



**BIGRIVERGOLD**  
LIMITED

# Brazilian Gold Developing the 2.43Moz Borborema Project

A presentation given to brokers, financiers and the 121 APAC and Mines & Money Conferences, March 2021  
10 March 2021

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



## CAPITAL STRUCTURE

Shares on issue	219.3m
Market Capitalisation (at \$0.41)	A\$90m
Options on issue (June 2022) <sup>1</sup>	22.1m
Debt	\$ 0.0m
Cash	\$20.3m
<b>EV</b>	<b>A\$69.6m</b>
EV/oz Resource	A\$ 28
EV/oz Reserve	A\$ 43

## 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.
- He has worked at a senior level in both production and exploration over a wide variety of areas and commodities and also undertaken technical reviews, project audits and monitored project construction.
- Has worked extensively with gold, base metals, rare earths and industrial minerals in Australasia, Asia, Africa and South America.
- He is and has been on the boards of several listed companies on ASX and AIM and was previously Managing Director and CEO of ASX listed companies operating in China and South America.



**John Evans**  
Non-  
Executive  
Director

- 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
- Prior to this, held a series of executive positions in Finance and General Management over a 15 year period, across a wide range of industries including telecommunications, banking and insurance, superannuation and funds management, media, hospitality, and property development
- Chartered Accountant and Member of CPA Australia and the Australian Institute of Company Directors.



**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.
- John made the successful transition to the financial sector and broking in 1994 where he established a very strong reputation with several brokers including Baillieu's, BT, HSBC and CommSec before running the Resources portfolio at Thorney Investments.
- John remains an investment manager at Thorney as well as a director of the recently established stockbroking firm Rawson Lewis.



**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.
- He has a wide technical and corporate management experience at a senior level in gold exploration and mining for both mining groups and international consulting groups.
- 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 underground and open pit 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 – HIGHLIGHTS



## Borborema – relatively low technical risk:

- Fully permitted – shovel ready
- Excellent access & infrastructure, grid power
- Process water secured for 2Mtpa Stage 1
- Freehold surface land owned 100%
- Strong community & Government support (low tax)
- Long mine life potential – remaining reserves and exploration upside



## Large deposit with Growth potential:

- 1.61Moz Reserve – to be mined in stages
- Open at depth (50m wide), potential for satellite deposits, Inferred resource conversion to Indicated.
- Stage 1 throughput 2Mtpa – preparing for expansion.
- Permitted up to 4Mtpa throughput.



## Feasibility Studies confirm 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 near completion** Ensuring seamless transition for possible plant expansion



# BORBOREMA – THE STRENGTHS



## High confidence in the resource and metallurgy

- Close spaced drilling over 3.5 km strike,
- Stage 1 is 36% Proven, 63% Probable Reserve
- >92.5% gold recovery with low reagent consumption



## Operationally de-risked

- 2 Mtpa industry standard CIL plant
- Open pit mining
- **No tailings dam**
- Freehold owned 100%
- Power available
- 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

- Government and local support
- No objections raised by any community group

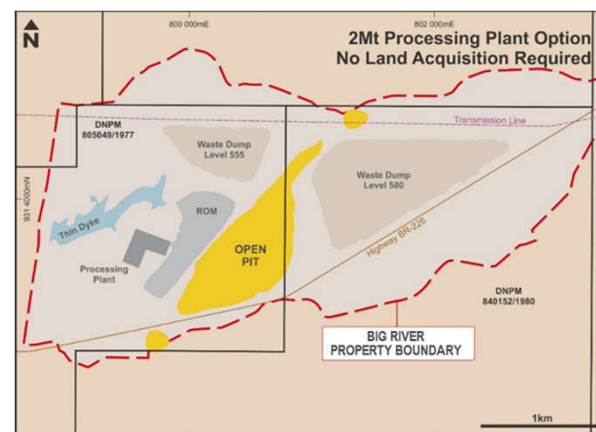


## Attractive regulatory and taxation environment

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



## Experienced Board and Management



## DEFINITIVE FEASIBILITY STUDY - 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.

## COMPANY STATUS AND IMMEDIATE PLANS – COVID19 UPDATE



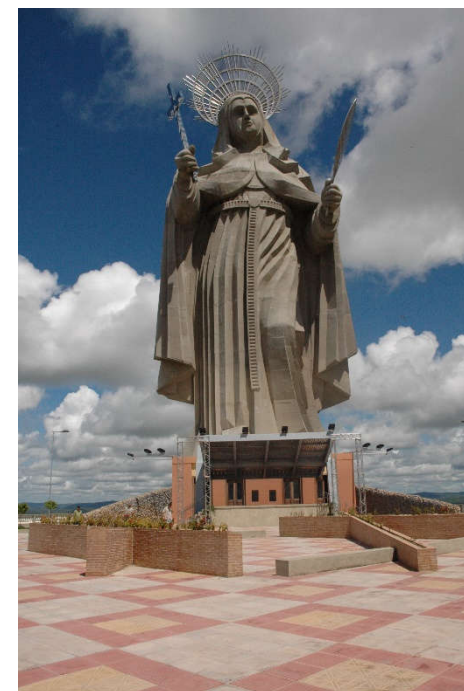
### CORPORATE & PROJECT

- BRV is in a good financial position with no debt.
- Work has commenced to advance engineering works and de-risk the project's infrastructure development.
- FEED and EPCM engineering contractors have been shortlisted
- Additional process water supplies are being sourced to support a possible early expansion of plant throughput rates above 2Mtpa.
- The Plant Design Option Review (PDOR) study is near completion. Early results are encouraging and suggest a more efficient use of capital in anticipation for possible expansion. Costings to be updated.
- Sourcing of Project Development Funding to resume subsequent to PDOR.



### CORONAVIRUS UPDATE

- Mining in Brazil is considered an essential industry allowing mines to continue production. Restricted movement is possible to sites although exploration has been impacted.
- BRV currently has limited activity required on site which will continue even when EPCM and Owners teams commence work, subject to securing funding.
- BRV teams in Brazil have been working effectively and positively since March 2020. They are to be commended for their efforts under these conditions.





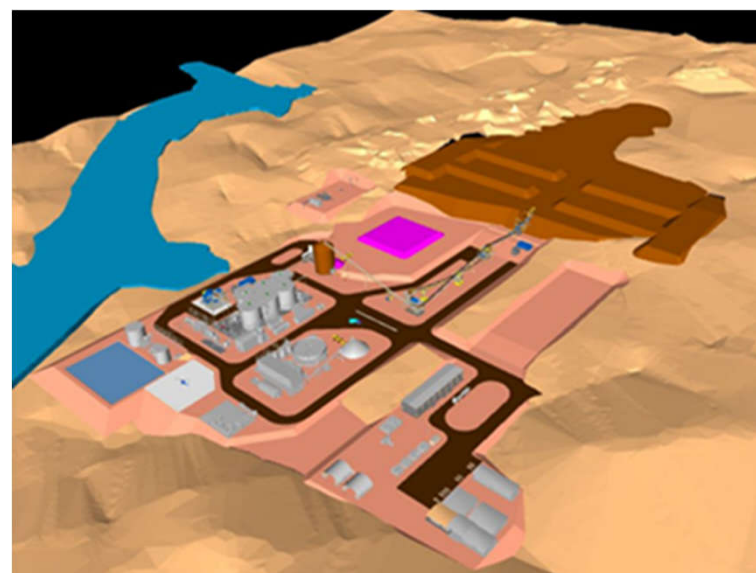
**BORBOREMA PROJECT  
DEFINITIVE FEASIBILITY STUDY (DFS)**



# DFS SUMMARY

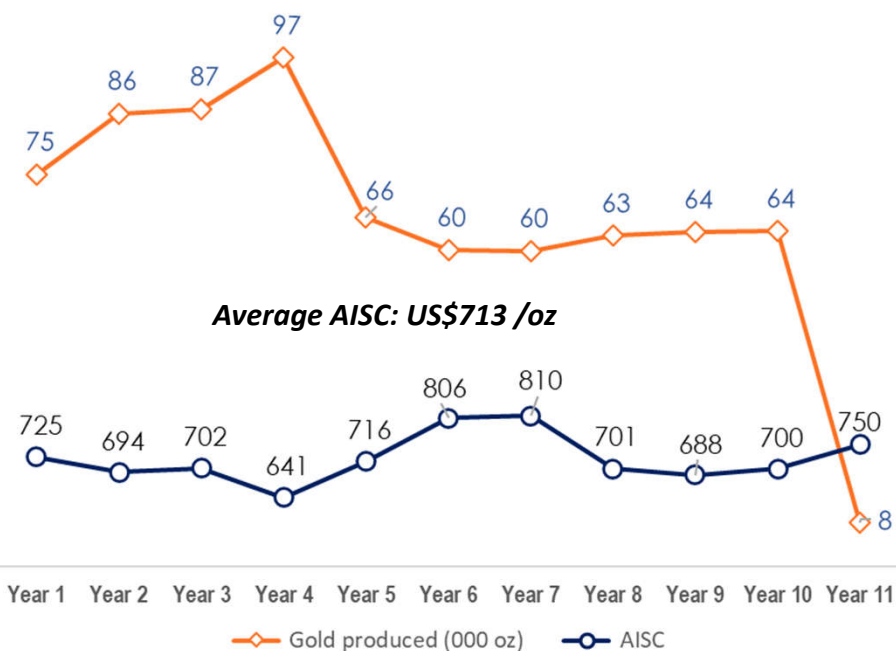
Key Parameters	
Mineral Resources (reported above 0.5g/t Au cut off, 2013)	68.6Mt @ 1.10 g/t Au (2.43Moz)
Stage 1 Ore Reserve Scheduled to be mined in DFS	20.0Mt @ 1.22 g/t (784,480 oz)
Open pit mining and 2Mtpa 3 stage crush/Ball mill	
<b>Capital Costs</b>	
Processing plant Capital Costs	US\$ 54.43M
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



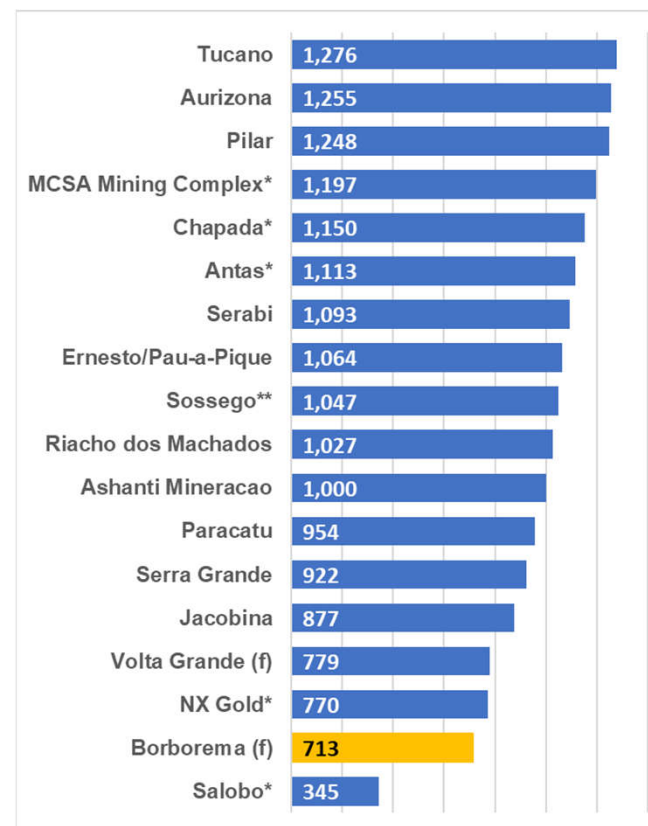
# DFS – STAGE 1 ANNUAL PRODUCTION & AISC COMPARISONS

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



- Production profile only shows first 10 years of Stage 1, representing ~30% resource.
- Subsequent Stages will target repeating preferential feed of high grade ore in 4-5 year cycles and/or increase in plant throughput while extending mine life.

## 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.

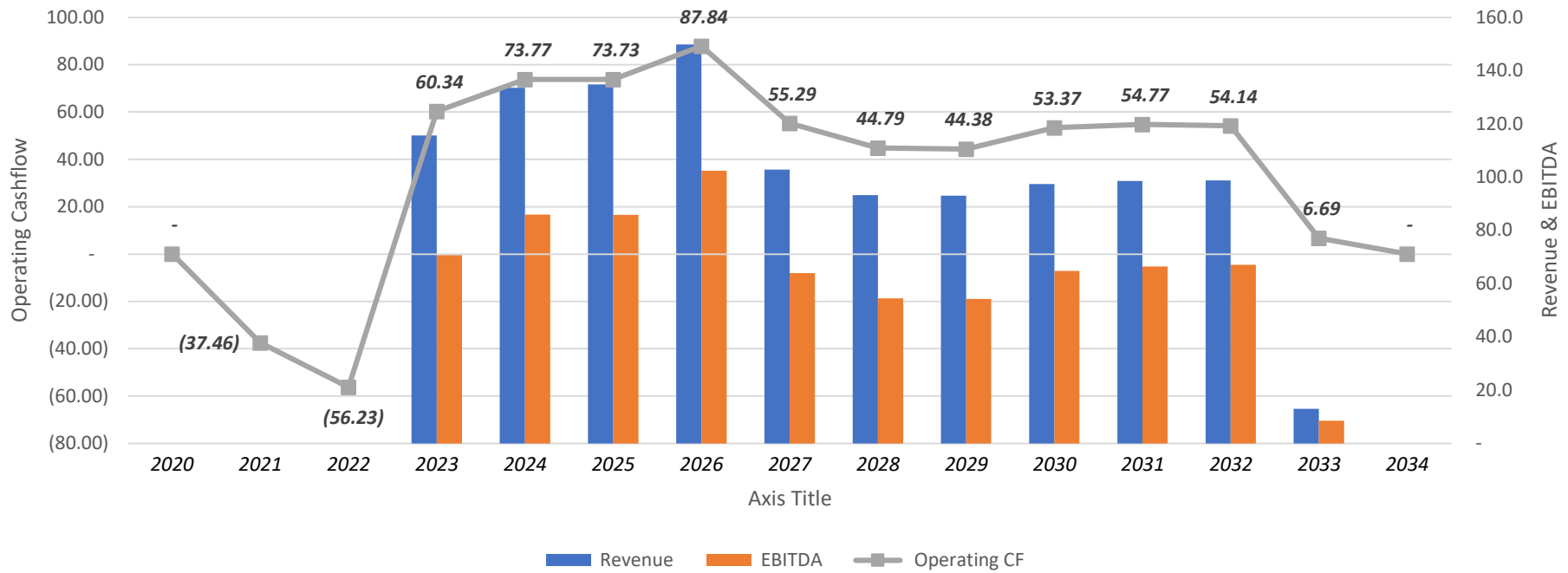
\*Credits included in AISC estimate (Cu or Ag)

(f) Forecast from Feasibility Studies

# DFS – STAGE 1 KEY FINANCIAL INDICATORS



**Borborema Project - Key Financial Indicators (US\$M)**

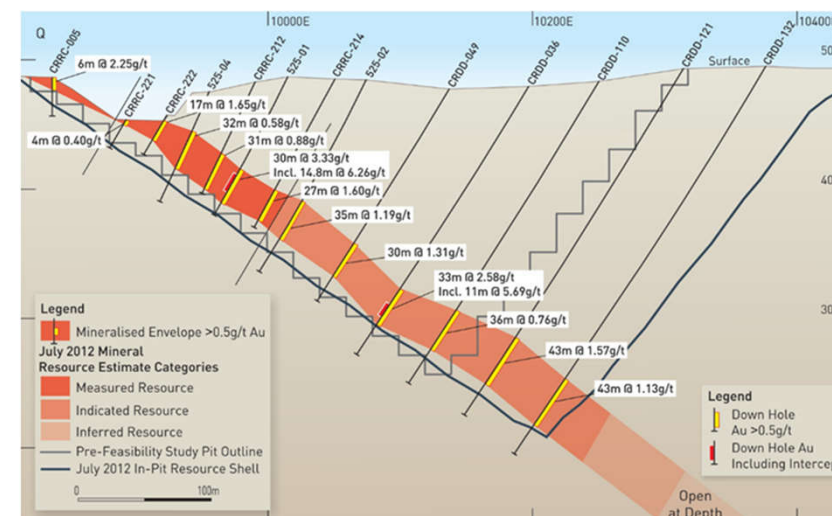
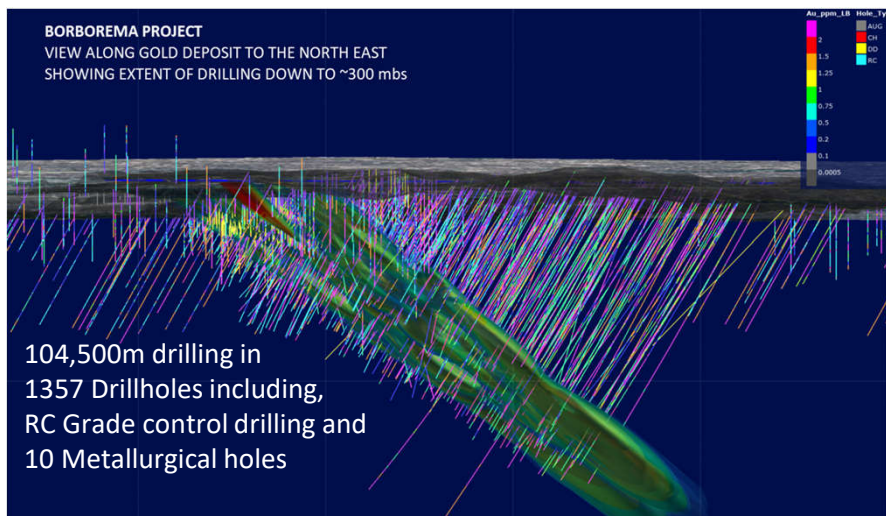
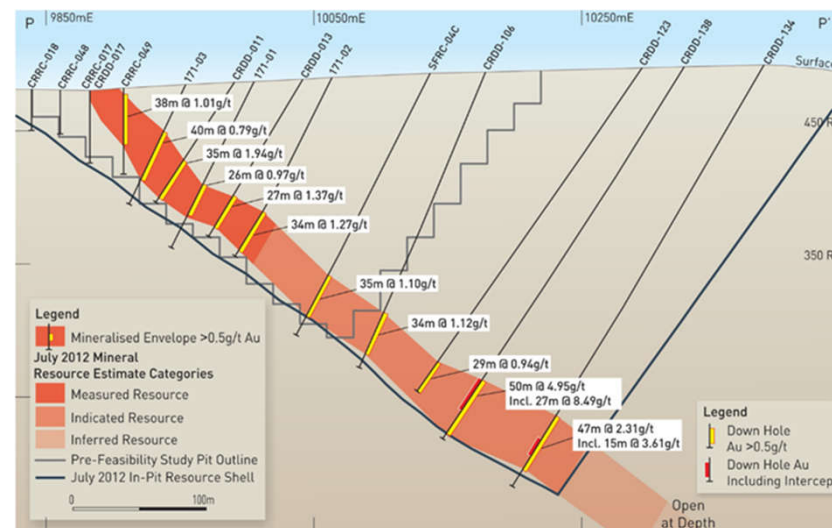
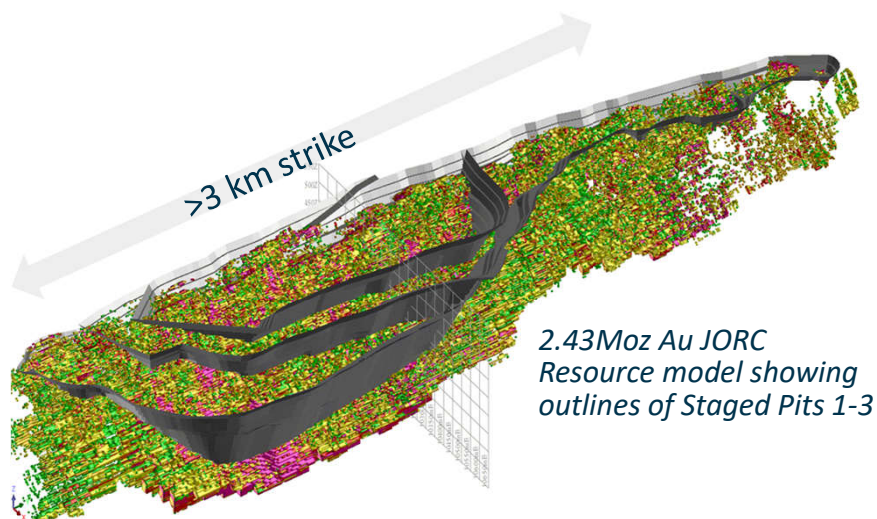


EBITDA is revenue after opex and royalty.  
 Operating cashflow is after opex, royalty, capex and tax.



**BORBOREMA PROJECT  
EXPLORATION POTENTIAL AND PROJECT ENHANCEMENT**

# BORBOREMA – MINERALISATION AND RESOURCES

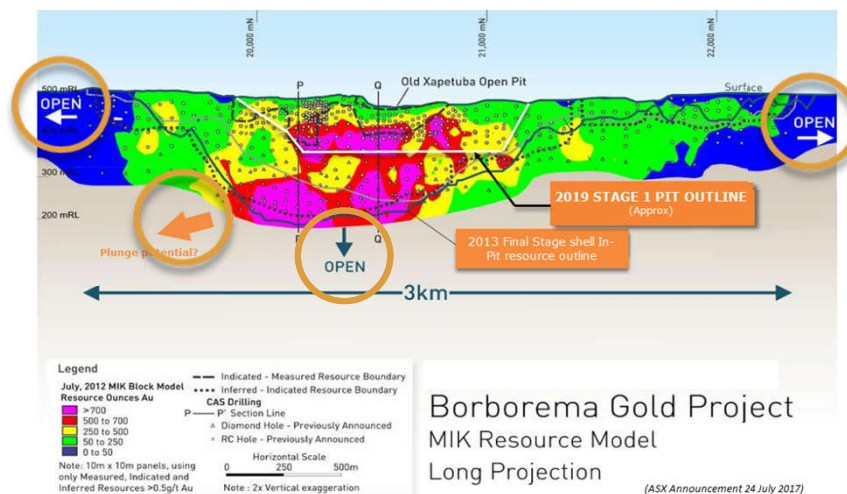


# BORBOREMA – EXPLORATION POTENTIAL



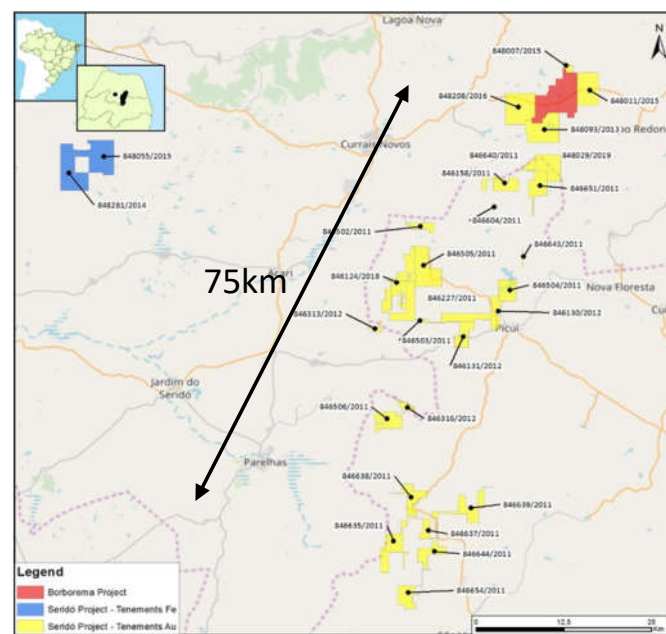
## Exploration potential – Mine area extensions

- 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

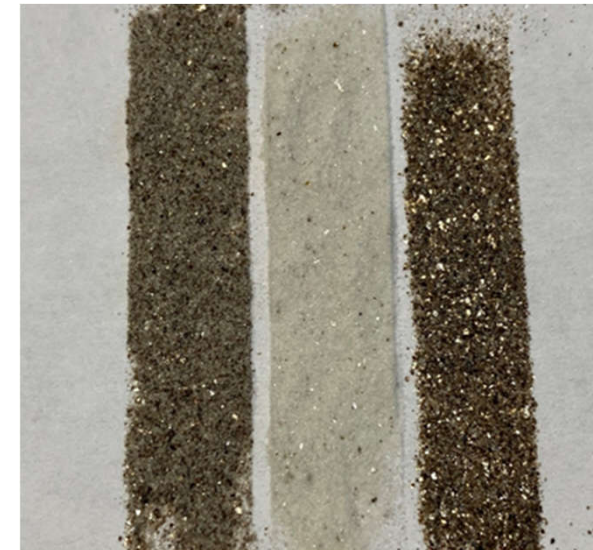


Potential for commercial mica production

- 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



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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.

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