



ASX:ZGM

27 JANUARY 2011

Centralised Company Announcements Office  
ASX Limited  
Exchange Centre  
20 Bridge Street, Sydney, NSW 2000

## **ZAMIA METALS LIMITED QUARTERLY ACTIVITIES REPORT**

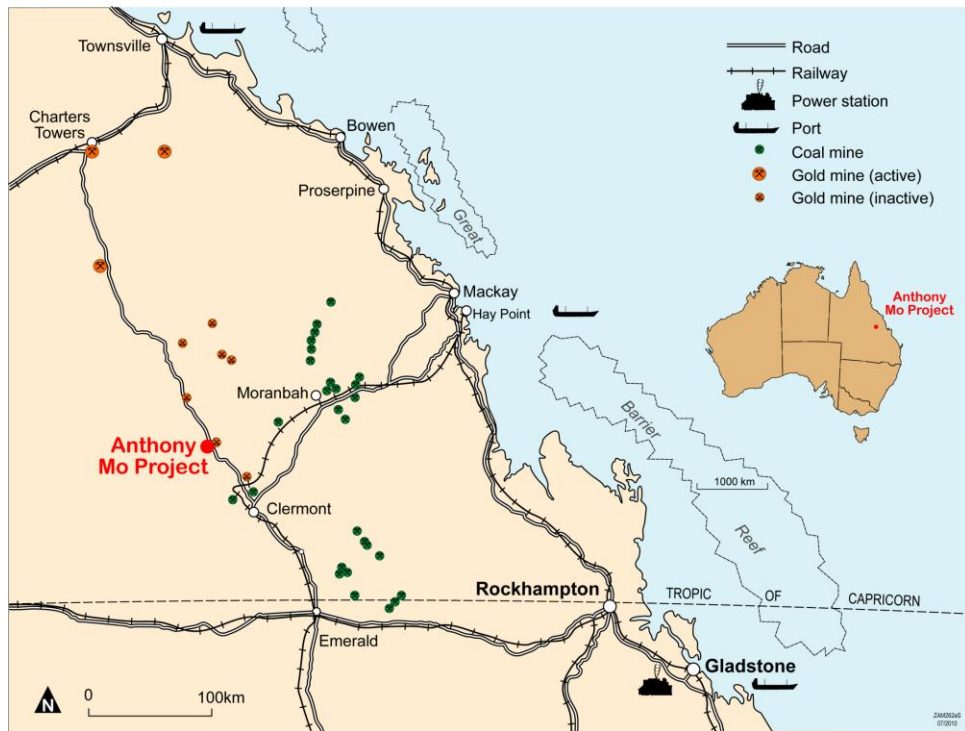
**For the quarter ended 31 December 2010**

### **HIGHLIGHTS**

- At the Anthony Molybdenum Project, drilling continues to intersect good molybdenum (Mo) grades.
- Metallurgical testwork on the near-surface oxide zone at Anthony indicated the possibility that a marketable Mo product can be produced from this material.
- A new exploration permit covering 150 km<sup>2</sup> and containing a known Mo occurrence was granted during the quarter. Review of historic exploration data will commence shortly.
- Zamia Metals Limited (Zamia) received funds of \$1.6 million via share placements. These funds are being used to advance the Anthony molybdenum project and the regional exploration programme.

### **ANTHONY MOLYBDENUM PROJECT**

In September 2010, Zamia announced an Inferred Resource of 130 million tonnes (Mt) at 0.04% (400 ppm) Mo in the primary (sulphide) zone, including a high grade zone of 15 Mt at 730 ppm Mo. There is an additional 63 million tonnes at 400 ppm Mo of near-surface oxide and transitional material. Resource and extension drilling is continuing to intersect good grade Mo mineralisation.

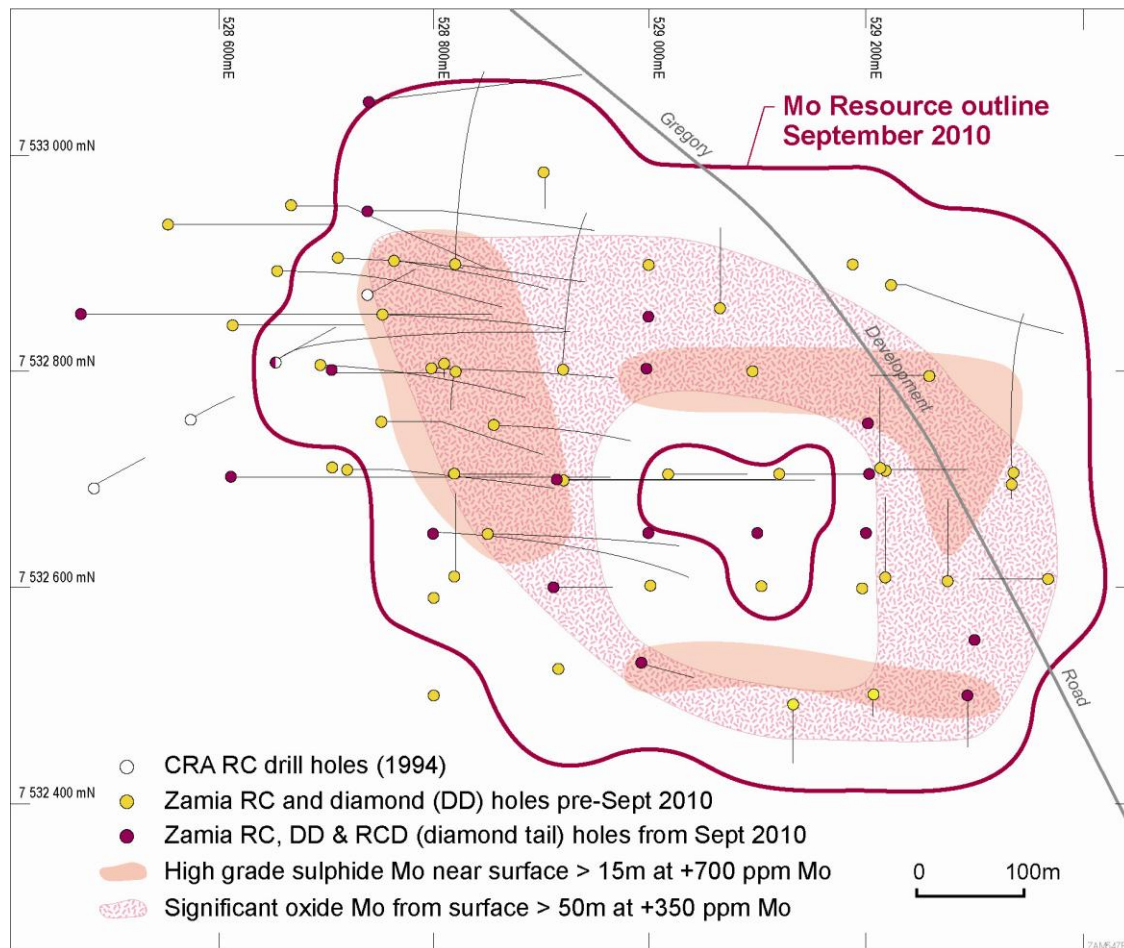


*Location map*

## Current Status of Project

**Drilling progress:** Drilling at the site is continuing. During the quarter, drilling totalled 1,568m of reverse circulation (RC) and 3,314m of diamond coring. A number of previously-drilled shallow RC holes, which had terminated in Mo mineralisation, were deepened by diamond drilling.

Available assay results were reported to the ASX on 10 December 2010. Further results will be reported when available.

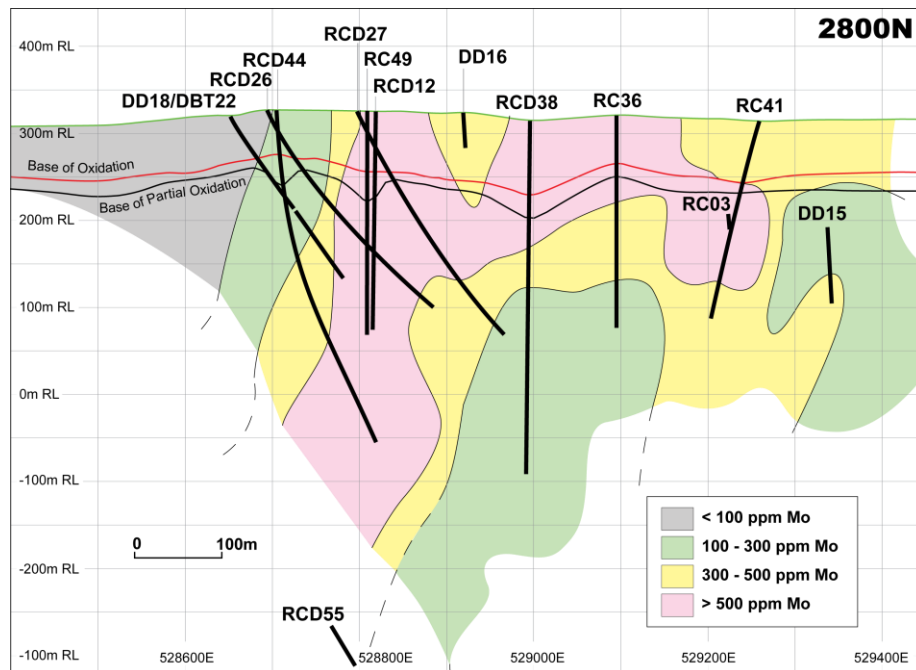


*Plan of Anthony project area showing drill hole locations and resource boundary*

**Resource:** The deposit consists of one or more high grade zones (+ 0.07% Mo = 700 ppm Mo) surrounded by a much larger “halo” of lower grade material, as shown on the following cross section.

Dr Phillip Hellman, an independent resource consultant, has estimated an Inferred Resource (estimated in accordance with Australia’s JORC Code and Guidelines) of 130 million tonnes (Mt) at 400 ppm Mo within the primary (sulphide) zone at a 200 ppm Mo cut-off grade down to approximately 300m vertical depth below surface. There is an additional 63 million tonnes at 400 ppm Mo in the oxide/transition (i.e. weathered) zone.

At a 500 ppm Mo cut-off grade, Dr Hellman estimated an Inferred Resource of 30 Mt sulphide at 630 ppm Mo and oxide/transition resource of 13 Mt at 600 ppm Mo. It is expected that most of the resource will upgrade into the JORC Indicated and Measured categories with additional infill drilling.



*Section 2800N showing distribution of Mo grades within the deposit*

Detailed logging of new core plus recent petrographic studies confirm that the deposit remains “open” at depth and laterally. As reported to the ASX on 10 December 2010, recent drilling is continuing to intersect Mo mineralisation, indicating that the resource has considerable potential to expand. A resource upgrade will be produced when additional assays have been received.

Mining: A firm of mining consultants has been contracted to provide a preliminary plan for an open-cut mining operation as well as preliminary capital expenses (CAPEX) and operating expenses (OPEX) estimates.

Processing - primary (sulphide) ore: Metallurgical tests show that sulphide Mo ore can be upgraded by a cheap and simple beneficiation process of coarse crushing, screening and gravity separation. Material averaging around 450 ppm Mo could be pre-concentrated to around 1000 ppm Mo at low cost thereby reducing capital and operating costs for subsequent grinding and flotation processes. A lower grade stockpile would remain to be processed later in the life of the project.

Locked cycle laboratory flotation tests on a bulk sample indicate that an operation would produce a concentrate of +50% Mo at about 90% recovery, with by-product rhenium (Re) values and low concentrations of potentially deleterious elements such as arsenic (i.e. well below reject levels).

This information is now being used for metallurgical and mining scoping studies being carried out in the first quarter of 2011.



*Zamia Geologist Daniel Doman working on the RC drilling programme at Anthony*

Processing – secondary (oxide) ore: A significant part of the oxide Mo resource is located above the near-surface high grade sulphide Mo resource. This means that the oxide Mo material would need to be mined to access the sulphide resource and therefore raises the possibility of economically processing the oxide resource.

Initial tests have indicated that:

- oxide material with >400 ppm Mo can be pre-concentrated to a higher grade (>800 ppm Mo);
- an acidic leach process can extract around 90% of contained Mo (as reported by two independent laboratories).

The next steps in the evaluation of a possible oxide Mo extraction process include: investigating production of a saleable Mo product from the leach solution, developing a preliminary flowsheet and assessing indicative economics of oxide Mo extraction as part of the overall oxide-sulphide resource evaluation at Anthony.





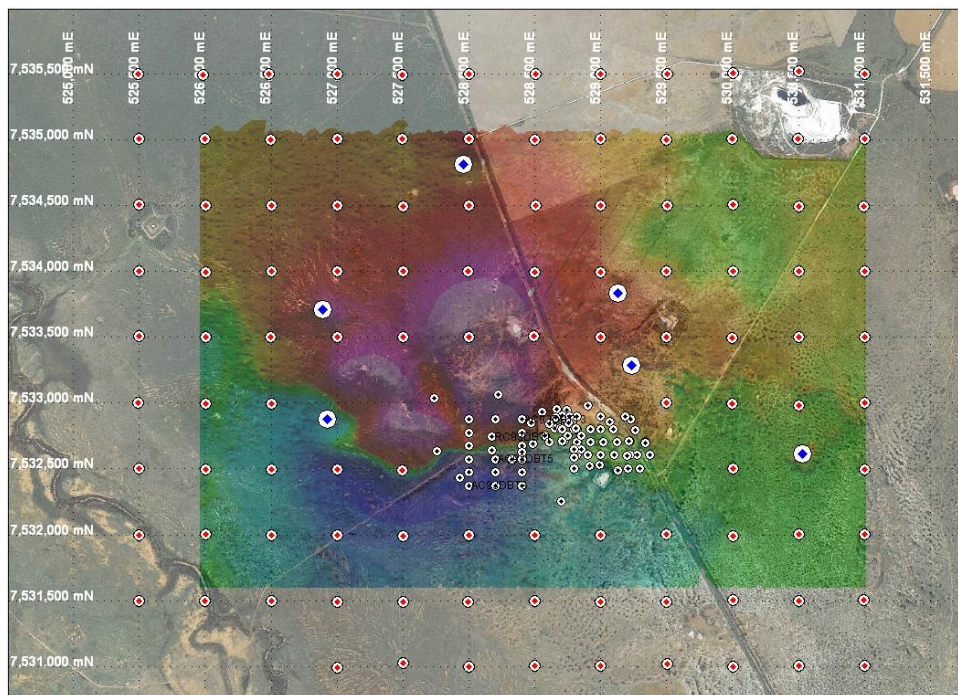
*Zamia Geologist Peter Litras examining Anthony diamond drill-core*

## **Planned Exploration**

Diamond drilling re-commenced at Anthony in January with a programme to complete three twin holes to test the correlation between Mo assays for RC chips and diamond core and 5-6 scout exploration holes. The scout holes are designed to test the outer margin of the Dead Horse Bore intrusive complex which represents the mineralisation environment of the Anthony Mo deposit. Drilling at Anthony to date covers only about 12.5% of this prospective area.

RC drilling is also planned to re-commence in January 2011. Drilling is prioritised to extend the existing resource south of 2500N and east of 9300 E. Infill holes are also planned, particularly on the east side of the known resource.

A bedrock (i.e. below black soil cover) geochemical sampling programme (RAB drilling) is also due to commence in February, depending on weather and accessibility.



*Proposed scout holes (blue) and RAB holes (red) overlain on magnetic imagery*

## Scoping Study

AMC Mining Consultants, based in Brisbane, have been engaged to develop a mining model so that an initial mine plan and costs can be developed. This model will be modified as new resource and geological data become available. It will also provide an indication of potential economic depth of mining at today's Mo prices as a guide to optimum depth of drill holes.

AMEC Minproc metallurgical consultants, also based in Brisbane, have been engaged to provide indicative processing capital and operating costs based on a preliminary flowsheet.

Zamia plans to initiate other key aspects of the scoping study in the first quarter of 2011 when key information is available from the initial mining and processing studies.

The scoping study will be followed by a peer review to be conducted by a reputable consulting group. Assuming a successful peer review, the company plans to commence a definitive (or "bankable") feasibility study (DFS) in mid-2011.

## Financial Analysis

Mining and processing studies, as well as further resource drilling, are still in progress. These will provide a better indication of likely project economics within the next 2 - 3 months. In the meantime, "back-of-the-envelope" assessment, based on assumed costs and revenue, indicate the likelihood of positive project returns at the current molybdenum price.

## Timing of Possible Development

It is planned to complete resource drilling, scoping and definitive feasibility studies (DFS) by mid-2012. After a successful DFS, project financing, design and construction will follow. As indicated in the table below it is estimated that production could begin by mid-2014.

	2010				2011				2012				2013				2014			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Resource drilling																				
Scoping study																				
Definitive feasibility study																				
Project Financing																				
Procurement and design																				
Construction																				
Production ramp up																				

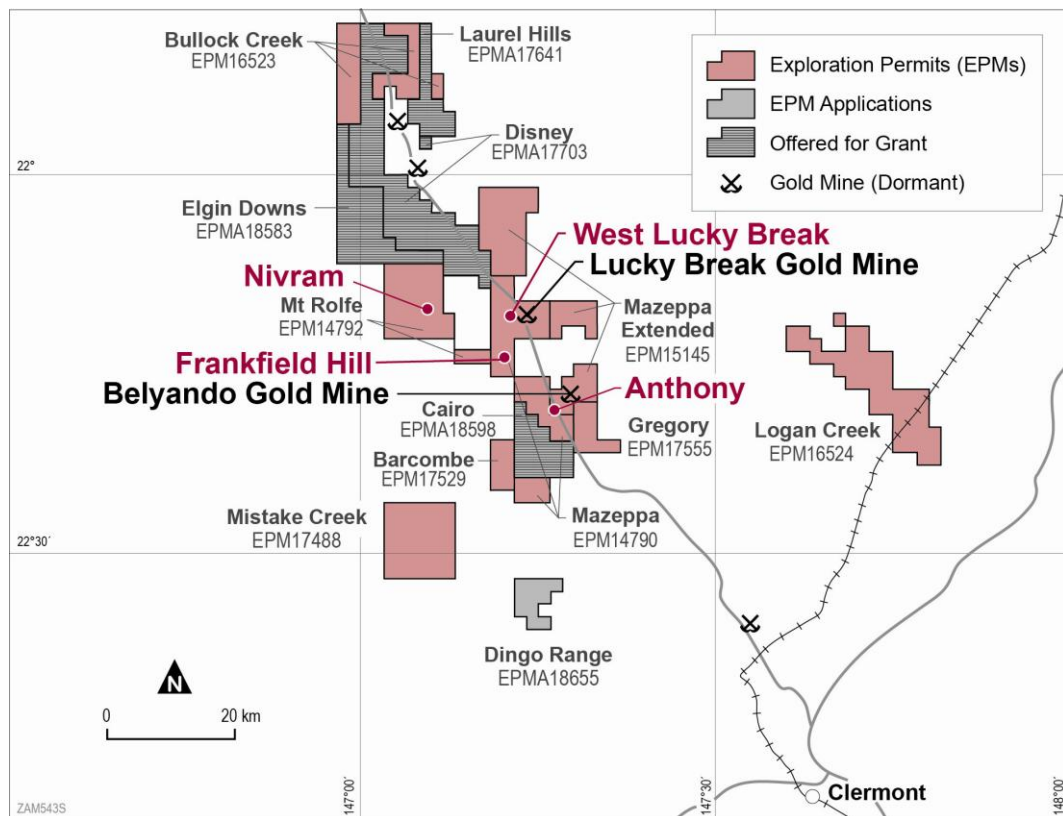
*Possible time frame to production*

## REGIONAL EXPLORATION

Zamia, through its wholly-owned subsidiary Zamia Resources Pty Ltd, has exploration permits and applications covering an area of more than 1300 km<sup>2</sup>. During the quarter, four EPM applications were offered for grant and EPM 16524 (Logan Creek) was granted on 23 December 2010.

The following map shows the current tenement position and highlights targets on which exploration activities have been carried out during the quarter.





*Zamia's tenement position at end-December 2010*

*Note: Belyando Gold Mine not included in Zamia's EPM 15145*

### **Nivram Prospect (EPM 14192 – Mount Rolfe)**

The Nivram prospect lies within the Mount Rolfe caldera structure. Previous work by Zamia identified an IP resistivity anomaly which was interpreted as a possible silica cap covering an epithermal vein system.

During the quarter, one diamond cored hole was drilled to 161m depth into the anomaly. The drill hole intersected variably siliceous and weakly veined tuff, failing to confirm the geological interpretation of the geophysical target.

Further targets have been defined within the EPM and will be followed up in due course. A RAB bedrock geochem sampling program is also being considered to identify alteration related to outcropping sinters.

### **West Lucky Break Prospect (EPM 14190 – Mazeppa)**

In 2007, Zamia had identified West Lucky Break as a target based on soil geochemical surveys which showed anomalous concentrations of gold (Au), silver (Ag), lead (Pb) and arsenic (As). This had been followed up by an induced polarisation (IP) geophysical survey which showed that the main Au-Ag anomaly is underlain by a west-dipping zone of low resistivity and interpreted as a possible zone of oxidised disseminated gold.

During the quarter, Zamia planned to test the target with three shallow RC holes. Only one hole was completed before wet weather prevented further drilling. This first hole intersected minor gold concentrations.

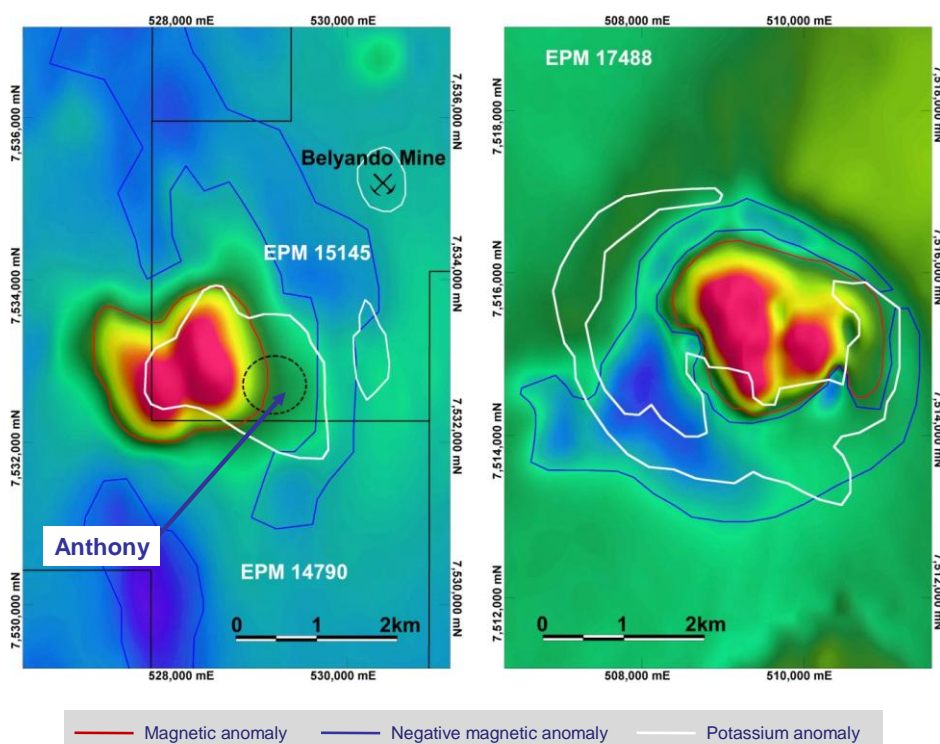
### Frankfield Hill Prospect (EPM 14790 – Mazeppa)

Drilling by a previous explorer during the 1980s had intersected elevated gold concentrations along a fault zone. Zamia's 2007-08 soil geochemical surveys identified an Au-Pb-As anomaly which had not previously been drilled.

During the quarter, Zamia tested the target with a number of shallow RC holes totalling 882m. Mildly elevated gold was intersected in several of the holes. Assessment of data is continuing.

### Mistake Creek Prospect (EPM 17488 – Mistake Creek)

Preliminary ground exploration work (mapping and sampling) commenced on the Mistake Creek prospect during the quarter. The target here is for porphyry style Cu-Mo-Au mineralisation related to an Anthony-type magnetic anomaly. Results are being evaluated to plan for future work programmes.



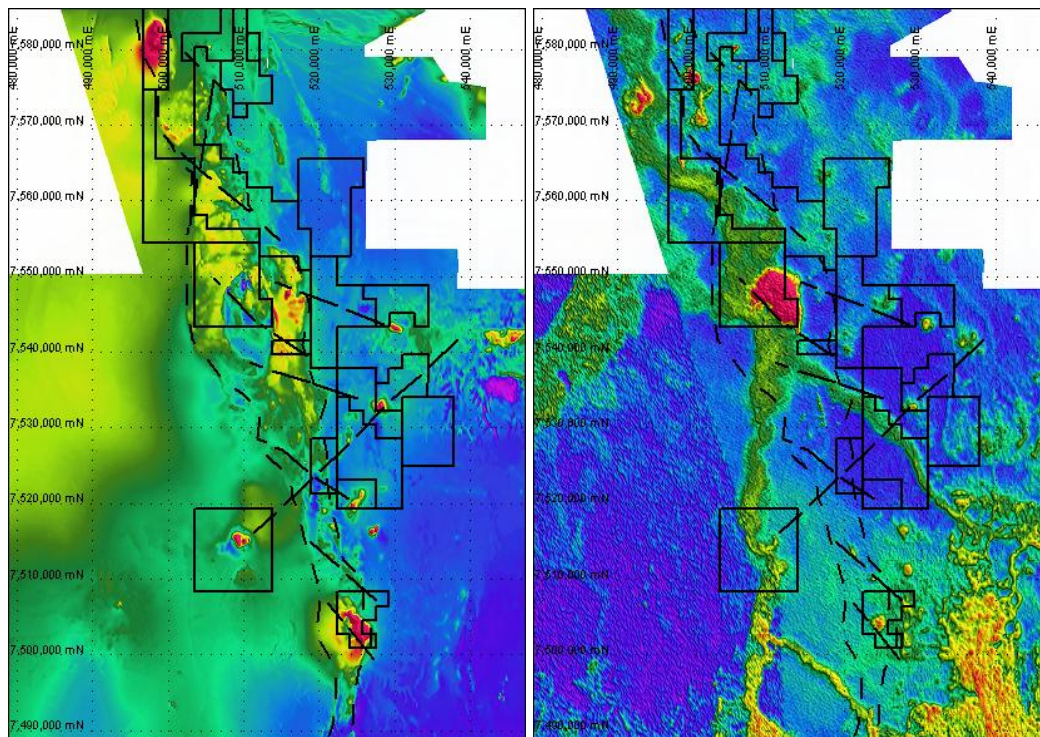
*The Anthony (left) and Mistake Creek (right) magnetic and radiometric anomalies exhibit similar physical and geological characteristics*

### Mount McLaren Prospect (EPM 16524 – Logan Creek)

The recently-granted EPM 16524 (Logan Creek) contains the Mount McLaren porphyry-style prospect where previous explorers had outlined a 1500m diameter circular molybdenum-copper-zinc geochemical anomaly. Altered rocks along the north and east flank of Mount McLaren have also returned anomalous gold grading up to 1.3 g/t Au. Previous exploration reporting for this target area will be compiled in the next quarter.

## Regional Assessment

Assessment of regional geophysical data has identified numerous other target areas within the company's tenements. These are being prioritised for follow-up exploration.



*Regional exploration targeting magnetic (left) and radiometric (right) anomalies is planned for the Bullock Creek, Mazeppa, Mistake Creek, Dingo Range and Logan Creek EPMs*

## CORPORATE ACTIVITIES

### Annual General Meeting

The Annual General Meeting of shareholders was held in Sydney on Friday 8 October 2010. The Chairman gave a presentation covering past and future activities at the Anthony Project as well as at the Company's regional exploration programme. He also spoke of the Company's recent efforts in relation to safety and firming up the already solid relations with our host landowners.

Three resolutions were proposed and passed:

- *Resolution 1:* The re-election of Andrew Skinner as a Director
- *Resolution 2:* The re-election of Alan Humphris as a Director
- *Resolution 3:* Adoption of the Remuneration Report

### Capital Raising

On 1 December, the Company received funds of \$1.6 million and allotted 16,000,000 shares at an issue price of 10 cents per share to sophisticated investor clients through the share placement which had been approved at the Extraordinary General Meeting (EGM) on 31 August 2010.

The funds are being used for the continuation of the Company's development strategy including the expansion of the Anthony molybdenum resource both laterally and at depth.

## **Personnel**

Zamia is gradually building its exploration team in the Clermont district. We have appointed two additional field assistants as well as taking on a geology student for vacation employment from December through to March.

Project geologist Adriaan van Herk resigned in December. In January 2011, Zamia employed a new geology graduate, Susan Schwartz. The geological team now comprises Sam Garrett as Exploration Manager, Daniel Doman, Peter Litras and Susan Schwartz. Patricia Hayward continues as Senior Field Technical Officer.

## **Stakeholder Relations**

During the quarter, Zamia held constructive discussions with our host landowners in relation to pending changes in Queensland's land access legislation. The Company will formalise agreements with landowners during the first quarter of 2011, well before the deadlines set by the new legislation.

## **Investor Relations and Promotion**

The Company participated in the Mining 2010 conference held in Brisbane during the period 27-29 October. Ken Maiden presented the Zamia story to an audience of brokers, institutional and private investors, and other industry participants.

Meetings were held with stockbroking firms and financial institutions to promote Zamia and the Anthony project.

The Capital Group has been appointed as the Company's media relations consultant.

## **Corporate Governance**

As part of its commitment to good corporate governance, Zamia has always had a robust yet practical share trading policy for directors and staff. In late 2010, the ASX stipulated a requirement to review and re-submit this policy. The review was completed in December and the policy resubmitted to the ASX. The policy can be viewed on the Company website: [www.zamia.com.au](http://www.zamia.com.au)

## **Health & Safety**

With the growing confidence in the Anthony project and the more time our field staff are spending at the site, the Company has moved a portable office and amenities block to the site and has connected electricity to power water pumps, an air conditioner etc.

During the quarter the Company ensured that all employees were current in 4-wheel-drive safety as well as remote area first aid.



## Environment

In December, Zamia engaged an environmental scientist to work with us as a Field Assistant at Clermont. As well as adding to our field work capabilities, this appointment is intended to promote continuous improvement in our site rehabilitation efforts.

## FUTURE PROGRAMME

Zamia plans to carry out the following work during the first half of 2011:

- Continue detailed exploration of the Anthony molybdenum deposit to determine its extent, both laterally and at depth.
- Upgrade the Anthony resource estimation as further assays become available.
- Carry out sufficient metallurgical testwork on both primary (sulphide) and secondary (oxide) material to determine the likely feasibility of producing a saleable product.
- Complete a scoping study for a molybdenum mining and processing operation based on the Anthony resource. The scoping study will include preliminary mine planning, processing options, infrastructure requirements and options, environmental study, preliminary CAPEX and OPEX estimates, and preliminary financial analysis.
- Conduct exploration around the Anthony deposit to identify targets for detailed follow-up including drilling.
- Continue to test other targets (for gold, molybdenum and copper) within the Clermont district.



Ken Maiden  
Executive Chairman

## Competent Person

Dr Ken Maiden, MAIG FAusIMM, Executive Chairman of Zamia Metals Limited, compiled the geological technical aspects of this announcement. He has sufficient experience to qualify as a Competent Person as defined in the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Maiden consents to the inclusion of the matters in the form and context in which they appear and takes responsibility for data quality and "reasonable expectation" assumptions relating to cut-off grades and resource potential.