

# Mungari operation

## A fourth cornerstone asset

[www.evolutionmining.com.au](http://www.evolutionmining.com.au)



**Location:** 600km east of Perth, 20km west of Kalgoorlie, Western Australia

**Producing:** Gold

**Management:** Owner operator

**Site management:** Scott Barber - General Manager

**Mine Site contact number:** +61 8 9268 4000

**Located in the Goldfields, we acknowledge the Maduwongga People and the Marlinyu Ghoorlie People.**

The addition of the Kundana and EKJV Assets in August 2021 elevates Mungari to Evolution's fourth cornerstone asset:

- A logical, value accretive and opportunistic acquisition of a portfolio of high grade underground operating mines located within 8km of Evolution's Mungari Mill
- Provides pathway to annual production objective of 200,000 ounces at Mungari
- Increases strategic presence in the Kalgoorlie district and builds on strong existing Maduwongga and Marlinyu Ghoorlie native title partnerships
- Large pipeline of attractive exploration projects across a combined 860km<sup>2</sup> tenement package provides potential to significantly extend mine life
- Unlocks compelling operational synergies
- Improved near term grade profile to increase production and cash flow
- Extends mine life to 12 years (based on Evolution's life of mine plan)
- More than doubles Mineral Resources and Ore Reserves

### ➔ Key Facts

- **FY23F gold production<sup>1</sup>:** 127,500oz +/-5%
- **FY23F AISC guidance<sup>1</sup>:** A\$2,040/oz +/-5%
- **TRIF:** 9.13<sup>2</sup> (12mma)
- **Mineral Resources:** 76.1Mt at 2.00g/t Au for 4.90Moz<sup>3</sup>
- **Ore Reserves:** 20.6Mt at 1.86g/t Au for 1.23Moz<sup>3</sup>
- **Tenement package:** 860km<sup>2</sup>
- **Mine life:** 12 years
- **Mining method:** conventional open pit and underground top-down long hole stoping with paste fill
- **Plant throughput:** ~2.0Mtpa
- **Process method:** Three stage crushing, ball mill, gravity and CIP
- **Recovery:** 91%
- **Grid power:** Western Power
- **Employees:** 850+ people including contractors

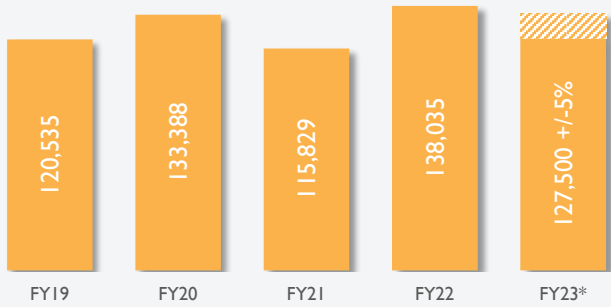
1. Production and cost guidance as at 27 June 2022. AISC is based on Gold price of A\$2,400/oz (royalties) and Copper price of A\$12,500/t (By-product credits)

2. TRIF: Total recordable injury frequency. The frequency of total recordable injuries per million hours worked. Results above are based on a 12 month moving average to June 2022

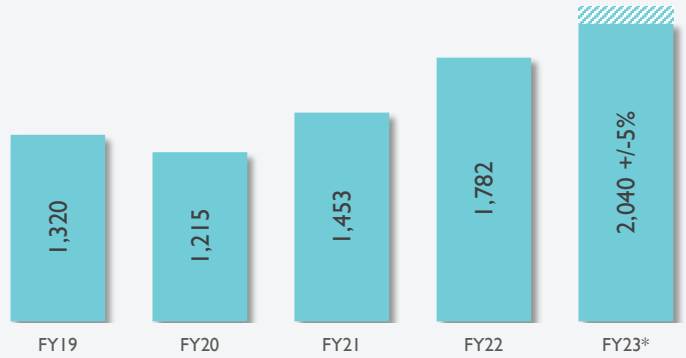
3. See ASX release 16 February 2022 "Annual Mineral Resources and Ore Reserves Statement".

# Snapshot

## Gold production (oz)



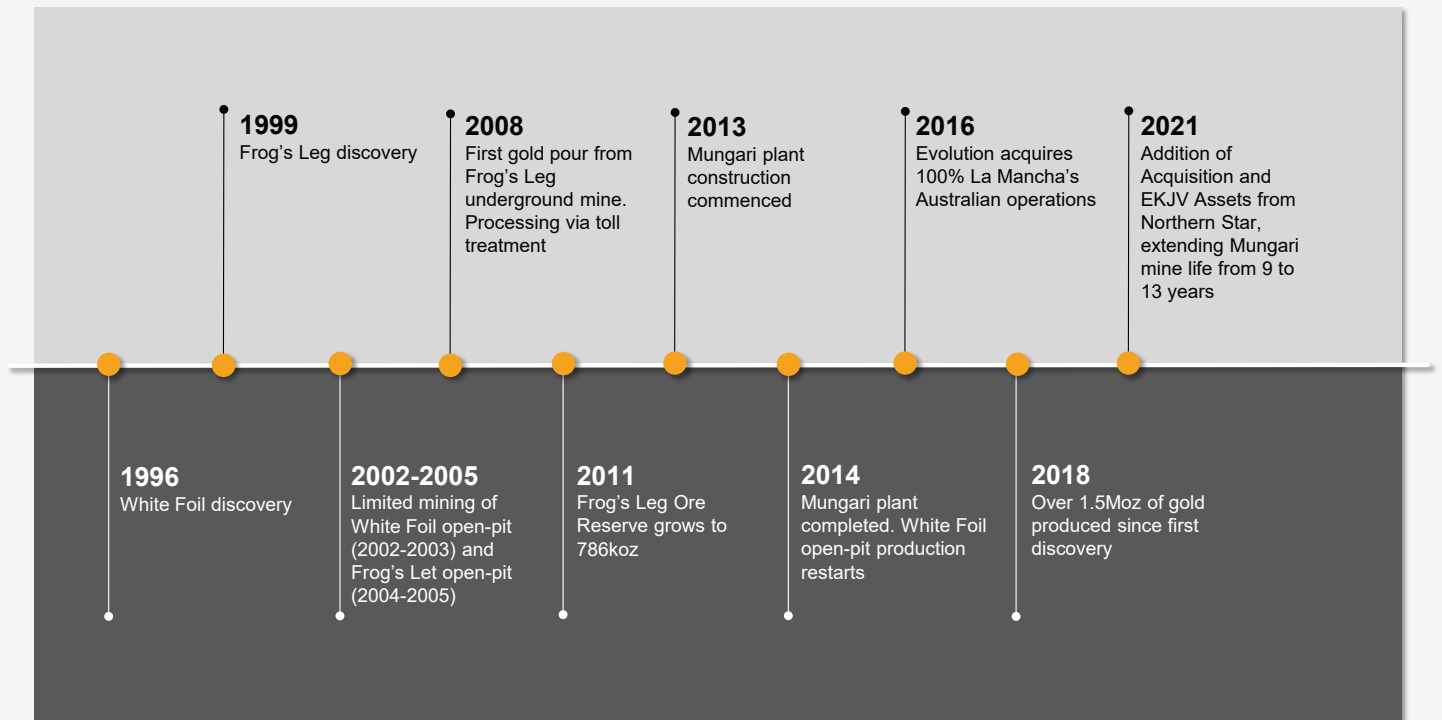
## AISC (A\$/oz)



\* denotes guidance for FY23

Historic performance data can be accessed at our [Interactive Analyst Centre™](#)

## History - Mungari Evolution



**Mineral Resources**  
(Dec 21)

**4.9Moz<sup>(1)</sup>**  
76.1Mt @ 2.00g/t gold

**Ore Reserves**  
(Dec 21)

**1.23Moz<sup>(1)</sup>**  
20.6Mt @ 1.86g/t gold

1. Refer to ASX release "[Mineral Resources and Ore Reserves Statement](#)" released to ASX on 16 February 2022 and available to view at [www.evolutionmining.com.au](http://www.evolutionmining.com.au).

# Sustainability

Sustainability is a strategic pillar for Evolution and we have published nine Sustainability Principles that provide the foundation for how we approach and integrate Sustainability into everything we do. These principles align with the United Nations Sustainable Development Goals and support our drive for improvement as we mature in our sustainability journey. The work we do on sustainability reflects our values driven approach to creating measurable value for our stakeholders through safe, reliable, low-cost gold production in an environmentally and socially responsible way.

Our sustainability efforts and higher levels of transparency have been recognised, with Evolution maintaining a rating of 'AA' in the MSCI ESG Ratings assessment for resilience to long term environmental, social and governance (ESG) risks, and ranked among the top five industry leaders globally for 'Health and Safety' and 'Business Ethics and Fraud' (FY20). We have also been recognised as a member of the Dow Jones Sustainability Index (DJSI) Australia, ranking Evolution in the top performing Australian mining companies for corporate sustainability in their annual assessment and are signatories to the United national Global Compact (UNGC).

Our [Annual and Sustainability report](#) provided on our website describes our approach and performance in the areas of health and safety, environmental stewardship, helping our communities thrive, cultural heritage, innovation and the development of our people. Some of the highlights from Mungari are provided below:

## Health and Safety

Integral to the sustainability of our business is the health, safety and wellbeing of our people. We have a strong health, safety and wellbeing culture with the ambition of being an injury free workplace.

## Environment

We believe in striving beyond legislative compliance to achieve best practice and to build trust and meet the expectations of the communities in which we operate. We are focused on enhancing environmental stewardship in line with our Net Zero Commitment and Sustainability Principles through the implementation of our sustainability performance standards and life of mine environmental management plans across all of the operation.

## Community

Securing the support of communities in which we operate is core to our operation. The Mungari operation sits within the local communities of Kalgoorlie and Coolgardie. It is surrounded by the traditional lands of the Maduwongga People and the Marliny Ghoolie People. We are proud to partner with our communities to achieve meaningful outcomes and generate shared value. A local approach is critical to support regional economic benefit. We invest in and partner with our communities to achieve meaningful outcomes and we prioritise local procurement and employment and training opportunities, as well as health and wellbeing initiatives. We work in partnership with schools to raise awareness of the benefits of mining and future career pathways into the industry.

- Sustainability projects include Ben Prior Park
- Mature health and safety culture – focusing on behavioural improvements
- Tailings storage facility approval received
- Strong local community support – Women's Refuge and schools
- Engaging with Native Title claimants on protecting cultural heritage
- Return to work program - flexible hours for people returning to the workforce while raising a young family

# Geology

The White Foil, Cutters Ridge and Frog's Leg deposits are situated within the Norseman-Wiluna Greenstone Belt of the Yilgarn Craton, Western Australia. White Foil lies three kilometres to the west of the Zuleika Shear, a regional scale shear zone, and is hosted within a quartz rich gabbro unit which is part of the Powder Sill intrusive complex. The mineralised zone is 70m wide, 400m long and dips to the WSW and WNS at between 50° to 60° and is open at depth.

The Frog's Leg deposit is located on the sheared contact between the porphyritic "cat rock" (regionally known as the Victorious Basalt) and volcanoclastic rocks of Black Flag Beds. The ore lodes are between 2m and 20m thick and occur as sub-parallel lodes.

The regional tenement package has positions on three main prospective structures:

- Zuleika Shear - Notable deposits include Frogs Leg and Bullant, as well as the Kundana group of Centenary, Strezlecki, Raleigh, Barkers, Hornet and Millenium
- Kunanalling Shear - Notable deposits include Castle Hill and Catherwood
- Carbine structure - hosting satellite gold deposits to Mungari Mill

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## Discovery

For information on exploration and opportunities in at Mungari, please refer to our [website](#).

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## Mining

### White Foil and Cutters Ridge (open pit mining)

|                            |   |
|----------------------------|---|
| <b>Mining method/s:</b>    | Conventional open pit (drill, blast, load and haul)   |
| <b>Ore mined:</b>          | FY22: 1,065kt   |
| <b>Workforce:</b>          | Load and haul: owner operator; drilling: Ausdrill contractors; blasting: Johnex contractors; maintenance; Emeco contractors |
| <b>Work roster:</b>        | 7 on / 7 off  |
| <b>Loading:</b>            | 1 x Hitachi EX2600, 1 x Komatsu PC1250  |
| <b>Hauling:</b>            | 5 x Caterpillar 785C  |
| <b>Dozers:</b>             | 2 x Caterpillar D10T  |
| <b>Road maintenance:</b>   | 1 x Caterpillar 16M, 1 x Caterpillar 773D water cart  |
| <b>Drilling equipment:</b> | 3 x Sandvik DP1500i   |
| <b>Explosives:</b>         | Emulsions and ANFO  |

### Frog's Leg (underground mining)

|                                    |   |
|------------------------------------|---|
| <b>Mining method/s:</b>            | Open stoping, with pastefill  |
| <b>Access:</b>                     | 5m x 5.5m decline from portal in pit, then twin declines from 125 metres below surface (mbs) to access north (Mist) and south (Rocket, Goliath) sections. Deepest current level is 700mbs |
| <b>Workforce:</b>                  | Owner operation and maintenance   |
| <b>Work roster:</b>                | 7 on / 7 off and 5/2/4/3  |
| <b>Loading:</b>                    | 1 x Caterpillar R2900G, 2 x Caterpillar R1700G  |
| <b>Trucking:</b>                   | 3 x Caterpillar AD55B   |
| <b>Drilling - development:</b>     | 1 x Sandvik DD421 twin boom jumbo   |
| <b>Drilling - production:</b>      | 1 x Sandvik DL421 production drill, 1 x Epiroc Simba M6C  |
| <b>Ground support:</b>             | Standard: friction bolts and mesh. Additional (as required): cable bolts, dynamic bolts, fibrecrete   |
| <b>Ancillary equipment:</b>        | 2 x Rocmec charge-up, 3 x integrated toolcarrier  |
| <b>Explosives:</b>                 | Stoping: emulsion, electronic initiation. Development: ANFO, non-electric initiation  |
| <b>Underground communications:</b> | VHF leaky feeder network (radio and data). Optic fibre to copper LAN (microseismic system, video, data)   |

# Mining (con't)

## Kundana (underground mining)

|                                    |   |
|------------------------------------|---|
| <b>Mining method/s:</b>            | Narrow Vein Long Hole Open Stoping  |
| <b>Access:</b>                     | Underground is accessed via two portals from two pits (South Pit & Moonbeam Pit). Link drives underground connect all the ore bodies to allow multiple Ingress/Egress points. Decline dimensions 5.0mW x 5.4mH. Deepest current working level is approximately 602m below sea level |
| <b>Workforce:</b>                  | Owner Operator  |
| <b>Work roster:</b>                | 14/14, 7/7, 8/6, 5/2-4/3  |
| <b>Loading:</b>                    | 2 x Sandvik LH517 loaders and 2 x Sandvik LH517i loaders with remote capability   |
| <b>Trucking:</b>                   | 4 x Sandvik TH551i articulated dump trucks  |
| <b>Drilling - development:</b>     | 1 x Sandvik DD421-60 and 1 x Sandvik DD421-60C twin boom jumbos   |
| <b>Drilling - production:</b>      | 2 x Atlas Copco Simba S7 Long hole drill rigs   |
| <b>Ground support:</b>             | Standard Support: - friction bolts and mesh. Additional as required.<br>Dynamic Support: - Horseshoe profile with dynamic bolts, chain-link mesh, and fibre reinforced shotcrete. Cable bolts and Additional support as required  |
| <b>Ancillary equipment:</b>        | 2 x Volvo L120F Integrated Tool Carriers, 1 x Charmec 1614B (ANFO loading), 1x Charmec 1614B (Emulsion loading), 1 x CAT 140H grader  |
| <b>Explosives:</b>                 | Stoping: - Emulsion, MS/ IKON detonators, electric/electronic initiation.   |
| <b>Underground communications:</b> | Development: - ANFO, LP Detonators and electric initiation<br>VHF leaky feeder network (radio and data). Optic fibre to copper LAN (microseismic system, video, data)   |

## East Kundana (underground mining) (Joint venture)

|                                    |  |
|------------------------------------|--|
| <b>Mining method/s:</b>            | Open stoping with pastefill  |
| <b>Access:</b>                     | 5m x 5.5m declines from portals in two pits to five declines which access the Rubicon, Hornet, and Pegasus orebodies at RHP and Raleigh and Sadler orebodies at Raleigh. Deepest current level is approximately 738 metres below the surface (Raleigh) |
| <b>Workforce:</b>                  | Owner Operator   |
| <b>Work roster:</b>                | Multiple including 7/7, 14/14, 8/6, 5/2/4/3  |
| <b>Loading:</b>                    | 3 x Sandvik LH517i   |
| <b>Trucking:</b>                   | 4 x Sandvik TH663i   |
| <b>Drilling - development:</b>     | 2 x Sandvik DD421 twin boom jumbos   |
| <b>Drilling - production:</b>      | 1 x Atlas Copco ME7; 2 x Atlas Copco S7C; 1 x Atlas Copco 1257H  |
| <b>Ground support:</b>             | Multiple different ground support regimes dependent on seismic hazard. High Energy Dissipation (HED): Shotcrete w. TECCO mesh, debonded gewi bolts w. cables (where required);   |
| <b>Ancillary equipment:</b>        | 6 x Volvo Integrated Tool Carriers (L120F; L110F; L50H; L35B, 2 x Normet 1614B Charmec   |
| <b>Explosives:</b>                 | Emulsion w. both nonel and electronic detonators (electronic for production only)  |
| <b>Underground communications:</b> | VHF leaky feeder network (radio and data). Optic fibre to copper LAN (microseismic system, video, data)  |

# Processing

- **Three stage crushing, ball mill, gravity and carbon-in-pulp (CIP)**
- **Annual average throughput rate**  
2.0Mtpa
- **Recovery**  
90 - 93%
- **Power**  
Western Power - grid supply
- **Crushing**  
Primary: 220kW Jaw  
Secondary: 315kW Cone  
Tertiary: 315kW Cone
- **Grinding**  
Ball Mill: 4.5MW, 8.7mL x 5.5m. diameter  
Grind Size p80: 106 um  
Media: 94mm and 78mm hi-chrome balls
- **Recovery method**  
Gravity and CIP
- **Leaching**  
Leaching: 2 x 1,140 m<sup>3</sup> tanks  
Adsorption: 6 x 750 m<sup>3</sup> tanks  
Elution: split AARL  
Electrowinning: 3 x Consep tanks [2 x carbon-in-leach (CIL), 2 x gravity]
- **Gravity circuit**  
Concentrator: 2 x Knelson  
Intensive Leach: Consep Acacia
- **Work roster**  
7/7 and 8/6
- **Surface haulage contractors**  
Rivet Mining Services - Frog's Leg to mill, Cutters Ridge to mill, tails haulage to Frog's Leg from TSF, tails haulage to Northern Star from TSF  
Raywell Contracting - Tails harvesting ~700ktpa



Mungari processing plant

# Process flowsheet

