



**TERRAMIN AUSTRALIA LIMITED**

**4<sup>th</sup>**

## **Quarter Report 2013**

### **HIGHLIGHTS**

- Financial Restructure and \$14.1m Capital Raising completed.
- Aquisition of high grade Bird-in-Hand Gold project and regional tenements package completed.
- Confirmation of resource estimate at Bird-in-Hand.
- Positive results from Bird-in-Hand scoping study.
- Progress in discussions with Algerian joint venture partner to resolve issues.



# BIRD-IN-HAND GOLD PROJECT

*100% owned by Terramin 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. The project has a high grade Resource of 233,000 ounces of gold which is amendable to underground mining.***

***It is anticipated that subject to required regulatory approvals, the Bird-in-Hand material 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 all the Bird-in-Hand tailings.***

## Update

During the quarter, Terramin completed the acquisition of the Bird-in-Hand Gold Project ("Project") and a portfolio of highly prospective Adelaide Hills exploration tenements from Maximus Resources Limited ("Maximus").

Concurrent with the completion of the acquisition, Terramin completed a revised resource estimate for the Project of 557,000 tonnes at 13.0g/t gold for 233,000 ounces. The revised Resource Estimate has been estimated and reported in accordance with the 2012 edition of the Australasian Code for the Reporting of Exploration results, Mineral Resources and Ore Reserves and it confirmed both tonnage and contained metal of the August 2008 Resource Estimate published by Maximus. Infill drilling of the Resource is likely to define small but readily accessible mineralisation in the immediate footwall. An example of this is drillhole BH033 which intersected from 162m, 2m @ 43.74g/t gold located only eight metres (true width) below Main Reef.

Based on structural and lithological interpretations, grade distribution (the mineralisation is open at depth), and the shapes and distribution of historic gold mines close to the Project, Terramin expects that additional mineralisation exists down plunge of the defined resource and possibly as separate lodes along strike.

The potential to discover additional high grade mineralisation further along strike is highlighted by the presence of two historic mines', Bird-in-Hand Extended and The Ridge, respectively 200m and 400m to the south (Figure 1). These mines were last worked in the 1890's. The Ridge has a recorded (incomplete) production of 517 ounces of gold from 2,766 tonnes at an average grade of 5.8g/t gold from 5 shafts and >500m of drives. The recorded retreatment of 6,266 tonnes of The Ridge tails by cyanide leach gave an additional 977 ounces. Bird-in-Hand Extended had 1 shaft sunk to 30m and at least 80m of drives were developed. The lode was up to 6m wide and is reported to have averaged 25-31g/t gold.

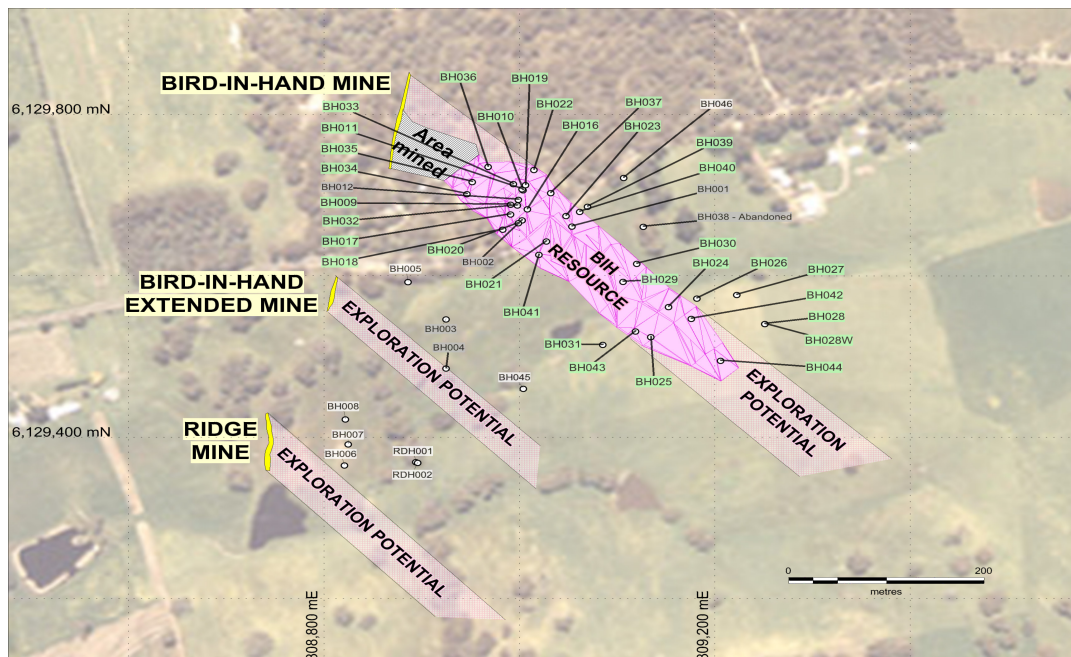


Figure 1: Location of historic mines and surface projection of the Bird-in-Hand Resource.

Terramin completed a Scoping Study in early December showing positive results for the project. As the study is based on an Inferred Mineral Resource, the economic viability of the project cannot be concluded to the standard required by the ASX Listing Rules.

However, the project's major attributes include:

- Large amount of existing infrastructure at the Angas Zinc Mine such as processing plant and tailings storage facility suitable for use with minimal modification thereby derisking the Project;
- Low start-up costs;
- Straightforward and well understood mining method;
- Low operating costs.

The Scoping Study is based on an underground, panelled cut and fill mining method and a gravity concentration and flotation processing approach to produce doré bullion and gold concentrate. The Company plans to undertake mining on an owner/operator basis with the mining fleet expected to be made up of Terramin's existing fleet or a leased fleet. Start-up capital costs are estimated to be approximately A\$25.6m (including initial underground development).

These positive outcomes are further enhanced with the potential for improvement through the following opportunities:

- Additional and higher grade metal tonnes identified through further drilling and Resource definition. Bird-in-Hand mineralisation is open down plunge and along strike which also presents opportunity for additional metal tonnes;
- Processing capacity at Angas is underutilised, providing potential for processing of satellite deposits in conjunction with Bird-in-Hand feed.

Following the positive Scoping Study results the Terramin Board approved the commencement of the Preliminary Feasibility Study and an additional drilling programme to determine an Indicated Resource. This has resulted in the immediate start up of extensive environmental and hydrological studies which are on the critical path for project approval and development.



# OUED AMIZOUR 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 Geologique et Miniere (ORGM) (2.5%). Oued Amizour Exploration Permit 5225PE is a 125km<sup>2</sup> tenement which contains several lead-zinc deposits in addition to the Tala Hamza deposit.***

## Update

Following the positive meetings held in September 2013, subsequent discussions have taken place in November and December 2013 between representatives of Terramin, ENOF and officials from the Ministry of Mines. The meetings were also attended by representatives of China Non Ferrous Metal Industry's Foreign Engineering and Construction Company (NFC), a shareholder of Terramin. These discussions highlighted that all parties were keen to progress the project and in particular to pursue the Algerian Government's objective of industry diversification and the creation of local employment and economic development. The parties continue to seek an agreement on the key issues for the development of the Tala Hamza project. To this end, Terramin and NFC have entered into a Technical Cooperation Agreement pursuant to which NFC will provide technical assistance to Terramin in its effort to reconcile its differences with ENOF regarding the outcomes of the Tala Hamza Definitive Feasibility Study.

At the most recent meetings held in Algeria in January 2014, Terramin, ENOF and NFC have agreed to reconsider the feasibility of an alternative mining method and other technical issues for the purpose of updating the DFS.

In order to facilitate these discussions and find a negotiated outcome the parties have agreed to suspend the arbitration proceedings brought by Terramin before the Arbitration Tribunal of the International Chamber of Commerce in Paris.

The Company notes that the Algerian parliament has recently voted in favour of a bill to amend the 2001 Mining Act. The amendments are reported to be aimed at reinvigorating the mining sector, increasing its importance in the Algerian economy and generating employment. The bill is reported to include a number of measures aiming at encouraging investments in exploration and mining of existing deposits. The Company is liaising with the Algerian authorities to better understand these new measures and their potential impact on the project.



# MENNINNIE PROJECT

100% owned by Terramin subsidiary Menninnie Metals Pty Ltd

**The Menninnie Project comprises a group of five Exploration Licences covering a contiguous area of 2,471km<sup>2</sup> in the Southern Gawler Ranges, South Australia.**

**Menninnie Metals has entered into a Farm in and Joint Venture Agreement with Musgrave Minerals Ltd (Musgrave) (ASX:MGV) regarding the Menninnie Project.**

## Update

In December 2013, Menninnie Metals and Musgrave Exploration Pty Ltd (a wholly owned subsidiary of Musgrave Minerals Ltd) executed a Farm in and Joint Venture Agreement (in accordance with the terms of the existing Heads of Agreement) pursuant to which Musgrave can earn an interest of 51% by spending a minimum of \$6 million in exploration.

Interpretation of the airborne VTEM (versatile time domain electromagnetic) survey completed in May 2013 identified seven high priority electromagnetic anomalies with co-incident surface silver geochemical anomalism. Follow-up mapping, rock-chip sampling and infill soil geochemistry completed on the VTEM targets and surrounding areas further defined high priority targets suitable for aircore drilling. Mineralised rock-chip samples containing up to 14.2g/t Ag, 0.15% Mo, 39ppb Au and 416ppm Cu were collected during the surface mapping.

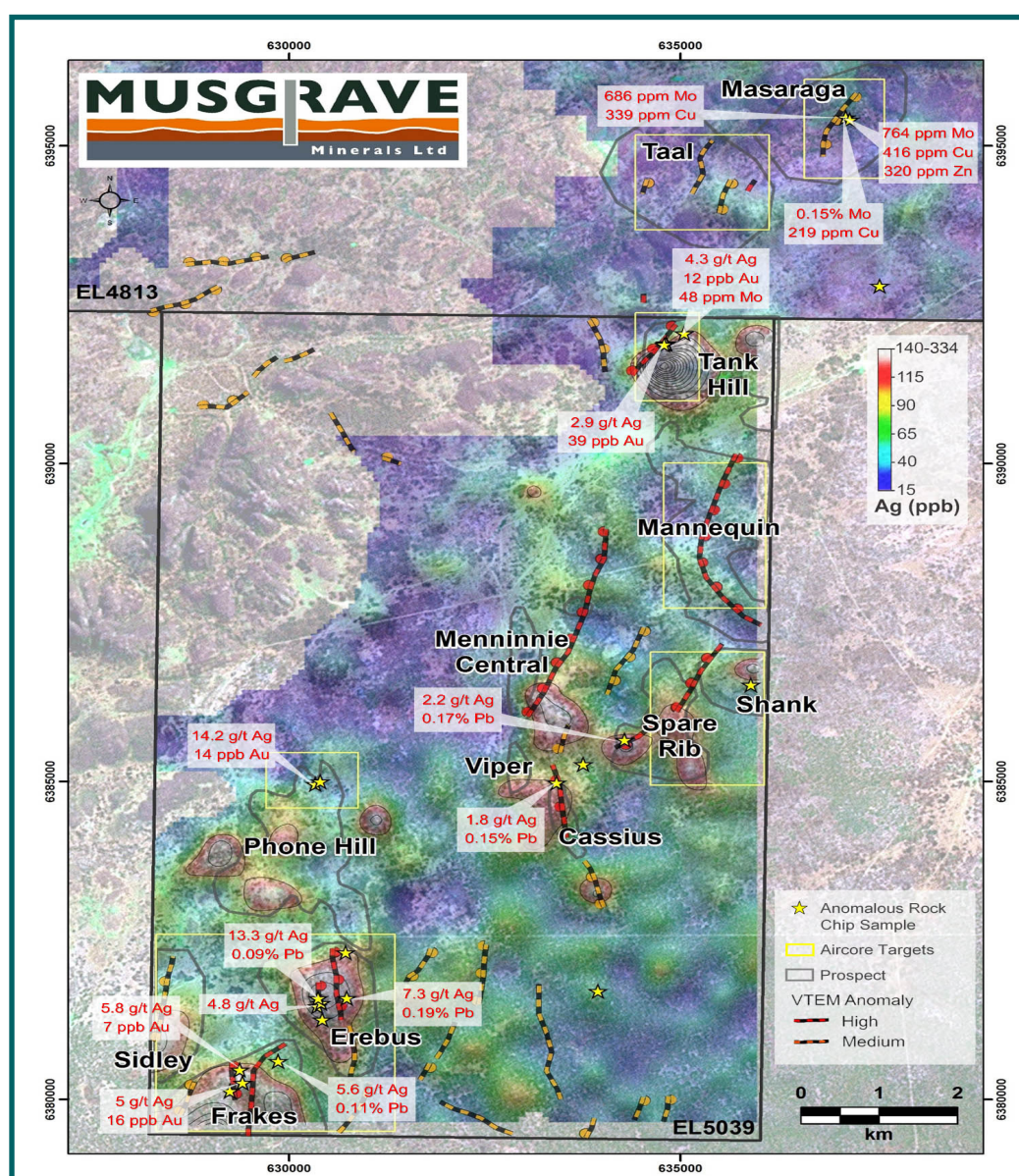



Figure 2: Location of Menninnie Dam prospects with anomalous rock-chip sample results and VTEM targets on silver soil geochemical grid and satellite ortho-image.



Late in the quarter a program of 87 aircore drillholes for a total of 3,417m, (to a maximum depth of 103m) over high-priority near-surface targets at the following locations on EL 5039 was completed:

- the Erebus and Frakes prospects, approximately 5-6 km southwest of the existing Menninnie Central and Viper deposits;
- the Spare Rib target ~1km east of Viper, where strongly anomalous Cu, Pb and Zn has been identified in historical drilling;
- the Tank Hill target, where strong sericite, carbonate, pyrite alteration is co-incident with anomalous silver, gold and molybdenum

and testing targets at the Masaraga prospect located on EL 4813 approximately 3.5 km northeast of Tank Hill.

The JV is targeting silver-lead-zinc and copper-gold-molybdenum mineralisation in this highly prospective, yet underexplored porphyry-epithermal field.

The aircore drilling program took two weeks to complete. Initial assay results from the first 4 drillholes in the program reveal highly anomalous lead, zinc and silver at shallow depths in the weathered zone at the Spare Rib prospect (Figure 3) over a distance of more than 130m (Musgrave ASX release, 28th January 2014). The mineralised zone is open to the north, south and down dip. Significant intercepts from three of the holes spaced approximately 40m apart include:

- MDAC307: 20m @ 2.04% Pb, 0.11% Zn, 0.12% Cu, and 11g/t Ag from 67m,
- MDAC306: 12m @ 0.54% Pb, 1.64% Zn, 0.02% Cu and 5.6g/t Ag from 54m, and
- MDAC305: 7m @ 1.21 %Pb 0.02% Zn, 0.01% Cu and 3.7g/t Ag from 14m

Zinc is typically strongly depleted in the weathered upper parts of basement mineralisation in the Menninnie area (both lead and silver are commonly depleted too) so it is reasonable to anticipate higher grade intercepts from future drilling of mineralised zones in fresh basement rocks at Spare Rib.

Thirty additional shallow aircore holes were drilled in the Spare Rib area and assays for these are expected by late in Q1, 2014.

# FLEURIEU AND ADELAIDE HILLS EXPLORATION

100% owned by Terramin

**The recently acquired Adelaide Hills tenements and the former Fleurieu project's exploration tenements, are now collectively referred to as the Adelaide Hills project. The twelve contiguous exploration tenements comprising the Adelaide Hills project cover 3547 km<sup>2</sup> stretching 120km between Victor Harbor and Kapunda. (Figure 1). This project area is considered prospective for gold, copper, lead and zinc.**

## Update

As part of the ongoing compilation of historical exploration and mining data and ranking of over 250 historic gold and copper mines, reconnaissance sampling has commenced at several localities including at the iconic Kapunda Copper Mine. Copper was discovered at Kapunda in 1842 and mined until 1879, producing approximately 13,700 tonnes of copper metal from 69,000 tonnes of ore (at approximately 20% Cu).

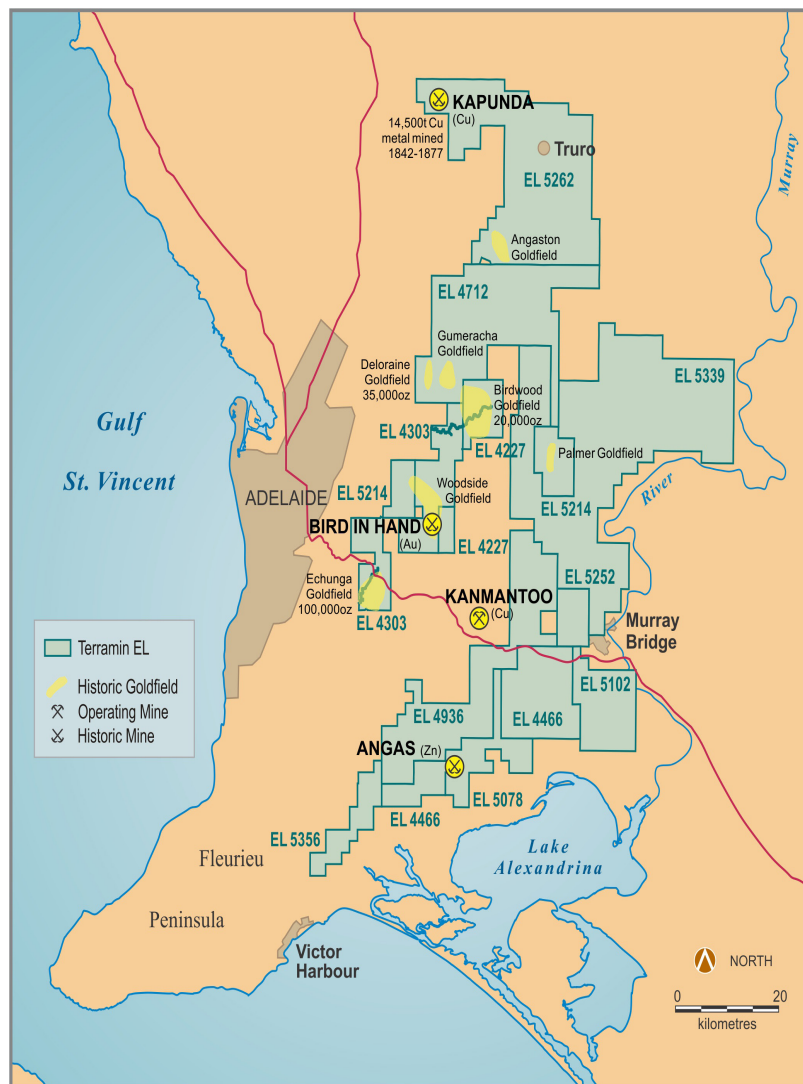


Figure 3: Terramin's Adelaide Hills tenements.





# ANGAS ZINC MINE

*100% owned and operated by Terramin*

***A 400,000 tpa operation that produced zinc and lead-copper-silver-gold concentrates currently in care and maintenance.***

## Operations

The site successfully moved into the care and maintenance phase. The primary fans were removed from underground and stored, a secondary fan has been installed at the portal for use during underground compliance inspections. Portal gates have been installed and an underground entry procedure developed to ensure safe access. The return air raise has been meshed and the secondary egress/escape way has been locked to prevent inadvertent access.

No mining was undertaken during the quarter but transport of surface waste stockpiles continued. All decline voids beneath Callington Road were filled as part of the mining license requirements. A total of 93% of underground voids were filled as part of the mining and closure process. The decline and level accesses remain open for future reopening of the mine and access to remaining resources. The majority of underground infrastructure has been removed and the void will be left to fill with ground water.

## Safety, Environment and Community Report

During the fourth quarter, all necessary redundancies of staff following the placement of the Angas Zinc Mine into care and maintenance have been finalised. Angas, with a continued focus on safety, completed this phase of operation without any harm to the health of any of the work force. All redundancies were undertaken with no industrial actions. Management and the Board thank and commend staff for their significant efforts and dedication during that period.

A meeting of the Strathalbyn Community Consultative Committee was held on November 21<sup>st</sup> – a site tour was provided with the attendance of the regulator DMITRE. The potential for Bird-in-Hand ore being brought to site for processing was again presented to the Committee. The revised Programme for Environment Protection and Rehabilitation for Angas Mine completion was issued to the Committee for review at the next meeting in February 2014.

No environmental incidents were recorded during the quarter. Water levels in the TSF remain in compliance. Additional clean-up work in the box cut and surface stockpile extended backfill operations with the work ensuring improved conditions for care and maintenance.

The October to December Quarterly Environmental Report is due to be submitted to DMITRE by the end of January. No compliance issues were identified.

Compilation of the annual Mining and Rehabilitation Compliance Report (MARCR) for 2013, due in March, has begun.

The National Pollution Inventory (NPI) report for 2013 has been accepted by the EPA.

In addition, Extractive Mineral Licence 5325 has been granted to Terramin for 7 years. EML 5325 allows the extraction, processing and potential sale of sand.



# CORPORATE

During the last quarter the Company completed a financial restructure and capital raising which was announced on 7 October 2013. The capital raising was undertaken through a fully underwritten non-renounceable 1 for 2 entitlement offer at 3.5 cents per share and raised approximately \$14.1 million.

Following the completion, the proceeds of the capital raising were used to repay:

- the balance of the corporate facility with Investec (approximately \$6.5m);
- \$2m to Asipac from the \$4m debt acquired from Investec.

The balance of the funds raised (after costs) will be used to:

- Progress the Bird-in-Hand and Tala Hamza projects;
- Undertake exploration work on the Company's extensive tenement holdings in the Adelaide Hills; and
- Provide working capital for the Company.

In November 2013, the Company completed the acquisition of the Bird-in-Hand project and Adelaide Hills tenements and as part of the consideration issued 25 million shares in the Company to Maximus Resources Ltd. The shares are placed in escrow until 25 November 2014.

As announced on 19 December 2013, the Company has entered into a Technical Cooperation Agreement with China Non-Ferrous Metal Industry's Foreign Engineering and Construction Co. (NFC) regarding the Tala Hamza project. Pursuant to that agreement, the Company has issued 12 million shares to NFC.

## CASH

The Company cash balance at 15 January was \$5.2 million.

## CORPORATE INFORMATION

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## CAPITAL STRUCTURE

at 31 January 2014

**Shares on issue** .....1,245,051,770

**Unlisted Options** ..... 1,875,000

**Unlisted Convertible/redeemable notes:**

**Convertible at VWAP**  
**(maturity May 2014)** .....US\$15,050,000

**Convertible at A\$2.21 per share**  
**(maturity July 2014)** .....\$5,002,400

**Conversion subject to minimum VWAP of \$1.70**  
**(maturity September 2014)** .....US\$10,000,000

## DIRECTORS

**Michael H Kennedy**

**Kevin McGuinness**

**Feng Sheng**

**Angelo Siciliano**

**Xie Yaheng**

**Non-Executive Chairman**

**Non-Executive Director**

**Non-Executive Director**

**Non-Executive Director**

**Non-Executive Director**

**Stéphane Gauducheau** **Company Secretary**

*The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Eric Whittaker, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whittaker is an employee and Principal Resource Geologist of Terramin Australia Limited. Mr Whittaker 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 Whittaker consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*