

24 MAY 2019

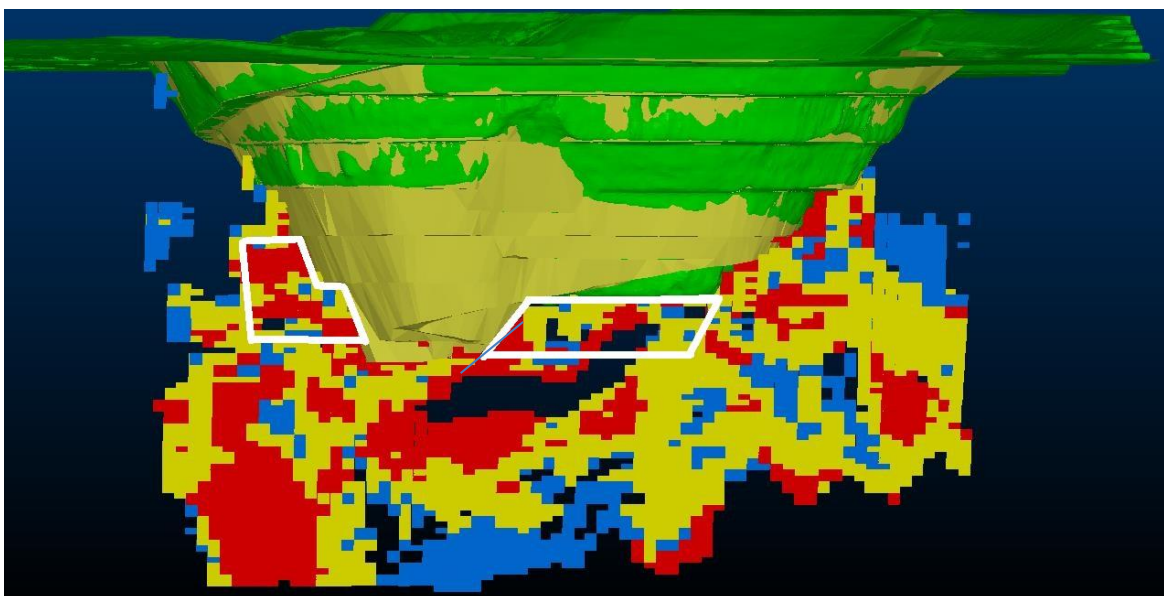
## TYRANNA IDENTIFIES EARLY MINING OPPORTUNITY AT EUREKA

### HIGHLIGHTS

- **Re-Start Study completed defining a financially viable early mining opportunity with the following results:**
  - Mineralised material accessed via shallow open pit mining and an adit into north pit wall producing an approximate combined total 60,500t of ore at a diluted grade of 2.1g/t for 4,057 ounces of contained gold over a 2-month minelife
  - Ore processing at 96% metallurgical recovery
  - Maximum capital draw down of between \$0.6m-\$0.7m, after which positive cash flow commences
  - At a gold price of A\$1,800/oz, the project generates ~\$2.6m in positive cash flow over a period of 2 months
  - Funds generated from mining will enable further exploration on the Eureka Gold Project to test extensions to the south and at depth.
- Study assumes contract mining and haulage with ore milled at a nearby processing facility
- The Board is in the process of reviewing funding options, with a preference for minimal or no shareholder dilution
- Next step in development is to fast track mining approvals, contractor appointment and finalisation of offtake agreement

Tyranna Resources Limited (ASX: TYX) ('Tyranna' or 'the Company'), is pleased to announce that independent mining consultants Entech have completed a review of a restart study at the Company's 100% owned Eureka Gold Project located 50km north of the gold mining centre of Kalgoorlie, Western Australia.

The restart study shows, subject to the cautionary statement below, that a viable cash flow positive early mining opportunity exists at the Eureka project.



**Figure 1: Areas of mineralisation extraction. Additional 20m bench and adit development into the north wall.**

## Cautionary Statement

*The Re-Start Study referred to in this announcement is based on lower-level technical and economic assessments and is insufficient to support estimation of Ore Reserves, or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Re-Start Study will be realised. Further, the Company cautions that there is no certainty that the forecast financial information derived from production targets will be realised. All material assumptions underpinning the production targets and forecast financial information derived from the production targets are set out in this announcement. The estimated mineral resources underpinning the Re-Start Study production targets have been prepared by Competent Persons in accordance with the current JORC Code 2012 Edition and the current ASX Listing Rules. No Inferred Mineral Resource material is included in the life of mine plan (refer Forward Looking and Cautionary Statements). Tyranna has concluded it has reasonable basis for providing the forward-looking statements included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and Material Assumptions on page 4-5.*

Tyranna Managing Director Bruno Seneque said: “The results of the mining study as an early mining opportunity demonstrates the potential to generate good free positive cash flow for the business with minimal upfront capital delivering a very good cash margin over a short period.

“We plan to generate cash flow to self-fund exploration to grow our assets at Eureka with minimal shareholder dilution.

“Plans are underway to secure a funding solution that will enable Tyranna to commence mining at Eureka and in the meantime, mining approvals will be fast tracked, mining and haulage contractors appointed, and negotiations with the preferred toll taker will be concluded.”

Independent mining consultant Entech has reviewed the study and has identified no fatal flaws. The Board will now consider funding options for the restart, with the objective of either no or minimal dilution for existing shareholders, given the relatively modest capital drawdown required. This will include internal funding, traditional debt/equity, profit share arrangements with strategic partners, sale or partial sale of Company assets.

## Overview

The Eureka project comprises the oxide and transition material contained in the updated Mineral Resource announced to the ASX on 13 March 2019. The 100% owned project is located on granted Mining Leases, 50km north of Kalgoorlie-Boulder in Western Australia.

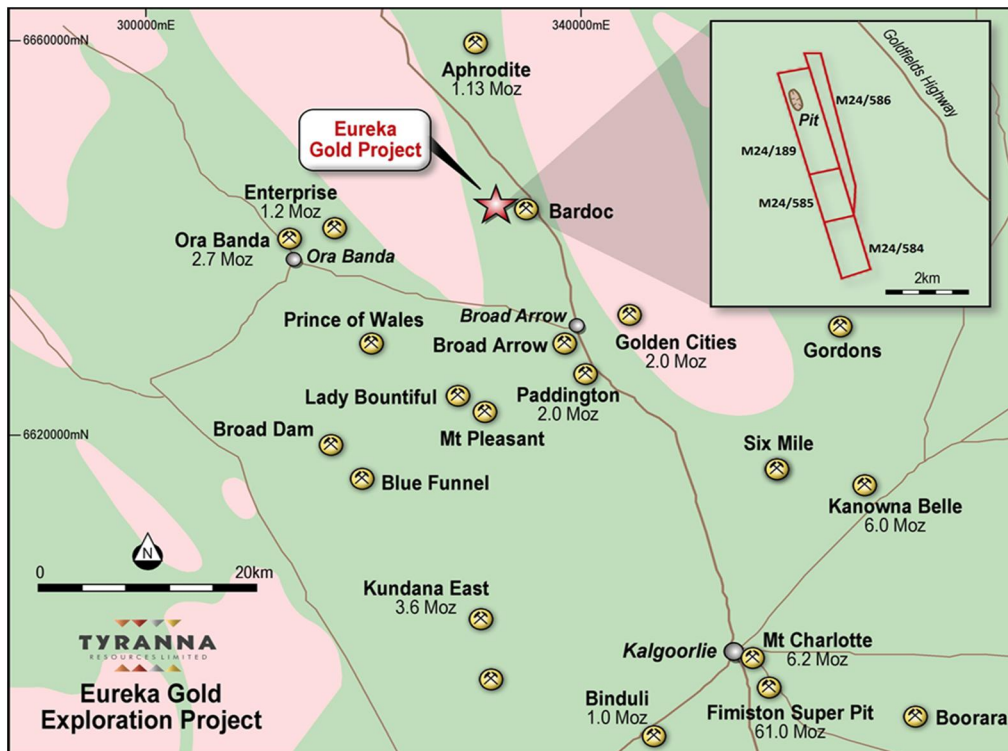
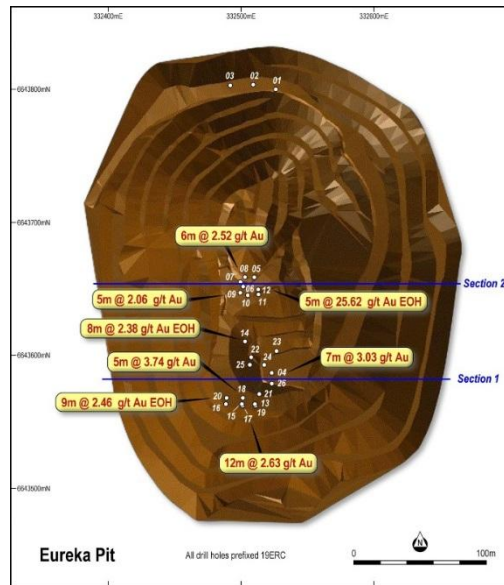


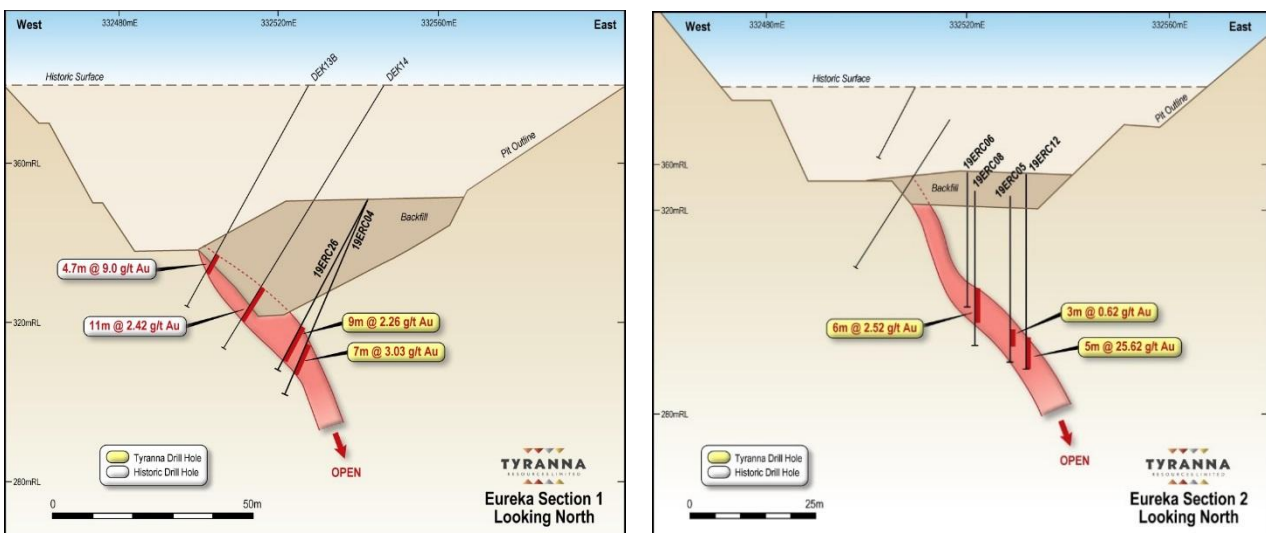
Figure 2: Eureka Project Location.

Between October 2017 and April 2018, a tribute arrangement under the previous owners of the Eureka project resulted in the mining of 53,000 tonnes at 3.3 g/t for production of 5,400 ounces. Mapping in the Eureka pit revealed that mineralisation was associated with quartz veining with minor sulphides contained within a broader zone of shearing and foliation. Since acquiring the Eureka project in September 2018, Tyranna has undertaken two drilling programs. In February 2019, the Company undertook a close space drilling program targeting mineralised material below the existing floor to validate historical drilling and confirm grade continuity. Significant shallow oxide intercepts included<sup>1</sup>:

- **5m @ 25.6 g/t Au** from 33m inc' **1m @ 89.7 g/t Au** from 34m (19ERC12)
- **7m @ 3.0 g/t Au** from 39m (19ERC04)
- **12m @ 2.6 g/t Au** from 20m inc' **1m @ 15.8 g/t Au** from 26m (19ERC17)
- **5m @ 3.7 g/t Au** from 23m inc' **1m @ 13.5 g/t Au** from 24m (19ERC18)
- **9m @ 2.5 g/t Au** from 12m (19ERC20)



**Figure 3: Plan view showing location of in-pit RC drill holes at the Eureka Pit.**



**Figure 4 and 5: Cross section through Eureka pit.**

**The Production Target is based on the following key parameters:**

- The March 2019 JORC (2012) Eureka Gold Project deposit Mineral Resource update of 762,000t at 1.8g/t Au for 43,100oz (at a 0.5g/t Au cut-off grade)<sup>2</sup>
- Production Target includes 100% Indicated Mineral Resources
- Production Target Financial assumptions were based on A\$1,800/oz
- Open pit mining and adit mining operations to be undertaken by mining contractors
- Ore haulage conducted by local contractors
- Processing through a conventional third-party carbon in conventional leach plant in close proximity
- Assumed metallurgical recovery of 96%, supported by historical processing in 2018 through the Lakewood toll treating facility in Kalgoorlie
- Open pit geotechnical parameters were based the 2018 Tribute mining pit slope angles

which was mined to similar depth

- Adit geotechnical assumptions based on existing adjacent decline and ore development completed in 1996
- Hydrological assumptions based historical flows during the 2018 Tribute mining
- Open Pit mining assumed to be 100% free dig (as per 2018 Tribute mining)
- A minimum mining width of 15m was used to allow for existing open pit cutbacks and truck turning circles
- Due to the small fleet being utilized and no drill & blast the mineralized zone dilution is estimated around 4%, while open pit mining recovery is estimated around 97%.
- Due to the low powder factor (Lightly blasted) required to be used in mining the north wall total, dilution is estimated at 10% and mine recovery at 85%
- Mine supervision and grade control costs were provided by Tyranna based on similar West Australian mining operations.
- State royalties have been included and applied.
- Refining costs have been allowed for in the toll processing cost

#### Key outcomes of the Study

The key Study outcomes for the Eureka Project are included in Table 1 below. The Indicated Mineral Resource, which constitutes 100% of the production target, has been prepared by Competent Persons in accordance with JORC Code 2012.

**Table 1: Summary of key outcomes (at an A\$1,800/oz gold price)**

<b>OPEN PIT MINING</b>	
Total pit volume (kBCM)	26
Stripping ratio (waste: ore)	3.3
Mined ore (kt)	21
Gold grade (g/t)	2.9
Milling recovery average (%)	95.7
Recovered gold (ounces) Koz	2
Upfront pre-production cost estimate (A\$M)	0.6
Stockpiled waste cost estimate to first ore (A\$M)	0.05
Free cash flow over 1-month project life (A\$M)	1.6
<b>ADIT MINING</b>	
Mined ore (kt)	40
Gold grade (g/t)	1.7
Milling recovery average (%)	95.7
Recovered gold (ounces) Koz	2.1
Free cash flow over 2-month project life (A\$M)	1

Ore mined will be delivered to the ROM pad for haulage to the processing facility in batches of 5kt parcels. Ore mining, once commenced, will be continuous for a two-month period. The Study assumes that 100% of the open pit ore mined will be free dig with no drill and blast to the final pit



depth of 20 metres below the current pit floor. 100% of the material to be processed is classified as Indicated Resource and no material to be processed is currently classified as an Inferred Mineral Resource.

### Geology

The Eureka area occurs on the eastern limb of the major south-east plunging Goongarrie-Mt. Pleasant Anticline. The eastern limb consists predominantly of north-north-west trending mafic and ultramafic lithologies, with minor thin mainly interflow sediments, bounded to the west by pre-to syntectonic granitoid forming the core of the regional anticline. The deposit lies at the top of the Mt Pleasant Sill where gabbro is overlain by high Mg basalts. Two distinct shale units are present, the western one being the Copper Mine Shale which marks the top of the sill and the other an interflow unit amongst the basalt. A zone of intense shearing 30m wide is situated between the shale units where highly altered basalt and lesser dolerite are found. Gold mineralisation occurs as a number of lens shaped ore shoots (in plan) up to 10m wide within the shear. The gold is hosted in quartz veins and quartz stringers within the altered mafic host rocks.

### Mineral Resources

The Mineral Resource has been estimated beneath the existing Eureka pit, where recent and historic exploration has been limited to. Mineral Resources at Eureka were estimated using inverse distance squared grade interpolation methods. A top cut of 20g/t was applied. The mineralised zone was modelled as a solid shape and grades interpolated within this shape using hard boundaries.

**Table 2:** Eureka Mineral Resource Estimate at 0.5g/t cut-off <sup>2</sup>

	<b>Tonnes</b>	<b>Grade</b>	<b>Ounces</b>
<b>Indicated</b>	<b>434,000</b>	<b>1.8</b>	<b>25,200</b>
<b>Inferred</b>	<b>328,000</b>	<b>1.7</b>	<b>17,900</b>
<b>TOTAL</b>	<b>762,000</b>	<b>1.8</b>	<b>43,100</b>

**Table 3:** Eureka Mineral Resource Estimate at 1.0g/t cut-off <sup>2</sup>

	<b>Tonnes</b>	<b>Grade</b>	<b>Ounces</b>
<b>Indicated</b>	<b>311,000</b>	<b>2.2</b>	<b>22,300</b>
<b>Inferred</b>	<b>251,000</b>	<b>2.0</b>	<b>16,000</b>
<b>TOTAL</b>	<b>562,000</b>	<b>2.1</b>	<b>38,300</b>

### OPEN PIT MINING

Waste material stockpiled from mining in 2018 is removed and placed back into the 2018 pit to build a ramp and platform up to the ore exposed in north face of the pit. The removal of this waste will also expose the ore on the original pit floor. Trench sampling along the full strike width of the ore zone on 5m flitches will be undertaken. This is expected to accurately define the ore boundary to enable maximum extraction and minimise dilution. The pit is 100% free dig with the last flitch assumed to being ripped by a dozer as experienced at a similar level during mining in 2018. Ore will be trucked to the surface using 40t trucks, waste will be stockpiled in the pit.

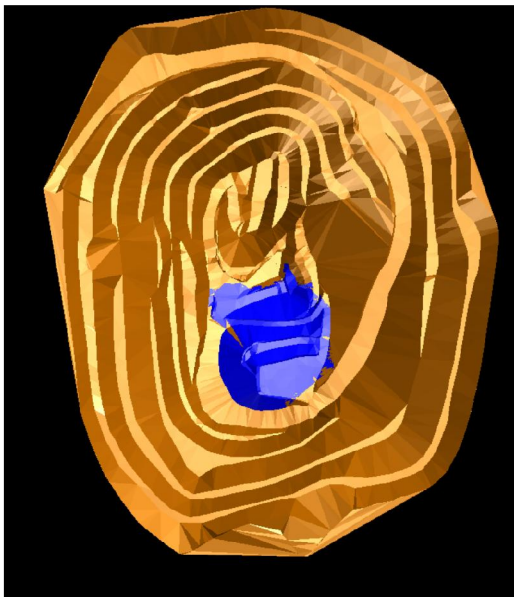


Figure 6: Existing waste fill from 2018 mining (Blue).



Figure 7: Waste moved into 2018 pit.

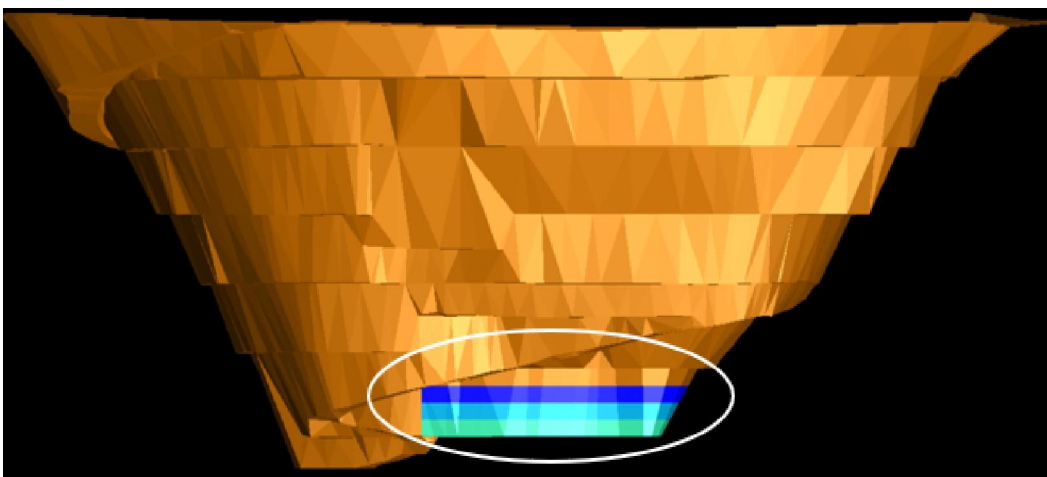


Figure 8: 20m open pit bench mined utilising existing access ramps.

## ADIT and MINING INTO THE NORTH WALL OF THE PIT

Channel sampling conducted across the ore zone before mining was completed in April 2018 indicates the presence of high-grade mineralisation beneath and along strike of the current pit (Refer to TYX ASX announcement on 5 December 2018 for channel sampling details). Figure 9 shows the position of the ore zone in the north wall and an ore drive that was developed in 1996. Decline development that was completed in 1996 is illustrated in Figure 9. The project was not progressed due to the prevailing gold price at that time.

To access the north wall, waste material overlying the open pit ore is used to build a ramp to allow an adit to be developed from the pit face. The access point is close to the original adit that was mined in 1996. The adit is designed to access the ore for 38m using conventional jumbo development. Once the adit has been developed both up and downholes are drilled and the ore blasted back into the pit. All ore is remote bogged and trucked to the surface ROM. The advantage of this methodology is that there is no capital or waste development required. All mining is undertaken in ore.



**Figure 9: Location of new adit on north wall of Eureka pit showing ore zone, excavator and truck at pit floor in 2018 during Tribute Mining.**

### Ore Haulage and Processing

Ore mined will be trucked to a nearby processing facility where the ore will be processed either on a campaign basis or blended with other ore after mill specific grade determination procedures. After the removal of waste overburden from 2018 mining, ore mining will commence once the ore exposed with haulage and treatment to commence immediately. Ore will be hauled via an existing haul road, to nearby processing facility. Budget haulage rates were received from a number of local haulage contactors for use in the Study.

Metallurgical results indicate ore treatment through a conventional crushing, grinding and gravity circuit followed by standard carbon in leach gold extraction is suitable and appropriate for the ore type as previously toll treated in 2018 at the Lakewood processing plant in Kalgoorlie where recoveries of 96% were achieved.

### Infrastructure, Transport and Services

The Eureka Gold project is 50km north of the City of Kalgoorlie-Boulder and access is via the sealed Menzies Highway. Site access is via an existing unsealed haul road.

Mine dewatering will commence 10m below the 20m deep pit. Dewatering pump lines are already in place with a pontoon pump planned to be located in the existing 2018 pit, pumping to an already established turkeys nest. Excess water, if any, is planned be pumped and used primarily for dust suppression system.

Site establishment will be conducted by the mining contractor comprising site office, maintenance workshop sea containers and fleet go line. Due to the close proximity of Kalgoorlie-Boulder, all staff and external service providers will be based in Kalgoorlie.



### Cost Estimates and Financial Evaluation

The upfront pre-production operating cost estimate of A\$0.6m represents costs for initial site establishment, haul road improvements, and mine dewatering infrastructure installation. Removal and placement in the existing pit of approximately 75k BCM of waste overburden will occur to expose the open pit ore. The operating cost estimate has been developed with inputs from mining contractors and Entech's database.

**Table 4:** Eureka Gold Deposit - Summary of Financials

Activity	Operating Cost (A\$M)
Gold produced (ounces)	4,057
Gross revenue (at A\$1,800 per ounce)	\$7.1M
Free positive cash flow over 2-month mine life	\$2.6M
C1 cash costs	\$1,109/oz
Mine establishment capital costs	\$0.10M
Initial pre-strip cost estimate to first ore	\$0.15M
First gold production from mine commencement	0.5 Months

Notes: All costs and prices are in Australian dollars, A\$1,800/oz gold price used

### Economic Evaluation & Sensitivity

The financial evaluation is based of A\$1,800/oz gold price (see Table 4). Table 5 provides a sensitivity analysis demonstrating the forecast economics under a range of future gold prices scenarios.

**Table 5:** Economic Evaluation with varying Gold Price

Gold Price / Oz (AUD)	Gross Revenue (A\$M)	Positive Cash Flow From Operation (A\$M)
\$1,700	\$6.7M	\$2.2M
\$1,750	\$6.9M	\$2.4M
<b>\$1,800</b>	<b>\$7.1M</b>	<b>\$2.6M</b>
\$1,850	\$7.3M	\$2.8M
\$1,900	\$7.5M	\$3.0M

### Environmental and Permitting

Eureka Gold Project generally contains land systems supporting vegetation types that are common throughout the Eastern Goldfields. There are no identified threatened ecological communities of national or sub-regional significance within the project area. No rare species of flora have been collected on the project area. There is no new land disturbance applications required.

A database search identified specially protected, migratory or priority fauna species as having been previously recorded or as being potentially present in the general vicinity of the survey area however, no fauna of conservation significance is likely to be significantly impacted on by the proposed development.

While no native title exists over the project area, the Company recognises that members of the Aboriginal community may hold native title rights over certain areas and may, in the future, lodge new native title claims. The Company will not be required to enter into any new access/compensation agreements in relation to the areas covered by the Leases.

## Funding

As at 31 March 2019 Tyranna had \$1.06 million cash at bank and investments valued at \$0.6 million in ASX listed Companies as at 31 March 2019. The Company has completed several successful capital raisings in the last five years and retains very supportive shareholders. The positive technical and economic fundamentals demonstrated to date at the Eureka Gold Project provide a sound basis to assess financing options including internal funding, traditional debt/equity, profit share arrangements with strategic partners, sale or partial sale of Company assets. The Board is confident the Company will be able to finance the Eureka Gold Project and has an objective of minimising dilution for current shareholders.

## Further Work

Entech has recommended further work is required before a Decision to Mine is made which would include the following:

- Further close spaced infill grade control drilling
- Detailed geotechnical and hydrogeological assessment
- Further contract negotiations for mining and haulage
- Review of processing options and final commercial negotiations
- Detailed review of physicals and costs to PFS level
- Completion of Ore Reserve
- Review of funding / financing options if required
- Completion of statutory approvals for mine development

## RISKS

Key risks identified by Entech include, but are not limited to:

- Access to project funding.
- Timely project approvals from government authorities.
- Adverse movements in the Australian gold price.
- Adverse movements in USD: AUD exchange rates.
- Not achieving the mining production rates, dilution assumptions and metallurgical and mining recovery rates.
- Adverse movement in fuel price.
- Ore Recovery when mining ore in the north wall
- Geotechnical risk

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**Competent person statement:** The information in this announcement that relates to Exploration Results is based on information compiled by Nicholas Revell, who is a Member of The Australian Institute of Geoscience and who has more than five years' experience in the field of activity being reported on. Mr. Revell is the Technical Director of the Company.

Mr. Revell has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Revell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Exploration Target (Target) Statement: An Exploration Target (Target) does not constitute the definition of any resource, which is compliant with the JORC Code. Target tonnages and grades contained herein are conceptual in nature and may or may not be realised through completion of further exploration and other studies on the targets described. As such, it is uncertain if further exploration will result in the determination of tonnages and grades that conform to mineral resources or ore reserves under the JORC code.

The information in this report that relates to Exploration Targets and Mineral Resource estimates is based on information compiled by Richard Maddocks, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Richard Maddocks is an independent consultant to Tyranna Resources Limited. Mr Maddocks has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr. Maddocks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

<sup>1</sup> This information is extracted from the report entitled 'Drilling intersects 5m @ 25.6 g/t Au at Eureka' created on 7 March 2019 and is available to view on <https://www.asx.com.au/asxpdf/20190307/pdf/44393tk558rx80.pdf> The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

<sup>2</sup> This information is extracted from the report entitled 'Eureka Mineral Resource & Maiden Exploration Target' created on 13 March 2019 and is available to view on <https://www.asx.com.au/asxpdf/20190313/pdf/443fkn3lzdj3p.pdf> The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

## Forward Looking and Cautionary Statements

Some statements in this report regarding estimates or future events are forward looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Forward looking statements include, but are not limited to, statements preceded by words such as "planned", "expected", "projected", "estimated", "may", "scheduled", "intends", "anticipates", "believes", "potential", "could", "nominal", "conceptual" and similar expressions. Forward looking statements, opinions and estimates included in this announcement are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. Forward looking statements may be affected by a range of variables that could cause actual results to differ from estimated results, and may cause the Company's actual performance and financial results in future periods to materially differ from any projections of future performance or results expressed or implied by such forward looking statements. These risks and uncertainties include but are not limited to liabilities inherent in mine development and production, geological, mining and processing technical problems, the inability to obtain any additional mine licenses, permits and other regulatory approvals required in connection with mining and third party processing operations, competition for among other things, capital, acquisition of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of acquisitions, changes in commodity prices and exchange rate, currency and interest fluctuations, various events which

could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, the ability to secure adequate financing and management's ability to anticipate and manage the foregoing factors and risks. There can be no assurance that forward-looking statements will prove to be correct.

Statements regarding plans with respect to the Company's mineral properties may contain forward looking statements in relation to future matters that can only be made where the Company has a reasonable basis for making those statements.

This announcement has been prepared in compliance with the JORC Code (2012) and the current ASX Listing Rules.

The Company believes that it has a reasonable basis for making the forward-looking statements in the announcement, including with respect to any production targets and financial estimates, based on the information contained in this and previous ASX announcements.