



**BIGRIVERGOLD**  
LIMITED

# Brazilian Gold Developing the 2.43Moz Borborema Project

A presentation given to the Annual General Meeting  
1 June 2021

# DISCLAIMER & COMPETENT PERSONS STATEMENT

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## Competent Person Statement

### Borborema mineral resource estimate

The information in this presentation that relates to the mineral resource estimate for the Borborema Project was first reported in accordance with ASX Listing Rule 5.8 on 24 July 2017. Big River confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 24 July 2017 and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply and have not materially changed.

### Borborema ore reserve estimate

The information in this presentation that relates to the Ore Reserve estimate for the Borborema Project was first reported in accordance with ASX Listing Rule 5.9 on 6 March 2018, 29 March 2018 and 11 April 2018. Big River confirms that it is not aware of any new information or data that materially affects the information included in these previous announcements and that all material assumptions and technical parameters underpinning the Ore Reserve estimate continue to apply and have not materially changed.

The portion of the estimated Mineral Reserve that comprises the Stage 1 mining schedule considered by the Definitive Feasibility Study was reported in accordance with the ASX Listing Rules on 24 December 2019.

## Exploration results

The information in this presentation relating to exploration results for the Borborema Project is based on and fairly represents information and supporting information compiled by Mr Robert Smakman and Mr Andrew Richards. Mr Smakman is the former Managing Director of the Company, and is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Richards is an Executive Director of the Company and a Member of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Society of Exploration Geologists. Both Mr Smakman and Mr Richards have consented to the form and context in which the exploration results and supporting information are presented in this presentation. Big River notes that the mineral resource estimate and ore reserve estimate for the Borborema Project were initially reported under the 2004 edition of the JORC Code. There was no difference in the resultant numbers between the 2004 edition of the JORC Code and the 2012 edition of the JORC Code and are updated in accordance with the 2012 edition.

# CORPORATE OVERVIEW – BIG RIVER GOLD LTD (ASX:BRV)



## CAPITAL STRUCTURE

Shares on issue	219.3m
Market Capitalisation (at \$0.38)	A\$83m
Options on issue (June 2022) <sup>1</sup>	22.1m
Debt	\$ 0.0m
Cash	\$20.2m
<b>EV</b>	<b>A\$63.0m</b>
EV/oz Resource	A\$ 26
EV/oz Reserve	A\$ 39

## SHAREPRICE 1 YEAR



<sup>1</sup> exercisable at \$0.16, expiring June 2022

## TOP SHAREHOLDERS (after Placement T2)

Dundee Goodman	19.4%
Copulos Group	18.7%
SG Hiscock & Co.	7.8%
Retzos Group	4.7%
Top 20 Shareholders	74.3%

## BOARD & MANAGEMENT TEAM



**Andrew Richards**  
Executive  
Chairman

- A geologist with over 35 years of experience in the international mining industry which included mine production and mine development, company management and banking project finance.
- Has worked extensively with gold, base metals, rare earths and industrial minerals in Australasia, Asia, Africa and South America.



**John Evans**  
Non-  
Executive  
Director

- Chartered Accountant and Member of CPA Australia and the Australian Institute of Company Directors.
- Currently the principal of a Business Broking & Advisory practice, and advises a range of businesses in both the SME sector and larger corporate clients, on matters such as strategic planning, marketing, governance, and financial analysis



**John Cathcart**  
Non-  
Executive  
Director

- John has 30 years experience in mining and mining investment analysis.
- He has extensive experience in the resources sector at a technical, corporate and financial level, working in gold, copper and nickel at several major operations.



**Adrian Goldstone**  
Non-  
Executive  
Director

- Adrian has over 35 years' experience as an executive in the resources industry including specialist investment and financing for the resources sector. He currently holds the position of Managing Director, Technical at Dundee Goodman Merchant Partners. .
- He has extensive experience in engineering, project construction, environmental management and corporate social responsibility.



**Beau Nicholls**  
Non-Executive  
Director

- Beau is a geologist and project manager with over 25 years of international experience, including Australia, Eastern Europe, West Africa and South America.
- Beau spent 8 years working in Brazil and speaks Portuguese fluently.



**Andrew Beigel**  
CFO/Company  
Secretary

- More than 15 years' corporate experience across a range of industries and has held executive positions with other ASX listed companies in the sector
- Holds a Bachelor of Commerce from Murdoch University and is a member of CPA Australia



**Pablo Diaz**  
Vice President  
Operations

- Well regarded mining engineer with over 20 years international experience in all phases from feasibility to construction and operations to corporate and financial management.
- Pablo has managed mine operations, overseen plant expansions and contract mining across multiple commodities.
- He worked for several years with major mining contractors in Australia and Brazil before taking senior management and corporate roles with Brazilian gold and other projects.
- Pablo is a multilingual Brazilian national, with Australian citizenship, residing in Brazil.



**Diana Lima**  
Country  
Manager = Brazil

- Diana is a lawyer with postgraduate qualifications in business administration and a Masters in labor and private law,
- She is the country manager and administrative director of the Big River Gold group in Brazil
- Diana has worked in law offices, providing legal services and consulting for several mining companies including Jaguar Mining, Aurizona Mining, Mundo Mineração Mining, Daido Chemistry of Brazil and Nova Era Silicon,

# BORBOREMA – THE STRENGTHS



## Large deposit with growth potential

- 2.43Moz Resource including 1.61Moz Reserve
- Open at depth (50m wide), potential for satellite deposits, Inferred resource conversion to Indicated.



## High confidence in the resource and metallurgy

- Close spaced drilling over 3.5 km strike,
- >92.5% gold recovery with low reagent consumption



## Operationally de-risked

- Staged open pit mining (2 Mtpa initially)
- industry standard CIL plant
- **No tailings dam**
- Freehold owned 100%
- **Process water secured for 2Mtpa, plan to increase**



## Excellent infrastructure and location

- Cheap power, water licence secured.
- Main highway 2 hrs from coast
- Skilled workforce in nearby city



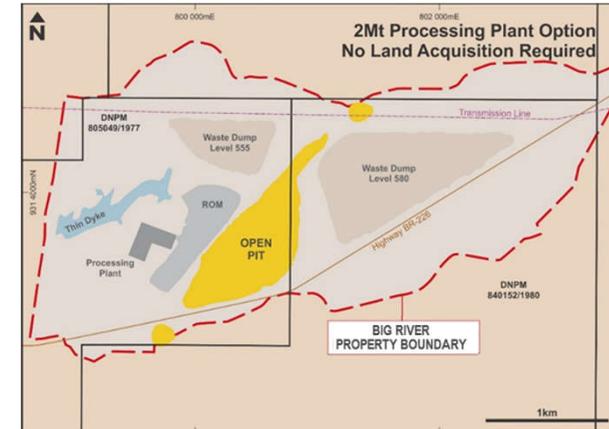
## Permitting and Environmental issues addressed

- Strong Government and local support



## Attractive regulatory and taxation environment

- Government assistance & co-operation
- Qualify for Sudene tax concessions (company tax ~15%)



# BORBOREMA – PROJECT HIGHLIGHTS OVER THE LAST 12 MONTHS

- ★
**Feasibility Studies for Stage 1 (2 Mtpa)**  
 Update in 2020 confirmed robust economics:
  - Conventional technology, high recoveries
  - No tailings dam, Open pit
  - Stage 1 (10 yrs) produces 730,000 ozAu
  - Robust economics & low cost production
    - NPV<sub>8%</sub> US\$ 342M (IRR 64.7%) at US\$1550 gold price
    - AISC US\$ 713/oz

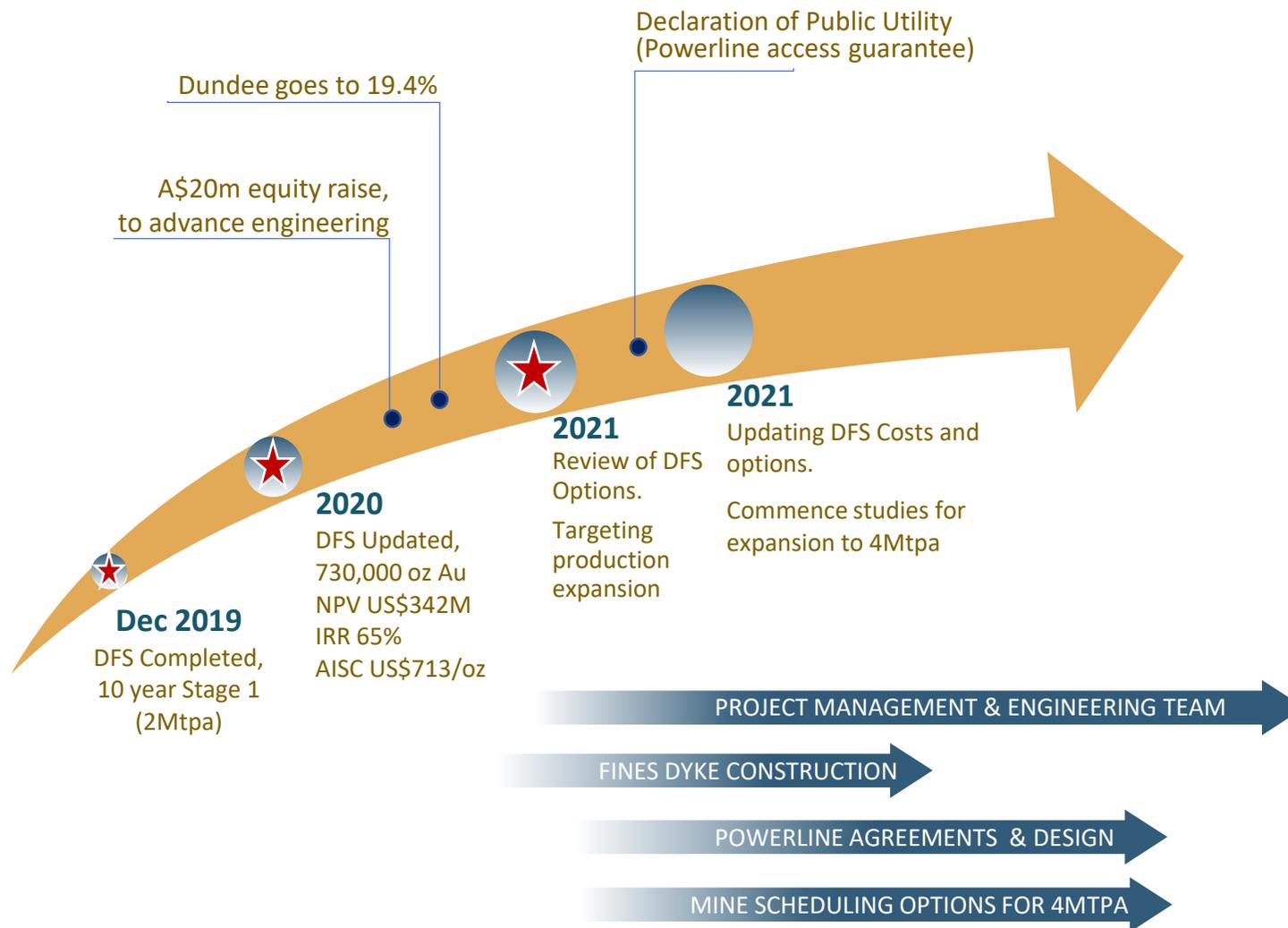
- ⚒
**Plant Design Option Study Completed (2021)**  
 Ensuring seamless transition for possible plant expansion.

- ✓
**Currently finalising 2Mtpa design cost update.**

- ↻
**Site and Management activity:**
  - Strengthened engineering teams and Project Management
  - Advanced infrastructure design and establishment
  - Commenced studies for early expansion to 4Mtpa throughput



# BIG RIVER GOLD & BORBOREMA PROJECT – HIGHLIGHTS



## DEFINITIVE FEASIBILITY STUDY 2020 - KEY MEASURES & GOLD PRICE

Effect of varying gold price	US\$1300	US\$1400	US\$1550 DFS (2020)	US\$1700	US\$1800	US\$1900
NPV (8%, pre-tax), US\$	\$233M	\$277M	<b>\$342M</b>	\$408M	\$451M	\$495M
IRR (pre-tax)	49.5%	55.8%	<b>64.7%</b>	73.1%	78.6%	83.8%
NPV (8%, post-tax), US\$	\$195M	\$232M	<b>\$287M</b>	\$343M	\$380M	\$416M
Payback (from start production)	1.9 yrs	1.8 yrs	<b>1.5 yrs</b>	1.3 yrs	1.2 yrs	1.2 yrs
Ave EBITDA, US\$/year	\$54.0M	\$61.0M	<b>\$71.6M</b>	\$82.1M	\$89.2M	\$96.2M

Production Summary (LOM, 10.2 years)		Production: First 5 years results (@ US\$1,550/oz)	
Average Annual production	<i>71,500 oz/year</i>	Average annual production	<i>83,800 oz/year</i>
Grade	<i>1.22 g/t Au</i>	Grade	<i>1.40 g/t Au</i>
Total Gold production	<i>729,374 oz</i>	Total Gold production	<i>410,690 oz</i>
C1 Cash Cost	<i>US\$534/oz</i>	C1 Cash Costs	<i>US\$532/oz</i>
AISC	<i>US\$713/oz</i>	AISC	<i>US\$692/oz</i>
Total EBITDA (10.2 years)	<i>US\$ 724m</i>	Total EBITDA (4.5 years)	<i>US\$ 409m</i>



**Significant upside left** - Total Resource 2.43Moz, including Reserve of 1.61 Moz. Only 729,000 oz gold produced in Stage 1



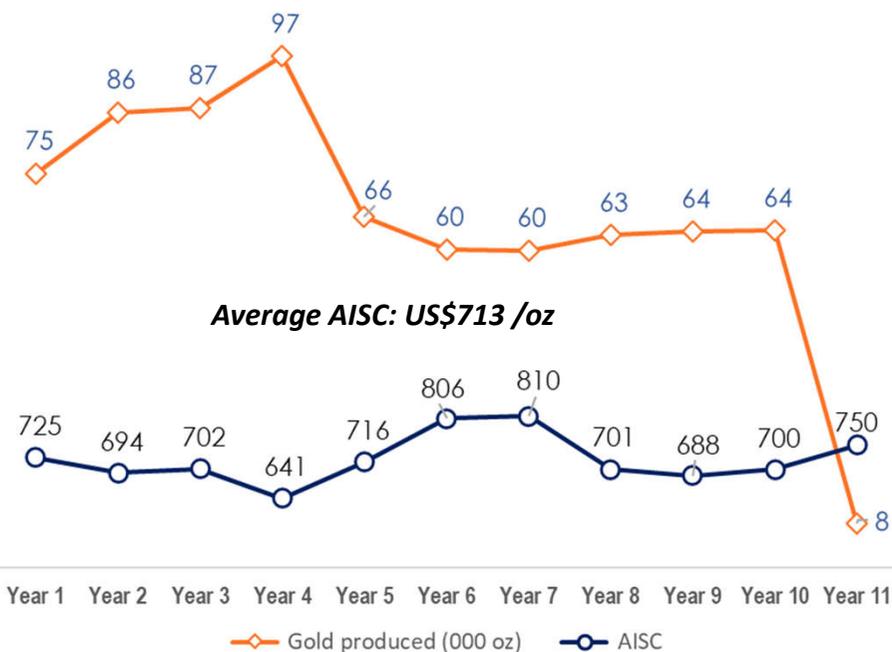
**High level of confidence in the base case resource** - No production scheduled from inferred resources.

<sup>1</sup>NPV & IRR estimated from project cashflows excluding financing and tax considerations.

<sup>2</sup> All material assumptions underpinning the production target of Stage 1 continue to apply and have not materially changed.

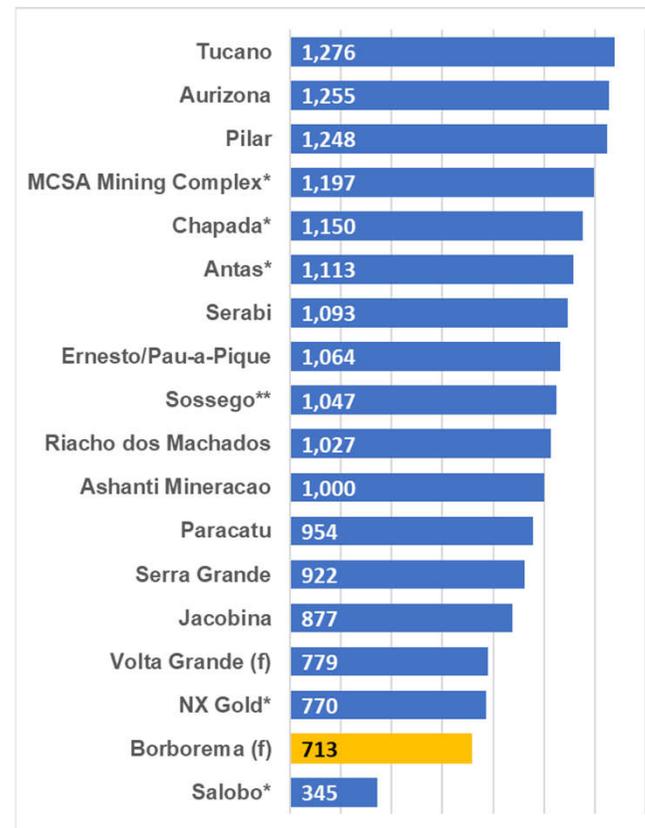
# DFS – STAGE 1 ANNUAL PRODUCTION & AISC COMPARISONS

## AISC and Gold produced | (in US\$/oz and koz Au)



- Production profile only shows first 10 years of Stage 1 at 2Mtpa, representing ~30% resource.
- Studies commenced to assess possible expansion to 4Mtpa in Years 2 or 3.

## Mines located in Brazil AISC<sup>1</sup> | 2019-20



Note<sup>1</sup>: Average AISC was used for the companies AISC includes both opex and sustaining capex.

\*Credits included in AISC estimate (Cu or Ag)

(f) Forecast from Feasibility Studies

## PLANT DESIGN OPTION STUDY (2021)– OPTIMISING FOR POTENTIAL EXPANSION



Redesigned 2Mtpa circuit incorporating provision for possible expansion up to 4Mtpa  
Expansion subject to ongoing Feasibility Studies and securing of additional process water.

1. SAG mill (4500kW); 2. Ball Mill (2250kw); 3. Ball Mill (2250kw), with expansion; 4. Increased CIL tankage; 5. Expanded Gold Room; 6. Increased filter capacity; 7. Mica recovery circuit (if proven viable); 8. Electrical substation

# PLANT DESIGN OPTION STUDY – FIRST PASS CAPEX ESTIMATES

## Initial Option Study capex estimates:

- Estimated with lower order of accuracy. → Key areas undergoing vendor/cost updates
- 2019 Economic and cost assumptions used for better comparison. → All capex and opex to be updated with latest costs, tax and FX assumptions

TABLE 1: CAPEX ESTIMATES BY STUDY (US\$000)	Dec 2019 DFS	2020 DFS Update	2021 OPTION STUDY 2 MTPA	4 MTPA Expansion costs	4MTPA Total
Accuracy of Estimate	-10% to +15%	-10% to +15%	±30%	±30%	±30%
<b>DIRECT FIELD COSTS</b>	<b>64,986</b>	<b>64,804</b>	<b>58,239</b>	<b>21,150</b>	<b>79,389</b>
<b>INDIRECT / OTHER FIELD COSTS</b>	<b>13,348</b>	<b>12,525</b>	<b>11,949</b>	<b>4,058</b>	<b>16,006</b>
<b>OWNERS COSTS</b>	<b>9,636</b>	<b>9,636</b>	<b>9,452</b>	<b>3,803</b>	<b>13,255</b>
<b>TOTAL CAPEX (EXCLUDING CONTINGENCY)</b>	<b>87,970</b>	<b>86,965</b>	<b>79,640</b>	<b>29,010</b>	<b>108,650</b>
<b>CONTINGENCY</b>	<b>11,361</b>	<b>11,541</b>	<b>15,000</b>	<b>5,800</b>	<b>20,800</b>
<b>TOTAL CAPEX</b>	<b>99,331</b>	<b>98,506</b>	<b>94,640</b>	<b>34,810</b>	<b>129,450</b>

*Note: Some of these cost estimates are expected to alter as the update is finalised as a result of ongoing engineering design, provision for additional water security, more recent vendor quotes and latest exchange rate and taxation environment.*

## BORBOREMA – CURRENT PLANS & PROGRAMS

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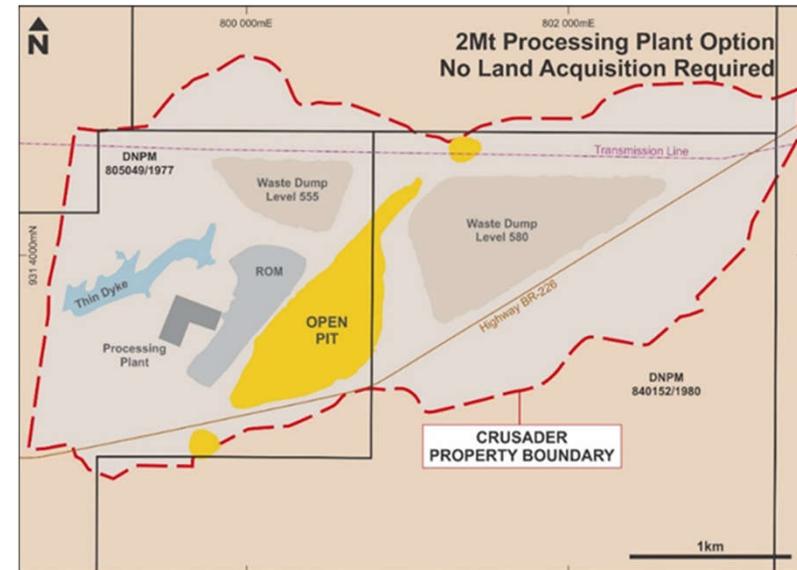
**Updating Engineering Cost Estimates and DFS**  
Ensuring seamless transition for possible plant expansion.
- 

**Finalising 2Mtpa financial model to resume project funding discussions in third quarter 2021.**
- 

**Plan to commence FEED detailed engineering phase after DFS and ECE update**
- 

**SITE ACTIVITY COMMENCED**

  - Construction of fines dyke for water collection.
  - Powerline and water pipeline design and construction planning
  - Commenced studies for early expansion to 4Mtpa throughput.
    - Process water security – identify additional sources or improve water recovery and recycling
    - Implications of expanding to 4Mtpa in Yr 2-3 and the timing of highway and transmission line relocation.
  - Preparation for near mine exploration drilling



## CORONAVIRUS UPDATE

- Mining in Brazil is considered an essential industry allowing restricted movement to sites although exploration has been impacted.
- BRV currently requires limited activity on site which will continue even when EPCM and Owners teams commence work, subject to securing funding.
- Detailed engineering to be undertaken and supervised in Perth with input from BRV's Brazil teams.
- BRV teams in Brazil have been working effectively and positively since March 2020. They are to be commended for their efforts under these conditions.



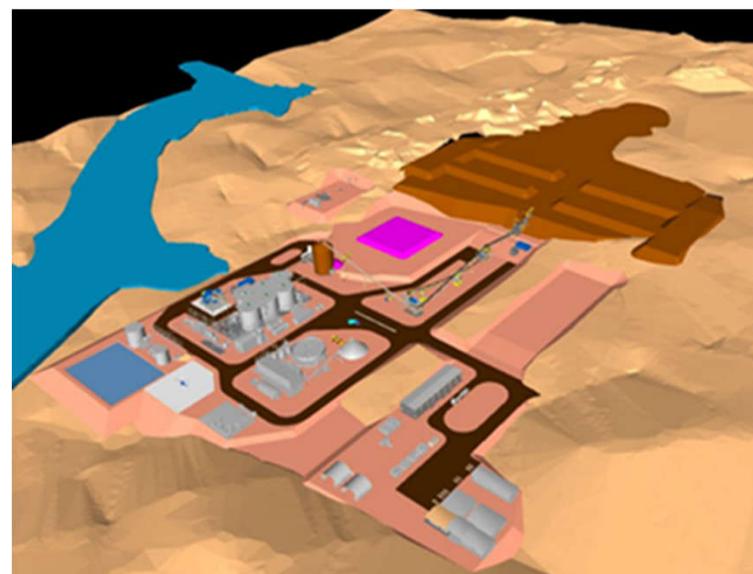


**BORBOREMA PROJECT  
DEFINITIVE FEASIBILITY STUDY (DFS)**

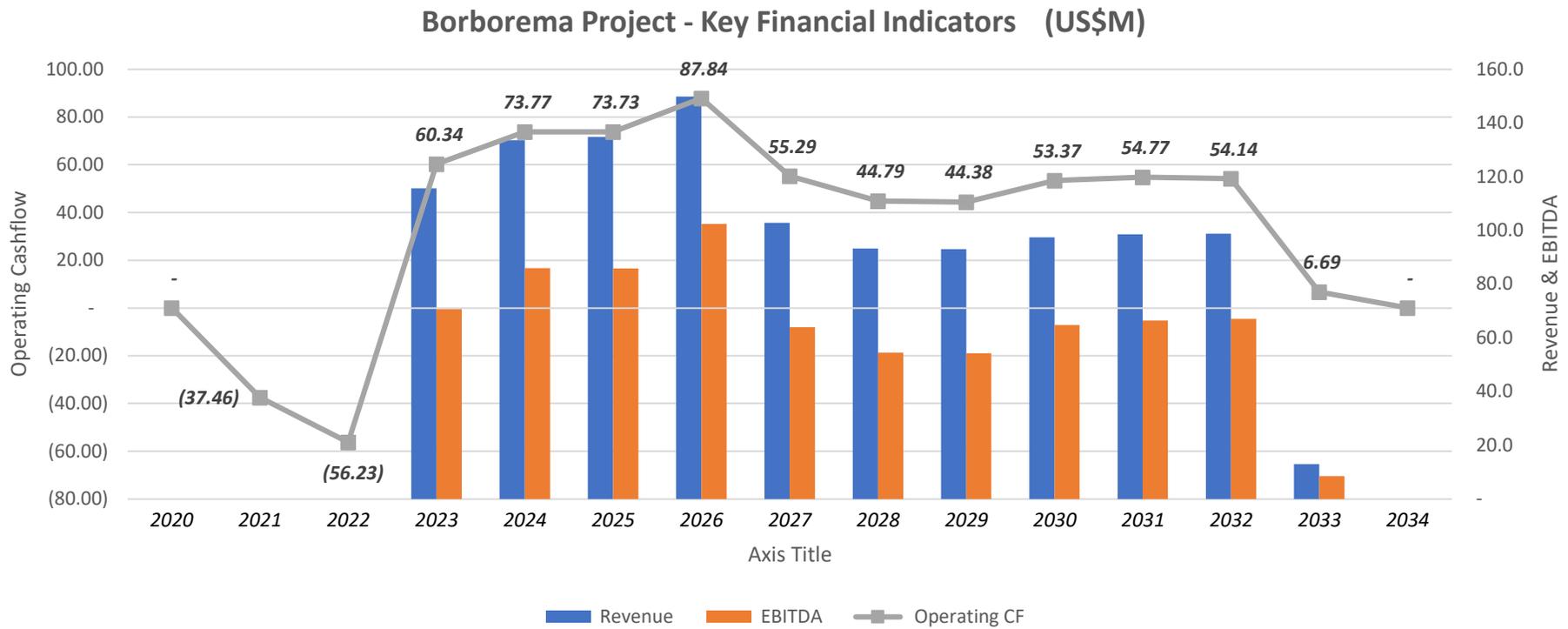
# DFS SUMMARY

Key Parameters	
Mineral Resources (reported above 0.5g/t Au cut off, 2013)	68.6Mt @ 1.10 g/t Au (2.43Moz)
Stage 1 Ore Reserve Scheduled to be mined in DFS	20.0Mt @ 1.22 g/t (784,480 oz)
Open pit mining and 2Mtpa 3 stage crush/Ball mill	
<b>Capital Costs</b>	
Processing plant Capital Costs	US\$ 54.43M
Non Processing infrastructure and Owners costs	US\$24.95M
Contingency	US\$ 11.33M
<b>Total Capital Summary</b>	<b>US\$ 90.71M</b>
NPV (8%, Pre-Tax)	US\$ 342M
NPV (8%, Post-Tax)	US\$ 287M
IRR (Pre-Tax)	64.7%
IRR (Post-Tax)	57.9%
Payback from start of production	1.4 yrs
<b>Life of Mine C1 Cash Costs</b>	<b>US\$534/oz</b>
<b>Life of Mine AISC costs</b>	<b>US\$713/oz</b>
<b>Production Summary</b>	<b>LOM</b>
Mine Life (from commissioning date)	10.2 years
Strip ratio (waste (t): Ore(t))	4.2
Mill throughput (total)	20.0 Mt
Grade	1.22 g/t Au
Recovery	92.5%
Gold produced – over Life of Mine	729,374 oz

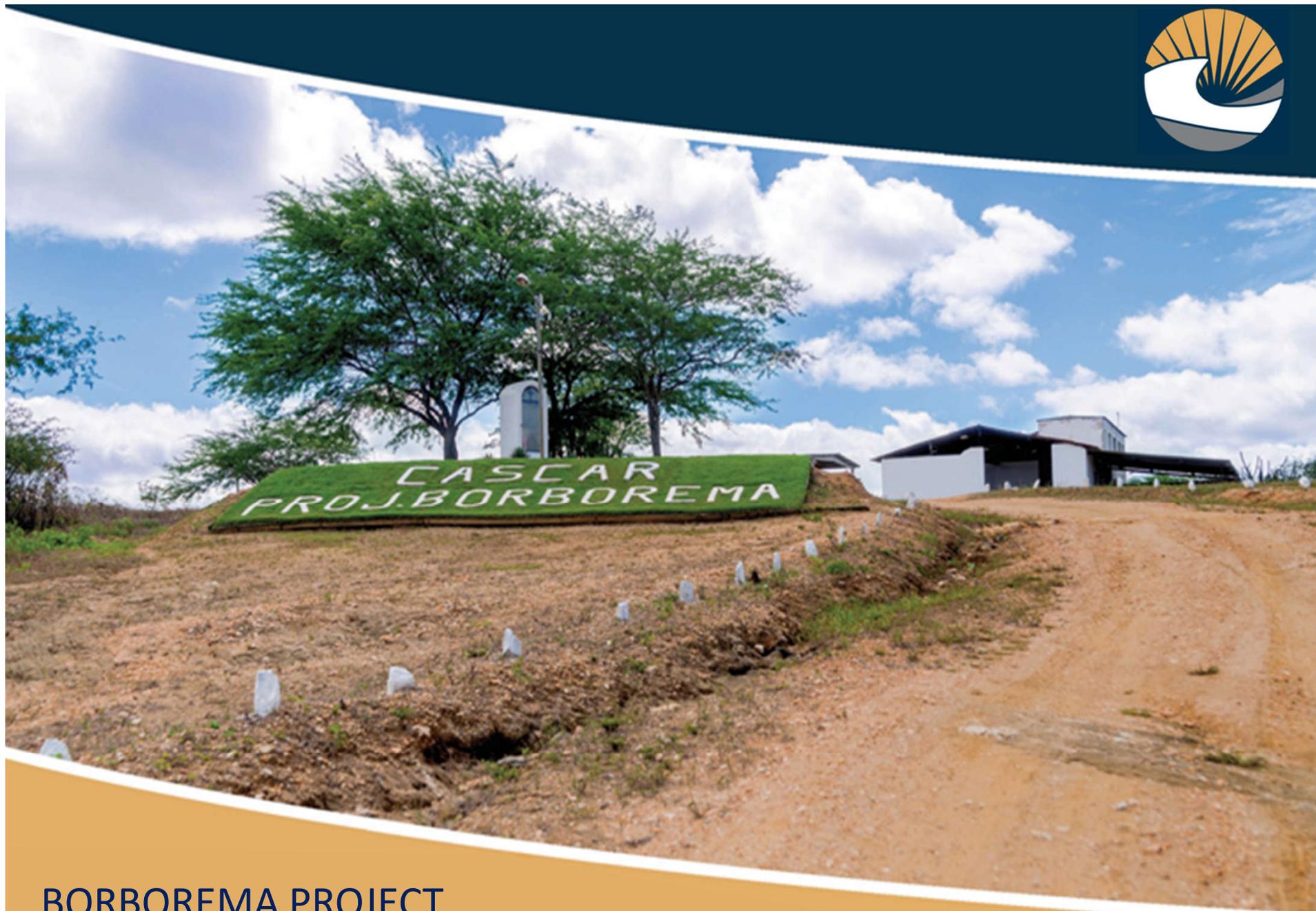
Project Economics, US\$M	LOM
<b>Study Gold price</b>	\$1,550/oz
<b>Gross Revenue LOM</b>	\$ 1,131M
<b>Operating costs LOM</b>	\$ 389M
<b>Capital:</b>	
Capital – Project Plant (inc contingency)	\$ 90.71M
Working capital – Mine establishment pre-production	\$ 5.36M
Capital – sustaining and mine closure costs	\$ 20.97M
<b>EBITDA</b>	\$724.2M
<b>NPAT</b>	\$526.6M



# DFS – STAGE 1 KEY FINANCIAL INDICATORS

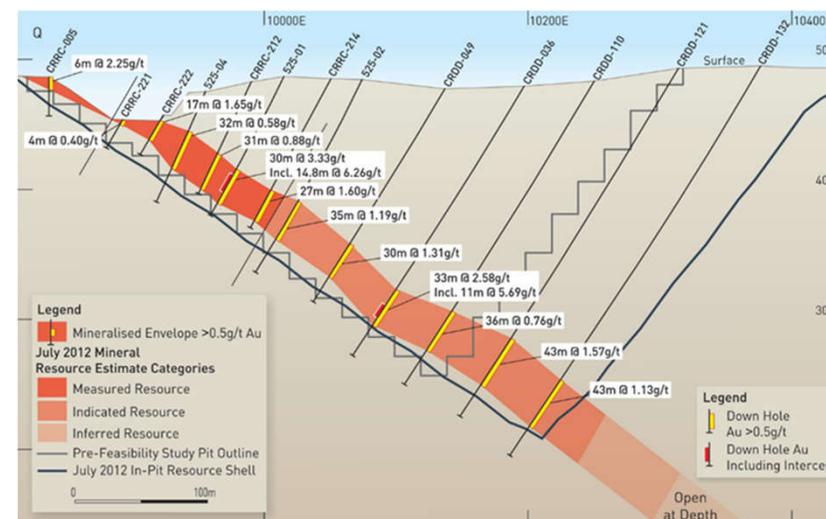
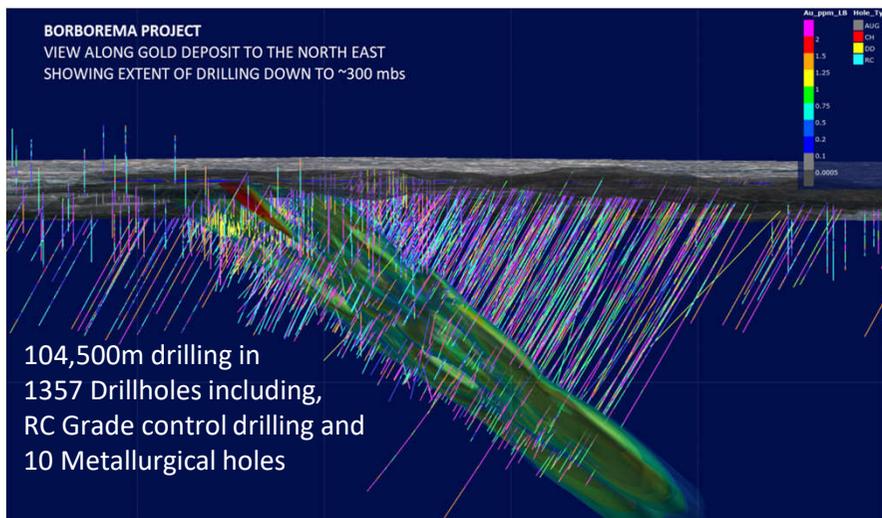
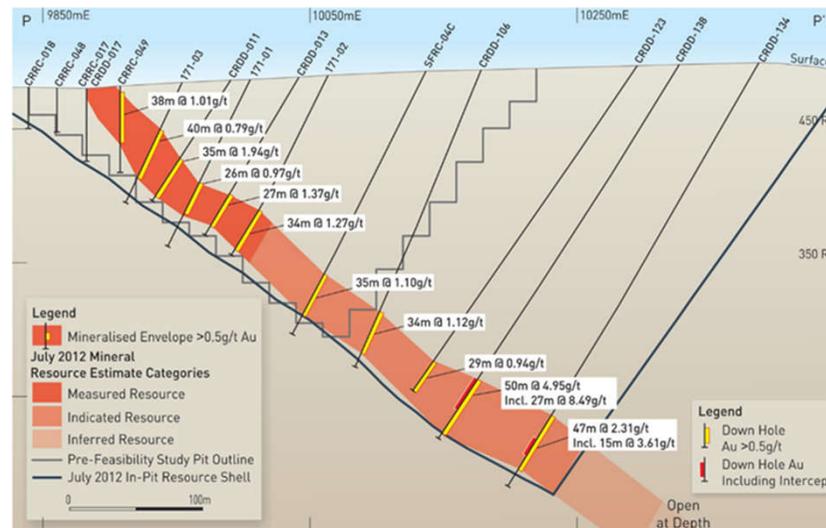
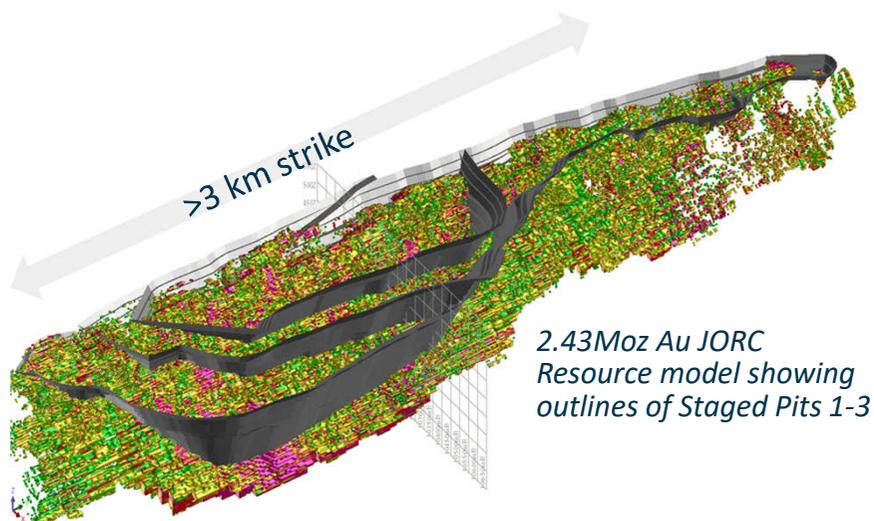


EBITDA is revenue after opex and royalty.  
 Operating cashflow is after opex, royalty, capex and tax.



**BORBOREMA PROJECT  
EXPLORATION POTENTIAL AND PROJECT ENHANCEMENT**

# BORBOREMA – MINERALISATION AND RESOURCES

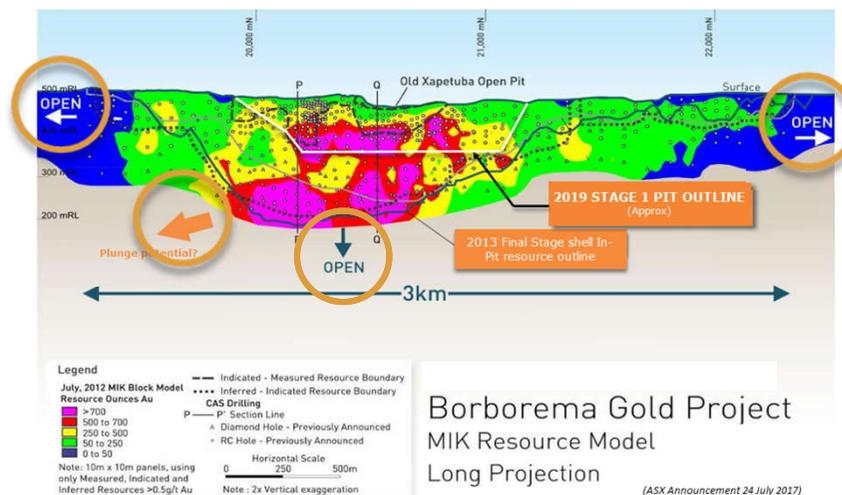


# BORBOREMA – EXPLORATION POTENTIAL



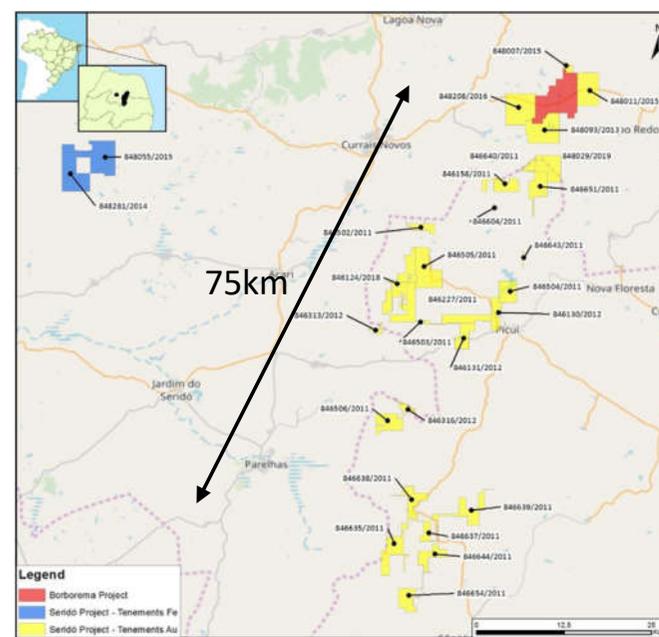
## Exploration potential – Mine area extensions

- Deposit is open along strike and at depth.
- Appears to be possible high grade plunge component



## Exploration potential – Repetitions/Satellites along trend

- Prospective, underexplored concessions held within the same shear structure immediately adjoining Borborema project.
- 410km<sup>2</sup> exploration concessions over 75km trend extension



## BORBOREMA – OPPORTUNITIES TO ENHANCE PROJECT



Exploration potential to be followed up with active exploration programs



Stage 2 Expansion Studies - Enhancing mill feed & grade

- Stage 2 to consider optimisation of significantly higher grades in zones within resource while expanding throughput.
- Commence when Stage 1 commissioned
- Stage 1 operational experience to be applied



Potential for commercial mica production

- The ore contains large amounts of mica minerals which will be processed to produce gold at 92.5% recovery.
- Results of testwork assessing potential for sale of mica by-product are very encouraging for significant revenue credits at very low cost.
- Bulk mica concentrates may be sold initially with the option of higher specification concentrates later. *Subject to securing product specifications and market acceptance.*
- Marketable samples being prepared and commercial studies to be completed August 2020.



*View to the south of the revised Borborema plant layout.*



*Gold plant leach residue (left), non magnetic reject (centre) and mica rich magnetic concentrate (right)*

# Borborema JORC Resources & Reserves



## Borborema Gold Project – Maiden Ore Reserve (Updated as at 31 December 2017<sup>1</sup>)

Category	Ore Type	Tonnes (Mt)	Grade (Au g/t)	Mineable Gold (koz)
Proven	Oxide	0.65	0.80	17
	Fresh	7.26	1.25	292
Probable	Oxide	1.68	0.70	38
	Fresh	32.82	1.20	1,260
<b>Total</b>		<b>42.41</b>	<b>1.18</b>	<b>1,610</b>

Ore Reserve estimate for the Borborema Gold Project.

Reported at a 0.4 g/t cut-off for oxide and 0.5g/t cut-off for fresh material. The cut-off grades have been based on the latest throughput costs, gold price of US\$1350/oz, metallurgical recovery of 95% and then rounded up. Note, appropriate rounding has been applied, subtotals may not equal total figures.

<sup>1</sup>See ASX announcement 6 March 2018

## Borborema Gold Project – Mineral Resource by Multiple Indicator Kriging (MIK)

Category	Cut-off grade	Tonnes (Mt)	Grade (Au g/t)	Contained Gold (Moz)
Measured	0.50	8.2	1.22	0.32
Indicated	0.50	42.8	1.12	1.55
<b>Total Measured + Indicated</b>	<b>0.50</b>	<b>51.0</b>	<b>1.14</b>	<b>1.87</b>
Inferred	0.50	17.6	1.00	0.57
<b>Total Mineral Resource</b>	<b>0.50</b>	<b>68.6</b>	<b>1.10</b>	<b>2.43</b>

July 2012 Mineral Resource Summary Table, reported at a 0.5 g/t cut-off. Parent Block 25mE x 25mN x 5mRL. Selective Mining Unit 5mE x 6.25mN x 2.5mRL. Note, appropriate rounding has been applied, subtotals may not equal total figure.

Resources are inclusive of reserves

## Administrative Office

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