

**Program of Work,  
Accompanying a Mineralisation Report**

**Submitted to  
Earth Resources Victoria,  
Department of Economic Development, Jobs, Transport and Resources**

**Retention License Application  
Tandarra Gold Project**

Author: Paul Quigley

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Licensee: Navarre Minerals Limited

License Manager: Kite Operations Pty Ltd (100% wholly owned subsidiary of Catalyst Metals Limited)

## Contents

Executive Summary .....	3
Introduction .....	6
Year One, 2018            Estimated Expenditure: \$250,000 .....	7
Year Two, 2019            Estimated Expenditure: \$250,000.....	9
Year Three, 2020           Estimated Expenditure: \$250,000 .....	9
Year Four, 2021           Estimated Expenditure: \$250,000 .....	10
Year Five, 2022           Estimated Expenditure: \$300,000.....	10
Year Six, 2023             Estimated Expenditure: \$300,000 .....	11
Year Seven, 2024           Estimated Expenditure: \$300,000 .....	11
Year Eight, 2025           Estimated Expenditure: \$400,000.....	11
Year Nine, 2026           Estimated Expenditure: \$400,000.....	11
Year Ten, 2027             Estimated Expenditure: \$400,000 .....	12

## Executive Summary

The Tandarra Gold Project mineralisation report includes a Distal 2 resource using alternative evidence of at a 0.4 g/t gold cut-off grade for 861,000 tonnes at 2.4g/t Au. In isolation, this has been assessed as being uneconomic to mine, requiring additional tonnage at higher grade. The project does provide potential for resource expansions both along strike and down-dip of existing resources and from parallel trends. Over \$7,000,000 has been spent on the exploration of EL4897, however it has not been possible to progress to a JORC-compliant Inferred Mineral Resource in the short time since principal gold mineralisation was discovered in 2006. This is largely due to the short drilling season limited by grain cropping and the time-consuming and difficult process of exploring for complex and variable gold mineralisation beneath the Murray Basin sediments.

Exploration has demonstrated that there is good potential to expand on the existing resource base both on the currently defined trends as well as on the known anticlinal structures between trends; and as such a staged approach will be required to progress to the project to feasibility and a decision to mine.

As determined by the preliminary economic evaluation study (AMC Consultants report, November 2017), the program to establish economic viability at Tandarra must identify significant additional volumes of higher-grade mineral resources in the district. Such investigations shall be accelerated in the first three years of the program, and will include:

- Deep diamond drilling of positions beneath the mineralisation at Tomorrow (possibly down plunge of Tomorrow North) to establish if there is a vertical repeat of the structural setting and potential for associated mineral resources (as was demonstrated in the Bendigo Goldfield). All diamond drill core will be oriented for complete structural analysis.
- Resource extension drilling along strike from the significant mineralisation of Macnaughtan, Dingee Zone, and Tandarra North. Drilling will be completed by RC methods where possible, and possibly with diamond “tails” through key locations for structural analysis, and at locations where depth constraints negate the use of RC methods.
- Completion of drilling traverses across the existing gravity anomalies as defined in the reprocessed gravity survey.
- Additional geophysical investigations to include untried but viable technologies as assessed on merit. Given the alluvial cover over mineralisation at Tandarra, the only viable method of investigating prospect-scale geological structure in the short term is through geophysics. A trial of deep ground penetrating radar (DGPR) in October 2017 has provided some encouragement that useful alternatives to gravity geophysics are available.

The existing resource at Tomorrow and Macnaughtan requires further definition including studies to confirm the working interpretation, the resource grade, and to demonstrate the viability of gold production at Tandarra. The program of work must seek to improve resource infill drill spacing to 25 metres within the existing coverage of the Tomorrow mineralisation. The initial drive for RC coverage has delivered a working interpretation of stratigraphy, structure and mineralisation – facilitated by knowledge of Bendigo-style systems and the implementation of XRF technology to stratigraphic correlation. RC drilling remains attractive as the immediate follow-up to air core drilling due to the low-cost and rapid completion of programs, however in the context of the advanced prospects, the informational and depth of investigation limitations of RC drilling have necessitated the planning of diamond drillhole coverage for 2017-18.

The next campaigns of drilling at Tomorrow will include:

- Diamond drilling of key sections of mineralisation to confirm structural interpretations, widths of mineralisation, grade of mineralisation, and at-depth repetition (down plunge from Tomorrow North)

- Infill RC drilling provide 25-metre section spacing for the entire resource and 50-metre section spacing where there is potential for further resource

Other than Tomorrow, the development of resources at Macnaughtan, Tomorrow North, Dingee Zone, and Tandarra North will follow a similar rationale with section spacing ultimately being closed to 25 metres. Other sites for advancement will require broad-spaced RC drilling adjacent to and along strike from anomalous scout drillholes in and around the known geophysical anomalies.

Investigations and studies other than resource development will include:

- Completion of metallurgical assessment at Tomorrow with follow up sample collection and submission to specialist contractor
- Metallurgical assessment programs for Tomorrow, Macnaughtan, and other selected prospects by sample collection and submission to specialist contractor
- Geotechnical drilling and assessment
- Hydrogeological drilling and assessment
- Revision of engineering and mining assumptions and constraints to estimate capital and operating costs for gold production
- Test excavation and reconciliation
- Environmental effects study
- Community engagement/management study
- Mine optimisation and (pre) feasibility study and report

***It should be emphasised that the progression from Resource development to Decision to Mine is highly uncertain and program milestones and expenditures will be totally dependent on results achieved.***

The following year-on-year milestones are therefore proposed for the Tandarra Project.

1. End-2018: **Resource infill and extension**
  - a. Structural definition diamond drilling at Tomorrow
  - b. Diamond drilling for deeper zones at Tomorrow to establish deeper repetition of mineralisation
  - c. RC drilling continued at Tomorrow
  - d. Air core and RC drilling of Macnaughtan
  - e. Geophysical survey of the Dingee Zone
  - f. Air core drilling of Dingee Zone mineralisation
  - g. Air core and RC drilling of Tandarra North mineralisation
  - h. Reconnaissance air core drilling completed to complete the testing of undrilled gravity anomalies
2. End-2019: **Resource infill and extension, Resource assessment**
  - a. Follow-up diamond drilling on deeper targets at Tomorrow
  - b. RC drilling completed at Tomorrow
  - c. RC continued at Macnaughtan, Tomorrow North, Tandarra North, Dingee Zone
  - d. Geostatistical assessments completed for use in resource estimation
  - e. Initial Inferred Resource estimate (Inferred mineral resource)
  - f. Reconnaissance air core drilling follow-up of gold mineralisation discovered in 2018
  - g. Metallurgical sampling- composite sample collection and assessment for all advanced prospects

3. End-2020: **Resource infill and extension, underground appraisal, scoping study**
  - a. RC Drilling of Satellite Deposits from 2019
  - b. Extension of block model to underground potential resource
  - c. Commence project scoping study
4. End-2021: **Resource assessment, scoping study, pre-feasibility**
  - a. Resource Drilling continued
  - b. Project scoping study (continued)
  - c. Commence geotechnical investigations
  - d. Commence hydrogeological investigations
5. End 2022: **Test excavation, scoping study, prefeasibility**
  - a. Test excavation (subject to resource results)
  - b. Complete initial grade reconciliation
  - c. Revised Resource Estimate (Indicated mineral resource)
  - d. Geotechnical investigations completed
  - e. Hydrogeological investigations completed
  - f. Project Scoping Study Completed
  - g. Engineering and mining investigations completed
6. End 2023: **Approval Process, EES, community management**
  - a. EES referral submitted
  - b. EES commenced (if required)
  - c. Commence community management study
  - d. Commence project prefeasibility study
7. End 2024: **Approval Process, EES, community management**
  - a. Community management study completed
8. End-2025: **Prefeasibility Investigations completed**
  - a. Project Prefeasibility Study completed
  - b. Community investigations completed
9. End 2026: **Feasibility**
  - a. EES completed (if required)
  - b. Project feasibility study completed
10. End-2027: **Decision to Mine**
  - a. Decision to mine
  - b. Construction project financing

## Introduction

The program to establish economic viability and the decision to mine at Tandarra is a project that includes an initial strategic advanced resource expansion phase followed by project development phases. Catalyst Metals has established the strategic elements of the endeavor – ensuring that the development of a viable gold mining operation in Central Victoria fits with the organisational vision and corporate requirements. Catalyst is currently planning the next campaign of resource development drilling and as an input into the business case which will complete the strategic elements of the Tandarra Gold Project.

The resource development campaign is designed to deliver:

- An increase in the tonnes of mineralised material potentially amenable to processing by increasing the number of known mineralised bodies in the district. This investigation will include drilling as follows:
  - Traverses across gravity geophysical anomalies
  - Adjacent to and along strike from existing isolated and significant intersections in the project area
- Improve knowledge of the potential of the Hayanmi and Boyd's Dam prospects by:
  - Completing investigation of the respective 'productive corridors'
  - Improve the drill spacing within the existing coverage of the Hayanmi and Boyd's Dam mineralisation as is appropriate for local resource estimation
- Follow up RC drilling adjacent to and along strike from anomalous reconnaissance drillholes with the eight geophysical anomalies
- Completion of metallurgical assessment at Hayanmi with follow up sample collection and submission to specialist contractor
- Metallurgical assessment programs for Boyd's Dam and other selected prospects by sample collection and submission to specialist contractor

Beyond resource definition, the Tandarra Gold Project requires investigations into other technical, environmental, and community aspects so that the ultimate decision to mine is based on rigorous information. Sub-projects include:

- Geotechnical and hydrogeological drilling and assessment
- Revision of engineering and mining assumptions and constraints to estimate capital and operating costs for gold production
- Completion of an EES or gain government exemption
- Community assessment study
- Mine optimisation and design
- (pre) Feasibility study and report

The process of establishing feasibility is expected to include elements of the project definition phase such as:

- Preliminary mine design (and options)
- Preliminary process design (and options)

These however are not considered material to the decision to mine.

Year One, 2018

Estimated Expenditure: \$250,000

**Milestone 1: Drilling (continued)**

The 2017-2018 drilling campaign will see the return to diamond drilling at Tandarra. Where high-density infill is required over the advanced projects, continued RC drilling will be implemented where possible. The purpose of these activities is to:

- To infill drill known mineralisation at Tomorrow with high quality drilling such as diamond drillholes and RC drillholes.
- Resource development RC drilling at the Macnaughtan line of mineralisation
- To investigate positions beneath the mineralisation at Tomorrow with diamond drilling; to establish if there are vertical repeats of structural setting and potential for associated mineral resources (as was demonstrated in the Bendigo Goldfield).
- Better quantify the potential of Tomorrow North, Tandarra North, and the Prairie Zone with follow-up air core and RC drilling
- Identify additional prospective lines of mineralisation in the Dingee Zone through DGPR geophysical survey and follow up air core drilling

The Tomorrow prospect was the most recent focus of resource development activity at Tandarra, with the 2017 RC drilling program focused on the northern and central areas of strong mineralisation. The focus of the 2017-18 program will be to implement diamond drilling into key locations of these areas to provide better understanding of the structural context of the gold mineralisation. The deployment of diamond drill rig also presents an opportunity to investigate at-depth repetitions of mineralisation beneath Tomorrow, specifically in positions where west-dipping faults encounter the Tomorrow anticlinal axis. Diamond drilling is planned to achieve 100-metre section spacing; centred around 5,972,825N. This spacing is not regarded as adequate to deliver an Inferred Mineral Resource, however it is anticipated that it will provide adequate detail to develop a 3D model of fault and fold geometries and generate targets; should the tenor of mineralisation be adequate to justify the cost of additional diamond drilling. Should diamond drilling dispute the current structural interpretation, additional drillholes will be required to improve the interpretation.

With further refinement of the Tandarra mineralisation concept will come greater opportunity to test the suitability to these to geostatistical assessment. Ideally the gold distributions in a better-dominated model/database will allow spatial grade modelling and localised gold grade estimation. Currently estimates are global for individual (interpreted) mineralised entities.

The Macnaughtan and Tandarra North prospects have already produced number of significant drillhole assays, which require further follow up. Additional air core and RC drilling will be required on existing and new sections to improve the respective datasets and potentially develop additional resources. There is also additional potential for follow-up on the existing air core intersections at the Prairie Zone, however this will only be completed in 2018 if time and drilling resources are available.

The Dingee Zone currently provided significant drillhole assays, however additional drilling will be required for this to contribute to the resource estimate. A government-assisted program of DGPR geophysics is scheduled for early 2018 with the intention to implement follow-up air core drilling.

A survey of gravity geophysical data from 2006 was reprocessed in 2017 by Hawke Geophysics Pty Ltd, which provided lineaments along strike of existing significant drillhole grades as well as in areas of no drilling. No less than 12 lines of mineralisation have become apparent through this reprocessing, and it is anticipated that reconnaissance air core drilling will commence in 2018. Figure 1 illustrates the lineaments (dashed red and yellow linework) with the gravity geophysics as an underlay:

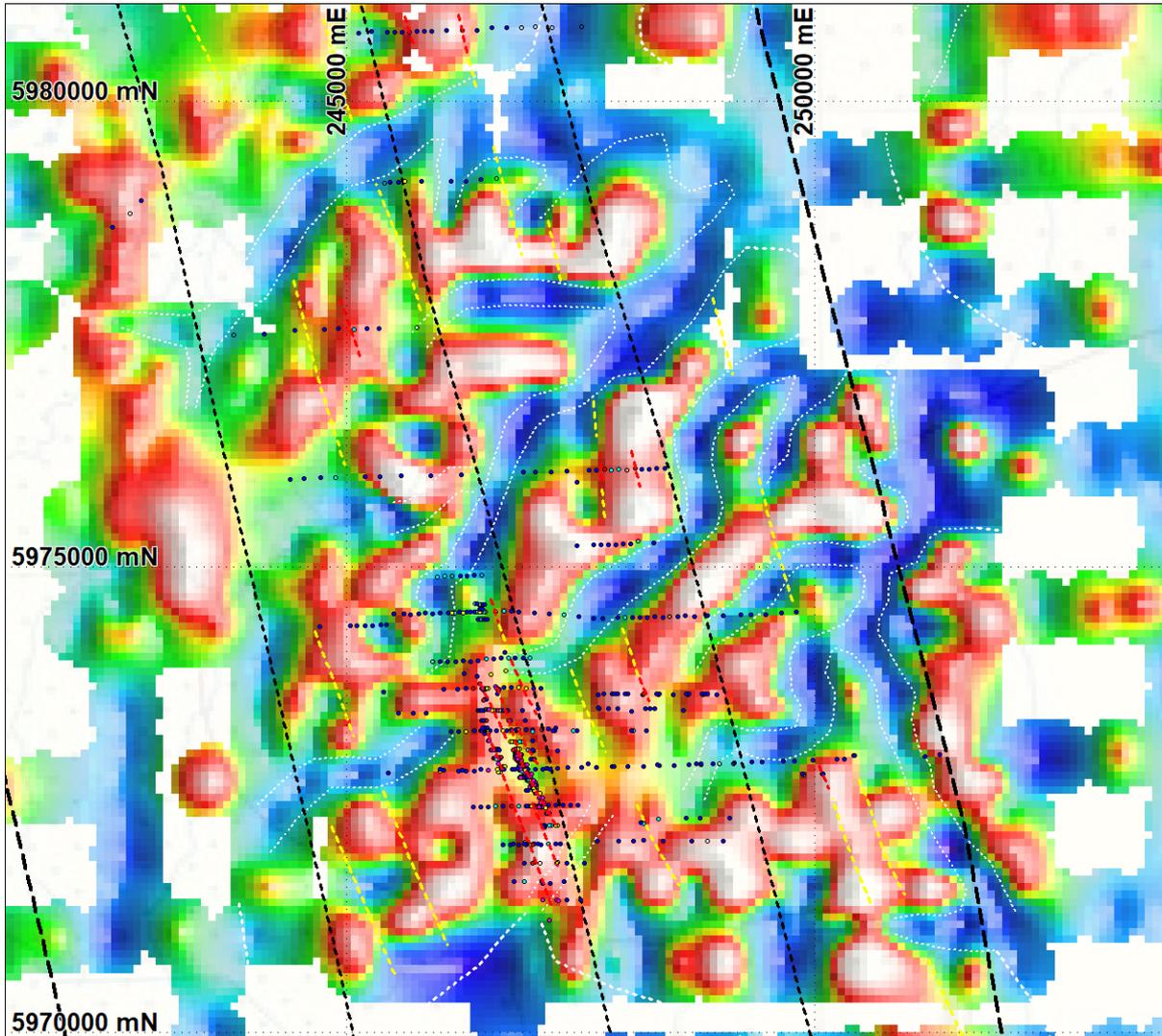


Figure 1 Gravity Geophysics and Lineaments at Tandarra

As the 2018 reconnaissance air core drilling delivers mineralisation of significance, comprehensive RC drilling will be required but not likely to be completed prior to 2020.

Year Two, 2019

Estimated Expenditure: \$250,000

**Milestone 2: Drilling (continued)**

The 2019 field season will include follow up diamond drilling beneath Tomorrow, investigating plunge extensions as they have become apparent from the 2018 program. There is also potential to commence deeper investigations beneath Macnaughtan.

The RC drilling of the shallow levels of Tomorrow will be completed to 25-metre section spacing to contribute to the Inferred Mineral Resource estimate. RC drilling will also continue at Macnaughtan and Tomorrow North, and commence in positions where 2018 air core drilling have provided evidence for significant mineralisation, such as at Tandarra North, Dingee, and Prairie Zone. Some air core drilling may be required on some step-out sections in order to better site the more expensive RC drillholes.

**Milestone 3: Resource estimate**

Block models will be developed to incorporate geochemical data and geostatistical understanding of the material resources at Tomorrow, Macnaughtan, and Tomorrow North. It is anticipated that the 25-metre section spacing and diamond drillhole information at key locations will provide the quality of interpretation and statistical understanding to produce a JORC-compliant Inferred Mineral Resource. The estimates will provide input to preliminary scoping and prefeasibility studies.

**Milestone 4: Metallurgical processing appraisal**

In addition to the drilling campaign for 2019, there will be further metallurgical test work to validate the test work to date. This testwork is anticipated to involve a composited sample(s) to ensure that there is greater representation than that of the previous samples (which were sourced from limited drilling). Test work will establish refinements to the estimated gold leachability of Tomorrow mineralisation, and new information for Macnaughtan mineralisation and any deep (primary) mineralisation encountered at depth beneath Tomorrow. The need for metallurgical test work on Dingee Zone mineralisation is subject to successful resource development.

It is expected that this assessment (and preceding assessments) will provide confidence in the gold distribution within the mineralised domains and how it responds to gold extraction processes. Such confidence will allow informed generalisations for use in scoping and prefeasibility studies up until bulk sampling allows further metallurgical assessment.

Year Three, 2020

Estimated Expenditure: \$250,000

**Milestone 5: Drilling (continued)**

The 2020 programme will involve infill RC drilling of any satellite zones of gold mineralisation discovered in the previous two years. It is likely that these satellite deposits will be necessary to form an economically viable gold mining district. Resource drilling will continue on all areas where potentially economic gold mineralisation is present.

The final delineation of all ore sources in the district will enable the commencement of a Scoping study that will highlight the priority ore sources for a future operation.

**Milestone 6: Project scoping study**

Resource development successes will be used to develop the conceptual potential of the project. Aspects of mining method and processing options will be explored to understand the strengths, weaknesses, opportunities, and threats to a mining operation. Scoping will inform the prefeasibility study, and it is expected that both studies will advance contemporaneously for a time.

Year Four, 2021

Estimated Expenditure: \$250,000

**Milestone 7: Drilling (continued)**

Year four is expected to see the completion of resource development drilling investigations, further informing the resource estimate for Tandarra.

**Milestone 8: Project scoping study (continued)**

Continuation of scoping study through Year Four.

**Milestone 9: Prefeasibility study**

The Year Four field season (January to May inclusive) will see the commencement of geotechnical and hydrogeological investigation. These will take the form of diamond drilling, percussion drilling, and groundwater sampling and measurement. Such activities will be located at sites of significant mineralisation as well as representative sites to characterise and generalise the nature of locations for infrastructure development (infrastructure such as waste dumps and surface water impoundments).

The Year Four drillhole samples will also provide an opportunity to commence test work on rock and soil interactions with the environment, for example, waste rock acid generation.

The initial geotechnical analysis combined with a localised resource (block) model will allow initial pit optimisation study; which will include cost and revenue sensitivity analyses to be performed at each resource location. This body of work will constitute the commencement of the project prefeasibility study.

Year Five, 2022

Estimated Expenditure: \$300,000

**Milestone 10: Test excavation and reconciliation**

Should the 2021 test pits provide an opportunity to source bulk mineralised material, processes will be put into place to store such material with the view to conduct bulk processing tests. This procession may or may not be achievable by the end of 2021, and if not may be deferred until 2022 or when a suitable plant becomes available.

**Milestone 11: Indicated Resource estimate**

After the Year Four drillhole data has been interpreted, more advanced geostatistical analysis is planned. It is anticipated that the increased sampling database will provide for greater understanding of mineralised domains, and allow meaningful variography. Should the data present structured variograms it is likely that local estimation (block modelling) of the mineralised domains will be possible (valid) resulting in a refined grade estimate which may be assessed against the test excavation and reconciliation (Milestone 10). Note that Catalyst aspires to publish a JORC-compliant indicated mineral resource estimate in 2020 or soon thereafter.

**Milestone 12: Project scoping study (continued)**

Completion of scoping study.

**Milestone 13: Prefeasibility study (continued)**

The 2021 field season (January to May inclusive) will see the completion of geotechnical and hydrogeological investigations which will contribute to the project prefeasibility study.

Year Six, 2023

Estimated Expenditure: \$300,000

**Milestone 14: EES referral**

Year Six will see the matter of environmental effects reviewed by the governing department. An EES referral will be sought, to determine if the project can proceed without the need for a full environmental effects study. The expenditure for 2022 will be greatly dependent on the need for a full EES.

**Milestone 15: EES commenced (if required)**

Should the governing department require an EES, the process of EES will commence before the end of Year Six.

**Milestone 16: Community engagement/management study**

With aspects of the project scoping and prefeasibility studies in hand, a community management study and engagement process will be implemented in Year Six.

**Milestone 17: Prefeasibility study (continued)**

With bulk sample processing completed, Year Six will provide the opportunity to prepare the initial Tandarra grade reconciliation. Results from bulk processing will be compared against local grade estimates to inform the validation step of resource estimation. The successful completion of this analysis and that of the geotechnical, hydrogeological, and mining costs will inform the completion of the project prefeasibility study.

Year Seven, 2024

Estimated Expenditure: \$300,000

**Milestone 18: Community engagement/management study**

Community management study and community engagement to continue through Year Seven.

**Milestone 19: Prefeasibility study (continued)**

Project prefeasibility study continues through Year Seven

**Milestone 20: EES (continued)**

EES continues through Year Seven.

Year Eight, 2025

Estimated Expenditure: \$400,000

**Milestone 21: Community engagement/management study (continued)**

Community management study completed (though community engagement processes will continue through to and into the operational phase).

**Milestone 22: Prefeasibility study completed**

2024 will see the completion of an operations options study, and selection of a project construction definition. This will form the basis for the decision to mine, and the development of a project charter to deliver an operational gold mine.

**Milestone 23: EES (continued)**

EES continues through Year Eight.

Year Nine, 2026

Estimated Expenditure: \$400,000

**Milestone 24: EES completed (if required)**

Year Nine will see the completion of the project EES (if one was required). This documents will inform the project feasibility study to be commenced in Year Nine.

**Milestone 25: Project feasibility study**

Preliminary construction and operational designs and schedules and financial models compiled in preparation for a decision to mine.

Year Ten, 2027

Estimated Expenditure: \$400,000

**Milestone 26: Decision to mine**

Should the Joint Venture Committee and associated directorships agree on the viability of a gold production operation at Tandarra, the decision to proceed to construction and operation will be made.

**Milestone 27: Project financing**

The Joint Venture Committee will secure sufficient capital to commence construction.