

# CSIRO RESEARCH PREDICTS NEW GOLD TARGETS AT STAWELL CORRIDOR GOLD PROJECT, VICTORIA

### AIR-CORE DRILLING TO TEST LANGI LOGAN TARGETS COMMENCES LATER THIS WEEK

- Navarre and Australia's national science agency, CSIRO, have completed a collaborative research project at the Stawell Corridor Gold Project in western Victoria.
- Prior research on the nearby 4Moz Magdala gold deposit in Stawell has provided a deep understanding
  of the structural evolution of a multi-million ounce gold system which has been used as a template to
  predict where gold mineralisation may occur on other basalt domes within the Stawell Corridor.
- The research project has used the latest advanced technologies, including supercomputer-based simulations of deformation-fluid flow transport processes involved in the formation of gold deposits, to highlight drill targets on the flanks of the Irvine and Langi Logan basalt domes.
- Air-core drill testing of CSIRO's predicted targets will commence at Langi Logan this week.
- Navarre is fully funded to test CSIRO targets with a current cash balance of approximately \$12 million.

Navarre Minerals Limited (ASX: NML) ("Navarre" or "the Company") is pleased to report that a collaborative research program with Australia's national science agency, CSIRO Mineral Resources Division, has identified several new sites prospective for gold mineralisation along the flanks of the Irvine and Langi Logan basalts within Navarre's 100%-owned Stawell Corridor Gold Project (Figure 1). These prospective areas will be subject to new drilling programs commencing later this week.

Funding of the research project was supported by a grant from the Australian Government's Department of Industry, Innovation and Science through the Innovation Connections scheme of the Entrepreneurs' Programme, with the remaining funding provided by Navarre.

Navarre's Managing Director, Mr Ian Holland, said today:

"Navarre is excited with the outcome from its collaboration with the CSIRO in cutting-edge, innovative research on our flagship Stawell Corridor Gold Project. Our Stawell Corridor Gold Project contains at least seven potential "Magdala" analogues in a 70km long tenement package south of and on-strike of Stawell's 4Moz Magdala Gold Mine.

Magdala's gold mineralisation is believed to have resulted from periods of high fluid flow during episodes of high strain.

The research has identified several new target areas prospective for gold mineralisation at our Irvine and Langi Logan basalt dome prospects which we are planning to drill test."



Figure 1: Navarre's Stawell Corridor Gold Project in western Victoria.

The research project has successfully used the latest advanced technologies to identify broad areas of potential high fluid flow around the basalt dome structures within Navarre's Stawell Corridor Gold Project.

The aim of the research was to reduce the search space by predicting areas of potential concealed gold mineralisation for direct drill testing.

# Irvine Basalt Dome

Modelling of the Irvine basalt dome, using the compression directions responsible for the formation of the Magdala gold deposit, shows the highest fluid flow and most dilation occurs in four main areas around the flanks of the Irvine basalt dome: on moderately dipping sections of the east and west flanks; and on the north and south plunging ends of the basalt dome.

A modelled principal compression direction of SSE-NNW was found to be the most consistent orientation for mineralisation to form in the position of Resolution Lode, which is important given the geometry of the basalt is more constrained by drilling in this area. Resolution Lode occurs at the northern tapered end of the Irvine basalt dome (Figures 2 & 3).

Modelling under a range of compression directions, specifically E-W and SSE-NNW, is predicting an additional target on the western flank of the Irvine dome where there has been limited previous shallow drilling (Figures 2 & 3). This area will be investigated with a view to drill testing in the coming months.



Figure 2: Location of Resolution and Adventure lodes on the flanks of the Irvine basalt dome (yellow) with historical alluvial gold workings. Predicted target area on the western flank is outlined in blue.



Figure 3: Perspective view showing new predicted area of prospective gold mineralisation modelled on the western flank of the Irvine basalt dome using E-W compression.

# Langi Logan Basalt Dome

Modelling of the basalt bodies in the Langi Logan area show that varying the basalt dome shape and its orientation can have a significant effect on the locations of increased dilation and fluid flow. Generally, the findings are similar for the Irvine basalt, where the plunging ends and moderately dipping flanks of the domes account for the areas of highest dilation most prospective for gold mineralisation (Figure 4). As the plunge of dome is normally north or south, SSE-NNW directed deformation allows for these areas to deform and dilate the most.

The northern end of the Langi Logan basalt dome and the northwest flank, specifically, will be targeted in an air-core drilling program planned to commence in early October (Figures 4 & 5). The NW flank of the Langi Logan North basalt dome is located under shallow cover and presents the earliest opportunity to test the CSIRO models.

#### Langi Logan North Basalt



Figure 4: Langi Logan basalt modelling results showing predicted gold mineralisation targets on the northwest flank of the Langi Logan North basalt dome.

The CSIRO research project was led by Dr Peter Schaubs, Team Leader (3D Structural Geology and Numerical Modelling) who is an accomplished structural geologist with intimate knowledge of Victorian gold deposits.

Navarre considers there is significant potential to apply computer simulation not only for high-grade gold mineralisation at depth at Irvine and Langi Logan but also for the five other basalt dome targets yet to be appraised within the Stawell Corridor Gold Project. This is another example of Navarre's innovative approach in reducing the time and cost of exploration by minimising ground disturbance with smart geology and targeted drilling.

Innovation Connections is part of the Australian Government's Department of Industry, Innovation and Science Entrepreneurs' Programme aimed to drive business growth and competitiveness by supporting business improvement and research collaboration in targeted growth sectors. CSIRO has a history and track record of innovation working with the gold sector.

This announcement has been approved for release by the Board of Directors of Navarre Minerals Limited.

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Figure 5: Plan of Langi Logan basalt dome showing new target area in blue from modelling of the north dome.

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#### **Competent Person Declaration**

The information in this release that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Shane Mele, who is a Member of The Australasian Institute of Mining and Metallurgy and who is Exploration Manager of Navarre Minerals Limited. Mr Mele 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 Mele consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.

#### Forward-Looking Statements

This announcement contains "forward-looking statements" within the meaning of securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "believe", "continue", "objectives", "outlook", "guidance" or other similar words, and include statements regarding certain plans, strategies and objectives of management and expected financial performance. These forward-looking statements involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Navarre and any of its officers, employees, agents or associates. Actual results, performance or achievements may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. Exploration potential is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. Readers are cautioned not to place undue reliance on forward-looking statements and Navarre assumes no obligation to update such information.

#### About Navarre Minerals Limited:

# Navarre Minerals Limited (ASX: NML) is an Australian-based gold exploration company focused on discovering large, long-life and high-grade gold deposits in under-explored areas of Victoria's premier gold districts.

Navarre is searching for gold deposits in an extension of a corridor of rocks that host the Stawell (~five million ounce) and Ararat (~one million ounce) goldfields (**The Stawell Corridor Gold Project**). The discovery of outcropping gold on the margins of the **Irvine** basalt dome and high-grade gold in shallow drilling at **Langi Logan** are a prime focus for the Company. These projects are located 20km and 40km respectively south of the operating 4Moz Stawell Gold Mine.

The high-grade **Tandarra Gold Project** is located 50km northwest of Kirkland Lake Gold's world-class Fosterville Gold Mine, and 40km north of the 22 million-ounce Bendigo Goldfield. Exploration at Tandarra, in Joint Venture with Catalyst Metals Limited (Navarre 49%), is targeting the next generation of gold deposits under shallow cover in the region.

The Company is searching for high-grade gold at its **St Arnaud Gold Project.** Recent reconnaissance drilling has identified gold mineralisation under shallow cover, up to 5km north from the nearest historical mine workings, which the Company believes may be an extension of the 0.4Moz St Arnaud Goldfield.

The Company is also targeting volcanic massive sulphide, epithermal and porphyry copper-gold deposits in the **Stavely Arc** volcanics. The Project area captures multiple polymetallic targets in three project areas including **Glenlyle, Eclipse** and **Stavely**. All properties are currently 100% owned apart from Stavely (EL 5425) which is subject to a farm-in agreement where Stavely Minerals Limited may earn an 80% interest by spending \$0.45M over 5 years.

At the Jubilee Gold Project, 25km southwest of LionGold's Ballarat Gold Mine, the Company is undertaking a systematic exploration program targeting extensions and repetitions of historically mined transverse quartz reefs that bear similarity to the high-grade Swan – Eagle system at Fosterville.