



29 Jan 2020

## December 2019 quarterly activities report

### Q4 HIGHLIGHTS

#### Terramin South Australia Gold

##### Bird-in-Hand Gold Project (BIHGP) and Regional Gold Exploration

- Awaiting government response document to Mining Lease Application (MLA) submission and public consultations. The Adelaide team continued to make progress on the response to expected government and community questions that are expected to feature.
- Discussions with offtake financiers and streaming companies for BIHGP continued.
- Metallurgical sampling program successfully completed and samples sent for analysis for inclusion in the BIHGP Feasibility Study.
- Draft of the Program for Environmental Protection and Rehabilitation (PEPR) continued to advance.
- Terramin's BIH property, Goldwyn Farm, was affected by the Cudlee Creek Fire. Thankfully, all staff were safe and unhurt. Terramin has extended assistance to its near neighbours in the Woodside area.

#### Exploration

- Terramin and Freeport-McMoRan ('Freeport') commenced a drilling program on the Wild Horse prospect and undertook study work on the South Gawler Ranges tenements.
- EPEPR for Kitticoola was approved and plans advanced for a scout drill program in H1 2020.
- ECR completed three drill holes on the Kapunda tenement.

#### Terramin Base Metals

##### Tala Hamza Zinc Project

- Elections in Algeria saw former-Prime Minister Abdelmadjid Tebboune returned as President.
- Discussions have recommenced with Algerian authorities to progress and refine the DFS.

#### Corporate and Environmental Performance

- Terramin raised \$8.6m in a Rights Issue from existing shareholders. The funds raised are sufficient to complete the MLA Response Document, the BIHGP Feasibility Study and pay down a portion of debt.
- The Asipac Corporate Facility was repaid, including fees and interest.
- Asipac extended its Standby and BIH debt facilities to April 2021.
- Hydrostor continued works at a slower pace due to drilling delays at the Angas Zinc Mine at Strathalbyn. Terramin is awaiting an update from Hydrostor on a revised project timeline.

## TERRAMIN BASE METALS

### TALA HAMZA ZINC PROJECT

100% owned by Western Mediterranean Zinc Spa (WMZ)

*Terramin holds a 65% shareholding in WMZ. The remaining 35% is held by two Algerian government-owned companies: Enterprise Nationale des Produits Miniers Non-Ferreux et des Substances Utiles Spa (ENOF) (32.5%) and Office National de Recherche Géologique et Minière (ORGM) (2.5%).*

#### Update

Presidential elections saw former-Prime Minister Abdelmadjid Tebboune elected. He took office on 19 December. Terramin has re-engaged with Algerian authorities with a view to progress and refine the Definitive Feasibility Study to enable formal approval in due course. Further discussion and negotiation will continue in Q1 2020.

The revised DFS envisages a long life (21 year) project at lower processing rates and higher grades than the original DFS in 2010. Importantly, the DFS 2018 moves away from the larger scale, higher capex block cave mining method and utilises a selective mining method, Underhand Drift and Fill (UDF) that removes the surface expression of the mine and allows for underground placement of the majority of the tailings generated by the project. The change in mining method will remove the need for a tailings dam and significantly reduce the pre-production capital expenditure envisaged in the DFS 2010.

Expenditure on the Tala Hamza project during the quarter was \$0.1 million.

## TERRAMIN SOUTH AUSTRALIA GOLD

### BIRD-IN-HAND GOLD PROJECT & ANGAS PROCESSING PLANT

100% owned by Terramin and its subsidiary Terramin Exploration Pty Ltd

*The Bird-in-Hand Gold Project is located approximately 30km north of Terramin's existing mining and processing facilities at the Angas Zinc Mine (Angas or AZM) which was operational until 2013. The project has a high grade Resource of 650,000 tonnes at 12.6g/t for 265,000 ounces of gold. It is anticipated that, subject to required regulatory approvals, the Bird-in-Hand ore will be processed utilising the facilities at Angas which can be modified to process gold-bearing material. The existing tailings dam at Angas has the capacity to hold Bird-in-Hand tailings.*

#### Update

Terramin reached a major milestone with the lodgment of the Mining Lease Application (MLA) for its Bird-in-Hand Project and the Miscellaneous Purpose Lease (MPL) to allow the AZM site to treat the Bird-in-Hand ore on 21 June 2019. Terramin continues to await a response from the Department for Energy and Mines on areas for clarification and issues arising from the public consultations. Terramin completed a first draft of the Program for Environment Protection and Rehabilitation (PEPR) with major aspects largely covered by the preparatory works already undertaken for the MLA and MPL.

During Q4, Terramin undertook a metallurgical sample program successfully and sent samples to Intertek and ALS for processing. Work to complete a Feasibility Study continued with engineering works on the Angas Processing Plant, including OEM site visits and finalization of final stope and designs for reserve delineation. The Feasibility Study team made strong process and is working towards 30 April 2020 completion.

The Bird-in-Hand Scoping Study envisages high grade trucking of gold bearing material from the mine site to the Angas processing facility. The project has robust financials, including results of Nominal NPV<sub>8</sub> \$A101 million and IRR 96%. The current improvements in gold price present significant upside on the scoping study results. There is potential to treat gold bearing material from Kitticoola and other potential targets, either currently held by the Company or available for acquisition.

The AZM site continued to be maintained in accordance with the DEM approved Mine Care and Maintenance Plan and is operating in compliance with its lease conditions. The Strathalbyn Community Consultation Committee and the Company met during the quarter, with the Company providing updates on the plan to use the Angas facility for the processing of Bird-in-Hand gold ore and also engagement with Canadian company Hydrostor regarding the Advanced Compressed Air Energy Storage (ACAES) project.

Terramin undertook a strategic review in 2018 which supported the eventual demerger of the precious metal assets from base metals. Demerger remains one of the options for the South Australian gold assets but in the short term management's focus is on realizing a project approval for the submitted MLA and MPL. While a number of parties expressed interest in Bird-in-Hand in 2019, the view is that the strong project economics and positive developments surrounding MLA and MPL submission warrant Terramin continuing to develop the project in the best interest of shareholders as outlined in the corporate strategy.

Expenditure on the Bird-in-Hand project and Angas Zinc Mine site was \$0.6 million.

## EXPLORATION

### EXPLORATION PROJECTS

100% owned by Terramin and Terramin subsidiaries Terramin Exploration Pty Ltd or Menninnie Metals Pty Ltd unless otherwise previously disclosed as part of a joint venture arrangement

*The Adelaide Hills Project consists of eleven contiguous exploration tenements that cover 3,481km<sup>2</sup> and stretch from Lake Alexandrina to Kapunda. This project area is considered highly prospective for gold, copper, lead, zinc and rare earth elements. Terramin's South Gawler Project is located along the southern margin of the Gawler Ranges, northern Eyre Peninsula, South Australia. The Project comprises a group of eleven Exploration Licenses totaling 4,524km<sup>2</sup>.*

### Kapunda Update

During the quarter Terramin's joint venture partner Environmental Copper Recovery drilled three holes at Kapunda. Two of the wells were screened and preliminary pump tests undertaken. Tracer tests are planned to be undertaken early in 2020 to further evaluate the hydrogeology.

Analyses of the drill chips by Hand Held X-Ray Fluorescence (HH-XRF) defined broad zones of copper mineralisation (ASX announcement 27/11/2019).

- KPFRT01 from surface to end of hole, 66 metres @ 0.27% Cu including 5m @ 0.72% Cu and 11 metres @ 0.54% Cu,
- KPFRT02 intersected from 8m, 23m @ 0.49% Cu to end of hole,
- KPFRT03 intersected from 22m, 6m @ 0.47% Cu to end of hole.

Samples from these holes have been submitted to CSIRO for large particle leach tests to evaluate the amenability for copper recovery using In Situ Recovery (ISR) technology.

Also, during the quarter Terramin's joint venture partner Freeport McMoRan flew a HyMapper survey over a significant portion of the South Gawler Ranges Project area.

Terramin's expenditure on the Adelaide Hills and Gawler Ranges tenements was \$0.1 million.

## CORPORATE AND ENVIRONMENTAL PERFORMANCE

Terramin management continued to work towards the recapitalisation of the business and undertook a number of discussions with shareholders and investors throughout the period. The company continued to be supported by Asipac and discussions on refinancing of loans continued over the period resulting in Asipac agreeing to extend debt financing facilities to 30 April 2021.

Terramin completed a pro rata non-renounceable rights issue offered to existing shareholders (ASX Announcement on 5 December 2019 - Non-Renounceable Rights Issue Results). Applications for entitlements received totaled \$8.6m, which was sufficient to provide funding to complete the MLA Response Document, the BIHGP Feasibility Study and pay down a portion of Asipac debt financing facilities.

Terramin continued to pursue its safety and environmental goals during the quarter. There were no recordable injuries and no instances of non-compliance with relevant safety or environmental regulation or lease conditions.

During the quarter no unlisted options were exercised.

As at 31 December 2019, the Company's cash balance was \$6.3 million.

This ASX release was approved by the Terramin Board.

For further information, please contact:

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## DIRECTORS AND MANAGEMENT

**Feng (Bruce) Sheng**  
**Michael H Kennedy**  
**Kevin McGuinness**  
**Angelo Siciliano**  
**Wang Xinyu**  
**Richard Taylor**

Executive Chairman  
Non-Executive Deputy Chairman  
Non-Executive Director  
Non-Executive Director  
Executive Director  
Chief Executive Officer and Company Secretary

## CAPITAL STRUCTURE - 31 DECEMBER 2019

Shares on issue	2,116,562,720
Unlisted options	10,000,000

## Forward Looking Statements

This announcement includes certain 'forward looking statements'. All statements, other than statements of historical fact, are forward looking statements that involve various risks and uncertainties. There can be no assurances that such statements will prove accurate, and actual results and future events could differ materially from those anticipated in such statements. Such information contained herein represents management's best judgement as of the date hereof based on information currently available. Except for statutory liability which cannot be excluded, each of Terramin, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in this document and exclude all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this statement or any error or omission. The Company does not assume any obligation to update any forward-looking statement. Accordingly no person or entity should place undue reliance on any forward looking statement.

## Competent Persons Statement

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Eric Whittaker (Tala Hamza and Exploration) and Mr Dan Brost (Bird-in-Hand), both being Competent Persons who are Member(s) of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whittaker is employed as the Principal Resource Geologist of Terramin Australia Limited and Mr Brost is a geologist consulting to Terramin. Mr Whittaker and Mr Brost have 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 Competent Person(s) as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Whittaker and Mr Brost consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on information compiled or reviewed by Mr Luke Neesham, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Neesham is Principal Mining Engineer for GO Mining Pty Ltd a consulting firm engaged by Terramin Australia Limited to prepare mining designs and schedules for the Tala Hamza Feasibility Study. Mr Neesham 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 Exploration Results, Mineral Resources and Ore Reserves'. Mr Neesham consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.