, Quebradona and Gramalote.

We are currently responsible for the management of the Gramalote JV (AngloGold Ashanti, 51% and B2Gold, 49%). The companies have agreed that B2Gold will sole fund the next \$13.9 million of expenditures on the Gramalote Project following which B2Gold will hold a 50% ownership interest in the JV. In the interim B2Gold has assumed management of the JV.

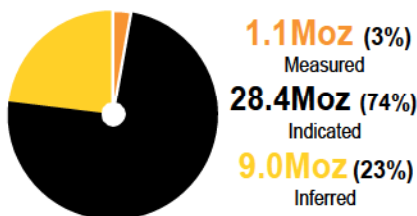
Nuevo Chaquiro, wholly owned by AngloGold Ashanti, is a significant copper-gold porphyry located within the Quebradona project. B2Gold is not participating in the exploration expenditure and its interest in the project has been converted to a profit share. The Quebradona project is situated in the Middle C uca region of Colombia, in the Department of Antioquia, 60km southwest of Medellin.

The wholly owned La Colosa project is currently under *force majeure* until the necessary environmental permits are issued.

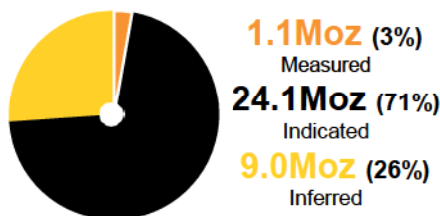
As at December 2019, the gold Mineral Resource (inclusive of Ore Reserve) for Colombia was 38.5Moz (2018: 37.1Moz) and Ore Reserve was 4.3Moz (2018: 4.0Moz). The copper Mineral Resource for Colombia was 9,677Mlb (2018: 7,954Mlb) and Ore Reserve was 3,068Mlb (2018: 2,769Mlb).

### GOLD

#### Inclusive Mineral Resource

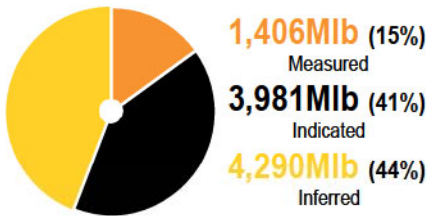
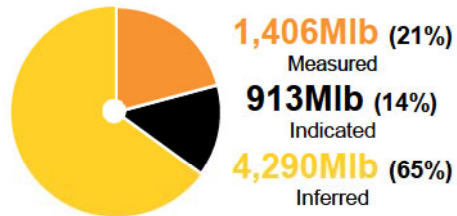



#### Exclusive Mineral Resource



#### Ore Reserve



**COPPER****Inclusive Mineral Resource****Exclusive Mineral Resource****Ore Reserve**

 Geologist and field assistants organising daily activities



# GRAMALOTE

## Americas

### Introduction

<b>Property description</b>	<p>Gramalote is a JV between AngloGold Ashanti (51%) and B2Gold (49%), with AngloGold Ashanti being the manager, through the operating company Gramalote Colombia Limitada. The companies have agreed that B2Gold will sole fund the next \$13.9 million of expenditures on the Gramalote Project following which B2Gold will hold a 50% ownership interest in the JV. In the interim B2Gold has assumed management of the JV.</p> <p>The project's Mineral Resource comprises ounces from three orebodies, namely Gramalote Central, Monjas and Trinidad.</p>
<b>Location</b>	<p>The Gramalote property is located near the towns of Providencia and San Jose del Nus within the municipality of San Roque, northwest Department of Antioquia. It is approximately 230km northwest of the Colombian capital of Bogota and 124km northeast of Medellin which is the regional capital of the Antioquia Department.</p>
<b>History</b>	<p>The region encompassing Gramalote has a long history of artisanal gold mining. Gramalote itself has had small scale artisanal mining for several decades prior to exploration work and the discovery by AngloGold Ashanti. Development of the Gramalote project commenced with a scoping study in 2009. A number of studies followed, leading to submission of a PFS in late 2013 which did not meet investment hurdles.</p> <p>From 2014 to 2017, intensive work was undertaken by all technical disciplines to identify ways to improve the project economics. The main changes were an improved orebody model, grade streaming to increase the feed grade in the early years and early treatment of oxide ore that overlies the main sulphide Mineral Resource. An enhanced PFS report was completed in September 2017, which supported the reporting of a maiden Ore Reserve. In 2019, further geological refinement improved the project economics. The project has now progressed to FS stage.</p>
<b>Legal aspects and tenure</b>	<p>Gramalote comprises one integrated exploitation concession and one exploration concession which was granted in June 2019. The first, the 14292 concession totalling 8,720.71ha, expires on 3 April 2043 and contains the Gramalote and Monjas anomalies. The second is the 4894 concession which is 2,292.81ha and hosts the Trinidad anomaly. This concession expires in June 2021 but can be extended by 11 years if required.</p> <p>In 2016, the project received its environmental and construction permits to operate for the LOM.</p> <p>According to Colombian mining law the exploration phase begins as soon as the concession contract is registered in the National Mining Registry. The total period for the concession contract (exploration, installation and construction, and exploitation) is 30 years, which may be renewed for an additional 20-year period. Under Colombian mining law, producing mines are subject to a federal royalty of 4% on 80% of the value of gold and silver production. Thus Gramalote's net royalty is 3.2% on gold and silver production.</p>
<b>Mining method</b>	<p>Gramalote is surface low-grade gold deposit comprising three main deposits. The PFS concluded that the project is suitable to be operated as a conventional open pit, employing 520t class shovels and 228t trucks, with a strip ratio of 2.51 and an average mining rate of 47Mtpa (max 60Mtpa). The LOM is estimated at 14 years (plus one year of pre-stripping).</p>
<b>Operational infrastructure</b>	<p>Currently the project has only field infrastructure that supports exploration and FS studies. Key infrastructure planned includes: TSF, waste rock facility, site water management, including a major creek diversion, roads and bridges, central workshop, offices and camp, as well as a metallurgical plant. Power is expected to be supplied to the Gramalote project from the national power grid.</p>
<b>Mineral processing</b>	<p>While the metallurgical design may change in the FS, the PFS design is as follows:</p> <ul style="list-style-type: none"> <li>- Processing by two parallel semi-autogenous grinding streams, one treating 11.3Mtpa of sulphide ore and the other 4.1Mtpa of oxide ore, switching to sulphide once the oxide is exhausted</li> <li>- Gold recovery post milling by flotation and concentrate leach in two separate circuits for sulphides and oxides</li> <li>- Conventional tailings deposition</li> </ul>



## Risks

The low grade Inferred Mineral Resource has low confidence and therefore represents a high risk part of the Mineral Resource due to the broad drill spacing. As a risk mitigation action, grade control test blocks were drilled to confirm short scale continuity, mineralisation geometry and geological contacts. In November 2019 a 40,000m drilling programme commenced across the anomalies to reduce risk and verify projected upside. This will be completed during 2020.

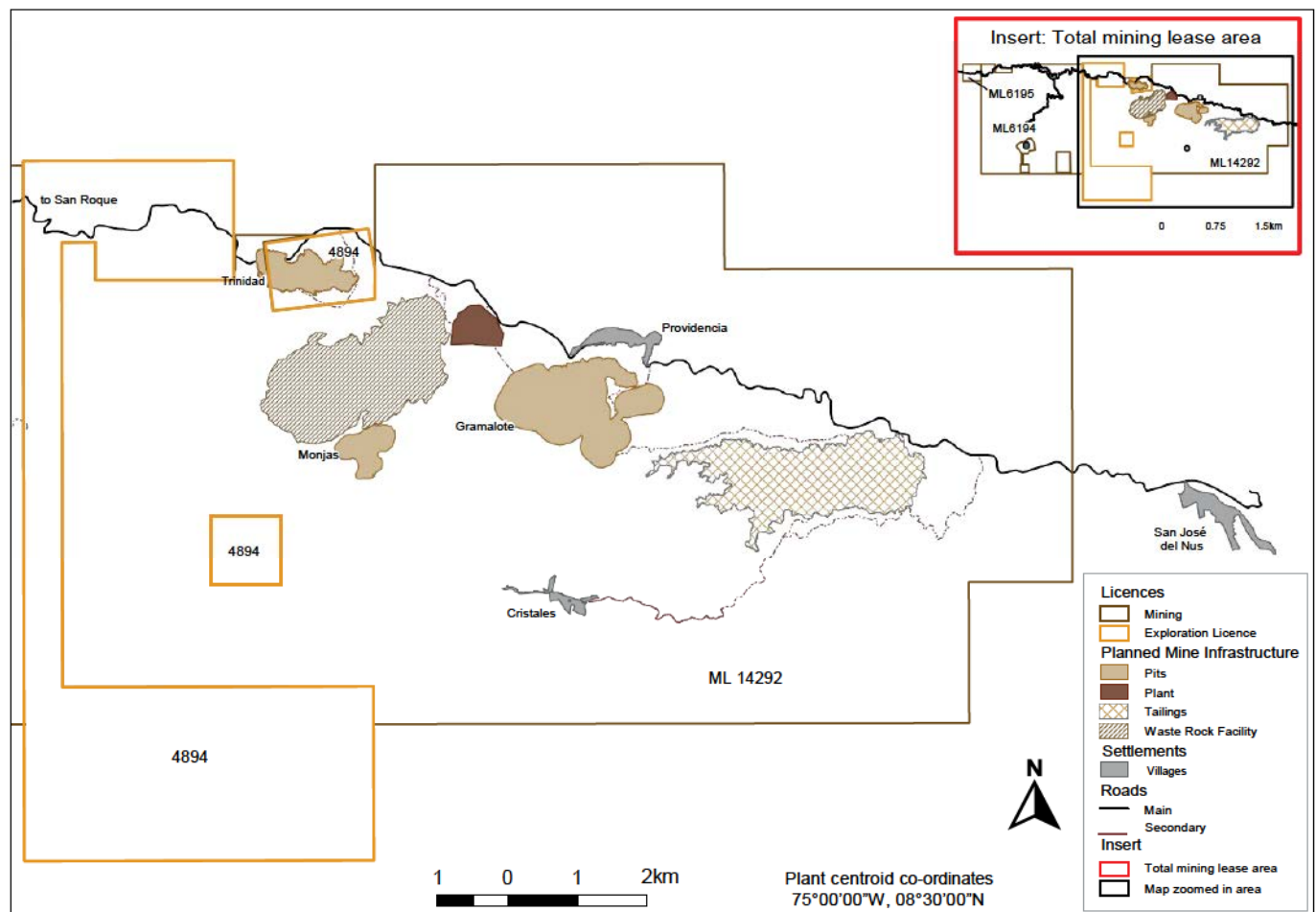
Poor digitising practices by the Colombian authorities of the 11 original licences that make up the main mining licence concession (14292), have created slithers of open ground that cross the Gramalote deposit. These have been claimed by a third party (Zonte Metals).

While AngloGold Ashanti believe that Zonte does not have a valid claim, Zonte is proceeding with legal action against the Secretaria de Minas (Secretary of Mines) for the Department of Antioquia, for not titling an exploration application for the open ground.

A number of Ore Reserve risks have been recognised, all of which have detailed risk mitigation strategies in place, including:

- Artisanal miners within the project footprint area that could be formalised at arms length using NGOs and Government agencies that guide, fund and regulate their activities
- The 2018 baseline study identified 271 social economic units that may have to be relocated and resettled
- The land acquisition process has been successful. A total of ~3,132ha has been acquired (63.6%), 567ha in promise of sale, and 635ha under special acquisition process. The total land pending to be acquired amounts ~590ha (12%).

Map showing Gramalote project planned infrastructure and licenses, with the total mining lease area insert shown in the top right corner



# GRAMALOTE CONTINUED

## Americas

### Geology

The Gramalote property is located in the northern portion of Colombia's Central Cordillera. The terrain is completely underlain by medium to coarse-grained biotite  $\pm$  hornblende  $\pm$  tonalite and granodiorite of the Cretaceous Antioquia Batholith.

Drilling within an extensive mineral tenement block of some 11,000ha (exclusively retained under licence by the JV) identified three distinct mineral deposits: Gramalote Central, Trinidad, and Monjas West. These are all of similar mineralisation and alteration, with vertical to sub-vertical mineralised zones extending from tens of metres to over 200m, with variable lengths up to 1km and extending to depths of several hundreds of metres.

### Deposit type

Gramalote is a pluton-related, mesothermal gold deposit genetically related to the host intrusion. The alteration and mineralisation is structurally controlled, restricted to small halos along veins, sheeted veins and stockwork arrays with sulphide content being less than 5%. Observations indicate that the alteration of the host rock is directly related to fluids evolved from the cooling pluton resulting in pegmatites, aplites and K-feldspar alteration.

### Mineralisation style

The Gramalote deposit is an intrusive hosted, structurally controlled, quartz stockwork system. Mineralisation is controlled by northeast to southwest trending strike-slip shear zones, north-northwest to south-southeast trending extensional shear zones and dilational fractures. Gold mineralisation is associated with stockwork veining and in particular quartz with fine pyrite veins, quartz-carbonate veins, and quartz with coarse pyrite veins.

Alteration occurs as both broad zones and narrow selvages around veins. The intensity of the alteration is directly related to both the frequency of veins and their size. The wider the vein, the wider the alteration selvage, ranging from a few millimetres around isolated veinlets to tens of centimetres around thick veins. In zones of stockwork, or where several veins are close enough to merge their selvages, the alteration halo is wider. The potassic alteration event is associated with Type I and Type II veins and it is characterised by a selvage of K-feldspar with disseminated pyrite. The white-mica event is characterised by a less pervasive distribution than the potassic event and it is restricted to selvages of a few centimetres wide around the Type III veins (quartz  $\pm$  calcite  $\pm$  white mica  $\pm$  pyrite  $\pm$  chalcopyrite). It is not associated with wide veins, and it does not carry high gold grades.

Mineralisation is closely linked to alteration and is therefore structurally controlled. The mineralisation is vein hosted, either in sheeted veins or in local stockworks. Three stages of mineralisation are identified and associated with vein and alteration types:

- Quartz  $\pm$  calcite  $\pm$  pyrite is an assemblage of fine-grained quartz and calcite with very fine grained pyrite. This vein type generally does not contain gold.

- Quartz  $\pm$  pyrite  $\pm$  chalcopyrite  $\pm$  gold is the most important gold host, typically associated with K-feldspar (potassic) selvages where gold occurs within fractures in pyrite, along with chalcopyrite.
- Quartz  $\pm$  calcite  $\pm$  white mica selvages where veining is commonly barren but can show moderate gold grades (up to 20g/t).

### Mineralisation characteristics

Gold mineralisation is associated with three overprinting, texture destructive, alteration assemblages including potassic, quartz-sericite and sericite carbonate. Within these alteration zones, anomalous gold mineralisation is associated with three specific types of stockwork quartz veining. These include quartz veinlets with fine-grained pyrite, quartz carbonate veinlets and quartz veinlets with granular pyrite. The saprolite (oxide) and saprock (transition) portions of the deposit constitute a small percentage of the mineralisation. Saprolite thickness is variable from 5 to 30m with an average thickness of 15m.

Petrographic work indicates the gold occurs as five to 20 micron sized particles associated with fractures and inclusions within pyrite and cavities associated with sulphosalts (aikinite ( $\text{PbCuBiS}_3$ ), matildite ( $\text{AgBiS}_2$ )). The silver to gold ratio is approximately 1:1.

### Exploration

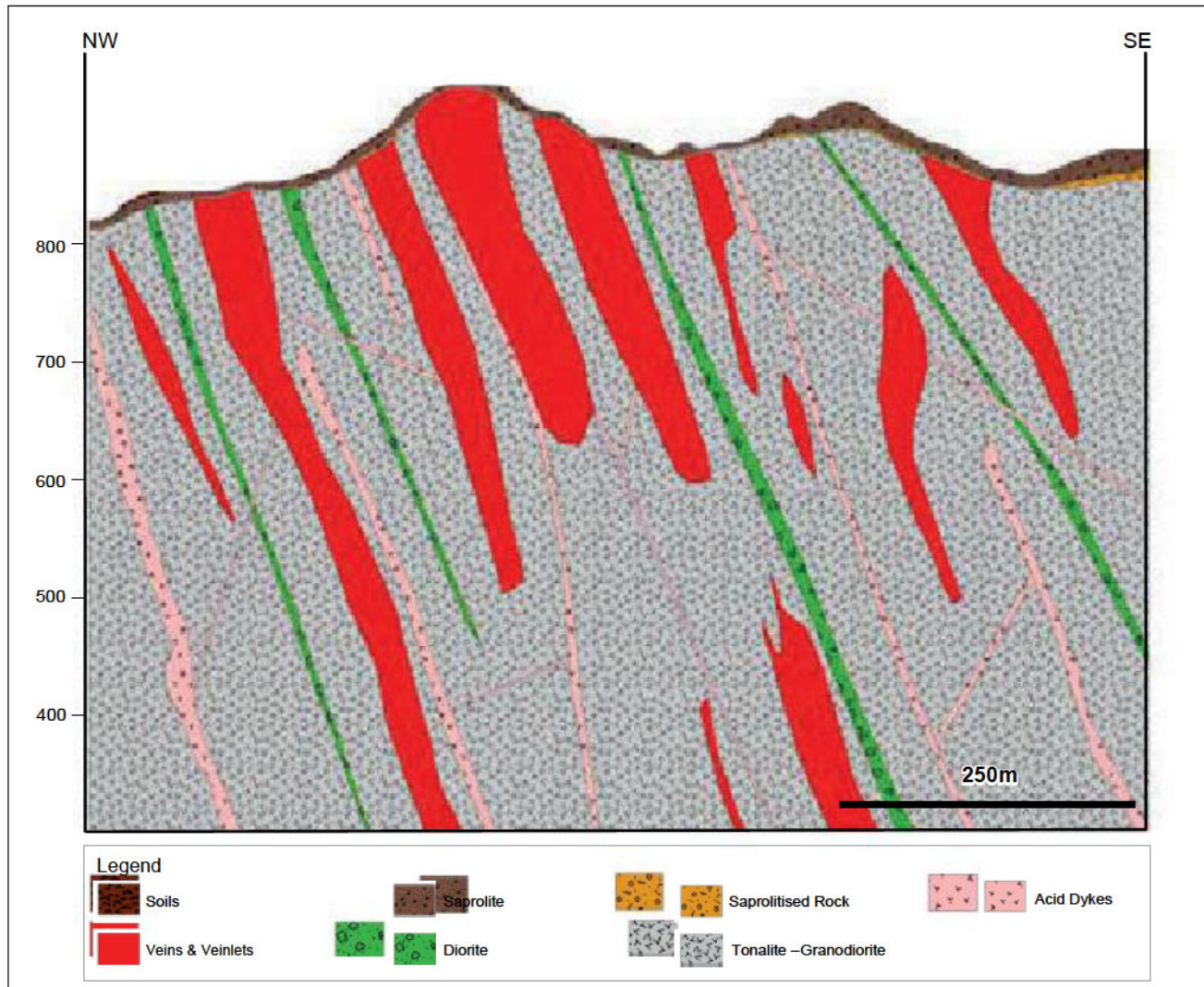
Exploration by AngloGold Ashanti between 2003 and 2007 comprised both regional exploration programmes as well as DD in the main Gramalote Central area. Surface mapping and rock and soil sampling identified an exploration target extending over an area of more than 1km<sup>2</sup> centered around Gramalote Ridge. This mineralisation is contained within numerous tens-of-metre sized, structurally-related corridors which commonly contain mineralisation exceeding 1g/t gold. Regional exploration programmes involving infill soil geochemistry, surface trenching, and mapping and sampling, were carried out on several targets adjacent to Gramalote Ridge.

Highlights from the exploration work to date on the Gramalote property include positive metallurgical test results with recoveries in excess of 90%, as well as encouraging drill results from Gramalote Central and the outside targets which indicate the potential for a larger Mineral Resource.

Exploration drilling has been carried out on six drill targets located within 4km of the current Gramalote Central Mineral Resource including Monjas West, Trinidad, Topacio, Monjas East, La Maria and El Limon, with the aim to add new Inferred Mineral Resource. All of these targets have similar geological, alteration and mineralisation characteristics to Gramalote Central. A total of 45,118m in 132 drill holes has been completed since October 2010 on the six satellite targets outside Gramalote Ridge. Results to date clearly indicate upside potential.



### NW-SE Geological cross-section through Gramalote Central pit, elevation in metres AMSL



Positive gold intersections have been returned in Monjas West and Trinidad, located 2km west-southwest along strike and 3km north-northwest of Gramalote Central Mineral Resource respectively and are therefore viewed as satellite deposits. A total of 3,489m of drilling in 211 drill holes has been completed in the saprolite (oxide ore) profile at Gramalote Central during 2015 and 2016. The objective of this drilling programme was to improve the definition of the low-grade saprolite Mineral Resource. As a result, the grade of the saprolite ore has been confirmed and the risk associated with the low core recovery reduced.

A total of 11,380m of sterilisation drilling was carried out from 2012 to 2017 with the intention of confirming the absence of potential mineralisation in areas where key infrastructure is located. Key locations sterilised are the tailings dam, waste dumps as well as La Maria and San Antonio plant site locations. No significant mineralisation was identified in these areas. In addition to this, an extensive RC drilling campaign was conducted to validate the UC

estimation technique and completed approximately 14,000m of RC drilling on Gramalote Hill (180 drill holes drilled at an average depth of ~80m). The drilling was done on three platforms of approximately 200 x 100m each, on a drilling pattern of 12.5 x 12.5m (spacing simulates a grade control block that might be used during the mine operation).

A 40,000m drilling programme for the Gramalote orebodies, of which 36,000m is planned for the main Gramalote orebody, commenced in 2019. This will be completed in 2020 and will include a Mineral Resource model update.

#### Projects

A successful PFS was completed in 2017, which supported the reporting of a maiden Ore Reserve. A SAMREC Table 1 was compiled in 2017 and can be found on the company's website. Additional optimisation studies were undertaken in 2019.



# GRAMALOTE CONTINUED

## Americas

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	-	-	-	-	-	-
Indicated	50 x 50		✓	-	-	-
Inferred	100 x 100	✓	-	-	-	✓
Grade/ore control	12.5 x 12.5	-	✓	-	-	-

The classification of the Mineral Resource was done by AngloGold Ashanti's internal 15% error with 90% confidence rule using conditional simulation.



### Inclusive Mineral Resource

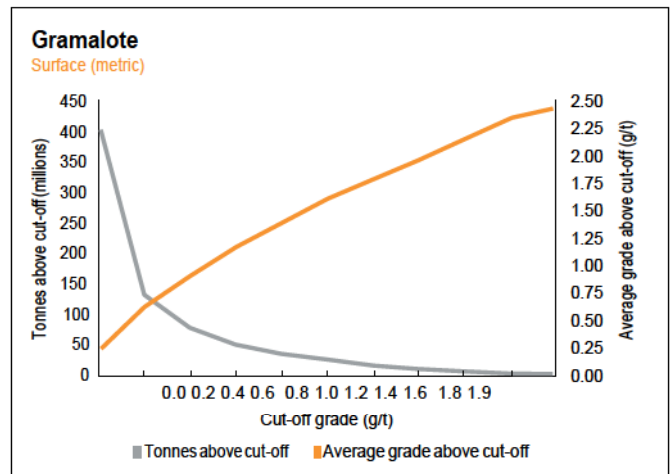
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Gramalote Central (oxide)	Measured	-	-	-	-
	Indicated	3.49	0.60	2.10	0.07
	Inferred	6.61	0.55	3.62	0.12
	<b>Total</b>	<b>10.09</b>	<b>0.57</b>	<b>5.71</b>	<b>0.18</b>
Trinidad (oxide)	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	9.17	0.55	5.01	0.16
	<b>Total</b>	<b>9.17</b>	<b>0.55</b>	<b>5.01</b>	<b>0.16</b>
Monjas West (oxide)	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	2.73	0.51	1.39	0.04
	<b>Total</b>	<b>2.73</b>	<b>0.51</b>	<b>1.39</b>	<b>0.04</b>
Gramalote Central (sulphide)	Measured	-	-	-	-
	Indicated	79.43	0.76	60.27	1.94
	Inferred	16.17	0.58	9.31	0.30
	<b>Total</b>	<b>95.60</b>	<b>0.73</b>	<b>69.58</b>	<b>2.24</b>
Trinidad (sulphide)	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	17.91	0.41	7.42	0.24
	<b>Total</b>	<b>17.91</b>	<b>0.41</b>	<b>7.42</b>	<b>0.24</b>
Monjas West (sulphide)	Measured	-	-	-	-
	Indicated	-	-	-	-
	Inferred	11.24	0.57	6.45	0.21
	<b>Total</b>	<b>11.24</b>	<b>0.57</b>	<b>6.45</b>	<b>0.21</b>
Gramalote	<b>Total</b>	<b>146.75</b>	<b>0.65</b>	<b>95.56</b>	<b>3.07</b>

### Estimation

For the 2017 PFS, results from approximately 145,000m of drilling (87,900m at Gramalote Central, 11,250m at the Trinidad area and 17,850m at Monjas West area) were used to support the estimation of the Mineral Resource. Mineral Resource modelling was performed using a geological model based on alteration, vein abundance and gold grade. Assay gold grades were composited to 2m down-hole intervals and outliers were capped based on the distribution observations using probability plots for each estimation domain. A geostatistical technique, LUC, was used to estimate block grades and quantify the effect of selective mining.

In 2019, an updated Mineral Resource model was generated for the main Gramalote orebody and this incorporated the new grade control information. The updated Mineral Resource was not incorporated as yet into the Mineral Resource, but used in the updated studies in 2019.

### Grade tonnage curve



### Exclusive Mineral Resource

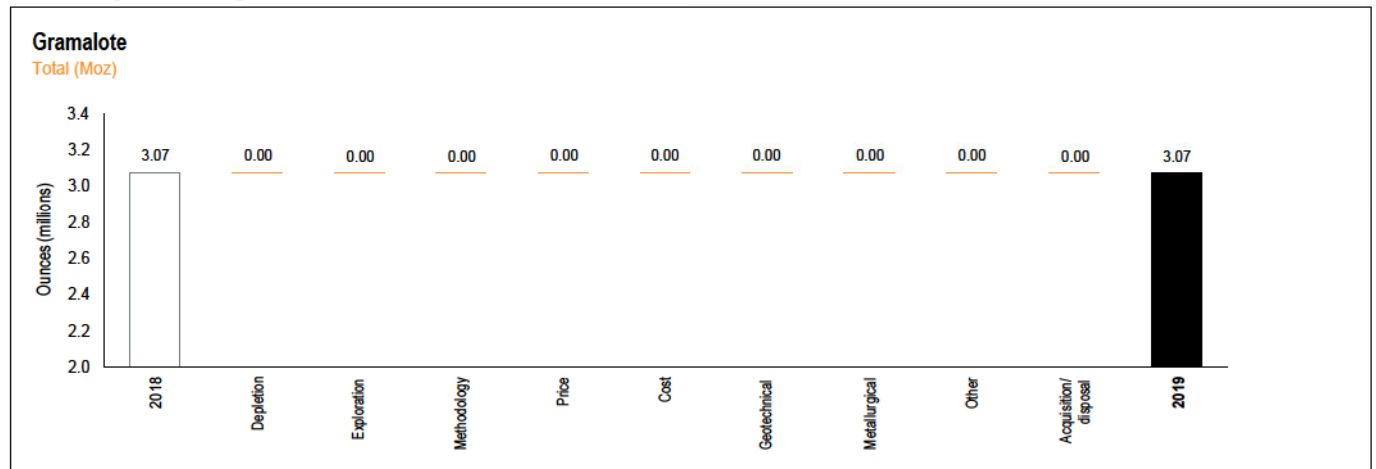
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Gramalote	Measured	-	-	-	-
	Indicated	19.21	0.40	7.69	0.25
	Inferred	63.84	0.52	33.20	1.07
	<b>Total</b>	<b>83.04</b>	<b>0.49</b>	<b>40.89</b>	<b>1.31</b>

The exclusive Mineral Resource includes the Gramalote Central, Trinidad and Monjas West Inferred Mineral Resource and a portion of the Indicated Mineral Resource not included in the Gramalote Central designed pit.

# GRAMALOTE CONTINUED

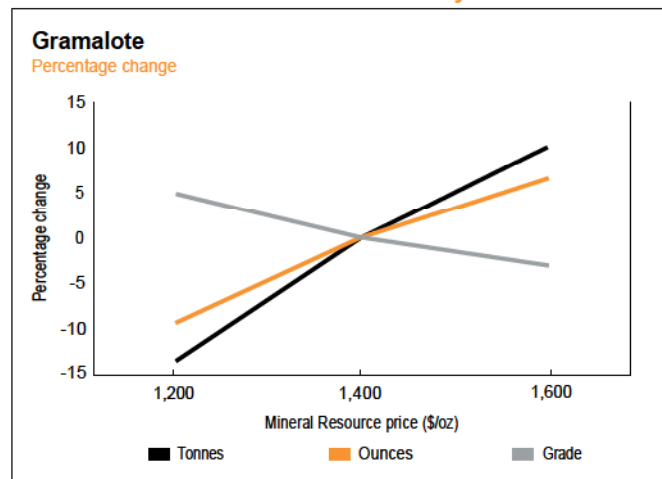
## Americas

### Year-on-year changes in Mineral Resource



There is no change in the year-on-year Mineral Resource.

### Inclusive Mineral Resource sensitivity



As a low grade deposit, Gramalote is very sensitive to a drop in gold price. There is a 7% upside in ounces at a higher Mineral Resource price and 9% downside in ounces at a lower Mineral Resource price.

### Ore Reserve

#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Gramalote Central (oxide)	Proved	-	-	-	-
	Probable	2.96	0.68	2.00	0.06
	<b>Total</b>	<b>2.96</b>	<b>0.68</b>	<b>2.00</b>	<b>0.06</b>
Gramalote Central (sulphide)	Proved	-	-	-	-
	Probable	60.74	0.87	52.67	1.69
	<b>Total</b>	<b>60.74</b>	<b>0.87</b>	<b>52.67</b>	<b>1.69</b>
<b>Gramalote</b>	<b>Total</b>	<b>63.71</b>	<b>0.86</b>	<b>54.67</b>	<b>1.76</b>

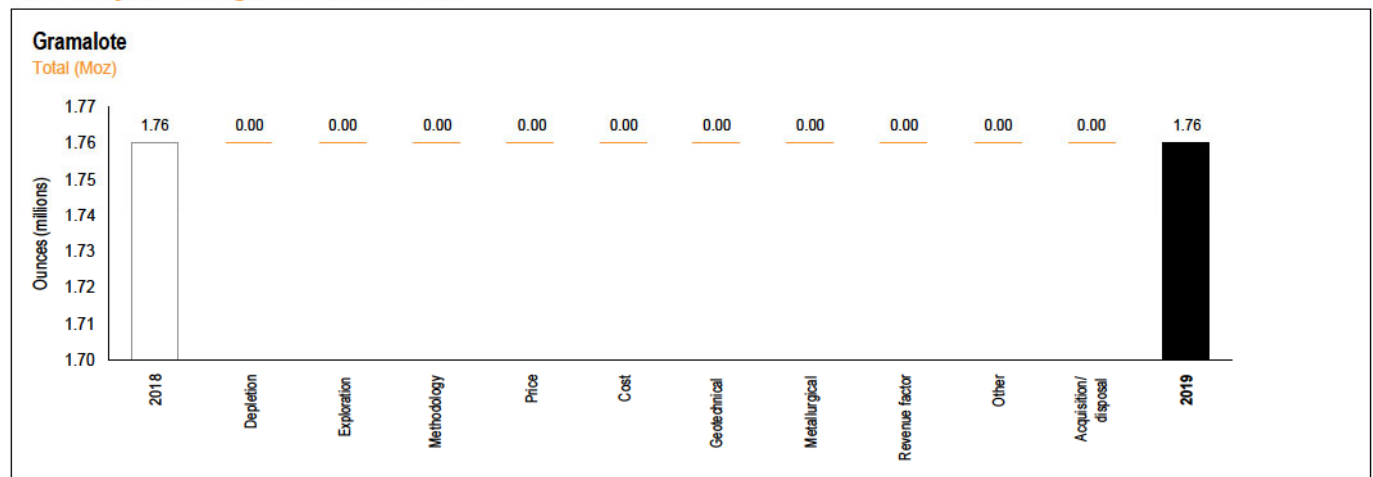
Only Gramalote Central is considered for the Ore Reserve statement.

### Estimation

The Gramalote pit was designed based on an optimisation that included all haul roads, waste dumps and pit. The design was scheduled and financially modelled to obtain the Ore Reserve.



## Year-on-year changes in Ore Reserve



There is no change in the Ore Reserve year-on-year.

## Ore Reserve modifying factors

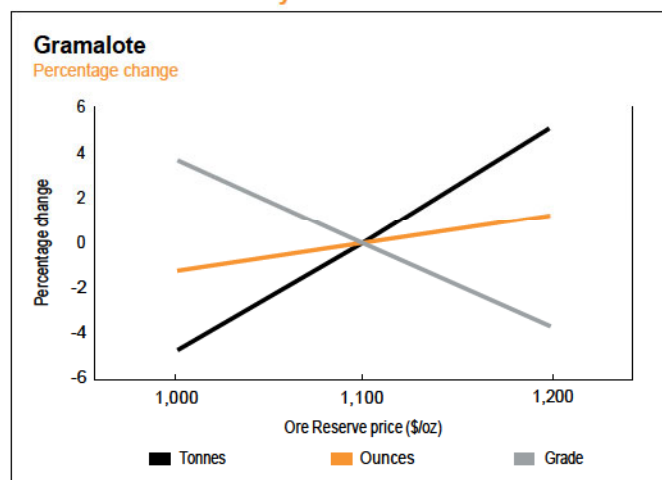
as at 31 December 2019	Gold price US\$/oz	Exchange rate US\$/COP	RMF % (based on tonnes)	RMF % (based on g/t)	MRF % (based on tonnes)	MRF % (based on g/t)	MCF %	MetRF %
Gramalote Central (oxide)	1,100	2,900	100.0	100.0	100.0	100.0	100.0	83.9
Gramalote Central (sulphide)	1,100	2,900	100.0	100.0	100.0	100.0	100.0	95.0

## Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Gramalote Central (oxide)	3.79	0.63	2.39	0.08
Gramalote Central (sulphide)	5.58	0.62	3.47	0.11
<b>Total</b>	<b>9.37</b>	<b>0.62</b>	<b>5.86</b>	<b>0.19</b>

With appropriate caution, a small portion of Inferred Mineral Resource is within the business plan but is not considered material. This accounts for 10% of the business plan.

## Ore Reserve sensitivity



Gramalote is insensitive to a change in the Ore Reserve gold price. There is a 1% upside in ounces at a higher Ore Reserve price and 1% downside in ounces at a lower Ore Reserve price.

## Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Claudio Devaux	MAusIMM	315 689	33 years	BSc Hons (Geology)
Ore Reserve	Marcelo Roldan	MAusIMM	324 958	23 years	BSc Hons (Mining Engineering)

# LA COLOSA

## Americas

### Introduction

<b>Property description</b>	The exploration project is wholly owned by AngloGold Ashanti. It is in its third year of <i>force majeure</i> and the project is on hold.
<b>Location</b>	The project is located 150km west of the Colombian capital city, Bogota, and 30km west of the major town of Ibague, which is the capital of the Tolima Department and the location of local government entities monitoring the project.
<b>History</b>	Mineralisation at La Colosa was discovered by AngloGold Ashanti's Colombian greenfields exploration team in 2006. Drilling commenced in 2007 and a conceptual study was completed in 2008.
<b>Legal aspects and tenure</b>	<p>The La Colosa exploration permits (integration of EIG-163, EIG-166, EIG-167, GLN-09261X, HEB-169 and GGF-151) have been consolidated so that the property now comprises of only one exploration permit, namely EIG-163 which totals 9,210ha. The combined lease is in its third year of exploration and it expires on 28 February 2037.</p> <p>Colombian mining law concerning duration of tenure states that the exploration phase begins as soon as the concession contract is registered in the National Mining Registry. The total period for the concession contract (exploration, installation, construction, and exploitation) is 30 years, which may be renewed for an additional 20-year period.</p>
<b>Mining method</b>	The project is still under development and a number of options were being investigated before <i>force majeure</i> was declared.
<b>Operational infrastructure</b>	Currently, the project has field infrastructure that supports access to the Mineral Resource with roads, accommodation, office and surface infrastructure for pre-logging and organisation of the drilling core. There is a core shed facility in the city of Ibague where geological and geometallurgical logging are performed. However, all work has stopped.
<b>Mineral processing</b>	The project is currently at an early stage however flotation of sulphide ore is being considered as a treatment option.
<b>Risks</b>	The La Colosa project is currently at an early stage and has identified a number of possible technical options all of which are capital intensive. The political risks associated with the mining industry in Colombia, specifically in the Tolima Department, must also be considered. The delineation of the Los Nevados Páramo by Resolution 1987 is considered a risk to the Mineral Resource and is currently being contested. This puts 13.99Moz of Mineral Resource at risk. The failure to grant environmental permits for site operations has hampered progress and it is the reason that <i>force majeure</i> was accepted by the government.

### Geology

#### Deposit type

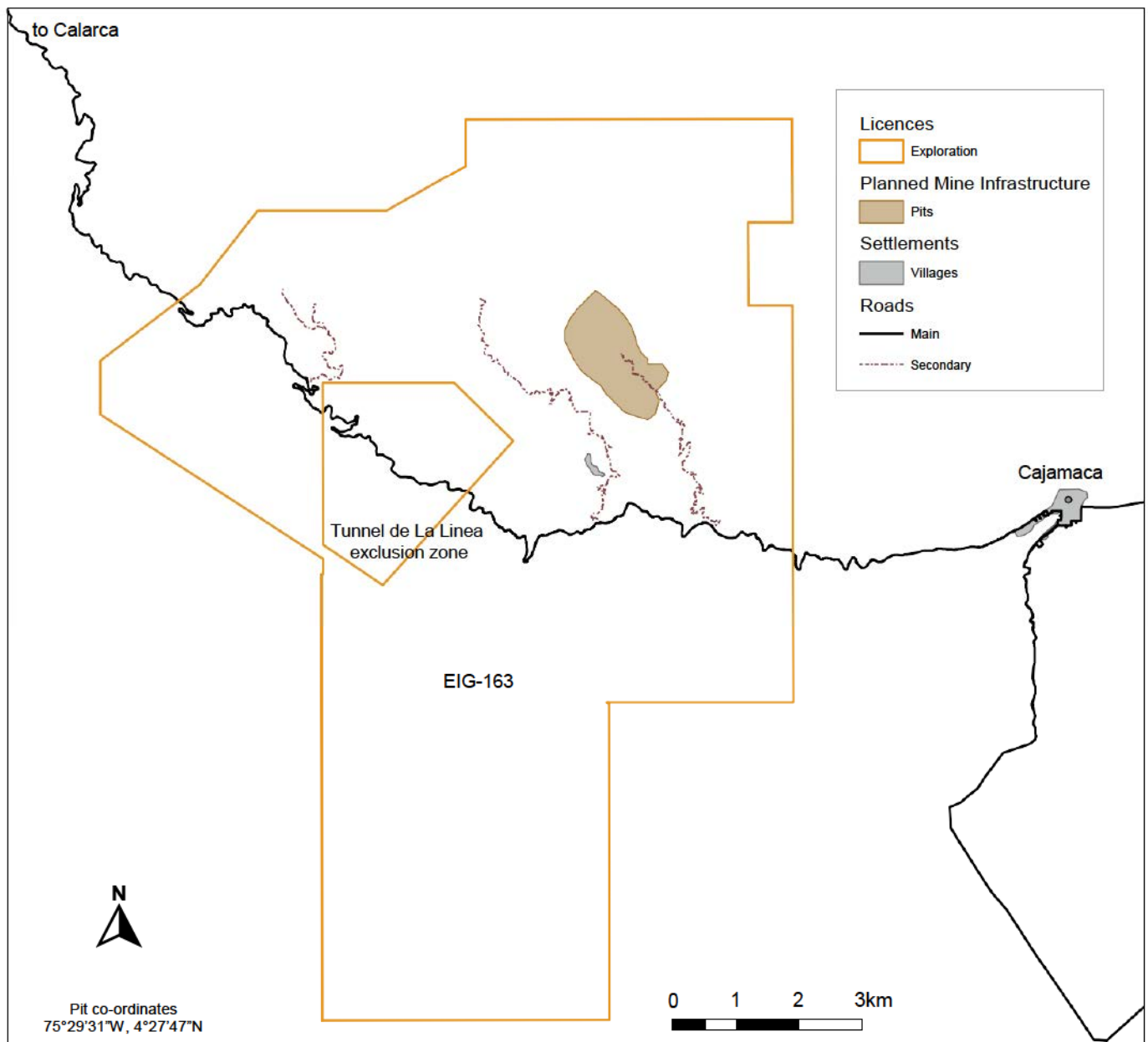
The La Colosa project is centered on a late Miocene (8.1Ma) multi-phase diorite porphyry gold complex intruded into reduced Paleozoic metasedimentary rocks. Although the porphyry system is generally copper-poor, a 0.1 to 0.2% copper anomaly associated with molybdenum (>150ppm) occurs laterally and at depth. The highest grade gold mineralisation is closely associated with a suite of early porphyry intrusions/breccias with potassic, sodic-calcic alteration, high intensity of gold sulphide veinlets, and sulphur values generally exceeding 2.5%. The multiphase diorite porphyry gold complex can be divided into three phases (early, intermineral and late) and is elliptical in shape with a known maximum north-south extent of at least 1,200m. The complex strikes N10W with a dip of 75 east-northeast, with the contacts to the surrounding country rock mostly structurally bound. Intermineral and late dacitic dykes extend both north and south into the foliated schistose hornfels.

Previous extension drilling has better defined the porphyry contacts and high-grade mineralisation along structural corridors. Additional upside for mineralisation occurs to the north-west of the porphyry.

#### Mineralisation style

Preliminary studies on the mineralogy, fluid inclusion assemblages and geochemistry indicate that a younger hydrothermal event overprints a previous porphyry style mineralisation event. These younger veinlets consist of quartz (colloform-crustiform texture) together with adularia and gold with narrow alteration halos of illite, sericite and carbonates. A distinct temperature-salinity environment marks this high grade ore zone (>2g/t gold average), which is spatially and genetically controlled by a north-trending corridor of tension gashes, crossing the magmatic complex and extending towards the metamorphic rocks in the northern areas.

Map showing La Colosa project planned pit and licenses



### Mineralisation characteristics

Three types of porphyry-style hydrothermal alteration are associated with the magmatic activity:

- Potassic alteration (mainly secondary biotite), which occurs as pervasive replacement of ferromagnesian minerals and host rock matrix in the early and intermineral phase intrusions
- Sodic-calcic alteration (albite ± actinolite ± epidote), which is confined to centimeter scale patches in the early and intermineral stage rocks

- Propylitic alteration (chlorite ± epidote ± albite ± carbonates) within the late magmatic stage

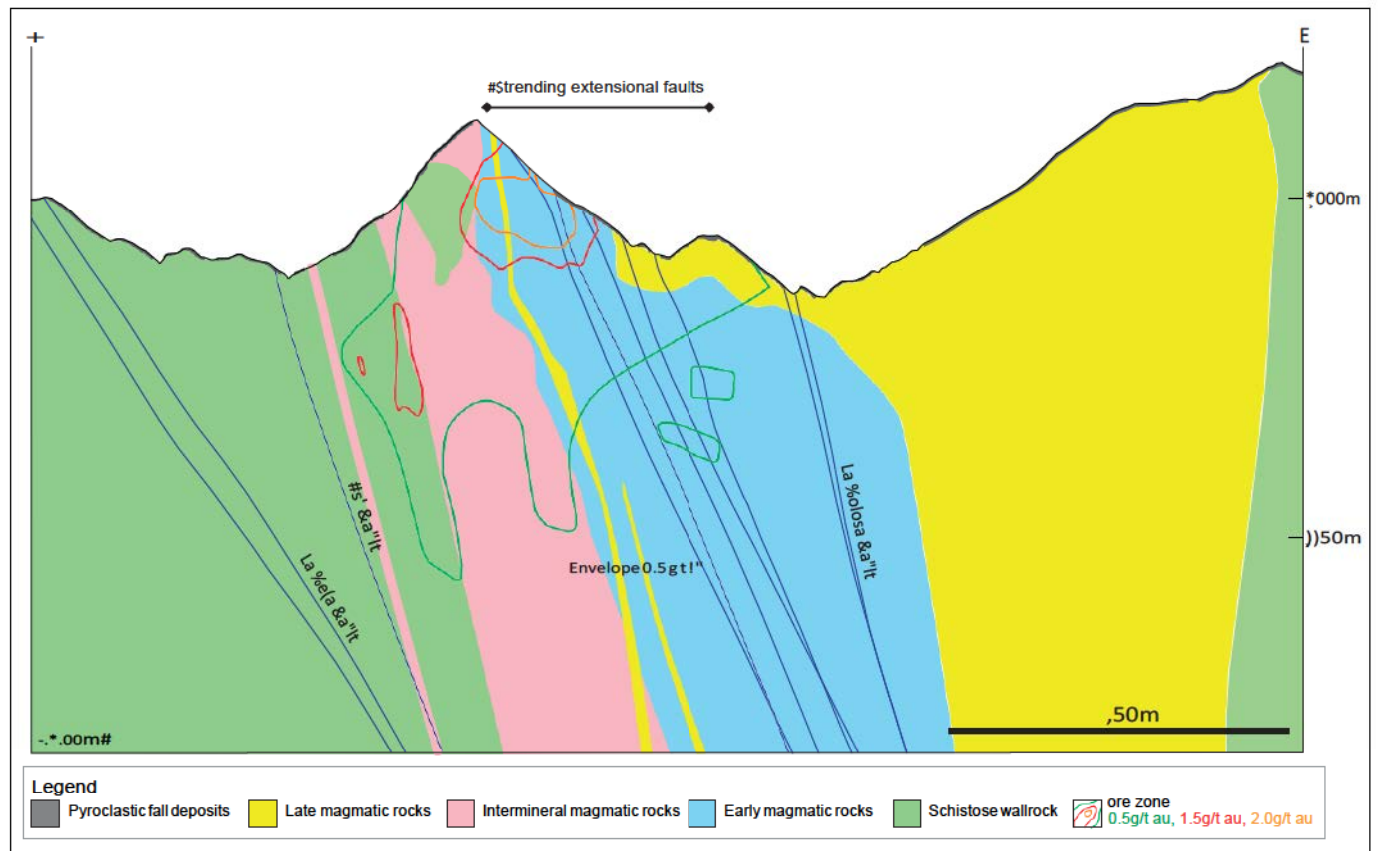
Multiphase silicification occurs within the schistose metamorphic rocks. Six major types of veinlets have been identified at the La Colosa project area. The veinlets occur in the magmatic rocks as well as in the metamorphic rocks. The veinlet sequence is (from oldest to youngest): EB-type, A-type, M-type, S-type, D-type, and CC-type.



# LA COLOSA CONTINUED

## Americas

### W-E Geological cross-section through La Colosa, elevation in metres AMSL



### Exploration

A total of 148,062m has been drilled to date. Three additional compliance drill holes (800m) and one geotechnical-hydrogeology drill hole was completed in 2017 before activities were suspended in early 2017.

Geometallurgical studies related to comminution modelling focused on obtaining hardness parameters have been undertaken while additional metallurgical comminution tests have been carried out for poorly represented areas. This metallurgical data has been correlated with multi-element assay and spectral mineralogical

data to obtain proxies for metallurgical parameters. Some 43,529m (153 drill holes) have been spectrally scanned using a sisuMobi system equipped with a red-green-blue (RGB) camera and a shortwave infrared camera.

### Projects

All project work has been stopped and the company applied for *force majeure* which was granted by the government. It was on that basis that the environmental permits were unduly delayed, as was permission to work in the area around the La Linea tunnel.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Diamond	RC	Type of drilling		
				Blasthole	Channel	Other
Measured	-	-	-	-	-	-
Indicated	75 x 75	✓	-	-	-	-
Inferred	100 x 100	✓	-	-	-	-
Grade/ore control	-	-	-	-	-	-

The average drill spacing of 100 x 100m has been reviewed according to AngloGold Ashanti's Mineral Resource classification criteria and accordingly, Indicated Mineral Resource has been defined for areas with a drill spacing of less than 75 x 75m.

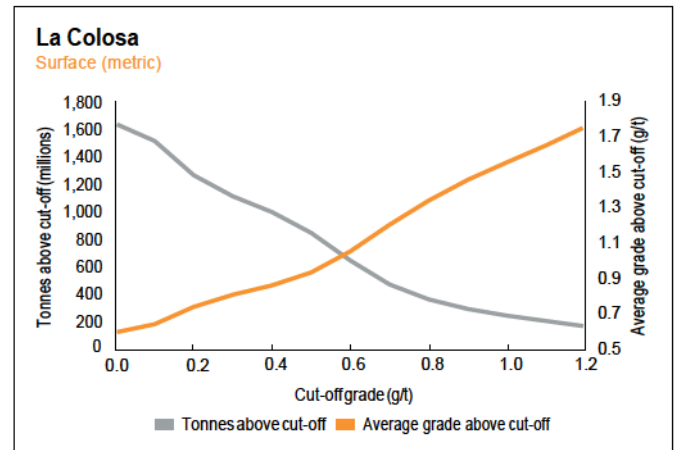
### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Open pit	Measured	–	–	–	–
	Indicated	833.49	0.87	726.31	23.35
	Inferred	217.89	0.71	154.86	4.98
La Colosa	Total	1,051.38	0.84	881.17	28.33

### Estimation

At La Colosa, approximately 148,062m of drilling supports the estimation of an Indicated Mineral Resource. Gold grades were estimated using ordinary kriging, which was performed into a block size of 50 x 50 x 10m using wireframed lithological domains in a grade-based mineralisation envelope. Estimates were also undertaken for the waste surrounding the mineralisation. All available geological drill holes, surface sampling and mapping information was validated and used in the modelling process. The La Colosa Mineral Resource is reported at a cut-off grade of 0.35g/t and it has been classified on the basis of kriging variance related to drill hole spacing.

### Grade tonnage curve



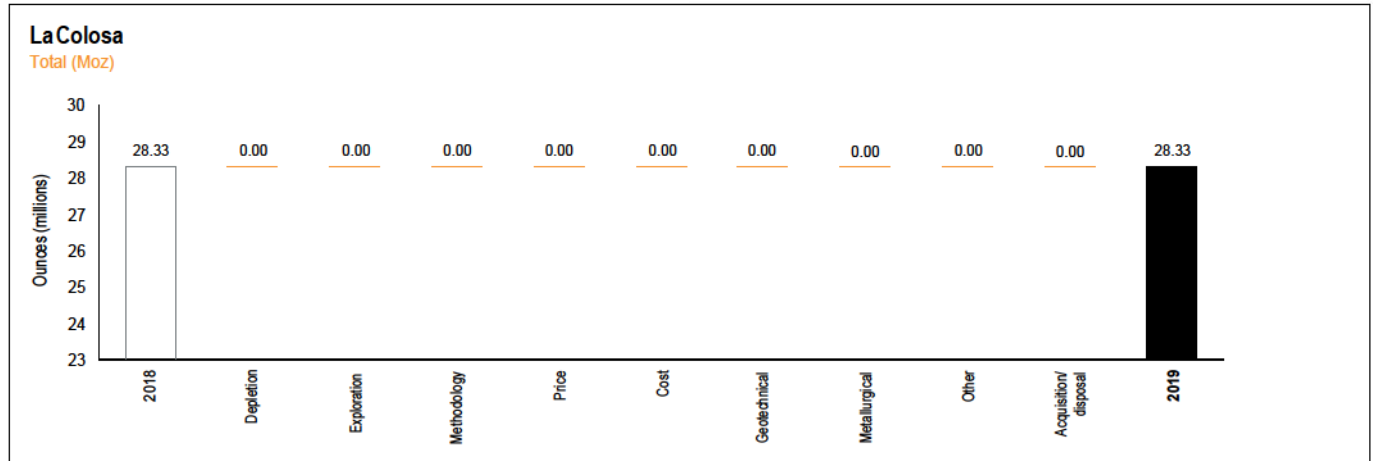
# LA COLOSA CONTINUED

## Americas

### Exclusive Mineral Resource

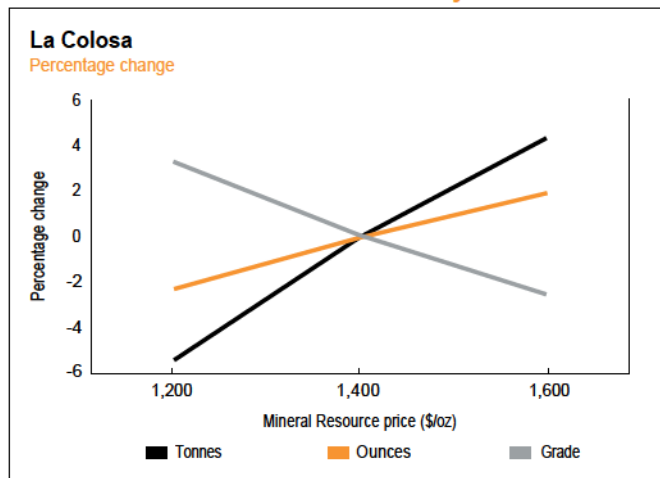
The La Colosa project currently does not have any declared Ore Reserve and the exclusive and inclusive Mineral Resource numbers are therefore identical.

### Year-on-year changes in Mineral Resource



There were no year-on-year changes in Mineral Resource.

### Inclusive Mineral Resource sensitivity




La Colosa is a high tonnage, low grade Mineral Resource which is insensitive to gold price. There is a 1.7% upside in ounces at a higher Mineral Resource price and 2% downside in ounces at a lower Mineral Resource price.

### Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Pablo Noriega	MAusIMM	315 688	21 years	BSc Hons (Geology)





 Exploration field work at Quebradona

# QUEBRADONA

## Americas

### Introduction

<b>Property description</b>	<p>The Quebradona project is a JV between AngloGold Ashanti and B2Gold and has completed a conceptual study (2016) as well as a PFS (2018), which supported the reporting of a maiden Ore Reserve. The project has progressed to a FS. During 2019 B2Gold participation dropped below 5 % which triggered AngloGold becoming the 100% owner.</p> <p>Five main targets have been identified, namely Nuevo Chaquiro, Aurora, Tenedor, Isabela and La Sola. Nuevo Chaquiro is the most advanced of the targets. Nuevo Chaquiro, a significant copper-gold porphyry-style mineralised system, is one of five known porphyry centres on the property and has been the focus of exploration activities since the beginning of 2011 with more than 75km of drilling. Nuevo Chaquiro was the sole deposit considered in the FS. Quebradona will be a copper mine with gold and silver as by-products.</p>
<b>Location</b>	<p>The Quebradona project is situated in the Middle Cauca region of Colombia, in the Department of Antioquia, 60km south-west of Medellin.</p>
<b>History</b>	<p>Exploration was carried out from 2004 by AngloGold Ashanti and then from 2006 to 2009 by B2Gold. In 2010 AngloGold Ashanti took management control and focused its exploration effort on Nuevo Chaquiro. In 2014 a maiden Mineral Resource was published for Nuevo Chaquiro and a conceptual study was initiated. The PFS was completed in January 2019. The FS is expected to be completed in 2020.</p>
<b>Legal aspects and tenure</b>	<p>Quebradona comprises one tenement (5881) which is the result of the integration of the five original tenements (5869, 6318, 6359, 7579 and 5881). The integrated tenement 5881 was issued on the 9 December 2016 and totals 7,593ha.</p>
<b>Mining method</b>	<p>The PFS concluded that sub-level caving is the preferred mining method. The Nuevo Chaquiro deposit is a medium to large, steep dipping, competent rock mass with higher grade material located at the top of the deposit which is approximately 200m below surface. The grade profile reduces with depth, thus making exploitation of the deposit amenable to sub-level caving with a top down mining method. Drill and blast methods will be used to fracture the orebody commencing at the top and sequentially moving downwards with an inter-level spacing of 27.5m from 425m below surface to 950m below surface.</p>
<b>Operational infrastructure</b>	<p>The project is close to existing highway, state and rural roads, and high voltage/medium voltage power infrastructure. The planned underground infrastructure consists of an adit to access the orebody and number of internal vertical ore passes that gravity feeds to the main ore transfer level. The material will be transferred to the main internal crusher by load and haul dump vehicles.</p> <p>Crushed material will then be transferred downhill to surface via a 6km conveyor, in a dedicated adit to a single coarse ore stockpile.</p>
<b>Mineral processing</b>	<p>PFS level test work confirmed that the ore can be treated by a typical porphyry copper flotation circuit producing a copper/gold concentrate. The concentrate is clean and free of deleterious elements which would attract smelter penalties. The processing circuit includes primary crushing underground, secondary crushing, high pressure grinding rolls, ball milling, rougher-scavenger flotation for all elements (Cu, Au, Ag), followed by regrinding the concentrate and cleaning, firstly in conventional cells and then in columns. A further flotation stage removes pyrite to leave a non-acid producing flotation tail and a pyrite concentrate that can be stored in a lined and eventually sealed impoundment within the TSF. Molybdenum, at present, is not planned for recovery. The Quebradona process plant will be designed to treat approximately 6.2Mtpa underground ore to produce copper concentrate over a 23 year mine life with provision of space for a molybdenum plant in the future.</p>

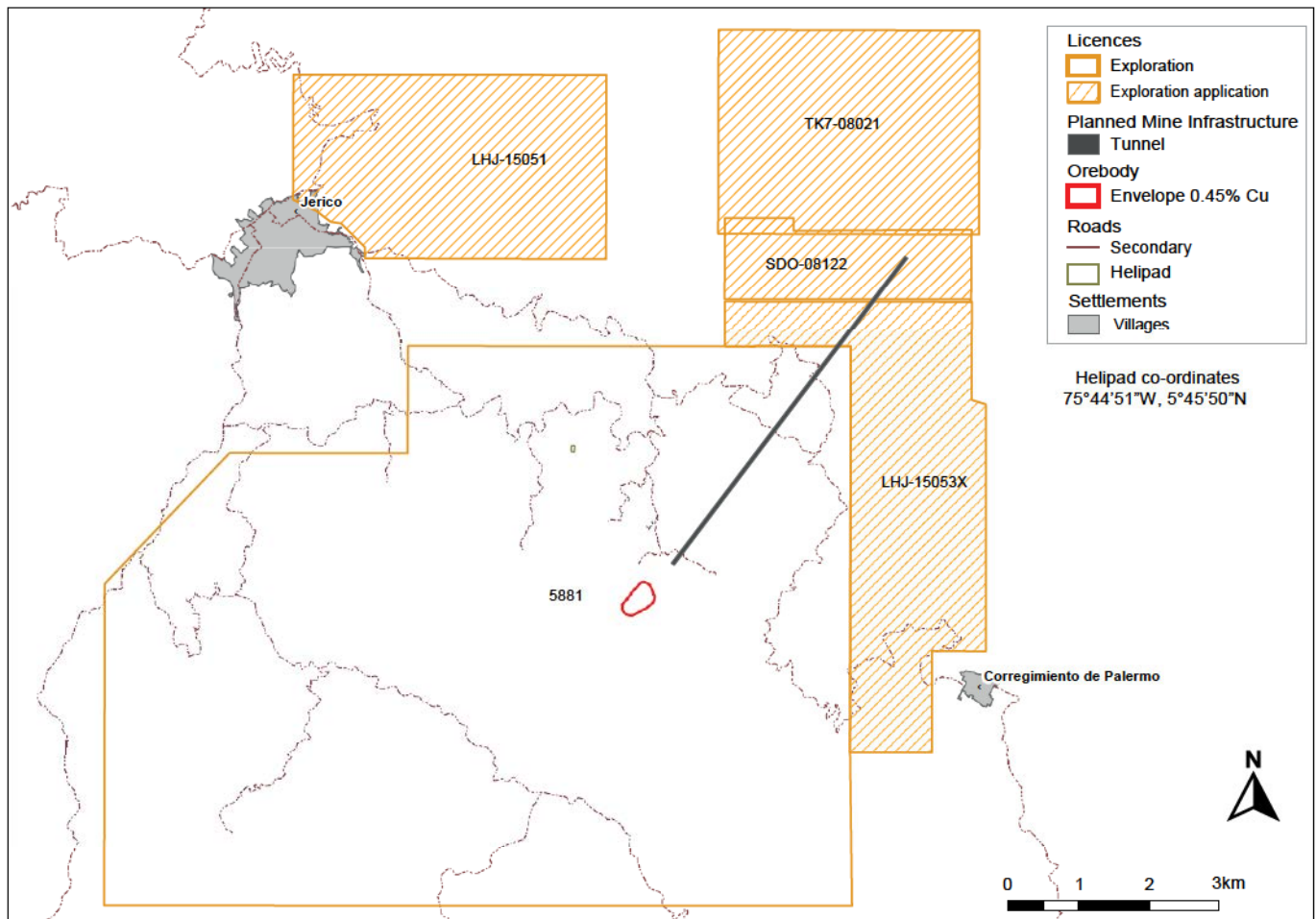


### Ore Reserve Risks

Several risks have been identified which if properly managed can be mitigated. Geological risk is considered low to moderate. Variability in copper grade is low, with high continuity while the security risk is considered low. Nuevo Chaquiro has a moderate seismic risk. Approximately 89% of the extracted material mined within the LOM mining plan is classified as Indicated Mineral Resource.

Other identified risks that will need to be mitigated include preventing schedule overruns both in the FS and in implementation; increasing geotechnical information levels; completing the final metallurgical test work; tailings; cost of earthworks; storage capacity in case of rain; seismic design criteria; financial and labour costs understated. Environmental permits are expected to be forthcoming in 2020 and approval is progressing through the FS phase. Community surveys have identified local opposition to the project, though the project is listed by the national government as a project of national interest. AngloGold Ashanti Colombia will continue to work with the community to address and mitigate concerns.

### Map showing Quebradona project planned infrastructure and licences





# QUEBRADONA CONTINUED

## Americas

### Geology

The geology of Nuevo Chaquiro consists of a volcanoclastic sequence of Miocene age (ash, tuffs, agglomerates and andesites) intruded by small dykes of diorite and quartz diorite, also of Miocene age. These host rocks are intruded by different pulses of mainly medium to fine grained quartz diorites. The majority of the intrusives do not outcrop. These intrusive rocks are categorised as pre-mineral, early, intra-mineral and late, according to cross-cutting interrelationships, spatial occurrence and copper-gold values. The alteration develops a well zoned porphyry system type with alteration of different temperatures from propylitic, sericitic, chloritic, potassic to calcic-potassic assemblages. Higher grade copper gold mineralisation is associated with a well-developed quartz vein stockwork in the cupola zone of early quartz diorite, persisting over a vertical interval of 500m.

### Deposit type

Nuevo Chaquiro is a typical porphyry copper deposit with large tonnes and low grade with gold, molybdenum and silver by-products.

The structural setting facilitated the rise of intrusive bodies through the volcanoclastic sequence of the Combia formation. The intrusives did not reach surface and remain as a blind deposit despite erosion acting for a significant period.

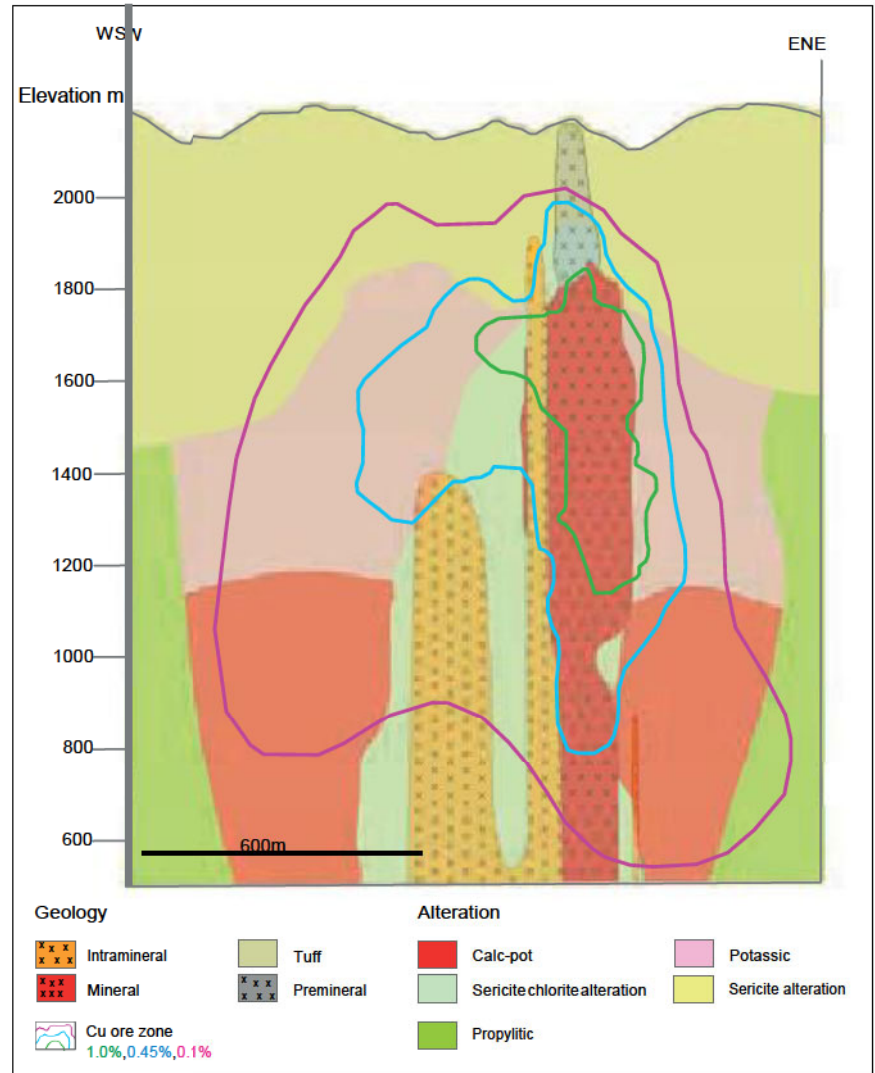
### Mineralisation style

The Nuevo Chaquiro deposit consists of Miocene-aged diorite, quartz diorite dykes and thin vertical stocks intruding a thick succession of andesitic tuffs and volcanoclastic rocks of the Miocene-age (6 to 10Ma) belonging to Combia formation, which fills a large pull-apart basin within the prospective middle Cauca belt of central Colombia. Depth to mineralisation from the surface is around 150 to 400m from northeast to southwest. Typical copper porphyry alteration zonation is evident with a high temperature, potassium silicate central zone (biotite, magnetite, chalcopyrite, and molybdenite), which trends into an overlying sericitic alteration zone (muscovite, chlorite, quartz, pyrite, tourmaline) surrounded by more distal propylitic alteration (chlorite, epidote, illite, carbonate). There is also an inner core of calcic-potassic alteration featuring biotite, actinolite, epidote, and anhydrite with lesser copper, gold and molybdenum values.

### Mineralisation characteristics

The intrusive complex can be categorised as pre-mineral, early, intra-mineral and late, based on cross-cutting relationships, localities, spatial occurrence and copper-gold values. An early dyke

WSW-ENE Geological cross-section through Nuevo Chaquiro, elevation in metres AMSL



is located in the eastern part of the deposit and is the main supplier of heat and hydrothermal fluids that caused the mineralisation event. In the central area abundant intra-mineral diorite and quartz diorites are found, of which a classic ore shell of lower-grade mineralisation is associated with these intrusions. Higher grade copper-gold mineralisation is associated with a well-developed quartz vein stockwork in the cupola zone of early quartz diorite which extends over a vertical interval of 500m. The majority of the intrusive rocks do not outcrop.

The mineralised zone is characterised by fine stockwork, disseminations and veinlets of quartz, magnetite, pyrite, chalcopyrite and molybdenite.

Traces of bornite and cubanite have been locally observed in amounts less than 0.1% volume. Other sulphides include pyrite and pyrrhotite in specific areas. Gold and silver correlate well with copper with gold grains dominantly occurring on the margins of sulphide grains within chalcopyrite.

## Exploration

The FS geological model used updated estimation boundaries, a soft boundary approach to estimation and updated Mineral Resource categories based on conditional simulation. Furthermore, the FS used updated geometallurgy, geotechnical parameters, hydrogeology and geological information in potential infrastructure sites (based on drill holes and test pits), structural geology and a revision of the estimated mineralisation endowment.

## Mineral Resource

### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	30 x 30		✓	–	–	–
Indicated	60 x 60		✓	–	–	–
Inferred	120 x 120		✓	–	–	–
Grade/ore control	–	–	–	–	–	–

Drill hole spacing over the project is variable as it is influenced by environmental and social considerations. Where possible multiple drill holes are conducted from the same drill pad to minimise the impact on the environment. Drilling at Quebradona varies from 50 x 50m grid in the central part and 100 x 100m to 120 x 120m in the adjacent low grade Inferred Mineral Resource areas. Due to having multihole platforms with angled drilling, the spacing in the upper 300m is tighter than in the deeper portions.

### Estimation

Copper, gold, silver, molybdenum, arsenic and sulphur grades were estimated using ordinary kriging into a 40m x 40m x 20m block model. Grades were estimated within grade-based 3D wireframe boundaries for copper and gold grades with separate domains for molybdenum and sulphur. The 2019 model maintains the same geological units but uses new grade envelopes of 1.0 and 0.1% copper content with soft boundaries as estimation units.

Drill hole data was composited to 4m down-hole lengths prior to estimation and extreme values were capped. Estimation was into homogeneous geological domains using ordinary kriging with an 18m soft boundary. Classification was guided by conditional simulation.

The Mineral Resource was tested for and found to have reasonable and realistic prospects for eventual economical extraction.

In 2019 the MSO tool was used to constrain the economic portion of the mineralisation at the Mineral Resource gold price. A sub-level cave option was considered followed by a second phase block cave option. An average \$45/t *in situ* Net Smelter Return (NSR)

### Ore Reserve modifying factors

as at 31 December 2019		Copper price US\$/oz	Exchange rate US\$/COP	Cut-Off Grade	Dilution %	Grade dilution	MCF %	MetRF %
Nuevo Chaquiro	Copper	2.65	2,936	\$45/t*	12.24	0.87%	100.0	95.8
	Gold	–	–	–	12.24	0.48g/t	100.0	60.0
	Silver	–	–	–	12.24	4.81g/t	100.0	82.3

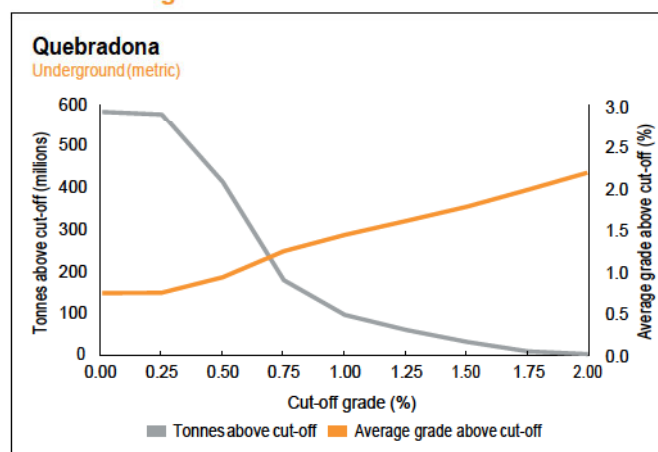
\* Ore cut-off \$45/t NSR and development cut-off \$25/t NSR.

## Projects

The PFS was completed in 2018. A SAMREC Table 1 was compiled in 2018 and can be found on the company's website. The FS is expected to be completed by the end of 2020.

results from all material included in the mining shape with at a NSR cut-off value of approximately \$27/t.

### Grade tonnage curve



## Ore Reserve

### Estimation

The Ore Reserve is based on the Mineral Resource Model. Design work was performed to generate the 3D underground design. Dilution and draw modelling were applied to the *in situ* Mineral Resource for production within the \$45/t NSR cut-off mineralised envelope. The dilution is applied as an algorithm. Schedules were combined and financially modelled to obtain the Ore Reserve.

# QUEBRADONA CONTINUED

## Americas

### COPPER

#### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Nuevo Chaquiro	Measured	57.90	1.10	0.64	1,406
	Indicated	203.77	0.89	1.81	3,981
	Inferred	340.43	0.57	1.95	4,290
<b>Quebradona</b>	<b>Total</b>	<b>602.10</b>	<b>0.73</b>	<b>4.39</b>	<b>9,677</b>

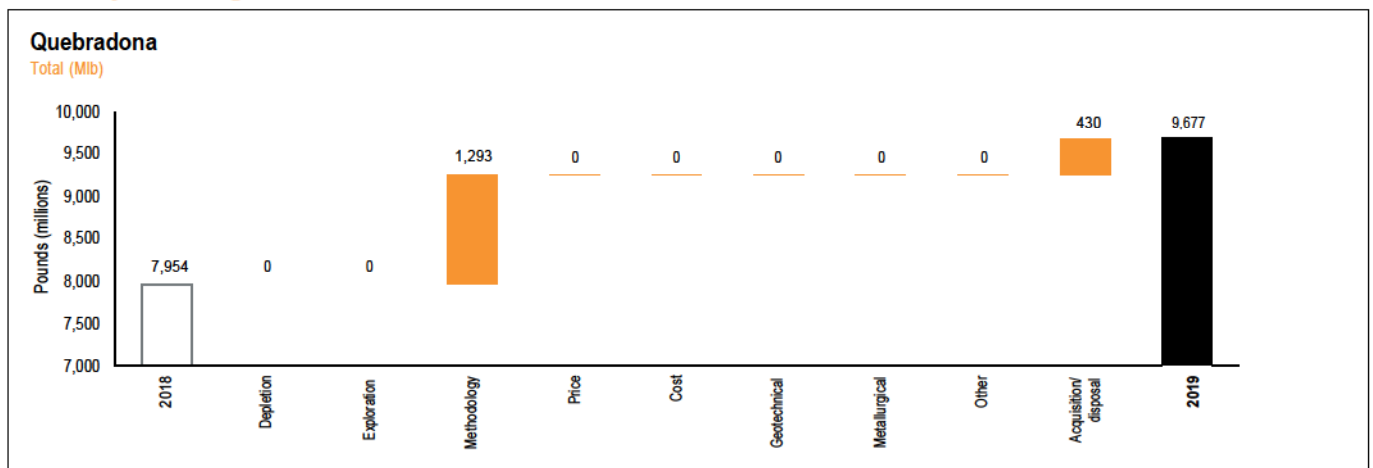
#### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Quebradona	Measured	57.90	1.10	0.64	1,406
	Indicated	92.53	0.45	0.41	913
	Inferred	340.43	0.57	1.95	4,290
	<b>Total</b>	<b>490.86</b>	<b>0.61</b>	<b>3.00</b>	<b>6,609</b>

#### Mineral Resource below infrastructure

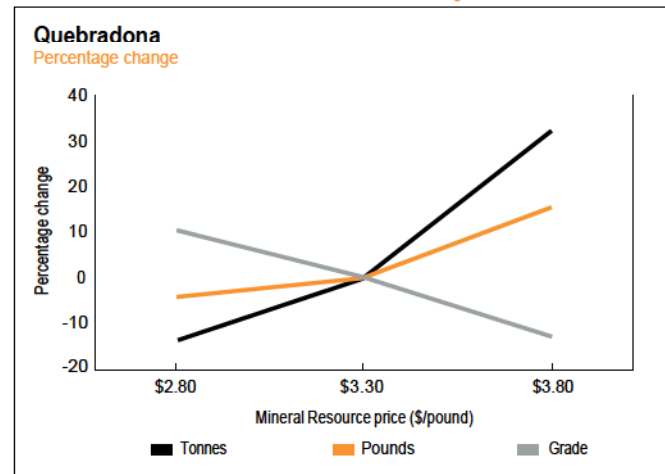
All of the Mineral Resource is below infrastructure.

#### Year-on-year changes in Mineral Resource



During 2019 more than 5% was added to the Mineral Resource with the main changes coming from the soft boundary estimation method. The attributable percentage ownership increased from 94.876% to 100%.

#### Inclusive Mineral Resource sensitivity



Quebradona is very sensitive to an increase of the copper price. There is a 15% upside in ounces at a higher copper Mineral Resource price and 4% downside in ounces at a lower copper Mineral Resource price. However the current output is constrained by tailings capacity.



## Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade %Cu	Contained copper	
				tonnes million	pounds million
Nuevo Chaquiro	Proved	–	–	–	–
	Probable	111.24	1.25	1.39	3,068
Quebradona	Total	111.24	1.25	1.39	3,068

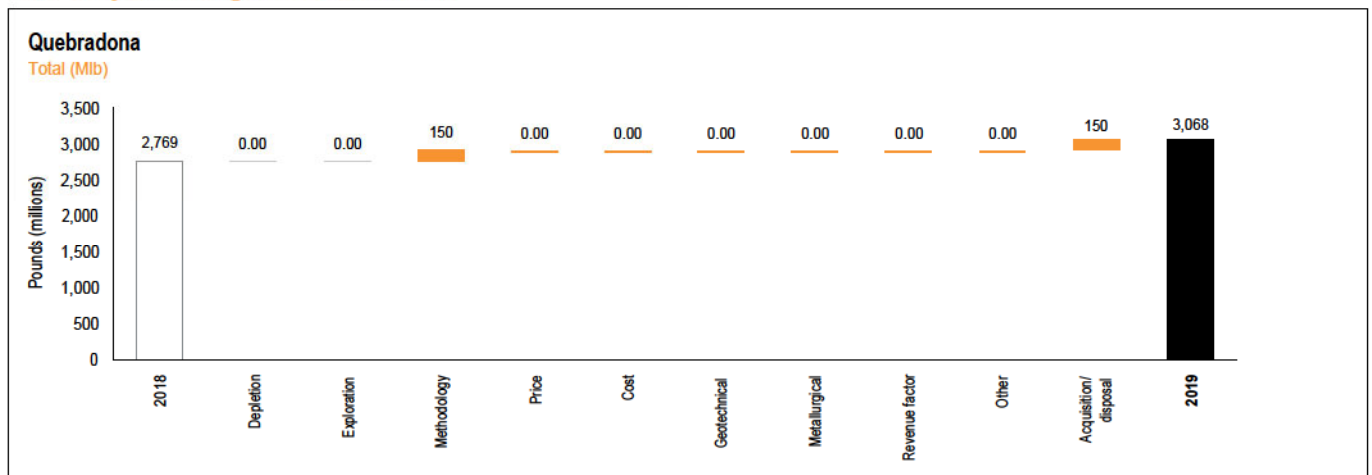
## Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade %Cu	Contained copper	
			tonnes million	pounds million
Nuevo Chaquiro	10.71	0.98	0.10	231
Total	10.71	0.98	0.10	231

## Ore Reserve below infrastructure

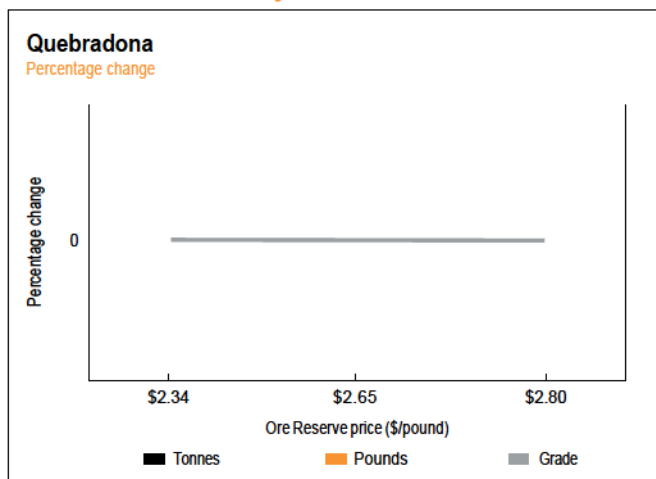
All of the Ore Reserve is below infrastructure.

## Year-on-year changes in Ore Reserve



The Ore Reserve increased due to remodelling of the Mineral Resource and re-optimisation of the sub-level cave design as well as by a change in ownership percentage.

## Ore Reserve sensitivity



Given the project is planned as a cave there will be little opportunity to react to any changes in copper price.

# QUEBRADONA CONTINUED

## Americas

### GOLD

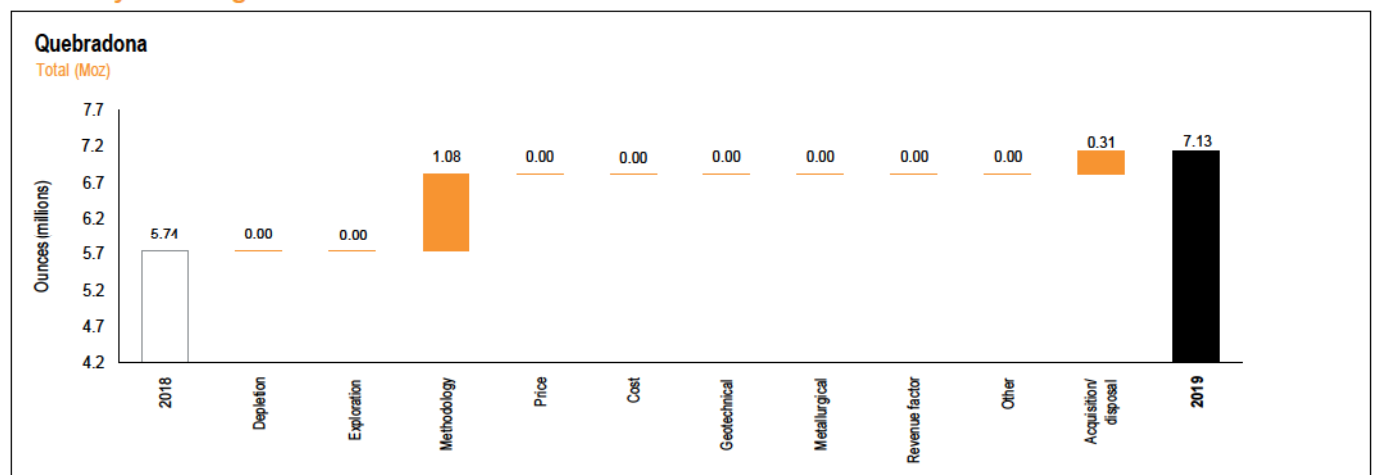
#### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Nuevo Chaquiro	Measured	57.90	0.58	33.84	1.09
	Indicated	203.77	0.47	95.65	3.08
	Inferred	340.43	0.27	92.29	2.97
Quebradona	Total	602.10	0.37	221.78	7.13

#### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Quebradona	Measured	57.90	0.58	33.84	1.09
	Indicated	92.53	0.18	17.05	0.55
	Inferred	340.43	0.27	92.29	2.97
	Total	490.86	0.29	143.18	4.60

#### Year-on-year changes in Mineral Resource



During 2019 more than 5% was added to the Mineral Resource inventory with main changes coming from the soft boundary estimation method. The attributable percentage increased from 94.876% to 100%.

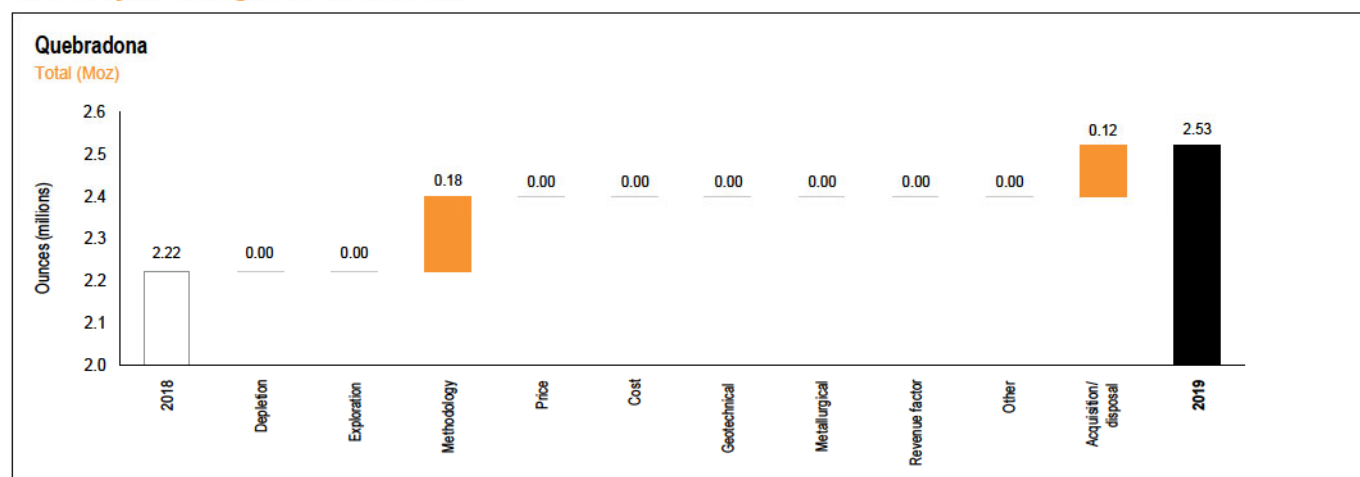
#### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Nuevo Chaquiro	Proved	-	-	-	-
	Probable	111.24	0.71	78.60	2.53
Quebradona	Total	111.24	0.71	78.60	2.53

#### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Nuevo Chaquiro	10.71	0.57	6.15	0.20
Total	10.71	0.57	6.15	0.20

## Year-on-year changes in Ore Reserve



The Ore Reserve increased due to remodelling of the Mineral Resource and re-optimisation of the sub level cave design as well as by a change in ownership percentage.

## By-products

### Inclusive Mineral Resource by-product: silver

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained silver	
				tonnes	Moz
Quebradona	Measured	57.90	6.40	371	11.92
	Indicated	203.77	5.64	1,149	36.93
	Inferred	340.43	4.03	1,372	44.10
	<b>Total</b>	<b>602.10</b>	<b>4.80</b>	<b>2,891</b>	<b>92.95</b>

### Inclusive Mineral Resource by-product: molybdenum

as at 31 December 2019	Category	Tonnes million	Grade ppm	Contained molybdenum	
				kilotonnes	pounds million
Quebradona	Measured	57.90	177	10.23	23
	Indicated	203.77	143	29.14	64
	Inferred	340.43	134	45.76	101
	<b>Total</b>	<b>602.10</b>	<b>141</b>	<b>85.13</b>	<b>188</b>

### Ore Reserve by-product: silver

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained silver	
				tonnes	Moz
Quebradona	Proved	–	–	–	–
	Probable	111.24	7.25	807	25.95
	<b>Total</b>	<b>111.24</b>	<b>7.25</b>	<b>807</b>	<b>25.95</b>

## Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Pablo Noriega	MAusIMM	315 688	21 years	BSc Hons (Geology)
Ore Reserve	Andrew McCauley	MAusIMM	223 692	15 years	Graduate Dip (Mining)



## SECTION 5

# AUSTRALIA



### Contribution to regional production

■ Sunrise Dam	254koz	41%
■ Tropicana	360koz	59%

### Regional overview

Regional overview	210
Sunrise Dam	212
Tropicana	220

# 19%

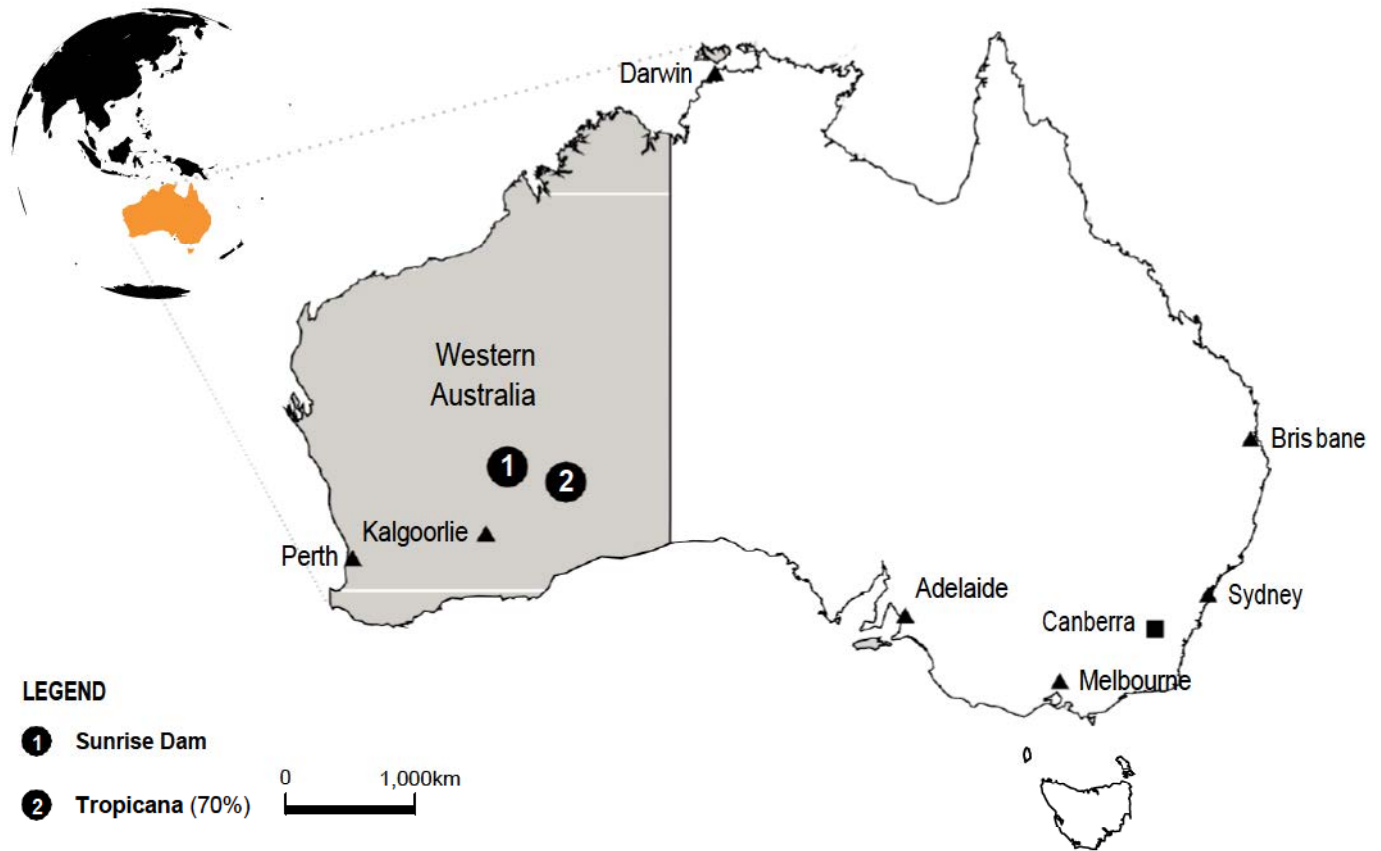
contribution to group production\*

\* Group including South African Operations



# REGIONAL OVERVIEW

## Australia



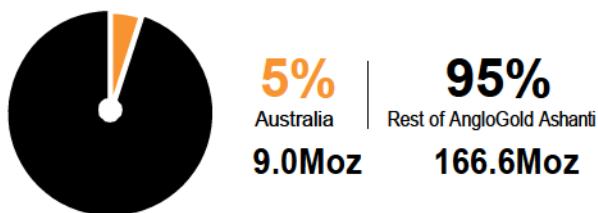
**LEGEND**

- 1 Sunrise Dam
- 2 Tropicana (70%)

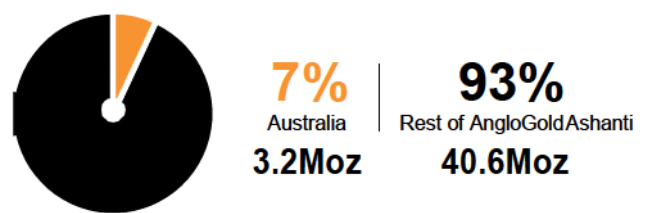
### Key statistics

	Units	2019	2018	2017
<b>Operational performance</b>				
Tonnes treated/milled	Mt	10.2	9.5	9.4
Recovered grade	oz/t	0.060	0.065	0.061
	g/t	1.87	2.01	1.89
Gold production	000oz	614	625	559
Total cash costs	\$/oz	730	762	743
All-in sustaining costs	\$/oz	990	1,038	1,062
Capital expenditure	\$m	149	156	153

#### Contribution to group Mineral Resource



#### Contribution to group Ore Reserve





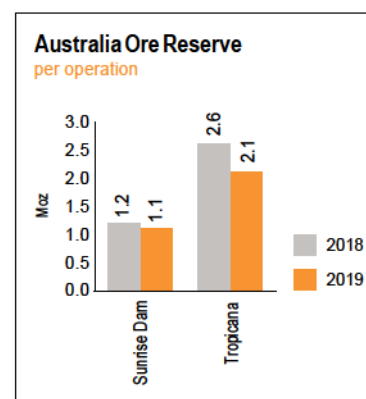
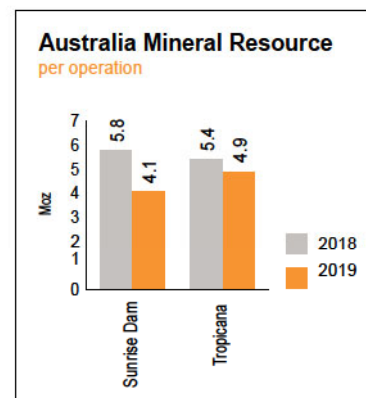
**A**s at 31 December 2019, the Mineral Resource (inclusive of Ore Reserve) for the Australia region was 9.0Moz (2018: 11.2Moz) and the Ore Reserve was 3.2Moz (2018: 3.8Moz).

This is equivalent to 5% and 7% of the group's Mineral Resource and Ore Reserve. Production from Australia was steady at 614koz in 2019, equivalent to 19% of group production <sup>1</sup>. We operate two mines in Western Australia.

Sunrise Dam, wholly owned by AngloGold Ashanti, is located 220km north-east of Kalgoorlie and 55km south of Laverton. Gold production started at Sunrise Dam in 1997. Underground mining, carried out by a contract mining company, is now the primary source of ore for the operation, following the cessation of mining in the open pit in 2014. The owner-operated processing plant comprises conventional gravity and CIL circuits, with a flotation and fine grind circuit commissioned in mid-2018 to improve metallurgical recovery.

Tropicana, a JV between AngloGold Ashanti (70% and operator) and IGO Limited (previously Independence Group NL, 30%), is located 200km east of Sunrise Dam and 330km east-northeast of Kalgoorlie. The operation poured first gold in September 2013. Tropicana is a large open pit and underground operation with mining carried out by a contract mining company. The processing plant is owner-operated comprising conventional carbon-in-leach technology and high-pressure grinding rolls for energy-efficient comminution. A second ball mill was added to the grinding circuit in 2018 to optimise the circuit, improve metallurgical recovery and match mine output.

<sup>1</sup> Group including South African Operations



### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Australia	Measured	57.88	1.17	67.82	2.18
	Indicated	70.81	1.91	135.36	4.35
	Inferred	28.30	2.69	76.23	2.45
	<b>Total</b>	<b>156.99</b>	<b>1.78</b>	<b>279.40</b>	<b>8.98</b>

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Australia	Measured	30.26	1.17	35.54	1.14
	Indicated	41.17	1.64	67.41	2.17
	Inferred	28.30	2.69	76.23	2.45
	<b>Total</b>	<b>99.73</b>	<b>1.80</b>	<b>179.17</b>	<b>5.76</b>

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Australia	Proved	27.62	1.17	32.28	1.04
	Probable	29.64	2.29	67.95	2.18
	<b>Total</b>	<b>57.26</b>	<b>1.75</b>	<b>100.23</b>	<b>3.22</b>

# SUNRISE DAM

## Australia

### Introduction

<b>Property description</b>	Sunrise Dam is an underground mine that is wholly owned by AngloGoldAshanti.
<b>Location</b>	Sunrise Dam is approximately 220km north-northeast of Kalgoorlie and 55km south of Laverton in Western Australia.
<b>History</b>	Open pit production began in 1997 and has now been completed at a final depth of 500m below surface. Underground mining commenced in 2003 with a number of different mining methods being applied, depending on the style of mineralisation and grade of the geological domain. By 2014, the mine was wholly an underground mining operation supplemented with stockpile processing.
<b>Legal aspects and tenure</b>	Sunrise Dam operates within two mining leases covering over 7,800ha, which are in good standing with the expiry dates in 2038. All Mineral Resource, Ore Reserve and mine infrastructure are hosted within lease M39/1116 while lease M39/1117 hosts water extraction infrastructure used to supply the operation with water.
<b>Mining method</b>	Mining is carried out by underground mining contractors and productivity improvements over the past few years has seen total underground tonnages mined reach a steady state of around 2.8Mtpa. This has been possible by the use of bulk mechanised sub-level open stoping using stabilising pillars and waste backfill where possible. Paste fill has been introduced in selected areas from 2019 to improve ore recovery in the higher grade parts of the Vogue ore zone.
<b>Operational infrastructure</b>	All required surface infrastructure is in place including a fully functional camp, plant, power plant and reticulation, offices and road system. The underground mining infrastructure has been undergoing continuous upgrades with an extra power feed to the underground mine completed during 2019 and a major ventilation fan upgrade completed in 2018. Power at Sunrise Dam is self-generated, and the mine uses natural gas supplied via an APA Operations (Pty) Limited pipeline.
<b>Mineral processing</b>	Ore is treated in a conventional gravity and CIL process plant. Installation of a new fine grind and flotation circuit was completed in the second half of 2018. Plant throughput at Sunrise dam is 4.1Mtpa.
<b>Risks</b>	<p>The complexity of the Sunrise Dam mineralisation means that the largest risk associated with the estimation of the Ore Reserve linked to the accuracy of the Mineral Resource. Design risk is low as the mining methods have been practiced at Sunrise Dam for the past 10 years.</p> <p>The last independent external Mineral Resource and Ore Reserve audit was undertaken in 2018 and found no fatal flaws in process or output. An internal, on-site review was conducted in 2019 which found no fatal flaws.</p>

### Geology

#### Deposit type

Sunrise Dam is considered to be a mesothermal gold deposit, typical of many orebodies found in the Archaean greenstone belts of Western Australia.

#### Mineralisation style

At Sunrise Dam, gold mineralisation is structurally controlled and vein hosted. The style of mineralisation can be differentiated depending on the structure or environment in which it is hosted. There are three dominant styles recognised:

- Shear-related and high strain e.g. Sunrise Shear Zone
- Stockwork development in planar faults with brittle characteristics (these occur in all rock types and are commonly

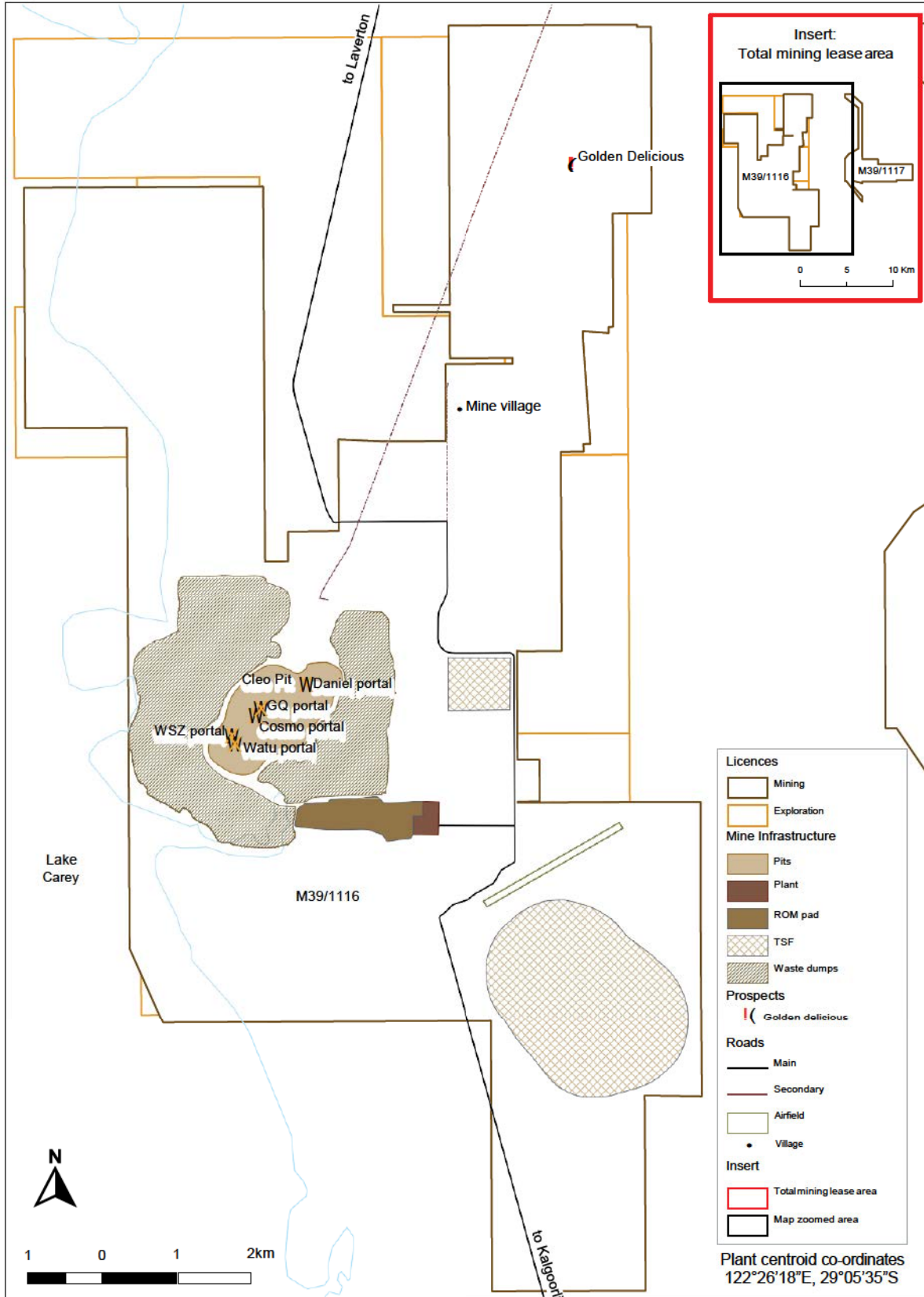
concentrated at contacts within the volcanic stratigraphy or the porphyry margin and within hinge positions within the magnetite shales) e.g. Cosmo, Dolly and Vogue orebodies

- Placer-style mineralisation hosted within the fluvial sediments

#### Mineralisation characteristics

Mineralisation is typically hosted in quartz-carbonate veins and breccias with varying quantities of pyrite and arsenopyrite. Gold occurs as free gold and is also occluded in the sulphides. The gold mineralisation is often associated with strongly altered country rocks proximal to the shear and fracture network that the hydrothermal fluids have passed through.

Map showing Sunrise Dam infrastructure and licences, with the total mining lease insert shown in the top right corner

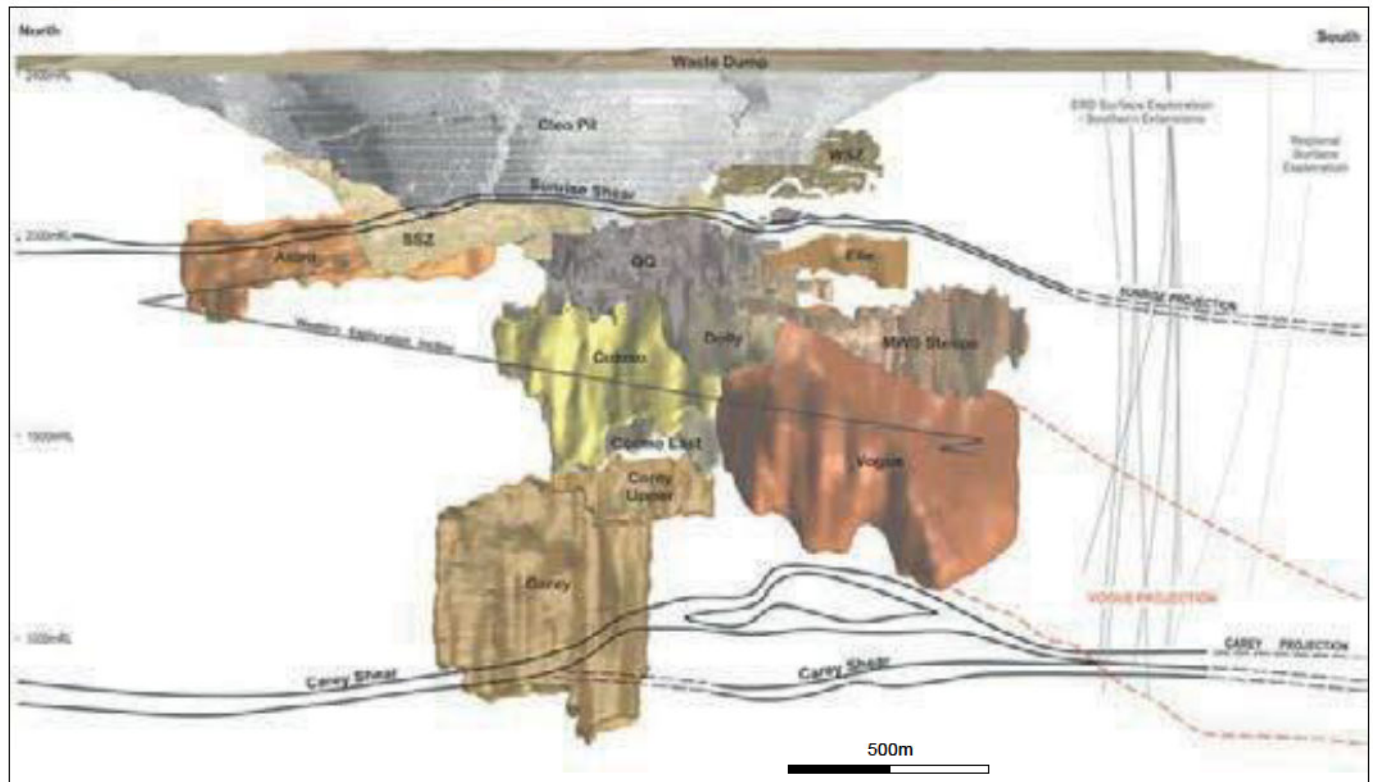




# SUNRISE DAM CONTINUED

## Australia

N-S Long section of Sunrise Dam looking east, elevation in mRL\*



\* mRL = 2,420m AMSL

### Exploration

During 2019, exploration focused on Mineral Resource expansion and infill drilling. The Mineral Resource expansion drilling focused on drill testing the under explored portions of the mine at depth and along strike to supply additional Mineral Resource to the LOM plan. This included successful surface drilling 1km south of the Ore Reserve to target the strike and down-plunge extents of the Vogue mineralisation. This success has provided confidence to extend the Western Exploration Decline and design the next major drilling platform.

Underground drilling was largely focused on Mineral Resource extension and conversion in Vogue and the Midway Shear orebodies to replenish Ore Reserve focusing on strike and down-dip extensions proximal to the current Ore Reserve. The Carey Shear remains open along strike and down-dip, providing significant upside potential as exploration proceeds. Strategic drill platforms have also been established to facilitate systematic exploration of the central and northern regions of the property.

### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification


Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	10 x 10, 25 x 25	✓	✓	-	-	-
Indicated	40 x 20, 40 x 40	✓	✓	-	-	-
Inferred	40 x 40, 100 x 100	✓	✓	-	-	-
Grade/ore control	6 x 8, 10 x 10	✓	✓	-	-	-

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Golden Delicious	Measured	1.12	1.29	1.44	0.05
	Indicated	3.73	1.20	4.49	0.14
	Inferred	0.04	0.79	0.03	0.00
	<b>Total</b>	<b>4.88</b>	<b>1.22</b>	<b>5.96</b>	<b>0.19</b>
Stockpile (open pit)	Measured	8.47	0.93	7.87	0.25
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>8.47</b>	<b>0.93</b>	<b>7.87</b>	<b>0.25</b>
Underground	Measured	19.24	1.81	34.87	1.12
	Indicated	21.79	2.19	47.76	1.54
	Inferred	12.55	2.38	29.89	0.96
	<b>Total</b>	<b>53.59</b>	<b>2.10</b>	<b>112.52</b>	<b>3.62</b>
Stockpile (underground)	Measured	0.06	3.02	0.18	0.01
	Indicated	-	-	-	-
	Inferred	-	-	-	-
	<b>Total</b>	<b>0.06</b>	<b>3.02</b>	<b>0.18</b>	<b>0.01</b>
Sunrise Dam	<b>Total</b>	<b>67.00</b>	<b>1.89</b>	<b>126.53</b>	<b>4.07</b>

The inclusive Mineral Resource includes Measured Mineral Resource stockpiles and all *in situ* Measured, Indicated and Inferred Mineral Resource with grades greater than the cut-off grade. The main change in 2019, compared to previous years, is using the MSO software, an underground optimisation tool, which provides an economic boundary to the Mineral Resource similar to using a Whittle Shell in the open pit environment. The MSO outline takes into consideration mining, geotechnical and economic parameters to produce a shell which identifies the mineable and economic portions of the Mineral Resource at the Mineral Resource parameters. The effect of using this approach has reduced the Mineral Resource but provides a more appropriate determination of what will be mineable in the future.



 Sunrise Dam open pit

# SUNRISE DAM CONTINUED

## Australia

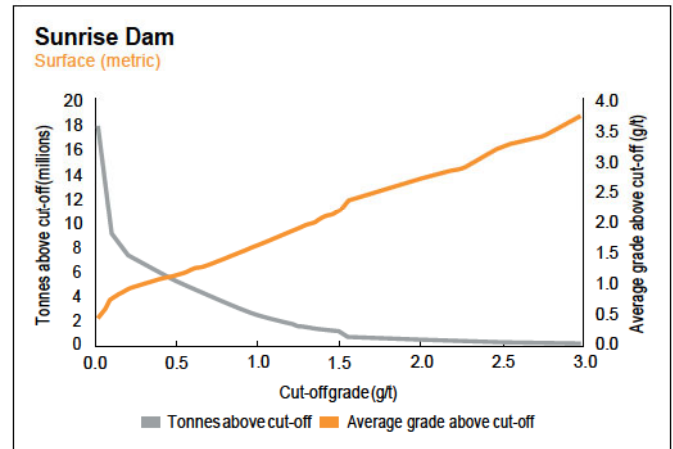
### Estimation

Estimation of the underground Mineral Resource uses the geological model boundaries to subdivide all drill hole data into appropriate domains. The geostatistical method of ordinary block kriging is used to estimate the Mineral Resource. High-grade restraining is used to limit the effects of outlier grade values. Dense patterns of underground RC drilling are completed prior to the final mine design, upon which, grade control models are created using conditional simulation. This allows for the probabilistic determination of the optimal mining stope configuration.

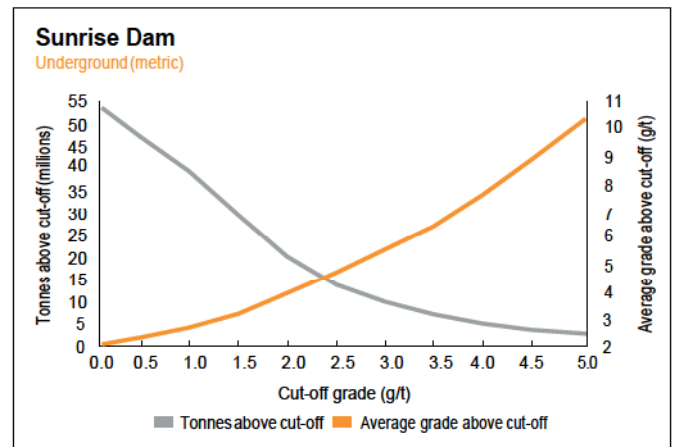
Mining of the open pit Mineral Resource was completed in early 2014. Remaining stockpiled material is estimated based on detailed grade control drilling completed prior to mining. Grades were estimated by means of the conditional simulation geostatistical method.

The Golden Delicious deposit has been estimated using LUC. All available geological drill hole information is validated for use in the models and the local geology of the deposit is used to classify the drill hole information into appropriate estimation domains. Detailed statistical analyses are conducted on each of these domains and this allows for the identification of high-grade outliers. If these values are anomalous to the characteristics of the general population they are then cutback to an appropriate upper limit for the population.

### Grade tonnage curves



The grade tonnage curves do not include stockpiles.



The underground grade tonnage curves are calculated at a range of cut-off grades within the MSO mining constraint shapes.

### Exclusive Mineral Resource

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
Sunrise Dam	Measured	17.74	1.63	28.96	0.93
	Indicated	18.88	1.77	33.37	1.07
	Inferred	12.59	2.38	29.93	0.96
	<b>Total</b>	<b>49.21</b>	<b>1.88</b>	<b>92.26</b>	<b>2.97</b>

The exclusive Mineral Resource includes a large portion of the underground Measured and Indicated Mineral Resource as the material is of a lower grade and therefore fails to meet Ore Reserve cut-off grade requirements. It also includes a small amount of the Golden Delicious Mineral Resource. The entire Inferred Mineral Resource in the underground mine is included in the exclusive Mineral Resource. Much of this Inferred Mineral Resource is located in the deeper parts of the underground mine where drill density is not yet adequate for the Mineral Resource to be considered in the Ore Reserve estimation process.

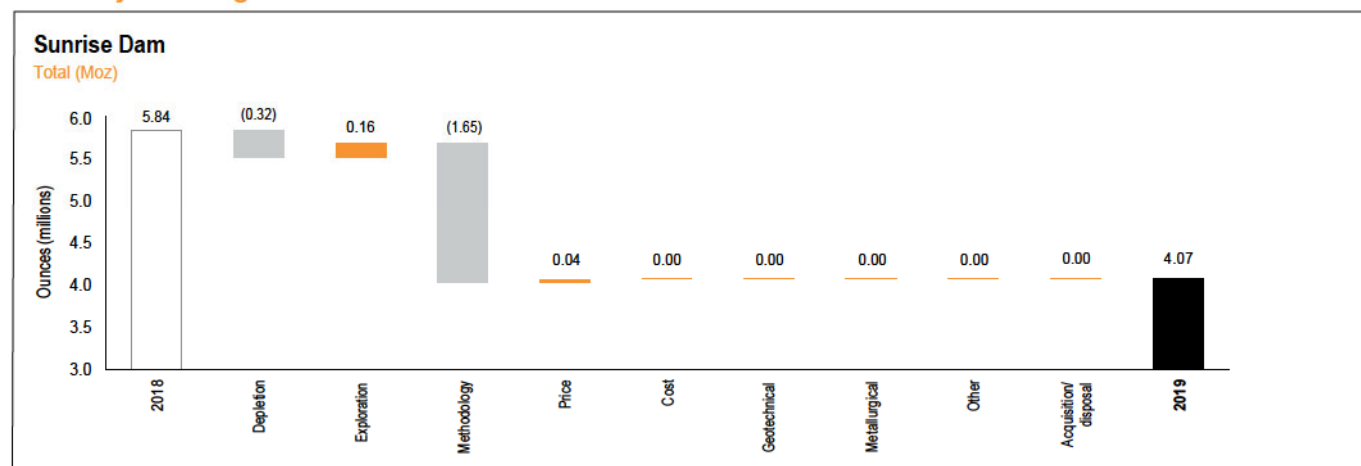
### Mineral Resource below infrastructure

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
Sunrise Dam	Measured	-	-	-	-
	Indicated	1.58	2.36	3.73	0.12
	Inferred	6.39	2.36	15.06	0.48
	<b>Total</b>	<b>7.97</b>	<b>2.36</b>	<b>18.78</b>	<b>0.60</b>

The Mineral Resource below infrastructure is reported below the 1,420mRL for Vogue, and below the 1,400mRL in the Cosmo orebody.

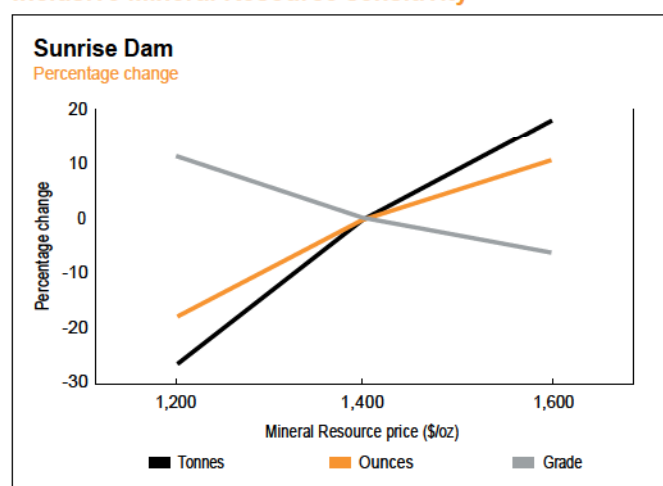


## Year-on-year changes in Mineral Resource



The decrease in Mineral Resource was largely due to the methodology change of using MSO to constrain the Mineral Resource, but mining depletion, sterilisation and increases in costs also made significant contributions. This was partially offset by successful exploration which generated new Mineral Resource.

## Inclusive Mineral Resource sensitivity



As a low grade underground mine, Sunrise Dam is very sensitive to changes in gold price. There is 10% upside in ounces at a higher Mineral Resource price and 18% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes	Grade	Contained gold	
		million	g/t	tonnes	Moz
Golden Delicious	Proved	-	-	-	-
	Probable	2.41	1.40	3.36	0.11
	<b>Total</b>	<b>2.41</b>	<b>1.40</b>	<b>3.36</b>	<b>0.11</b>
Stockpile (open pit)	Proved	8.47	0.93	7.87	0.25
	Probable	-	-	-	-
	<b>Total</b>	<b>8.47</b>	<b>0.93</b>	<b>7.87</b>	<b>0.25</b>
Underground	Proved	2.62	2.80	7.34	0.24
	Probable	4.23	3.66	15.52	0.50
	<b>Total</b>	<b>6.86</b>	<b>3.33</b>	<b>22.86</b>	<b>0.73</b>
Stockpile (underground)	Proved	0.06	3.02	0.18	0.01
	Probable	-	-	-	-
	<b>Total</b>	<b>0.06</b>	<b>3.02</b>	<b>0.18</b>	<b>0.01</b>
<b>Sunrise Dam</b>	<b>Total</b>	<b>17.79</b>	<b>1.93</b>	<b>34.27</b>	<b>1.10</b>

# SUNRISE DAM CONTINUED

## Australia

### Estimation

The underground Ore Reserve is based on portions of the Mineral Resource model which were estimated to be mineable based on price, mining factors and mill recovery assumptions. The mining shapes are based on Measured and Indicated Mineral Resource that are projected to provide a 15% margin on total cost, based

on the reference assumptions. Mine layout and designs have been created within mining shapes for each geological domain to calculate the Ore Reserve directly from the Mineral Resource model. The Proved and Probable Ore Reserve was then defined by applying the Mineral Resource classification for each estimation domain.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price AUD/oz	Cut-off grade g/t Au	Dilution %	Dilution g/t	RMF % (based on tonnes)	MRF % (based on tonnes)	MCF %	MetRF %
Golden Delicious	1,512	0.70	3.0	–	100.0	100.0	100.0	85.0
Stockpile (open pit)	1,512	0.91	–	–	100.0	100.0	100.0	75.0
Underground	1,512	1.56	10.0	0.9	100.0	100.0	100.0	84.5

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold tonnes	Moz
Golden Delicious	0.01	0.93	0.01	0.00
Underground	3.27	3.09	10.11	0.32
<b>Total</b>	<b>3.28</b>	<b>3.09</b>	<b>10.11</b>	<b>0.33</b>

The Inferred Mineral Resource in the business plan includes extensions of all geological domains. Further exploratory drilling during 2020 is planned with the aim of increasing the confidence to Indicated Mineral Resource.

### Ore Reserve below infrastructure

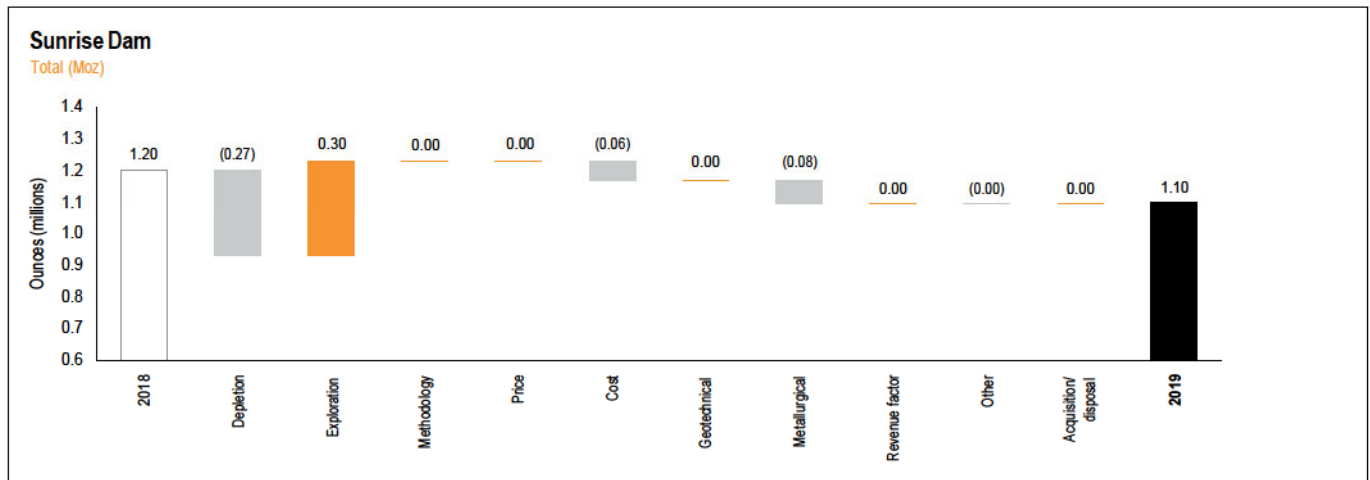
as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold tonnes	Moz
Sunrise Dam	Proved	0.10	4.00	0.39	0.01
	Probable	0.91	5.02	4.57	0.15
	<b>Total</b>	<b>1.01</b>	<b>4.92</b>	<b>4.97</b>	<b>0.16</b>

Ore Reserve below infrastructure exists at the Vogue and Cosmo orebodies. This is below the 1,420mRL for Vogue, and below the 1,400mRL in the Cosmo orebody.



Exploration drill core logging facilities at Sunrise Dam

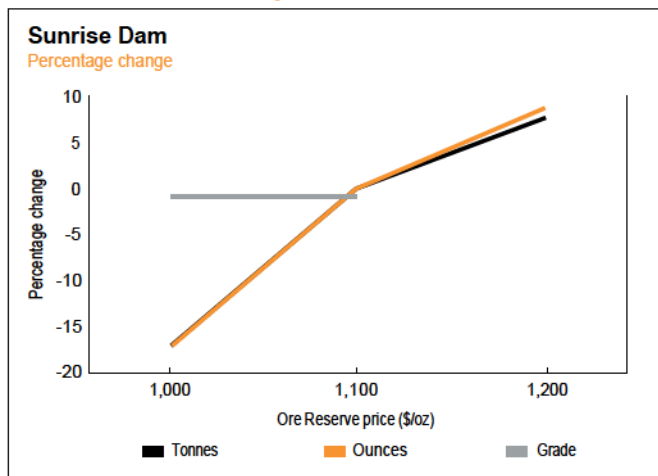
## Year-on-year changes in Ore Reserve



Year-on-year changes in Ore Reserve are due mainly to the following:

- Depletion in surface stockpiles and underground mining
- Increase in the Ore Reserve with the continued exploration drilling at the underground mine, and the addition of Golden Delicious open pit
- Reduction due to lower metallurgical recoveries and higher unit costs

## Ore Reserve sensitivity



As a low grade underground mine, Sunrise Dam is very sensitive to changes in gold price. There is a 8% upside in ounces at a higher Ore Reserve price and 17% downside in ounces at a lower Ore Reserve price.

## Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Fraser Clark	MAusIMM	226 390	18 years	BSc Hons (Geology), Postgraduate Certificate (Geostatistics)
Ore Reserve (surface)	Chris James	MAusIMM	208 379	17 years	BEng Hons (Mining), Graduate Certificate (Mining Geomechanics), Unrestricted Quarry Managers Certificate
Ore Reserve (underground)	Nicholas Sutherland	MAusIMM	326 684	12 years	BEng (Mining)




# TROPICANA

## Australia

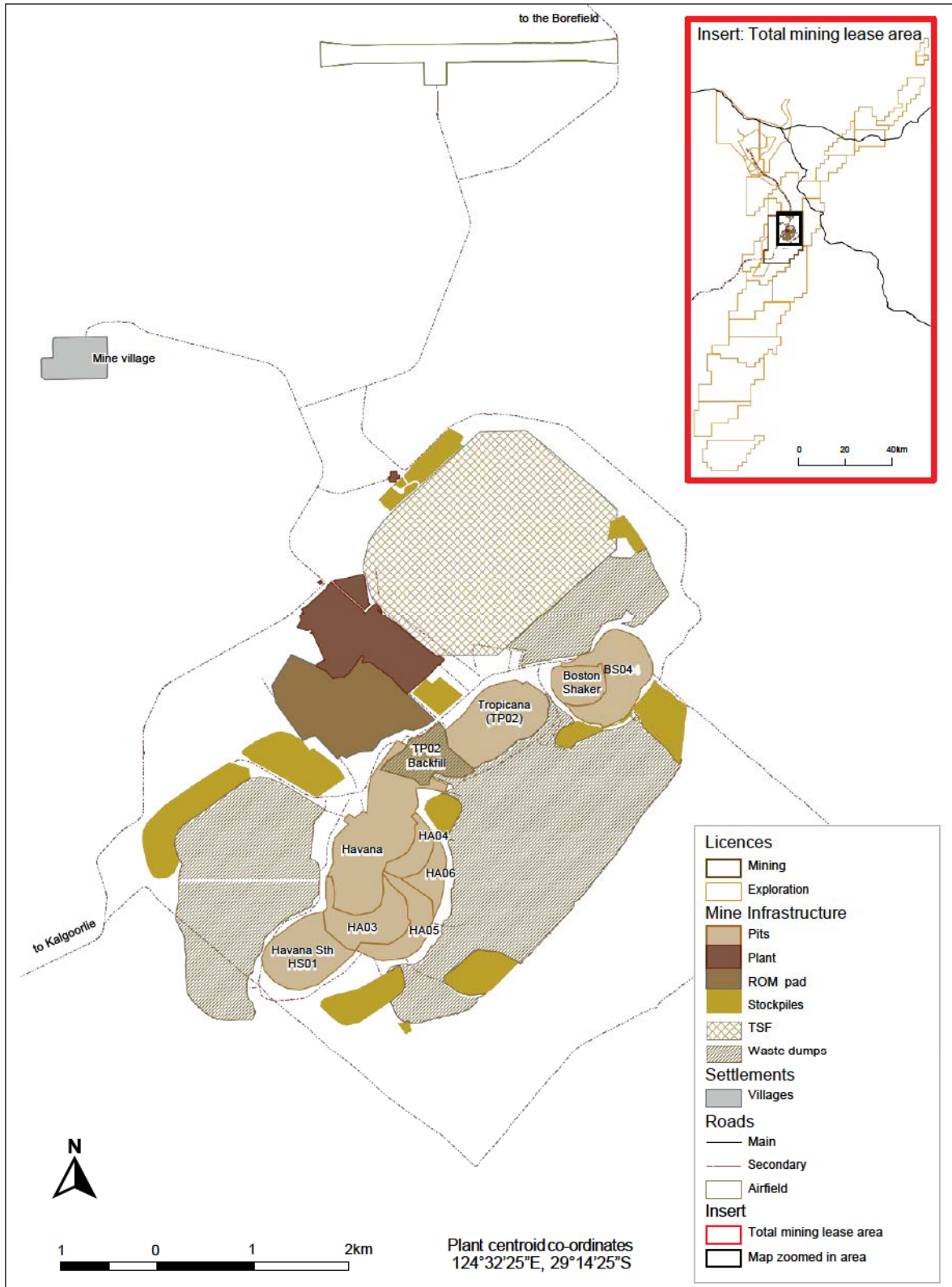
### Introduction

<b>Property description</b>	Tropicana is comprised of a number of open pits and an underground mine that are operated as a JV between AngloGold Ashanti (70% and operator), and IGO Limited (30%).
<b>Location</b>	Tropicana is located 200km east of Sunrise Dam and 330km east-northeast of Kalgoorlie, Western Australia. Tropicana is the first deposit discovered in this remote portion of the Great Victoria Desert.
<b>History</b>	Open pit mining began during 2012 with first gold production occurring during September 2013. Tropicana reached the 2Moz produced milestone during the first quarter of 2018.
<b>Legal aspects and tenure</b>	<p>Tropicana has security of tenure for all current exploration licences and the mining lease that covers its future Ore Reserve. This lease is M39/1096 and is valid from 11 March 2015 to 10 March 2036 covering a total area of 27,228ha.</p> <p>The previous 31 mining leases comprising 27,228ha (including M39/980, M39/981, M39/982 and M39/1052), were conditionally surrendered in favour of the grant of a single mining lease, M39/1096, on 11 March 2015 for 21 years with all existing rights and obligations preserved. This process was completed with the co-operation of the Department of Mines and Petroleum.</p>
<b>Mining method</b>	Open pit mining activities are undertaken by Macmahon in an alliance partnership with AngloGold Ashanti. Mining is conventional open cut, drill and blast, followed by truck and excavator operation to develop the deposits (Havana, Havana South and Boston Shaker). The total annual movement of ore and waste is approximately 95Mtpa. Underground mining utilises mechanised jumbo development and open stoping methods. At peak production, annual production from underground is planned to reach 1.1Mt of ore.
<b>Operational infrastructure</b>	All surface infrastructure facilities are in place and operational. The processing plant and TSF are operating well, consistent with design specifications. The infrastructure includes, but is not limited to water supply, processing plant, mine, dewatering infrastructure, TSF, workshops, camp facilities and airstrips. Power is supplied to the mine by on site gas and diesel power stations, natural gas is supplied via an APA Operations (Pty) Limited pipeline. Underground development is ongoing.
<b>Mineral processing</b>	The processing plant comprises crushing, high pressure grinding rolls, one stage grinding and CIL recovery with a capacity of between 8 and 9Mtpa.
<b>Risks</b>	No material risks are identified.



 Havana Stage 3 open pit

Map showing Tropicana Mine infrastructure, with the total mining lease area insert shown in the top right corner

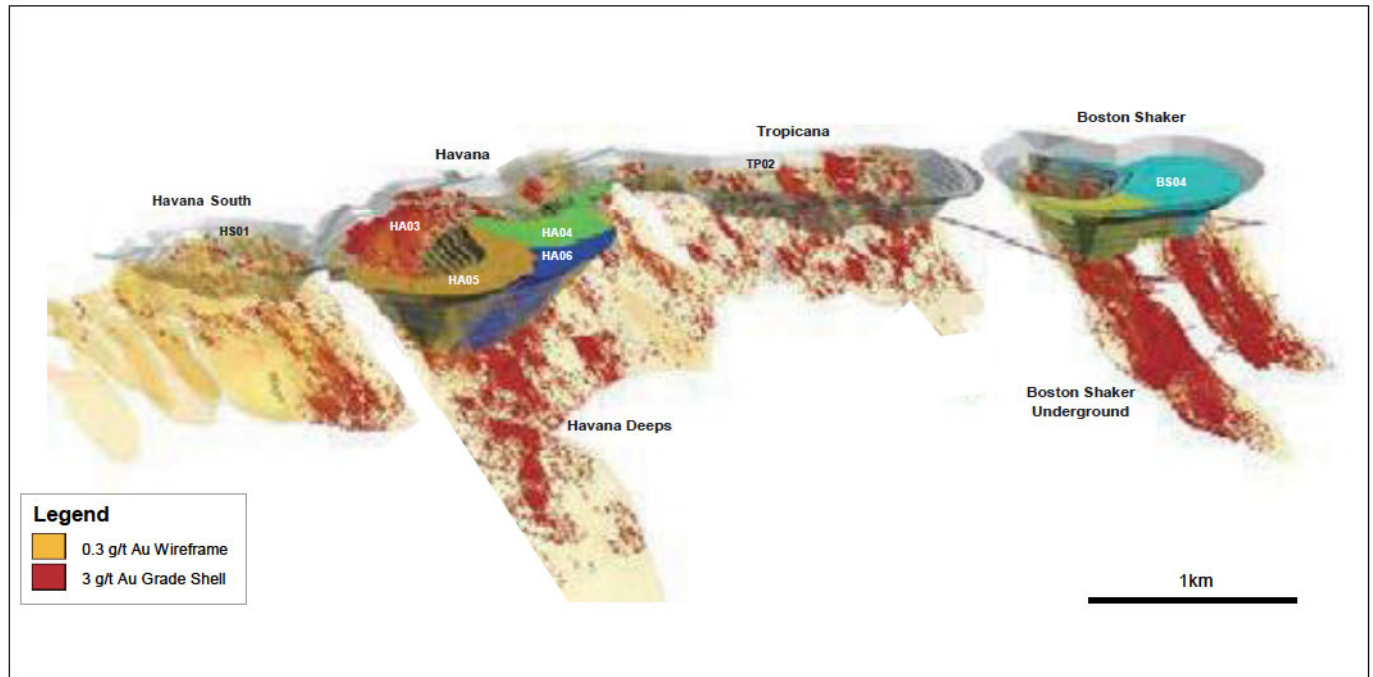




# TROPICANA CONTINUED

## Australia

### SW-NE View of both the open pit and underground Mineral Resource over the strike length of Tropicana



### Geology

#### Deposit type

The Tropicana Gold Project area lies east of a northeast trending magnetic feature, interpreted to be the major tectonic suture between the Yilgarn Craton and the Proterozoic Albany-Fraser Orogen that extends over 700km. The gold deposit is hosted in Archaean gneissic metamorphic rocks (ca. 2,640Ma) with cover sequences generally 10 to 30m thick resulting in the mineral deposit not being exposed at surface.

Together, the Tropicana, Havana, Havana South and Boston Shaker deposits define a northeast trending mineralised corridor, approximately 1.2km wide and 5km long that has been tested to a vertical depth of more than 1,200m. The Mineral Resource remains open down-dip from the Tropicana, Havana and Boston Shaker deposits and has the potential to be extended to the north and south. Neither the immediate metamorphic host rocks nor the mineralised zones are exposed at surface due to the presence of widespread younger cover sequences.

#### Mineralisation style

The Tropicana deposit comprises a mineralised zone up to 50m thick, hosted predominantly in quartzo-feldspathic gneiss with a garnet-gneiss dominated hangingwall package. The mineralisation is comprised of subordinate thin (3 to 5m), discontinuous

mineralised lenses that typically return intercepts of >0.5g/t gold. The Havana deposit comprises a lower, laterally continuous, higher-grade lode up to 50m thick that is overlain, in the central and southern parts of the pit, by stacked, typically lower-grade and thinner (up to 25m thick) mineralised zones. Havana is also dominantly hosted in quartzo-feldspathic gneiss, again with a garnet gneiss dominated hangingwall.

#### Mineralisation characteristics

Mineralisation is accompanied by pyrite (2 to 8%) with accessory pyrrhotite, chalcopyrite and other minor sulphides and tellurides. The gold mineralisation is related to shear planes that postdate the main gneissic fabric developed during peak granulite-facies metamorphism.

#### Exploration

During 2019, Tropicana JV brownfields exploration programmes included Mineral Resource development drilling at Tropicana Gold Mine and near-mine exploration drilling.

Mineral Resource development drilling completed extensional drilling at Boston Shaker, Havana, Havana South and Tropicana, designed to test for underground extensions. In-pit Mineral Resource definition drilling was completed at Boston Shaker, Havana and Havana South for increased Mineral Resource confidence.



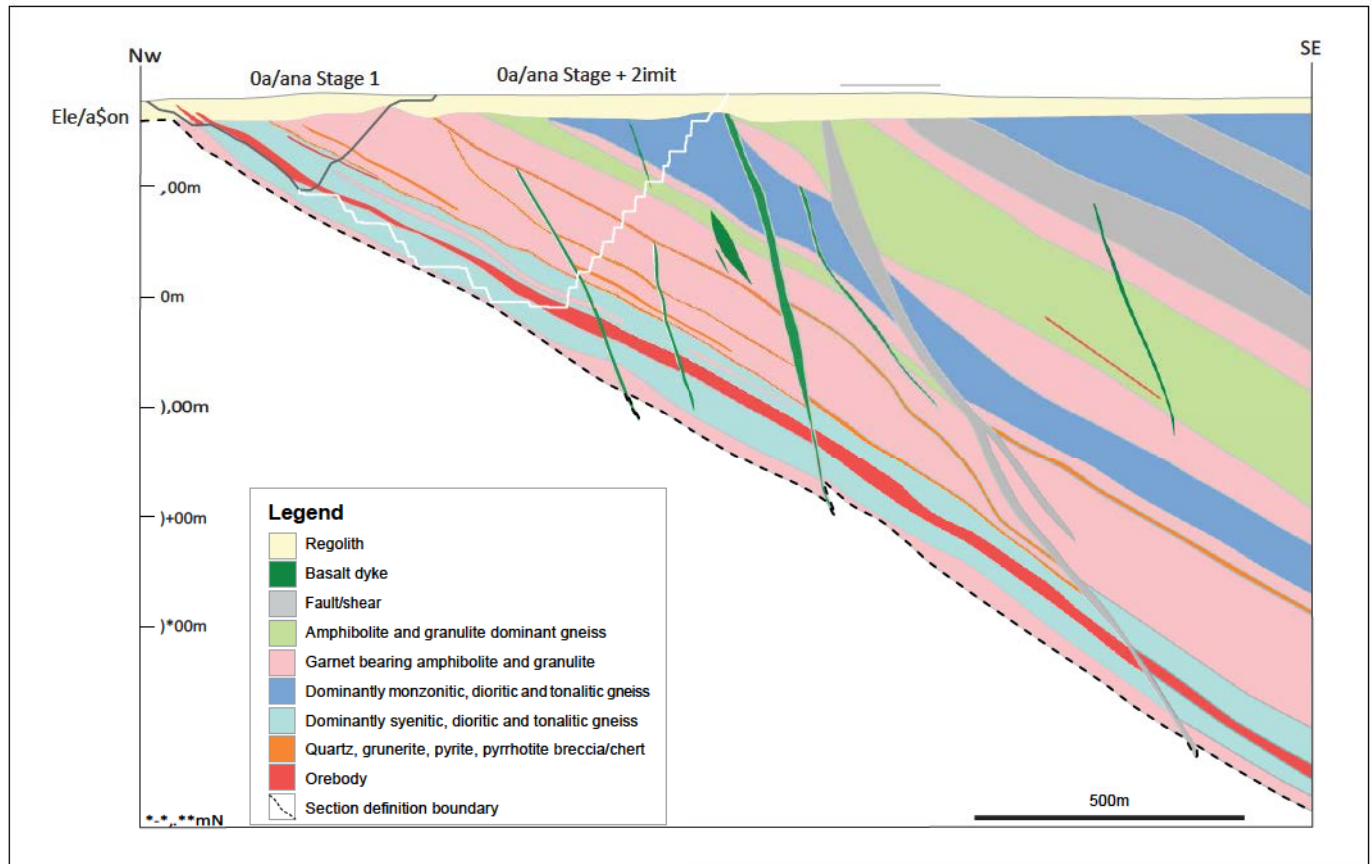
Near-mine exploration programmes explored for potential open pit satellite Mineral Resource, within 60 km of the mine. They comprised a mix of advanced and early stage exploration using DD, RC and AC drilling. Of these, the advanced programmes are testing prospects such as Madras, New Zebra, Angel Eyes and Voodoo Child, with early stage AC drilling at Southern Traverses, following ongoing target generation. The results of the 2019 exploration drilling and ongoing targeting work provide a comprehensive pipeline of exploration targets with focus on near mine exploration going forward into 2020.

### Projects

The Boston Shaker underground was approved through a FS in February 2019, and has been in development since May 2019, with first ore stopes scheduled for July 2020.

A PFS is examining the options around mining the depths of the Havana pits. The study will trade-off open pit versus underground options for material below the current pit.

### NW-SE Geological cross-section through Havana pit, elevation in metres AMSL



### Mineral Resource

#### Details of average drill hole spacing and type in relation to Mineral Resource classification

Category	Spacing m (-x-)	Type of drilling				
		Diamond	RC	Blasthole	Channel	Other
Measured	12 x 12, 25 x 25	✓	✓	–	–	–
Indicated	50 x 25, 50 x 50	✓	✓	–	–	–
Inferred	100 x 100	✓	✓	–	–	–
Grade/ore control	12 x 12	–	✓	–	–	–

# TROPICANA CONTINUED

## Australia

### Inclusive Mineral Resource

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Boston Shaker Stage 4 – BS04	Measured	1.19	1.85	2.21	0.07
	Indicated	3.62	2.02	7.29	0.23
	Inferred	–	–	–	–
	<b>Total</b>	<b>4.81</b>	<b>1.98</b>	<b>9.50</b>	<b>0.31</b>
Havana Stage 3 – HA03	Measured	–	–	–	–
	Indicated	0.53	2.17	1.16	0.04
	Inferred	–	–	–	–
	<b>Total</b>	<b>0.53</b>	<b>2.17</b>	<b>1.16</b>	<b>0.04</b>
Havana Stage 4 – HA04	Measured	0.30	1.32	0.40	0.01
	Indicated	6.15	1.69	10.41	0.33
	Inferred	–	–	–	–
	<b>Total</b>	<b>6.46</b>	<b>1.67</b>	<b>10.81</b>	<b>0.35</b>
Havana Stage 5 – HA05	Measured	0.03	1.46	0.04	0.00
	Indicated	6.52	1.72	11.21	0.36
	Inferred	–	–	–	–
	<b>Total</b>	<b>6.55</b>	<b>1.72</b>	<b>11.26</b>	<b>0.36</b>
Havana Stage 6 – HA06	Measured	–	–	–	–
	Indicated	8.55	1.65	14.13	0.45
	Inferred	–	–	–	–
	<b>Total</b>	<b>8.55</b>	<b>1.65</b>	<b>14.13</b>	<b>0.45</b>
Havana South Stage 1 – HS01	Measured	–	–	–	–
	Indicated	1.04	1.35	1.41	0.05
	Inferred	–	–	–	–
	<b>Total</b>	<b>1.04</b>	<b>1.35</b>	<b>1.41</b>	<b>0.05</b>
Havana South Shell	Measured	0.18	0.94	0.17	0.01
	Indicated	10.90	1.18	12.89	0.41
	Inferred	2.37	1.27	3.02	0.10
	<b>Total</b>	<b>13.45</b>	<b>1.19</b>	<b>16.07</b>	<b>0.52</b>
Stockpile (open pit)	Measured	27.30	0.76	20.64	0.66
	Indicated	–	–	–	–
	Inferred	–	–	–	–
	<b>Total</b>	<b>27.30</b>	<b>0.76</b>	<b>20.64</b>	<b>0.66</b>
Boston Shaker (underground)	Measured	–	–	–	–
	Indicated	4.61	3.26	15.03	0.48
	Inferred	7.79	3.47	27.02	0.87
	<b>Total</b>	<b>12.40</b>	<b>3.39</b>	<b>42.06</b>	<b>1.35</b>
Tropicana (underground)	Measured	–	–	–	–
	Indicated	1.52	2.69	4.09	0.13
	Inferred	0.30	2.64	0.79	0.03
	<b>Total</b>	<b>1.82</b>	<b>2.68</b>	<b>4.88</b>	<b>0.16</b>
Havana (underground)	Measured	–	–	–	–
	Indicated	1.66	2.97	4.93	0.16
	Inferred	4.83	2.95	14.24	0.46
	<b>Total</b>	<b>6.49</b>	<b>2.95</b>	<b>19.18</b>	<b>0.62</b>
Havana South (underground)	Measured	–	–	–	–
	Indicated	0.18	3.07	0.55	0.02
	Inferred	0.42	2.96	1.23	0.04
	<b>Total</b>	<b>0.59</b>	<b>2.99</b>	<b>1.78</b>	<b>0.06</b>
<b>Tropicana</b>	<b>Total</b>	<b>89.99</b>	<b>1.70</b>	<b>152.87</b>	<b>4.91</b>

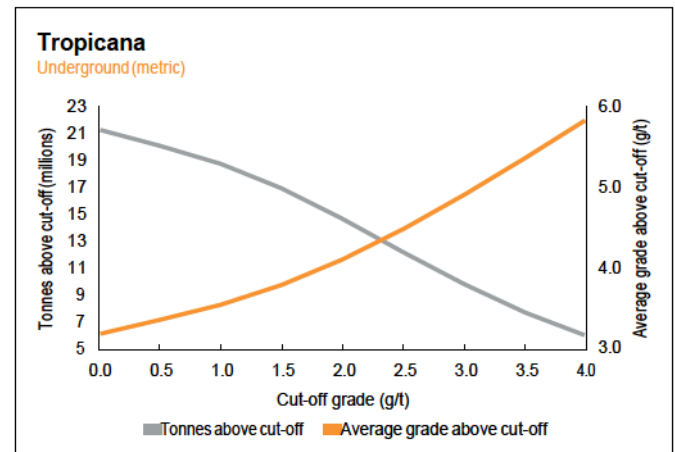
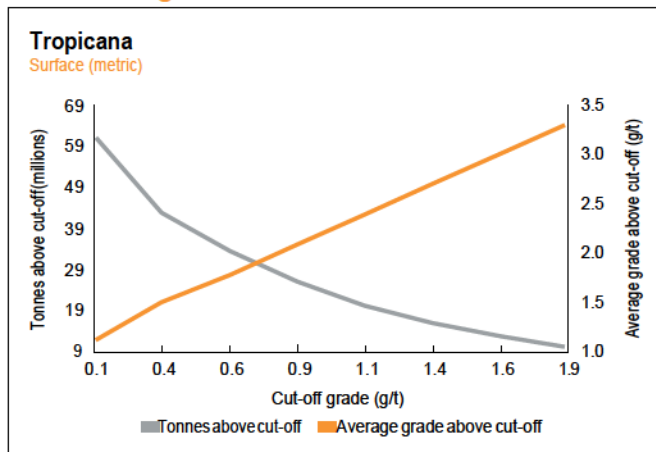
## Estimation

All available geological drill hole information is validated for use in the models and the local geology of the deposit is used to classify the drill hole information into appropriate geostatistical domains. Detailed statistical analyses are conducted on each of these domains. The recoverable gold Mineral Resource for the open pit is estimated by LUC. This is conventional UC, which estimates the proportion of material recovered by mining above a cut-off grade, assuming a specified SMU. LUC goes a step further to position

the SMU block within the estimated panel based on the most likely position of the higher grade SMU blocks relative to the lower grades SMU blocks.

The underground Mineral Resource estimate uses all available drilling hosted within the down-plunge and along strike extents of the mineralisation, outside the current open pits and open pit Mineral Resource shells, and is estimated by LUC.

## Grade tonnage curves



The grade tonnage curves do not include stockpiles.

## Exclusive Mineral Resource

as at 31 December 2019		Category	Tonnes million	Grade g/t	Contained gold	
					tonnes	Moz
Tropicana		Measured	12.52	0.53	6.57	0.21
		Indicated	22.29	1.53	34.04	1.09
		Inferred	15.71	2.95	46.30	1.49
		<b>Total</b>	<b>50.52</b>	<b>1.72</b>	<b>86.91</b>	<b>2.79</b>

The exclusive Mineral Resource contains Mineral Resource below the Ore Reserve cut-off grade, Mineral Resource within an open pit optimisation, outside the current Ore Reserve pit design and also Inferred Mineral Resource. The underground exclusive Mineral Resource also contains Mineral Resource constrained within shapes defined by MSO, an underground optimisation tool, that is outside the current Ore Reserve slope designs.

## Mineral Resource below infrastructure

as at 31 December 2019		Category	Tonnes million	Grade g/t	Contained gold	
					tonnes	Moz
Tropicana		Measured	-	-	-	-
		Indicated	7.97	3.09	24.61	0.79
		Inferred	13.34	3.24	43.28	1.39
		<b>Total</b>	<b>21.31</b>	<b>3.19</b>	<b>67.89</b>	<b>2.18</b>

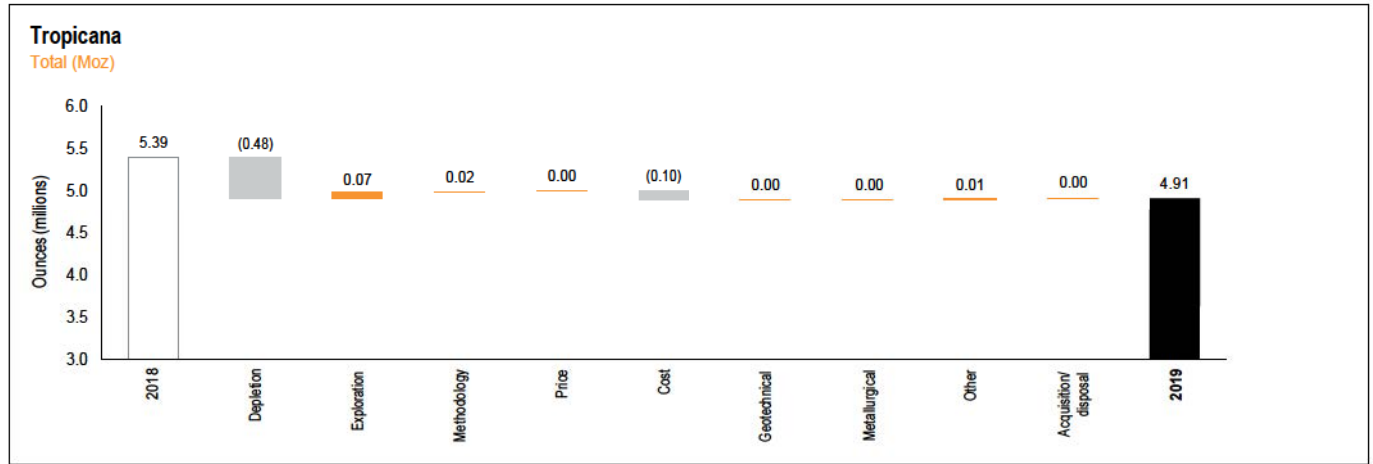
Boston Shaker began underground decline development in May 2019 and ore production is scheduled for mid-2020, accordingly all Mineral Resource here is classified as below infrastructure. All other remaining underground Mineral Resource is below infrastructure development with no development in place or currently planned.



# TROPICANA CONTINUED

## Australia

### Year-on-year changes in Mineral Resource

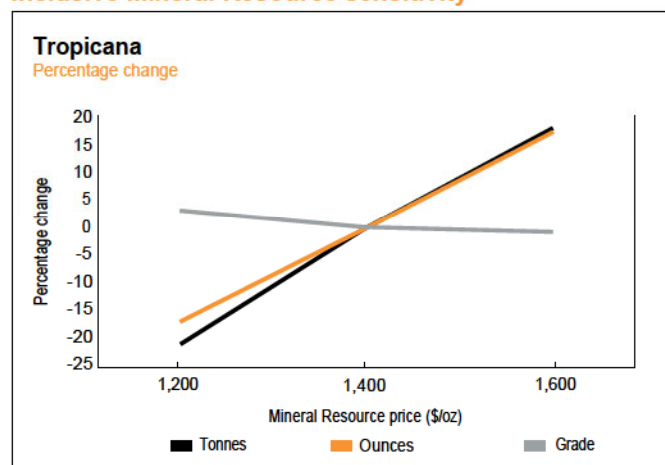


Mineral Resource change was dominated by depletion, with minor additions to Mineral Resource through exploration drilling at Boston Shaker underground. The Havana South underground Mineral Resource was adjusted to be lower, in-line with the updated Mineral Resource shell optimisation.



Senior exploration geologist inspecting core

## Inclusive Mineral Resource sensitivity



The open pit Mineral Resource is highly sensitive to gold price changes, particularly in Havana South. In other areas, the pit designs are fixed and based on the current business plan. There is a 17% upside in ounces at a higher Mineral Resource price and 18% downside in ounces at a lower Mineral Resource price.

## Ore Reserve

### Ore Reserve

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Boston Shaker Stage 4 – BS04	Proved	0.88	2.33	2.05	0.07
	Probable	2.88	2.40	6.91	0.22
	<b>Total</b>	<b>3.76</b>	<b>2.38</b>	<b>8.96</b>	<b>0.29</b>
Havana Stage 3 – HA03	Proved	–	–	–	–
	Probable	0.43	2.57	1.09	0.04
	<b>Total</b>	<b>0.43</b>	<b>2.57</b>	<b>1.09</b>	<b>0.04</b>
Havana Stage 4 – HA04	Proved	0.19	1.59	0.30	0.01
	Probable	4.92	1.95	9.61	0.31
	<b>Total</b>	<b>5.10</b>	<b>1.94</b>	<b>9.91</b>	<b>0.32</b>
Havana Stage 5 – HA05	Proved	0.01	1.62	0.02	0.00
	Probable	5.39	1.94	10.45	0.34
	<b>Total</b>	<b>5.40</b>	<b>1.94</b>	<b>10.47</b>	<b>0.34</b>
Havana Stage 6 – HA06	Proved	–	–	–	–
	Probable	6.71	1.93	12.93	0.42
	<b>Total</b>	<b>6.71</b>	<b>1.93</b>	<b>12.93</b>	<b>0.42</b>
Havana South Stage 1 – HS01	Proved	–	–	–	–
	Probable	0.78	1.63	1.26	0.04
	<b>Total</b>	<b>0.78</b>	<b>1.63</b>	<b>1.26</b>	<b>0.04</b>
Stockpile (open pit)	Proved	15.40	0.94	14.52	0.47
	Probable	–	–	–	–
	<b>Total</b>	<b>15.40</b>	<b>0.94</b>	<b>14.52</b>	<b>0.47</b>
Boston Shaker (underground)	Proved	–	–	–	–
	Probable	1.89	3.60	6.82	0.22
	<b>Total</b>	<b>1.89</b>	<b>3.60</b>	<b>6.82</b>	<b>0.22</b>
<b>Tropicana</b>	<b>Total</b>	<b>39.47</b>	<b>1.67</b>	<b>65.96</b>	<b>2.12</b>

# TROPICANA CONTINUED

## Australia

### Estimation

The Ore Reserve for Tropicana is based on an operating LOM plan. For the open pit LOM plan, a FS was completed in 2010, which determined a technically achievable and financially economic mine plan and this is updated annually. The pits that make up the open pit LOM plan are Havana, Boston Shaker and Havana South.

For the underground LOM plan, the Boston Shaker FS study was completed in 2019 which determined the viability of the Boston Shaker underground project. All Ore Reserve is estimated by reporting physicals (volumes, tonnes, grades, material types, etc) against the Mineral Resource model within detailed designs. Ore Reserve physicals are then scheduled and put through a financial model for economic evaluation.

### Ore Reserve modifying factors

as at 31 December 2019	Gold price AUD/oz	Cut-off grade g/tAu	MRF %(based on tonnes)	MRF %(based on g/t)	MCF %	MetRF %
Boston Shaker Stage 4 – BS04	1,512	0.70	100.0	100.0	100.0	90.0
Boston Shaker Stage 3 – BS03	1,512	0.70	100.0	100.0	100.0	90.0
Havana Stage 3 – HA03	1,512	0.70	100.0	100.0	100.0	90.0
Havana Stage 4 – HA04	1,512	0.70	100.0	100.0	100.0	90.0
Havana Stage 5 – HA05	1,512	0.70	100.0	100.0	100.0	90.0
Havana Stage 6 – HA06	1,512	0.70	100.0	100.0	100.0	90.0
Havana South Stage 1 – HS01	1,512	0.70	100.0	100.0	100.0	90.0
Tropicana Stage 2 – TP02	1,512	0.70	100.0	100.0	100.0	90.0
Stockpile (open pit)	1,512	0.70	100.0	100.0	100.0	90.0
Boston Shaker (underground)	1,512	2.69	95.0	100.0	100.0	89.9

### Inferred Mineral Resource in business plan

as at 31 December 2019	Tonnes million	Grade g/t	Contained gold	
			tonnes	Moz
Boston Shaker (underground)	2.55	3.99	10.15	0.33
<b>Total</b>	<b>2.55</b>	<b>3.99</b>	<b>10.15</b>	<b>0.33</b>

All Mineral Resource categories, including the Inferred Mineral Resource, were included in the business plan. The Inferred Mineral Resource was excluded from the Ore Reserve. There is an insignificant percentage of Inferred Mineral Resource (less than 0.1% by tonnage) within the pit designs used.

The underground Ore Reserve contains 3.7% Inferred Mineral Resource within the Ore Reserve design.

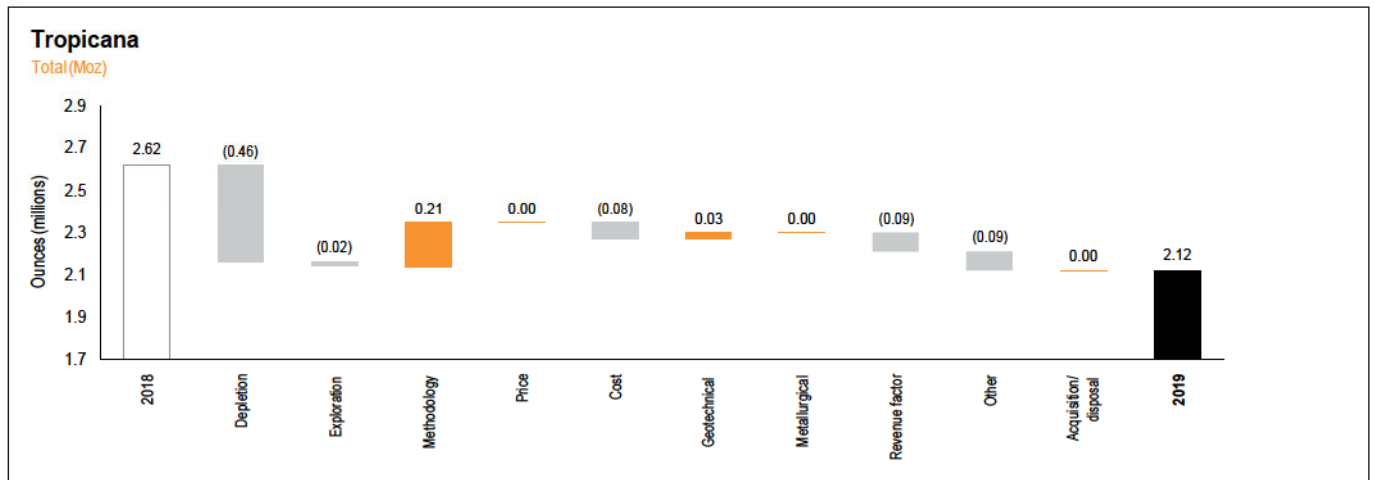
### Ore Reserve below infrastructure

as at 31 December 2019	Category	Tonnes million	Grade g/t	Contained gold	
				tonnes	Moz
Tropicana	Proved	–	–	–	–
	Probable	1.89	3.60	6.82	0.22
	<b>Total</b>	<b>1.89</b>	<b>3.60</b>	<b>6.82</b>	<b>0.22</b>

All of the Boston Shaker underground Ore Reserve is below infrastructure.

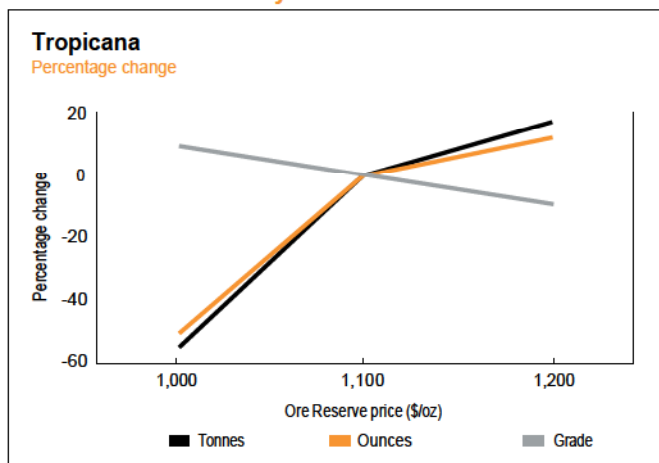


## Year-on-year changes in Ore Reserve



Changes in the Ore Reserve are mainly due to depletion during 2019 operations. There were several minor changes to Mineral Resource models, costs and operations, however these changes effectively balanced each other out.

## Ore Reserve sensitivity



The open pit Ore Reserve is highly sensitive to gold price changes particularly in Havana. In other areas, the pit designs are fixed based on the current business plan. There is a 12% upside in ounces at a higher Ore Reserve price and 17% downside in ounces at a lower Ore Reserve price.

## Competent Persons

Responsibility	Competent Person	Professional organisation	Membership number	Relevant experience	Qualification
Mineral Resource	Damon Elder	MAusIMM	208 240	23 years	BSc Hons (Geology)
Ore Reserve (surface)	Joanne Endersbee	MAusIMM	334 537	10 years	Certificate in Mine Surveying
Ore Reserve (underground)	Jeff Dang	MAusIMM	307 499	12 years	BEng Hons (Mining)

## SECTION 6

# ADMINISTRATIVE INFORMATION

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# DEFINITIONS

This section provides information on our definition of Mineral Resource and Ore Reserve as well as a glossary of terms and abbreviations.

## Mineral Resource

The SAMREC Code, 2016 edition, definition of a Mineral Resource is as follows (refer to the diagram on page 233):

**“A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are subdivided, and must be so reported, in order of increasing confidence in respect of geoscientific evidence, into Inferred, Indicated or Measured categories.”**

All reports of Mineral Resource must satisfy the requirement that there are reasonable prospects for eventual economic extraction (more likely than not), regardless of the classification of the Mineral Resource. Portions of a deposit that do not have reasonable prospects for eventual economic extraction are not included in a Mineral Resource.

The Mineral Resource is estimated using all relevant drilling and sampling information along with a detailed geological model.

The geological models are based on various combinations of core and/or chip logging, mapping, geophysics, geochemistry and geological understanding that have been developed for each deposit. Most of our deposits have been the subject of research by world experts in the relevant class of gold deposit.

The grade estimation for each deposit has been developed over the life of the mine, and is constantly reviewed in terms of grade control information and reconciliation with the metallurgical plant. In general, the deep South African mines utilise a process of mixed support co-kriging for the estimation of the Mineral Resource, while the open pits and shallow underground mines generally use kriging with post processing by UC or LUC to generate a recoverable Mineral Resource model where appropriate.

In order to comply with the economic requirement of the definition of Mineral Resource, all our Mineral Resource is constrained at an upside gold price, with all other parameters being kept the same as used for estimation of the Ore Reserve. In the underground gold mines, scoping studies are conducted on all coherent blocks of ground that lie above the calculated Mineral Resource cut-off grade. These studies include all cost and capital requirements to access the block. In the case of open pit operations, pit optimisations are conducted at the Mineral Resource gold price and all material outside these shells is excluded from the Mineral Resource unless it is potentially mineable from underground.

At a number of our underground operations, primarily in Brazil and Australia, a change in methodology in 2019 resulted in significant reductions in Mineral Resource. These changes were introduced in order to better meet the requirement for eventual economic extraction. The process saw the introduction of a stope optimiser to constrain the Mineral Resource in an economically and technically defined shape, and a clean out of existing pillars not considered minable from a geotechnical perspective. This process represents a once off adjustment.

It is the opinion of AngloGold Ashanti that the Mineral Resource represents a realistic view of an upside potential to the Ore Reserve. In interpreting the Mineral Resource it is critical to factor in the following:

- That there is a reasonable expectation of eventual economic extraction
- The Mineral Resource is quoted *in situ* and has not been corrected for dilution, mining losses or recovery
- Many of the areas lying in the exclusive Mineral Resource are currently being actively drilled and are the subject of economic and technical studies. It can, however, not be assumed at this stage that the company has intent to mine these areas

Mineral Resource classification is based on the ‘15% Rule’. A Measured Mineral Resource should be expected to be within 15% of the quarterly metal estimate at least 90% of the time while, for an Indicated Mineral Resource estimate, the annual metal estimate should be within 15% of the metal estimated at least 90% of the time. For an Inferred Mineral Resource, the annual error may, for 90% of the time, be greater than 15%.

The process and methodology of classification are at the discretion of the Competent Person and involves expressing the ‘15% Rule’, as a required level of information, which in tangible terms is the spacing of the drill hole or tunnel spacing in a particular deposit. Techniques such as conditional simulation or even an empirical reconciliation-based approach are employed. However, all operations are responsible for demonstrating, through reconciliation, that their classification system conforms to the 15% rule set out above.

Final Mineral Resource classification also considers relative confidence in sampling, drilling and assay QA/QC as well as other variables that may impact on confidence in tonnage and grade.

The Inferred Mineral Resource category is intended to cover situations in which a mineral concentration or occurrence has been identified and limited measurements and sampling have been completed but in which the data are insufficient to allow the geological or grade continuity to be interpreted with confidence. While it would be reasonable to expect that the majority of Inferred Mineral Resource would upgrade to Indicated Mineral Resource with continued exploration, due to the uncertainty of Inferred Mineral Resource, it should not be assumed that such upgrading will always occur.

We quote our Mineral Resource as inclusive of the Ore Reserve. However, in this document, the exclusive Mineral Resource is also quoted. The exclusive Mineral Resource is defined as the Inclusive Mineral Resource less the Ore Reserve before dilution and other factors are applied.

The exclusive Mineral Resource consists of the following components:

- Inferred Mineral Resource, including that within the Ore Reserve design or stope shape
- Mineral Resource that sits above the Mineral Resource cut-off grade but below the Ore Reserve cut-off grade that resides within the defined Ore Reserve volume
- Mineral Resource that lies between the LOM pit shell/mine design and the Mineral Resource pit shell/mine design (this material will become economic if the gold price increases)
- Mineral Resource where the technical studies to engineer an Ore Reserve have not yet been completed

All grade tonnage graphs represent *in situ* grade and tonnes within the Mineral Resource. Caution should be exercised when interpreting the grade tonnage graphs presented. The ability to selectively mine the deposits may be precluded by the deposit geometry, mining method and the need for practical development of the orebody.

### Ore Reserve

The SAMREC Code, 2016 edition, definition of an Ore Reserve is as follows (refer to the diagram on page 233):

“A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at prefeasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.”

Ore Reserve is subdivided in order of increasing confidence into Probable Ore Reserve and Proved Ore Reserve.

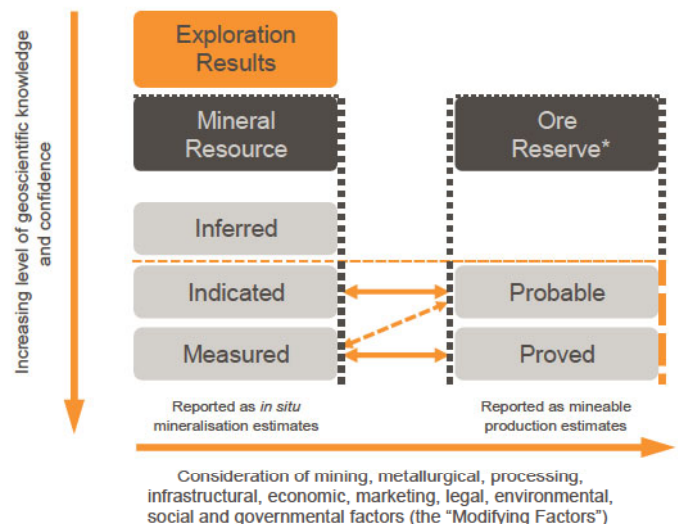
In the underground operations, the Ore Reserve is based on a full mine design and, in the case of open pits, on a pit optimisation followed by a final pit design. The Ore Reserve is reported according to tonnage, mean grade(s) and contained metal inclusive of mining dilution, mining ore-losses and mine call factors.

These modifying factors are based on measurements rather than estimates. Tonnage and grade estimates for surface stockpile materials that meet Ore Reserve criteria are itemised separately.

Only the Ore Reserve included for treatment in the business plan production schedule is considered in the Ore Reserve statement. Inferred Mineral Resource is not included in the Ore Reserve statement. Inferred Mineral Resource may however have an influence on the Ore Reserve by virtue of its inclusion in the optimisation process used to define the final pit limits or stope design. Inclusion in the production schedule will also influence the cash flow and thus the viability of any project. The effect of including Inferred Mineral Resource in the business plan is tested by scheduling the optimisation results, including the Inferred Mineral Resource, and generating a cash flow based on giving a value to the Proved and Probable Ore Reserve component of the schedule only (Inferred Mineral Resource is costed as waste). The Ore Reserve is acceptable if the cash flow, inclusive of the zero value Inferred Mineral Resource, is positive over the life of the mine.

For all new projects, an audited PFS (as a minimum requirement) must have been completed that demonstrates the viability of the project and meets the company's investment requirements. This study must be signed off at the appropriate executive level in order to demonstrate an intent on the part of the company to proceed to FS.

### Relationship between Exploration Results, Mineral Resource and Ore Reserve



\* Although the term Mineral Reserve is used throughout the SAMREC Code, it is recognised by the Code that the term Ore Reserve is synonymous with Mineral Reserve. We elect to use Ore Reserve in its reporting.



# GLOSSARY OF TERMS

<b>Banded iron formation (BIF)</b>	A chemically formed iron-rich sedimentary rock.
<b>By-products</b>	Any potentially economic or saleable products that emanate from the core process of producing gold or copper, including silver, uranium, molybdenum and sulphuric acid.
<b>Calc-silicate</b>	A metamorphic rock consisting mainly of calcium-bearing silicates such as diopside and wollastonite, often formed by metamorphism of impure limestone or dolomite.
<b>Capital expenditure</b>	Total capital expenditure on tangible assets which includes stay-in-business and project capital.
<b>Carbon-in-leach (CIL)</b>	Gold is leached from a slurry of ore where cyanide and carbon granules are added to the same agitated tanks. The gold loaded carbon granules are separated from the slurry and treated in an elution circuit to remove the gold.
<b>Carbon-in-pulp (CIP)</b>	Gold is leached conventionally from a slurry of ore with cyanide in agitated tanks. The leached slurry then passes into the CIP circuit where activated carbon granules are mixed with the slurry and gold is adsorbed on to the activated carbon. The gold-loaded carbon is separated from the slurry and treated in an elution circuit to remove the gold.
<b>Comminution</b>	The crushing and grinding of ore to make gold available for physical or chemical separation (see also Milling).
<b>Contained gold</b>	The total gold content (tonnes multiplied by grade) of the material being described.
<b>Cut-off grade</b>	The minimum grade at which a unit of ore can be mined to achieve the desired economic outcome.
<b>Depletion</b>	The decrease in quantity of ore in a deposit or property resulting from extraction or production.
<b>Development</b>	The process of accessing a deposit through shafts and/or tunnelling in underground mining operations.
<b>Electro-winning</b>	A process of recovering gold from solution by means of electrolytic chemical reaction into a form that can be smelted easily into gold bars.
<b>Elution</b>	Recovery of the gold from the activated carbon into solution before zinc precipitation or electrowinning.
<b>Feasibility study (FS)</b>	A comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable modifying factors together with any other relevant operational factors and detailed financial analysis necessary to demonstrate, at the time of reporting, that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a PFS (SAMREC 2016).
<b>Flotation</b>	Concentration of gold and gold-hosting minerals into a small mass by various techniques (for example collectors, frothers, agitation and air flow) that collectively enhance the buoyancy of the target minerals, relative to unwanted gangue, for recovery into an overflowing froth phase.
<b>Full grade ore (FGO)</b>	Ore material with sufficient grade to carry the full operating cost of the operation. FGO cut-off is the break-even grade where cost is representative of all costs to carry the full operation.
<b>Gold produced</b>	Refined gold in a saleable form derived from the mining process.
<b>Grade</b>	The quantity of ore contained within a unit weight of mineralised material generally expressed in grams per metric tonne (g/t) or ounces per short ton of ore (oz/t) for gold-bearing material.
<b>Indicated Mineral Resource</b>	That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation (SAMREC 2016).
<b>Inferred Mineral Resource</b>	That part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration (SAMREC 2016).
<b>Leaching</b>	Dissolution of gold from crushed or milled material, including reclaimed slime, prior to adsorption on to activated carbon or direct zinc precipitation.
<b>Life of mine (LOM)</b>	Number of years that the operation is planning to mine and treat ore as taken from the current mine plan.



<b>Marginal ore</b>	Ore material with grade below the FGO cut-off that can be economically treated at the end of mine life when overhead and mining costs are reduced. Marginal ore cut-off is the break-even grade where cost is representative of the reduced cost that will be experienced after mining has ended.
<b>Measured Mineral Resource</b>	That part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Mineral Reserve or to a Probable Mineral Reserve (SAMREC 2016).
<b>Metallurgical plant</b>	A processing plant designed to treat ore and extract gold or copper in the case of Quebradona (and, in some cases, often valuable by-products).
<b>Milling</b>	A process of reducing broken ore to a size at which concentrating can be undertaken (see also comminution).
<b>Mine call factor (MCF)</b>	The ratio, expressed as a percentage, of the total quantity of recovered and unrecovered mineral product after processing with the amount estimated in the ore based on sampling. The ratio of contained gold delivered to the metallurgical plant divided by the estimated contained gold of ore mined based on sampling.
<b>Metallurgical recovery factor (MetRF)</b>	A measure of the efficiency in extracting gold from the ore.
<b>Mineral deposit</b>	A mineral deposit is a concentration (or occurrence) of material of possible economic interest in or on the Earth's crust.
<b>Mining recovery factor (MRF)</b>	This factor reflects a mining efficiency factor relating the recovery of material during the mining process and is the variance between the tonnes called for in the mining design and what the plant receives. It is expressed in both a grade and tonnage number.
<b>Modifying factors</b>	Considerations used to convert Measured and Indicated Mineral Resource to Ore Reserve. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.
<b>Net present value (NPV)</b>	The difference between the present value of cash inflows and the present value of cash outflows.
<b>Ore Reserve</b>	Although the term Mineral Reserve is used throughout the SAMREC Code, it is recognised by the Code that the term Ore Reserve is synonymous with Mineral Reserve. AngloGold Ashanti elects to use Ore Reserve in its reporting.
<b>Ounce (oz) (Troy)</b>	Imperial measure of mass specifically used for precious metals and still the standard measure of mass in the gold industry. A kilogram is equal to 32.1507 troy ounces. A troy ounce is equal to 31.1035 grams.
<b>Páramo</b>	Alpine tundra ecosystem/alpine moorland.
<b>Precipitate</b>	The solid product formed when a change in solution chemical conditions results in conversion of some pre-dissolved ions into solid state.
<b>Prefeasibility study (PFS)</b>	A comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the modifying factors and the evaluation of any other relevant factors which are sufficient for a Competent Person, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting. A PFS is at a lower confidence level than a FS (SAMREC 2016).
<b>Probable Ore Reserve</b>	The economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the modifying factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve (SAMREC 2016).
<b>Proved Ore Reserve</b>	The economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the modifying factors. (SAMREC 2016).
<b>Reclamation</b>	In the South African context, reclamation describes the process of reclaiming tailings dumps using high-pressure water cannons to form a slurry which is pumped to the metallurgical plants for processing.

# GLOSSARY OF TERMS CONTINUED

<b>Recovered grade</b>	The recovered mineral content per unit of ore treated.
<b>Reef</b>	A gold-bearing horizon, sometimes a conglomerate band, that may contain economic levels of gold. Reef can also be any significant or thick gold bearing quartz vein.
<b>Refining</b>	The final purification process of a metal or mineral to a saleable form.
<b>Region</b>	Defines the operational management divisions within AngloGold Ashanti, namely South Africa, Continental Africa (DRC, Ghana, Guinea, Mali and Tanzania), Australia and the Americas (Argentina, Brazil and Colombia).
<b>Rehabilitation</b>	The process of returning disturbed land to a stable, productive or self-sustaining condition requiring no ongoing maintenance to meet the post-mining land use objectives and taking into account beneficial uses of the site and surrounding land. Rehabilitation objectives are generally defined in environmental permits but are typically amended during the operational phase of projects through stakeholder engagement processes to ensure post mining land uses are congruent with surrounding and regional land use plans. Rehabilitation methods can vary by location owing to the extent of disturbance and geo-climatic factors and include, among others, the processes of remediation, revegetation and restoration, to address issues such as soil, ground and surface water, contamination, soil erosion and revegetation.
<b>Resource modification factor (RMF)</b>	This factor is applied when there is an historic reconciliation discrepancy in the Mineral Resource model. For example, between the Mineral Resource model tonnage and the grade control model tonnage. It is expressed in both a grade and tonnage number.
<b>Seismic event</b>	A sudden inelastic deformation within a given volume of rock that radiates detectable seismic energy.
<b>Shaft</b>	A vertical or subvertical excavation used for accessing an underground mine for transporting personnel, equipment and supplies; for hoisting ore and waste; for ventilation and utilities; and/or as an auxiliary exit.
<b>Smelting</b>	A pyro-metallurgical operation in which gold precipitate from electro-winning or zinc precipitation is further separated from impurities.
<b>Selective mining unit (SMU)</b>	The smallest unit that can be mined at a particular operation with the equipment available at that site, reflecting the intended or proposed mining selectively.
<b>Stope</b>	An underground excavation where ore is extracted.
<b>Stoping</b>	The process of excavating ore underground.
<b>Stripping ratio</b>	The ratio of waste tonnes to ore tonnes mined calculated as total tonnes mined less ore tonnes mined divided by ore tonnes mined.
<b>Tailings</b>	Finely ground rock of low residual value from which valuable minerals have been extracted.
<b>Tailings storage facility (TSF)/facilities (TSFs)</b>	Dam facilities designed to store discarded tailings.
<b>Tonne (t)</b>	Used in metric statistics. Equal to 1,000 kilograms, the International System Units (SI) mass unit.
<b>Tonnage</b>	Quantity of material measured in tonnes.
<b>Waste</b>	Material that contains insufficient mineralisation for consideration for future treatment and, as such, is discarded.

# ABBREVIATIONS

°	Degrees
%	Percentage
\$	United States dollars
3D	Three-dimensional space
AC	Aircore drilling
Ag	Silver
AGA	AngloGold Ashanti
AGACSM/AGA Mineração	AngloGold Ashanti Córrego do Sítio Mineração
AGAG	AngloGold Ashanti (Ghana) Limited
AMSL	Above mean sea level
ANM	Agência Nacional de Mineração
ARS	Argentine peso
Au	Gold
AUD	Australian dollars
Barrick	Barrick Gold Corporation
BIOX	Bacterial oxidation
BMD	Below mine datum
BRL	Brazilian real
ca.	Circa (approximately)
CdS	Córrego do Sítio
CLR	Carbon Leader Reef
cm	Centimetres
cm.g/t	Centimetre grams per tonne
COP	Colombian peso
CPR	Competent Persons report(s)
Cu	Copper
CVSA	Cerro Vanguardia S.A.
DD	Diamond drilling
DRC	Democratic Republic of the Congo
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
ESIA	Environmental and social impact assessment
FAusIMM	Fellow of the Australasian Institute of Mining and Metallurgy
g	Grams
GCS	George Cappendell Shaft
GGB	Geita Greenstone Belt
GGM	Geita Gold Mine
Guinea	Republic of Guinea
g/t	Grams per tonne
ha	Hectare
JORC	Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves
JSE	Johannesburg Stock Exchange Limited
JV	Joint venture
KCD	Karagba, Chauffeur and Durba
kg	Kilograms
koz	Thousand ounces
kozpa	Thousand ounces per annum
kt	Thousand tonnes
kg/t	Kilograms per tonne
km	Kilometres
km <sup>2</sup>	Square kilometre
KMS	Kwezi Mensah Shaft
ktpa	Kilo tonnes per annum
lb	Pounds
LIB	Long inclined borehole

LUC	Localised uniform conditioning
M or m	Metre or million, depending on the context
m <sup>2</sup>	Square metre
m <sup>3</sup>	Cubic metre
Ma	Mega-annum
MAusIMM	Member of the Australasian Institute of Mining and Metallurgy
MCH	Meta-chert
Mlb	Million pounds
Mo	Molybdenum
Moz	Million ounces
MPRDA	Mineral and Petroleum Resources Development Act
mRL	Metres relative level
MSG	Mineração Serra Grande
MSO	Mineable Shape Optimiser
Mt	Million tonnes
Mtpa	Million tonnes per annum
Mtpm	Million tonnes per month
MW	Mega watt
MWS	Mine Waste Solutions
NSR	Net Smelter Return
oz/t	ounces per tonne
POX	Pressure oxidation
QA/QC	Quality Assurance/Quality Control
RCubed	Mineral Resource and Ore Reserve Reporting System
R or ZAR	South African rand
Randgold	Randgold Resources Limited
RC	Reverse circulation drilling
RGB	Red-green-blue
ROM	Run-of-mine
RRSC	Mineral Resource and Ore Reserve Steering Committee
S	Sulphur
SACNASP	South African Council for Natural Scientific Professions
SAG	Société Ashanti Goldfields de Guinea
SAG mills	Semi-autogeneous grinding mills
SAGC	South African Geomatics Council
SAMREC	The South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves
SEMOS	Société d'Exploration des Mines d'Or de Sadiola SA
SEC	United States Securities and Exchange Commission
SFZ	Sadiola Fracture Zone
SOKIMO	Société Minière de kilo-Moto
SOMIQ	Société Minière Internationale du Québec
SOX	Sarbanes-Oxley (Act of 2002)
SSP	Sadiola Sulphide project
tpd	Tonnes per day
U <sub>3</sub> O <sub>8</sub>	Uranium oxide
UC	Uniform conditioning
VCR	Ventersdorp Contact Reef
VR	Vaal Reef
WUDLs	Western Ultra-deep Levels



# ADMINISTRATIVE INFORMATION FOR PROFESSIONAL ORGANISATIONS

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<b>AusIMM</b>	The Australasian Institute of Mining and Metallurgy PO Box 660, Carlton South, Victoria 3053, Australia Telephone: +61 (3) 9658 6100 Facsimile: +61 (3) 9662 3662 <a href="http://www.ausimm.com">www.ausimm.com</a>
<b>The Geological Society</b>	The Geological Society of London Burlington House, Piccadilly, London W1J 0BG Telephone: +44 (0)20 7434 9944 <a href="http://www.geolsoc.org.uk">www.geolsoc.org.uk</a>
<b>GSSA</b>	The Geological Society of South Africa PO Box 91230, Auckland Park 2006, Johannesburg, South Africa Telephone: +27 (11) 358 0028 <a href="http://www.gssa.org.za">www.gssa.org.za</a>
<b>SAGC</b>	South African Geomatics Council P O Box 752799, Garden View 2047, Gauteng, South Africa Telephone: +27 (11) 626 1040/1080 Facsimile: +27 (11) 626 2007 <a href="http://www.sagc.org.za">www.sagc.org.za</a>
<b>SACNASP</b>	South African Council for Natural Scientific Professions Private Bag X540, Silverton 0127, Gauteng, South Africa Telephone: +27 (12) 748 6500 Facsimile: +27 (86) 206 0427 <a href="http://www.sacnasp.org.za">www.sacnasp.org.za</a>
<b>SAIMM</b>	The Southern African Institute of Mining and Metallurgy PO Box 61127, Marshalltown 2107, Gauteng, South Africa Telephone: +27 (11) 834 1273/7 Facsimile: +27 (11) 838 5923/8156 <a href="http://www.saimm.co.za">www.saimm.co.za</a>
<b>SME</b>	Society for Mining, Metallurgy & Exploration 12999 E. Adam Aircraft Circle, Englewood, CO 80112, United States Telephone (toll free – U.S. only): +1 800 958 1550 Main number: +1 720 574 1256 Facsimile: +1 303 973 3845 <a href="http://www.smenet.org">www.smenet.org</a>

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# FORWARD-LOOKING STATEMENTS

Certain statements contained in this document, other than statements of historical fact, including, without limitation, those concerning the economic outlook for the gold mining industry, expectations regarding gold prices, production, total cash costs, all-in sustaining costs, all-in costs, cost savings and other operating results, productivity improvements, growth prospects and outlook of AngloGold Ashanti's operations, individually or in the aggregate, including the achievement of project milestones, commencement and completion of commercial operations of certain of AngloGold Ashanti's exploration and production projects and the completion of acquisitions, dispositions or joint venture transactions, AngloGold Ashanti's liquidity and capital resources and capital expenditures and the outcome and consequence of any potential or pending litigation or regulatory proceedings or environmental health and safety issues, are forward-looking statements regarding AngloGold Ashanti's operations, economic performance and financial condition. These forward-looking statements or forecasts involve known and unknown risks, uncertainties and other factors that may cause AngloGold Ashanti's actual results, performance or achievements to differ materially from the anticipated results, performance or achievements expressed or implied in these forward-looking statements. Although AngloGold Ashanti believes that the expectations reflected in such forward-looking statements and forecasts are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic, social and political and market conditions, (including as a result of the covid-19 pandemic), the success of business and operating initiatives, changes in the regulatory environment and other government actions, including environmental approvals, fluctuations in gold prices and exchange

rates, (including as a result of the covid-19 pandemic), the outcome of pending or future litigation proceedings, and business and operational risk management. For a discussion of such risk factors, refer to AngloGold Ashanti's annual reports on Form 20-F filed with the United States Securities and Exchange Commission. These factors are not necessarily all of the important factors that could cause AngloGold Ashanti's actual results to differ materially from those expressed in any forward-looking statements. Other unknown or unpredictable factors could also have material adverse effects on future results. Consequently, readers are cautioned not to place undue reliance on forward-looking statements. AngloGold Ashanti undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events, except to the extent required by applicable law.

All subsequent written or oral forward-looking statements attributable to AngloGold Ashanti or any person acting on its behalf are qualified by the cautionary statements herein.

## **Non-GAAP financial measures**

This communication may contain certain "Non-GAAP" financial measures. AngloGold Ashanti utilises certain Non-GAAP performance measures and ratios in managing its business. Non-GAAP financial measures should be viewed in addition to, and not as an alternative for, the reported operating results or cash flow from operations or any other measures of performance prepared in accordance with IFRS. In addition, the presentation of these measures may not be comparable to similarly titled measures other companies may use.

# ADMINISTRATION AND CORPORATE INFORMATION

## AngloGold Ashanti Limited

Registration No. 1944/017354/06  
 Incorporated in the Republic of  
 South Africa

### Share codes:

ISIN: ZAE000043485  
 JSE: ANG  
 NYSE: AU  
 ASX: AGG  
 GhSE: (Shares) AGA  
 GhSE: (GhDS) AAD

### JSE Sponsor:

The Standard Bank of South Africa Limited

### Auditors:

Ernst & Young Inc.

### Offices

**Registered and Corporate**  
 76 Rahima Moosa Street  
 Newtown 2001  
 (PO Box 62117, Marshalltown 2107)  
 South Africa  
 Telephone: +27 11 637 6000  
 Fax: +27 11 637 6624

### Australia

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 140 St George's Terrace  
 Perth, WA 6000  
 (PO Box Z5046, Perth WA 6831)  
 Australia  
 Telephone: +61 8 9425 4600  
 Fax: +61 8 9425 4662

### Ghana

Gold House,  
 Patrice Lumumba Road  
 (PO Box 2665)  
 Accra,  
 Ghana  
 Telephone: +233 303 773400  
 Fax: +233 303 778155

## Directors

### Executive

KPMDushnisky<sup>§</sup> (Chief Executive Officer)  
 KC Ramon<sup>^</sup> (Chief Financial Officer)

### Non-executive

SM Pityana<sup>^</sup> (Chairman)  
 AM Ferguson<sup>\*</sup>  
 AH Garner<sup>#</sup>  
 R Gasant<sup>^</sup>  
 NP January-Bardill<sup>^</sup>  
 NVB Magubane<sup>^</sup>  
 M Ramos<sup>^</sup>  
 MDC Richter<sup>#</sup>  
 RJ Ruston<sup>~</sup>  
 JE Tilk<sup>§</sup>

<sup>\*</sup> British <sup>§</sup> Canadian <sup>#</sup> American  
<sup>~</sup> Australian <sup>^</sup> South African

### Officers

Executive Vice President: General Counsel,  
 Compliance and Company Secretary  
 ME Sanz Perez

## Investor Relations contacts

### Sabrina Brockman

Telephone: +1 646 880 4526  
 Mobile: +1 646 379 2555  
 E-mail: sbrockman@anglogoldashantina.com

### Fundisa Mgidi

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 E-mail: fmgidi@anglogoldashanti.com

### Yatish Chowthee

Telephone: +27 11 637 6273  
 Mobile: +27 82 821 5322  
 E-mail: yrchowthee@anglogoldashanti.com

### General e-mail enquiries

Investors@anglogoldashanti.com

### AngloGold Ashanti website

www.anglogoldashanti.com

### Company secretarial e-mail

Companysecretary@anglogoldashanti.com

## Share Registrars

### South Africa

Computershare Investor Services (Pty) Limited  
 Rosebank Towers, 15 Biermann Avenue,  
 Rosebank, 2196  
 (Private Bag X9000, Saxonwold, 2132)  
 South Africa  
 Telephone: 0861 100 950 (in SA)  
 Fax: +27 11 688 5218  
 E-mail: queries@computershare.co.za  
 Website: www.computershare.com

### Australia

Computershare Investor Services  
 Pty Limited  
 Level 11, 172 St George's Terrace  
 Perth, WA 6000  
 (GPO Box D182 Perth, WA 6840)  
 Australia  
 Telephone: +61 8 9323 2000  
 Telephone: 1300 55 2949  
 (Australia only)  
 Fax: +61 8 9323 2033

### Ghana

NTHC Limited  
 Martco House  
 Off Kwame Nkrumah Avenue  
 PO Box K1A 9563 Airport  
 Accra,  
 Ghana  
 Telephone: +233 302 235814/6  
 Fax: +233 302 229975

### ADR Depository

BNY Mellon (BoNY)  
 BNY Shareowner Services  
 PO Box 30170  
 College Station, TX 77842-3170  
 United States of America  
 Telephone: +1 866 244 4140  
 (Toll free in USA) or  
 +1 201 680 6825 (outside USA)  
 E-mail:  
 shrrelations@cpushareownerservices.com  
 Website: www.mybnymdr.com

### Global BuyDIRECT<sup>SM</sup>

BoNY maintains a direct share purchase  
 and dividend reinvestment plan for  
 ANGLOGOLD ASHANTI  
 Telephone: +1-888-BNY-ADRS







ANGLO**GOLD**ASHANTI

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[www.anglogoldashanti.com](http://www.anglogoldashanti.com)

[www.aga-reports.com](http://www.aga-reports.com)

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 27, 2020

AngloGold Ashanti Limited

By: /s/ M E SANZ PEREZ  
Name: M E Sanz Perez  
Title: EVP: Group Legal, Commercial & Governance