



# Zamia Metals Limited

## 赞米亚金属有限公司

April 2012  
2012年4月



# Capital Structure (as of 11 April 2012) 资本结构（截至2012年4月11日）

- Established junior mining company with investor interest from both Australia and Asia 成功初级矿业勘探公司，获澳大利亚及亚洲投资人支持
- Top 20 shareholders account for approx 67% of the register 前20位股东持有约67%股份
- Review of potential strategic/cornerstone industry investors and JV partners underway 正在评估引进潜在战略/支柱性产业投资人和合资伙伴

Shares 股份	247,534,631
Options 期权	22,442,856
Shareholders 股东	1063

Holder Name 股东名称	%
Brownstone International Pty Ltd	17.4
Kings Resources Group Co Limited	8.7
West Minerals Pty Ltd	7.0
China Kings Industry Pty Ltd	5.8
International Base Metals Limited	5.5
Mr Geng Haitao	3.7
Dr Deng Jiniu	3.5
Great Sea Wave Investment Pty Ltd	2.6



- **Alan Humphris**  
**Non Executive Chairman 非执行主席**  
Investment Banker 投资银行家



- **Ken Maiden**  
**Non Executive Director 非执行董事**  
Geologist with 40 years professional experience  
有四十年专业经验的地质专家



- **Qiang Chen**  
**Non Executive Director 非执行董事**  
International commodities trader and investor,  
Mining Engineer 国际商品交易及投资人, 采矿工程师



- **Andrew Skinner**  
**Non Executive Director 非执行董事**  
Chartered accountant 注册会计师



- **Jordan Li**  
**Chief Executive Officer 首席执行官**



- **John Stone**  
**Company Secretary 公司秘书**



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## Company Strategy: Two-track Focus 公司战略：双向重点

Zamia has a two-track strategy to (a) advance the Anthony Project (molybdenum), and (b) establish copper & gold resources in its large tenement position in central Queensland 赞米亚公司制定了双向战略即(a) 推进Anthony安东尼钼矿项目及 (b) 确定公司位于昆士兰州中部大面积矿权区内的铜矿和金矿资源

### Anthony Project 安东尼项目

- Seek potential strategic/cornerstone industry investors 寻求潜在的战略/支柱性产业投资人
- Advance the Anthony project towards feasibility 推进安东尼项目至可行性报告阶段

### Regional Exploration 区域勘探

- Test gold-copper targets within the Company's tenements 对公司矿权区金铜靶区的探测
- Review of potential Joint Venture partners 评估潜在合资伙伴
- Seek other advanced gold projects 寻求其他成型的金矿项目

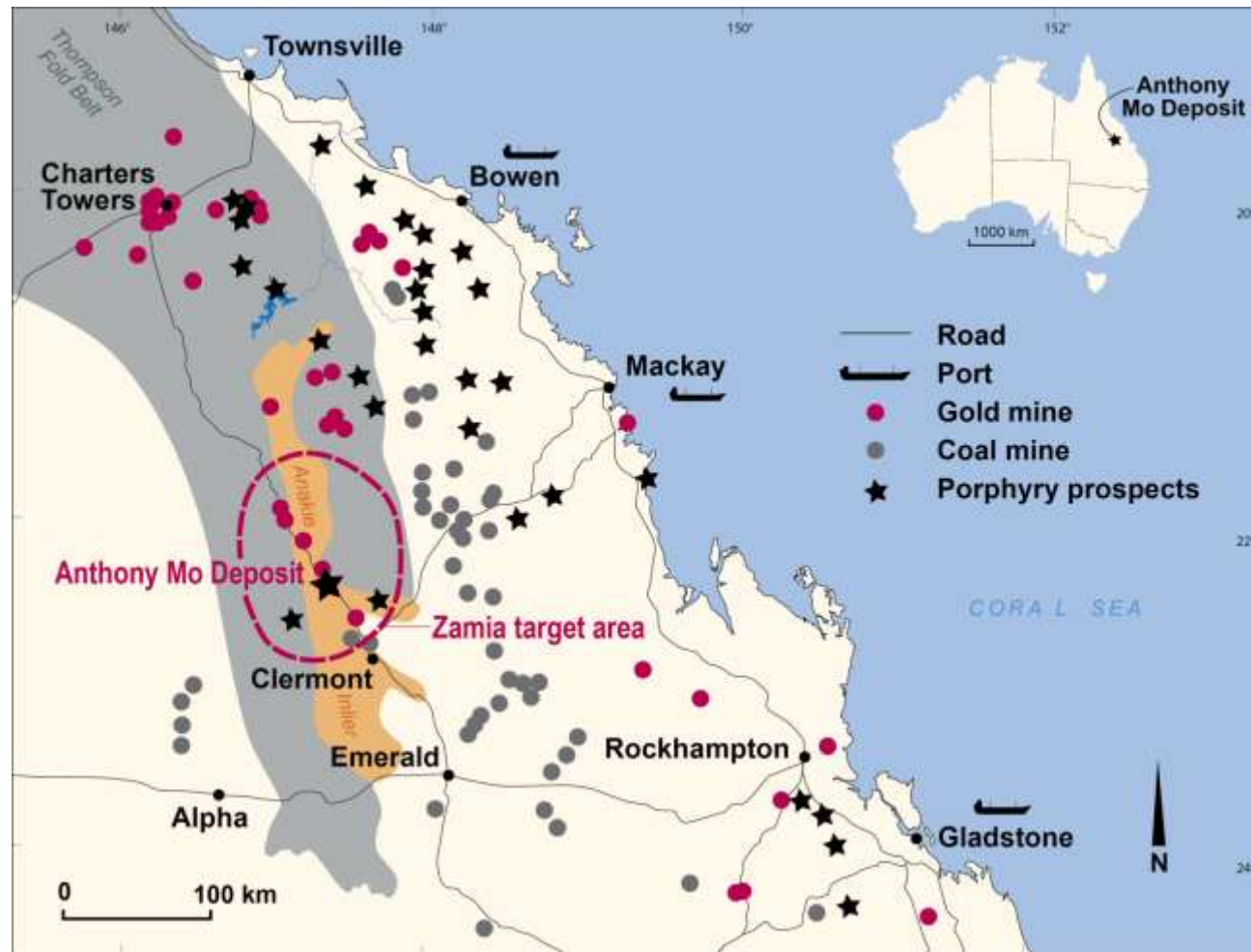






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## Location – Central Queensland 地理位置 – 昆士兰州中部

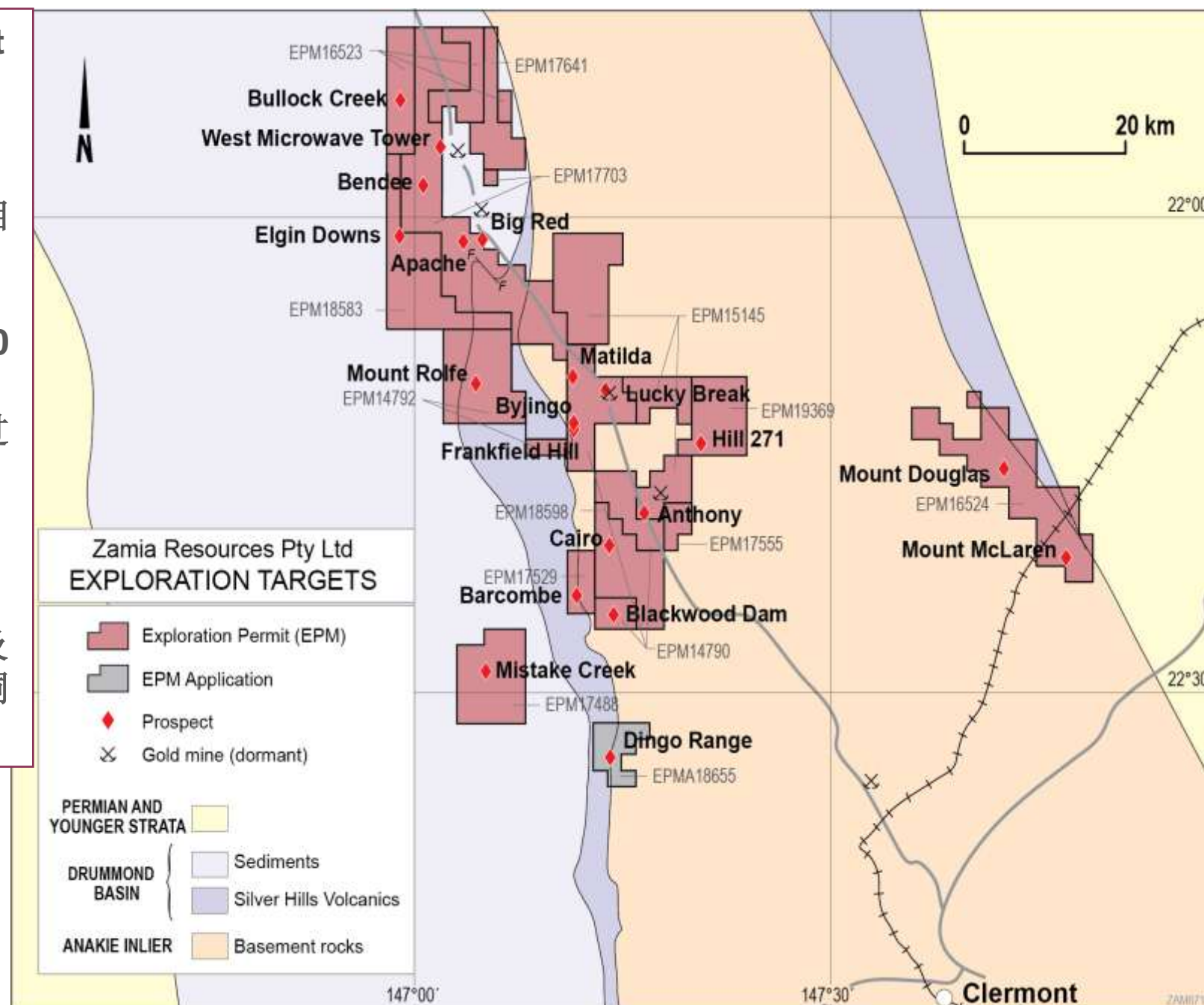


- Established gold province with emerging copper, gold and molybdenum deposits 成型的金矿区域，新兴铜、金及钼矿斑岩类型矿藏
- Good potential for large porphyry copper-gold deposits 大型斑岩铜金矿藏潜力巨大
- Multiple operating and post-production gold mines 多处运营金矿及旧金矿
- Good access but under-explored 交通便利但未充分勘探
- Established infrastructure 基础设施完善
- Access to power & water 电力及用水便利
- No major environmental issues 无重大环保问题





- Central Queensland has excellent potential for discovery of intrusion-related gold (Au), copper (Cu) & molybdenum (Mo)  
昆士兰州中部有发现与侵入岩类型相关的金、铜和钼金属的巨大潜力
- Zamia has exploration permits & applications over more than 1,300 km<sup>2</sup>
- 赞米亚公司勘探许可区和申请区超过1300平方公里
- Zamia has identified numerous porphyry and epithermal targets, some with known Au, Cu & Mo  
赞米亚公司已经确定众多斑岩类型及热液类型靶区，部分靶区已有金、铜和钼金属发现





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# Anthony Molybdenum (**Mo**) Project

## 安东尼钼矿项目



ASX:ZGM





## Main Features – 主要特点

- **Porphyry-style Mo deposit 斑岩类型钼矿矿藏**
- **A maiden resource was announced in April 2010. Ongoing drilling has expanded the resource substantially 资源首次公布于2010年4月。后续的钻探工作大幅扩展了资源量**
- **Resource of 318 Mt ore at 390 ppm (0.039%) Mo updated in March 2012 资源量于2012年3月更新为3.18亿吨矿石，品位为390ppm (0.039%)钼**
- **Resource open laterally & at depth – 资源水平方向及纵深方向未封闭**
- **Oxide to 60 – 80m depth, above primary sulphide Mo – 硫化矿主矿床之上覆盖60-80米氧化矿**
- **Excellent metallurgy in sulphide Mo material – 硫化钼矿石冶金测试良好**
- **Recovery of oxide Mo looks possible – 氧化矿钼金属回收存在可能性**
- **Well located with respect to infrastructure – 地理位置良好，基础设施便利**





## Inferred Resource estimate updated in March 2012

### 2012年3月推测级资源估算更新

Cut off grade 边界品位	Sulphide Resource 硫化矿资源			Transition Resource (partial oxide) 过渡带（部分氧化矿）资源			Oxide Resource 氧化矿资源			Total Resource 资源总和		
(ppm Mo) (ppm 钼金属)	Tonnes (million) 吨(百万)	Mo Grade (ppm) 钼金属品位 (ppm)	Contained Mo (million lb) 钼金属含量 (百万磅)	Tonnes (million) 吨(百万)	Mo Grade (ppm) 钼金属品位 (ppm)	Contained Mo (million lb) 钼金属含量 (百万磅)	Tonnes (million) 吨(百万)	Mo Grade (ppm) 钼金属品位 (ppm)	Contained Mo (million lb) 钼金属含量 (百万磅)	Tonnes (million) 吨(百万)	Mo Grade (ppm) 钼金属品位 (ppm)	Contained Mo (million lb) 钼金属含量 (百万磅)
600	20	800	36	1.3	730	2.1	3.1	660	4.5	25	780	42
400	91	560	112	5.2	540	6.2	17	510	20	114	550	137
200	250	390	215	13	400	11	53	370	43	318	390	269

*Note: Figures have been rounded 注：数字已四舍五入*

Inferred Resource estimate upgraded by Dr P Hellman of consultants Hellman & Schofield Pty Ltd,  
March 2012, reported in accordance with JORC Code & Guidelines

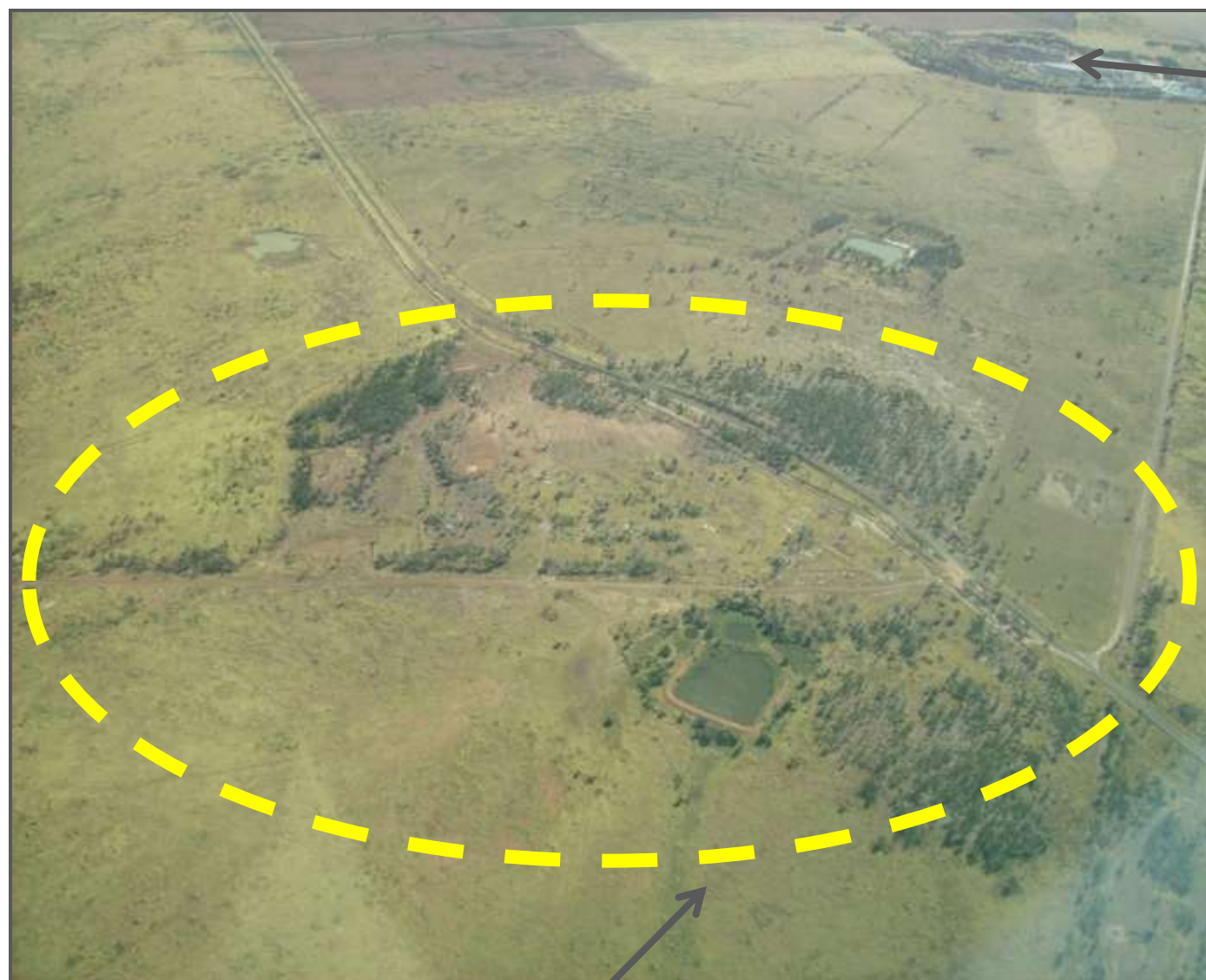
(Note: 400 ppm Mo = 0.04% Mo)

推测级资源评估由Hellman & Schofield 公司咨询顾问P Hellman博士  
于2012年3月更新，报告遵照JORC 标准及原则  
(注：400 ppm 钼金属=0.04%钼)



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## Project Area 项目区域



**Belyando gold mine  
(not held by Zamia)**  
柏力安窦金矿（非赞米亚公司所有）

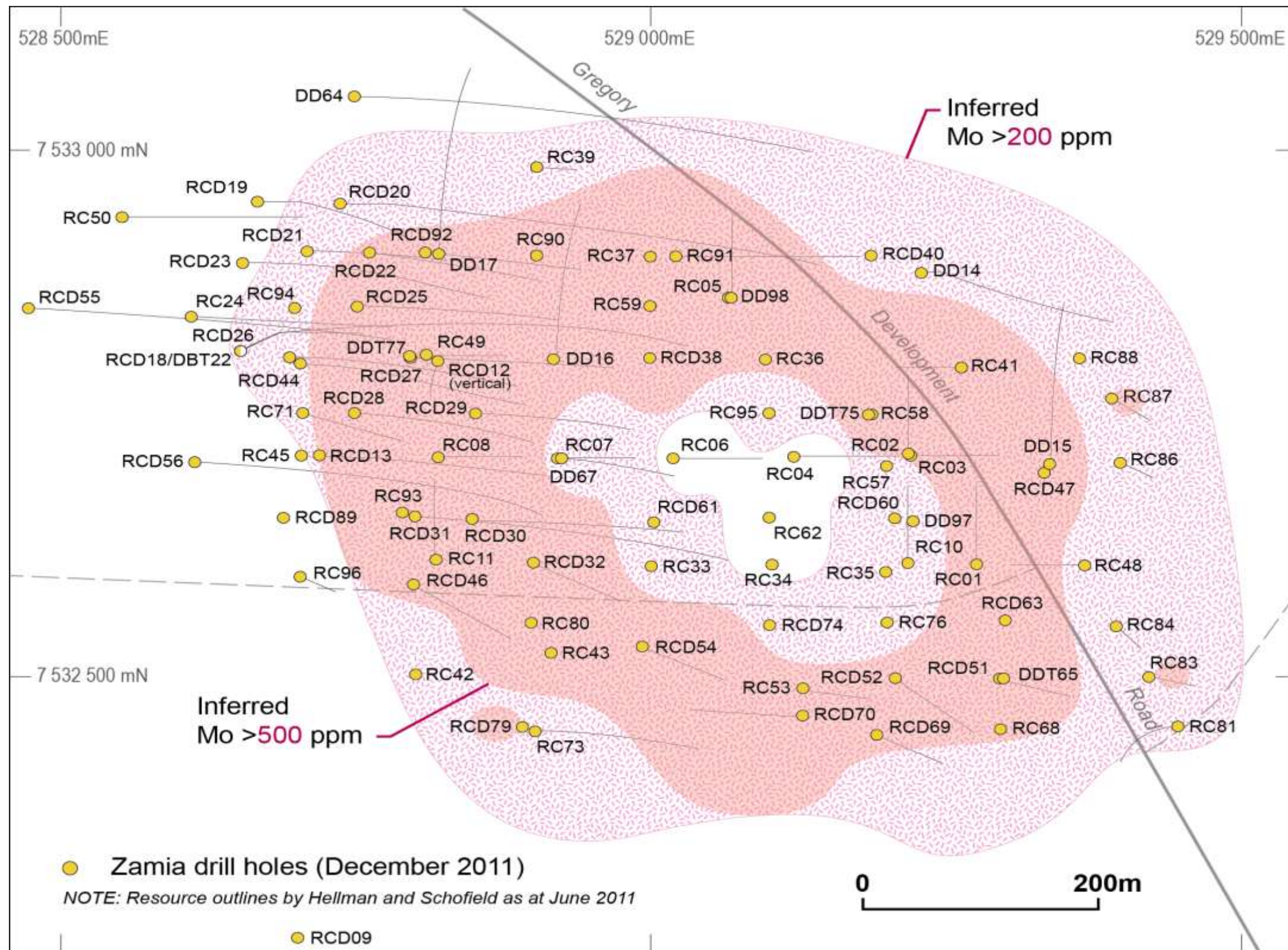
- The deposit outcrops on a low ridge, which rises about 15m above the surrounding black soil plain – 矿藏岩石露头低脊高出周边黑土平原15米
- A sealed highway crosses over the deposit – 柏油路贯穿矿藏地表
- The inactive Belyando gold mine lies about 2 km to the northeast – 停止开采的柏力安窦金矿位于矿区东北2公里处

**Anthony Mo deposit**  
安东尼钼矿矿藏





## Anthony Drill Plan 安东尼钻孔分布图

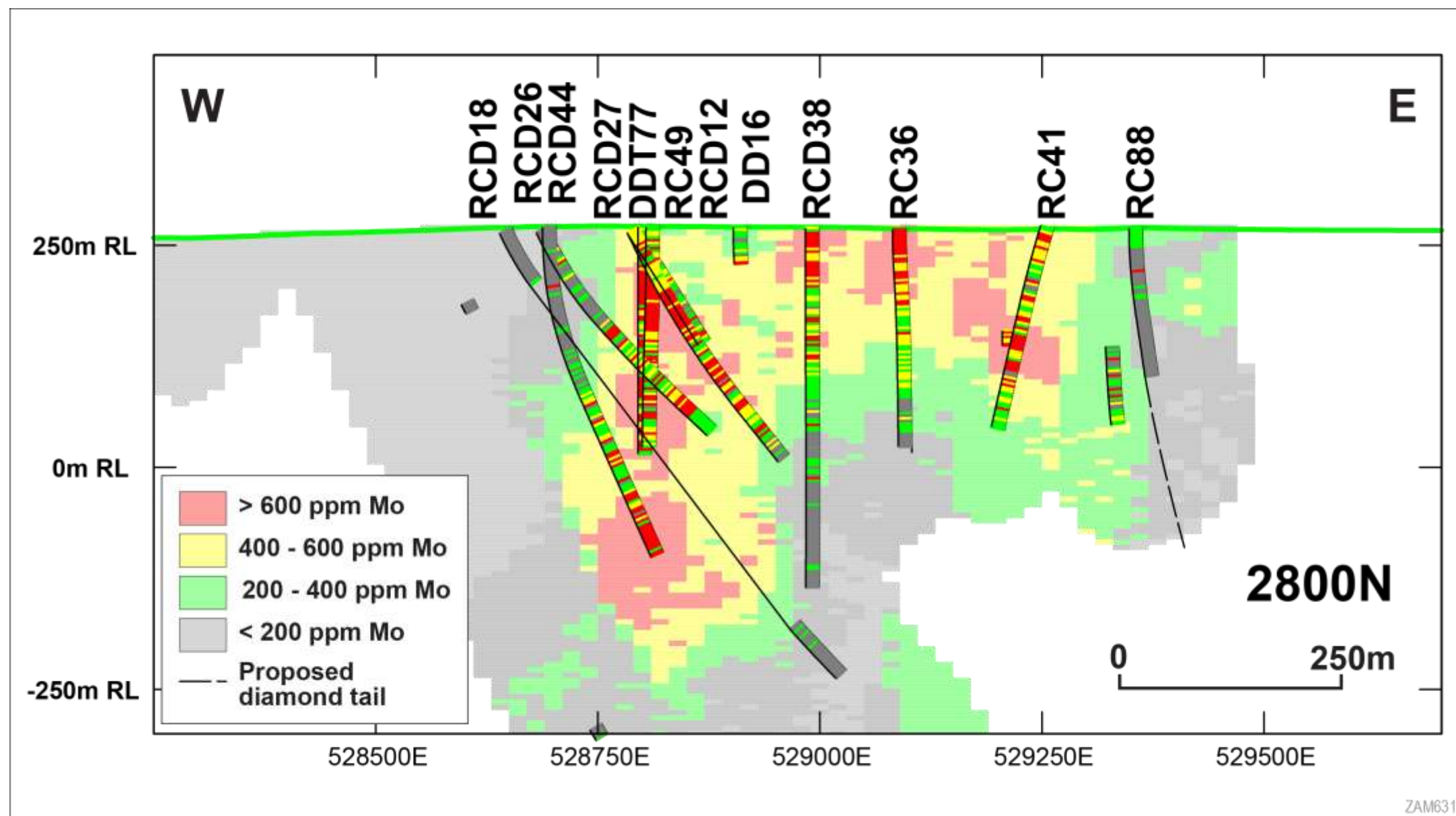


ASX:ZGM





## Drill Section 钻探截面图



Drill cross-sections (west-east) through the Anthony deposit show high grade zones surrounded by lower grade mineralisation. Drill holes have intersected potentially ore-grade molybdenum mineralisation down to 500m depth below surface. The deposit shape is conducive to a large open-pit mining operation 贯穿安东尼矿体钻探横截面（东西方向）显示了高品位区被较低品位矿体环绕。钻孔穿过可计矿石品位的钼矿矿体至地表以下500米。矿藏形状有利于大型露天开采





## Upgrading of Sulphide Molybdenum Ore 硫化钼矿石品位提升

- **Low grade material (~ 400 ppm Mo) can be simply & cheaply upgraded ('beneficiated') by coarse crushing & gravity separation to produce a feedstock of ~ 1000 ppm Mo** 低品位矿石（约等于400 ppm 钼金属）可简单并低成本地提升（选矿）品位，在粗颗粒破碎之后通过重力分选产出品位达1000 ppm 的选送矿石
  
- **Zamia is investigating a process whereby** - 赞米亚公司正在评估以下流程
  - **High grade ore will be fed directly through the crushing & grinding circuit to a flotation plant** 高品位矿石直接送入破碎和研磨流程，之后送入浮选厂
  - **Low grade material will be beneficiated to produce high grade feedstock for the grinding circuit & flotation plant** 低品位矿石在选矿之后产出高品位选送矿石送入研磨流程和浮选厂
  - **Flotation tests show the likelihood of producing a high grade (+50% Mo) concentrate with low levels of contaminants (lead, arsenic, etc)** 浮选测试显示产出高品位（+ 50% 钼金属）矿精粉的可能性，矿精粉含较低水平污染物（比如铅、砷等）
  - **Preliminary testwork indicates the possibility of recovering a molybdenum product from the near-surface oxide resource** 初步测试表明从近地表氧化矿资源中回收钼金属产品的可能性





## Strategy 战略

- Upgrade resource estimation - resource upgraded in March 2012 资源评估更新 - 资源于2012年3月更新
- Seek potential strategic/cornerstone industry investors 寻求潜在的战略/支柱性产业投资人
- Advance the project towards feasibility 推进安东尼项目至可行性报告阶段

## Committee of technical experts recommendations:

### 技术专家委员会建议:

- Pause in drilling after resource upgrade 资源更新之后暂停钻探
- Assess technical feasibility - primary & oxide Mo 评估技术可行性 - 钼矿主矿体和氧化矿
- Then move to a scoping study including preliminary financial analysis 之后进行包括初步财务分析的概略研究

**Zamia is seeking a strategic/JV partner to fund the project through to completion of a definitive feasibility study 赞米亚公司正寻求战略/合资伙伴提供完成项目终可研的资金支持**







## Attributes 特性

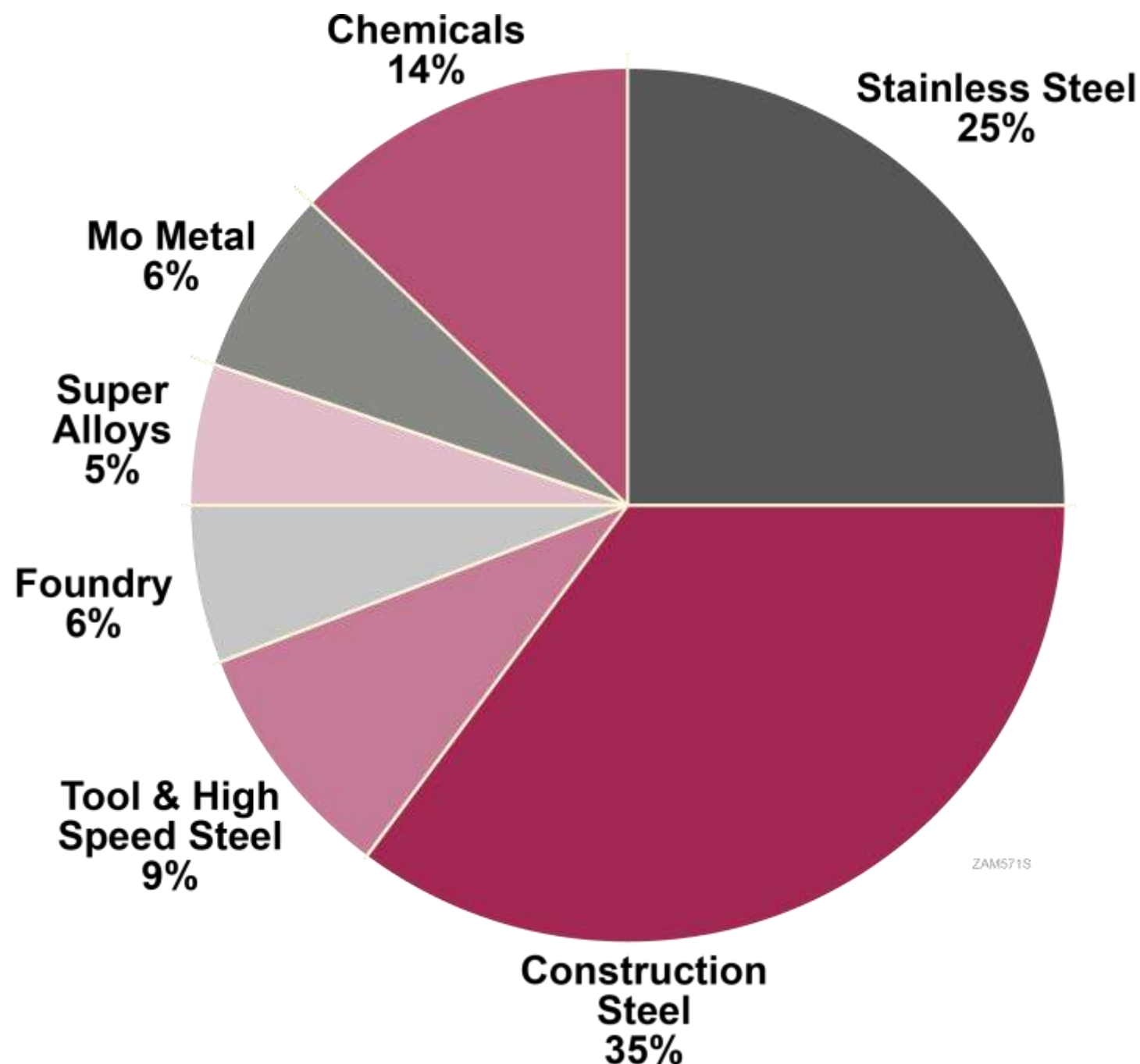
- Heavy metal 重金属
- Very high melting point +2,600°C 熔点极高，超过2600摄氏度
- Steel, alloyed with Mo, is stronger & more resistant to heat & corrosion 钼合金钢强度更高，更耐高温和腐蚀

## Major uses 主要用途

- Construction steel 建筑用钢材
- Stainless steel 不锈钢

## Emerging uses 新兴用途

- Thin film solar panels 太阳能电池薄板
- Clean, efficient production of hydrogen 洁净高效生产氢气





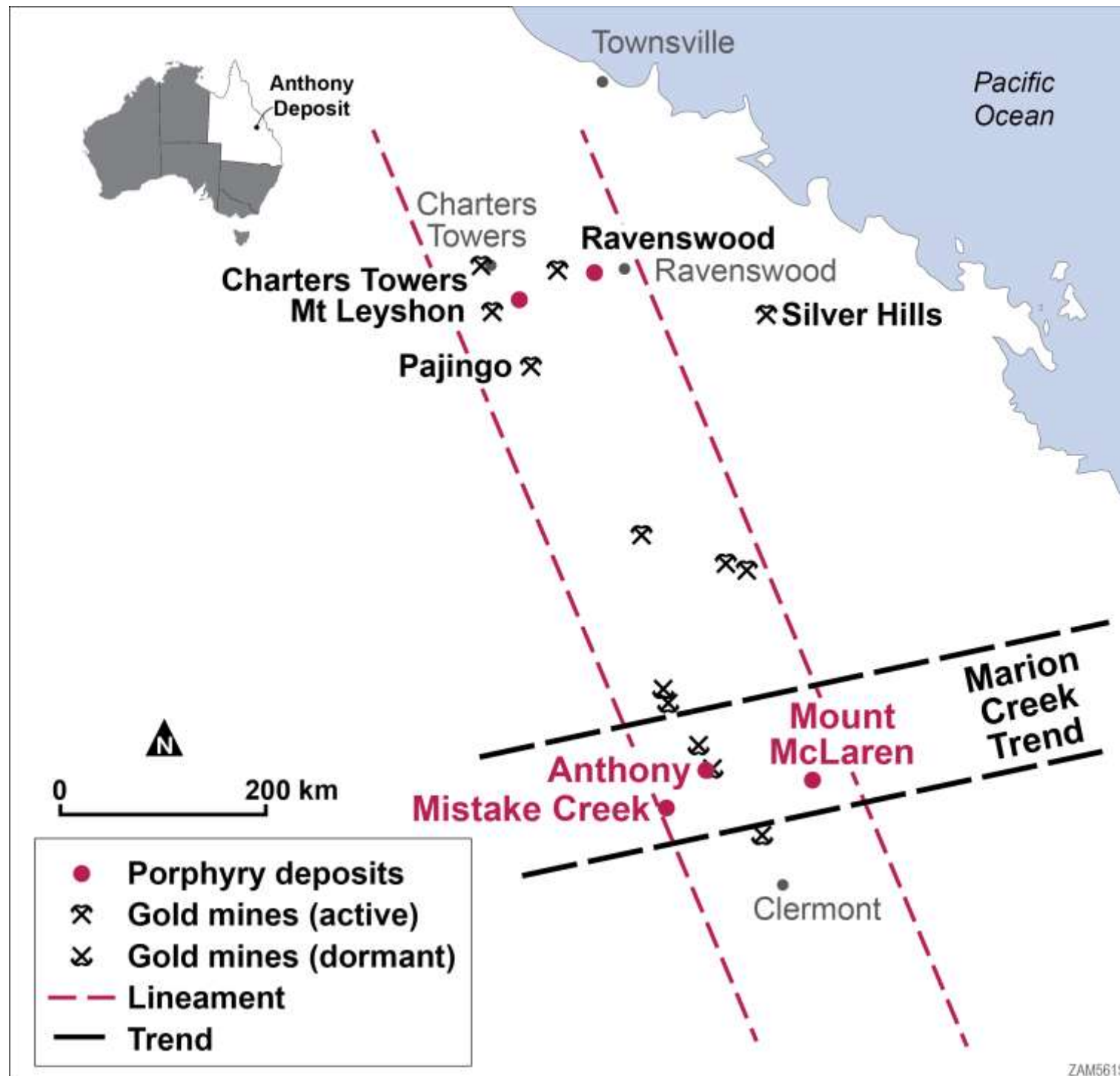
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# **Regional Discovery Potential**

## **区域勘探发现潜力**



**ASX:ZGM**

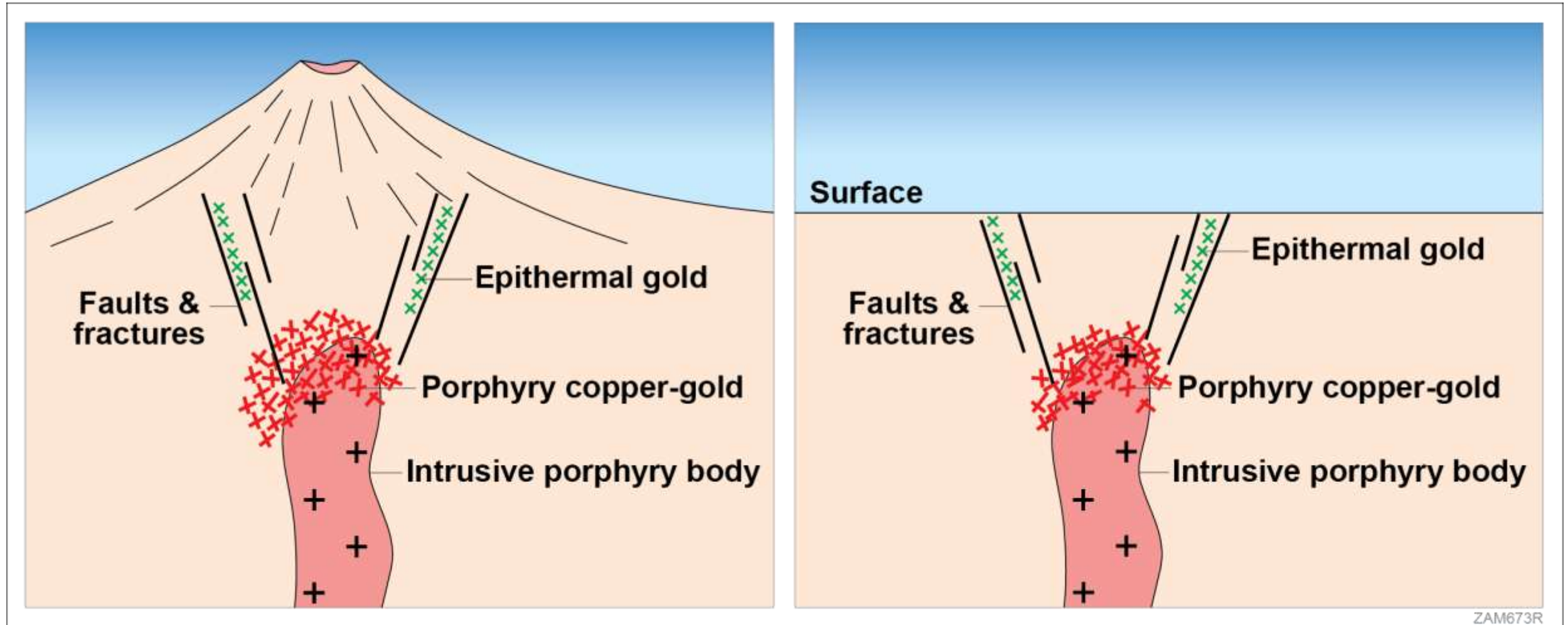


- The Charters Towers to Clermont belt in Central Queensland has long been recognised as a gold province
- 昆士兰州中部从查特斯陶额斯镇到克莱蒙特镇地质带长期以来作为金矿区域得到认可
- Some porphyry-type copper-gold prospects have been known for some time 有一些斑岩类型铜金远景区为人所知由来已久
- Zamia's discovery of the Anthony deposit demonstrates the potential for major porphyry systems 赞米亚公司发现安东尼矿藏本身即证明了大型斑岩系存在的潜力
- Since the Anthony discovery, exploration ground has been tightly held in the region 自安东尼勘探发现之后，区域内勘探矿权区已经被持有待沽
- Several major companies are now seeking Joint Venture opportunities 数家大型公司正在寻求成立合资企业的机会





# Porphyry – epithermal model 斑岩 – 热液模型



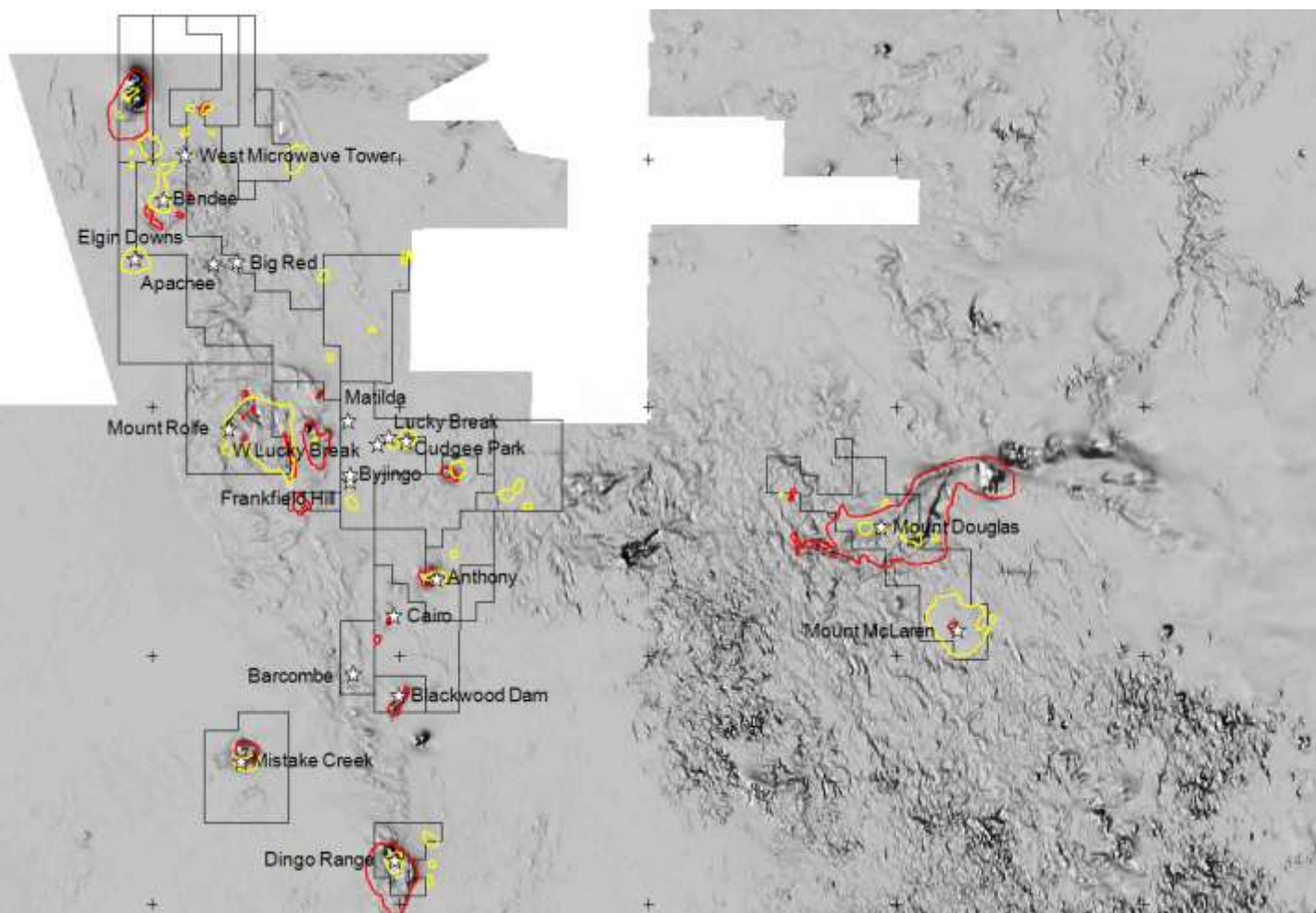
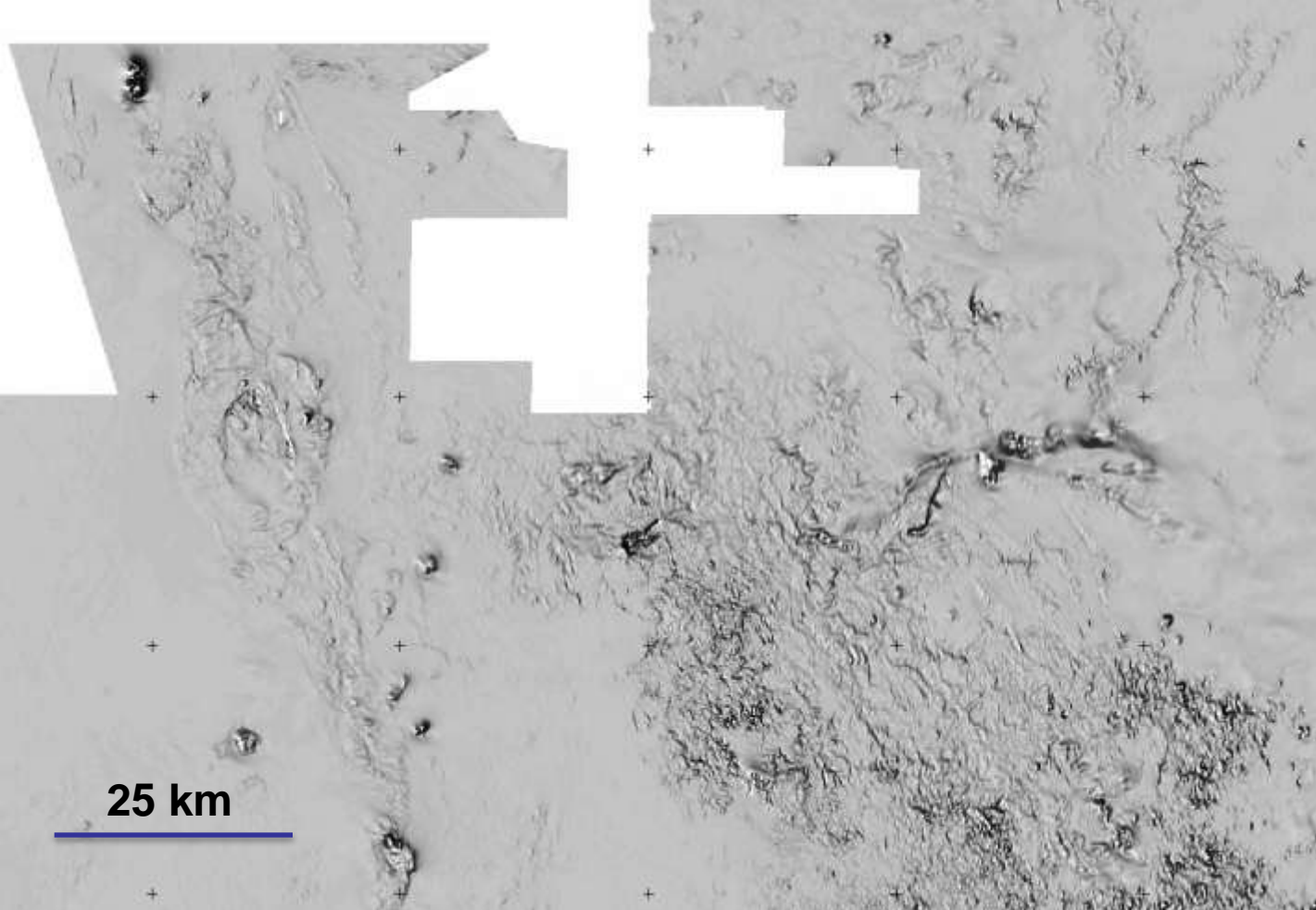
Geological setting - 地质构造

(a) 400 million years ago 四亿年前

(b) Today 今天

## Geological Setting 地质构造

- The grey-scale magnetic image shows numerous intrusive igneous complexes. Most of these do not outcrop and have never been explored 灰度磁异常图像显示众多侵入型火成岩综合体。多数未形成岩石露头，也从未做过勘探工作
- Red outlines = magnetic anomalies (Magnetic intrusive bodies) 红色轮廓线 = 磁异常（磁性侵入岩体）
- Yellow outlines = potassium anomalies (Intrusive bodies or alteration zones) 黄色轮廓线 = 钾异常（侵入岩体或者蚀变带）
- Black lines = Zamia EPMs & applications 黑色轮廓线 = 赞米亚公司勘探许可区及申请区







## Regional Exploration 区域勘探

**Zamia's current exploration programme includes:** 赞米亚公司目前的勘探计划包括:

- **Regional geological interpretation based on integration of data, including review of the regional airborne geophysical (magnetic & radiometric) data sets** 通过数据整合包括对区域航测地球物理（磁性和放射性）数据集审评进行区域地质分析解释
- **Identification of intrusive igneous complexes** 确定侵入型火成岩综合体
- **Prioritisation of targets** 优先确定靶区
- **Geological mapping, soil geochemical surveys and electrical geophysical (induced polarisation) surveys** 地质绘图，土壤地球化学勘查和电极地球物理（电极定位）勘查





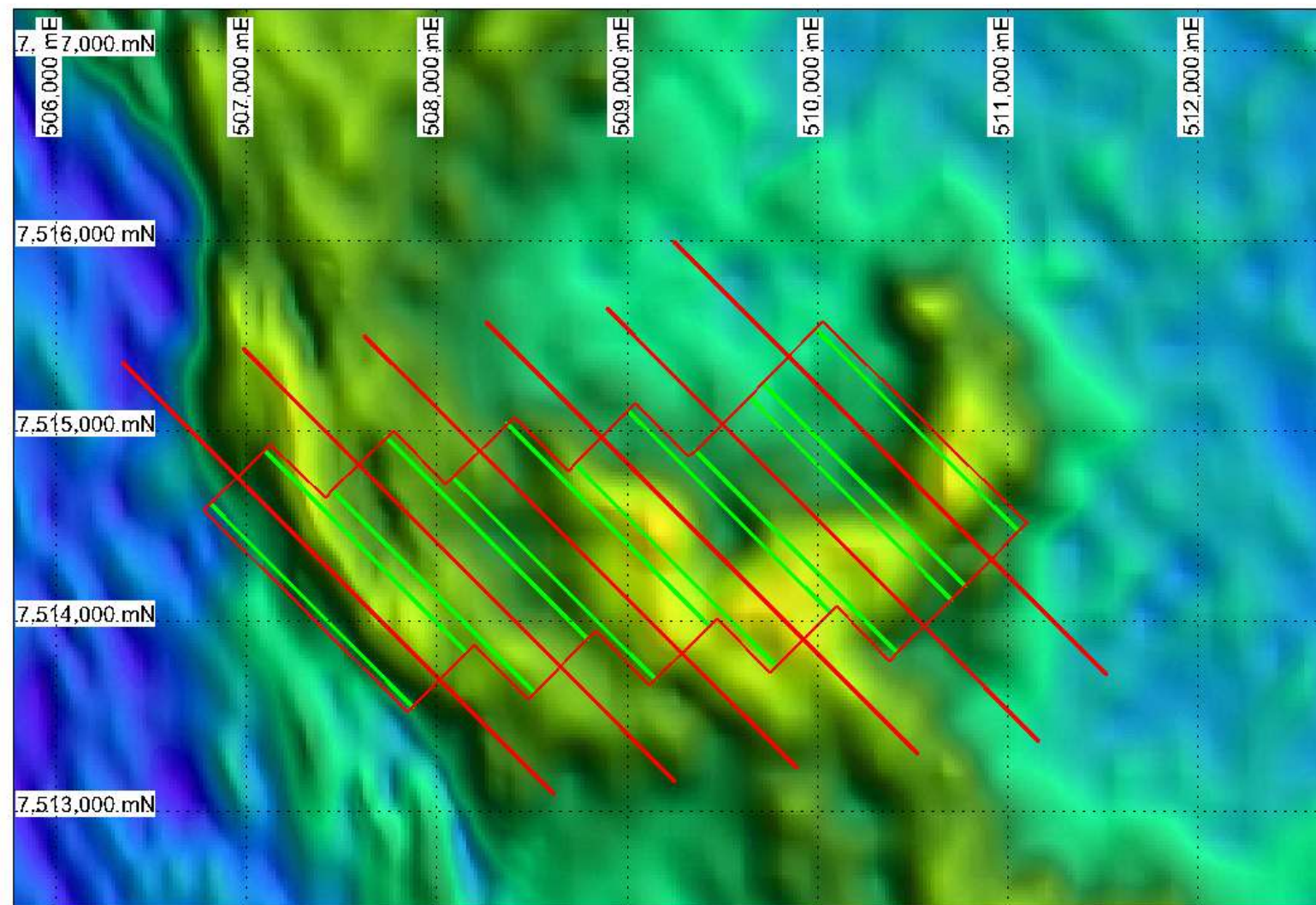
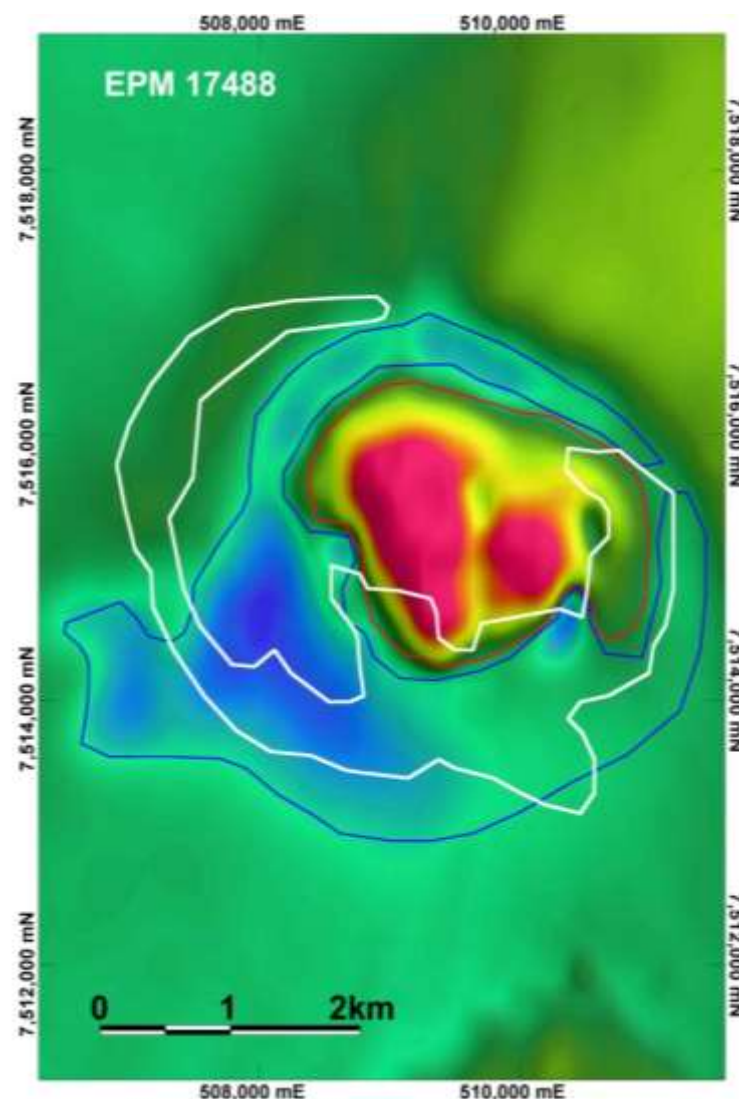
Zamia has two options to explore in Clermont in 2012: 赞米亚公司2012年在克莱蒙特勘探有两种选择:

- **Joint venture (whole or partial) of Zamia tenements, allowing Zamia to seek opportunities in new geological areas or expand its presence in the Clermont district** 赞米亚公司矿权区部分或者全部合资勘探, 公司可在新的地质区域寻求机会, 或者在克莱蒙特地区进行扩展
- **Continue to sole-fund Clermont exploration tenements** 继续在克莱蒙特独资勘探
  - **Proposed activities include geological mapping, surface geochemical and petrological sampling as well as surface based geophysical exploration techniques (magnetic intensity, gravity and IP).** 计划勘探工作包括地质绘图、地表化探和岩石采样以及地表地球物理勘探 (磁强度、重力和电极定位)
  - **Identify viable drill targets amongst a significant number of diverse geophysical and geological targets along the Anakie Inlier/Drummond Basin contact** 在安山石内露层/德拉蒙德盆地接触带地球物理及地质特性迥异的众多靶区中的确定可行的钻探靶区
  - **Prioritise drill targets and establish an exploration budget for newly planned drilling program.** 优先选定钻探靶区并重新制定钻探计划及相应勘探预算



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## Regional Targets - Mistake Creek 区域内靶区 – 密斯忒克河



**Left:** Magnetic image showing a “high” (red) related to magnetic intrusive bodies, and surrounded by subdued negative magnetic anomalies (blue lines). White lines = potassium radiometric anomalies possibly indicating rock alteration. Previous shallow drilling near the edge of the magnetic anomaly intersected elevated base metals & gold (up to 2m at 2.0 g/t Au). The magnetic “low”, possibly caused by rock alteration, has not been tested

**左图：**磁异常图像显示“高值”（红色）与磁性侵入岩体有关，周边被非磁性异常（蓝线）环绕。白线 = 钾辐射异常表明岩石蚀变可能性。之前靠近磁异常边缘的浅钻勘探到高含量的基本金属和金（在2米深度范围内达到每吨2克金）。磁性“低值”可能由岩石蚀变造成但未检测。

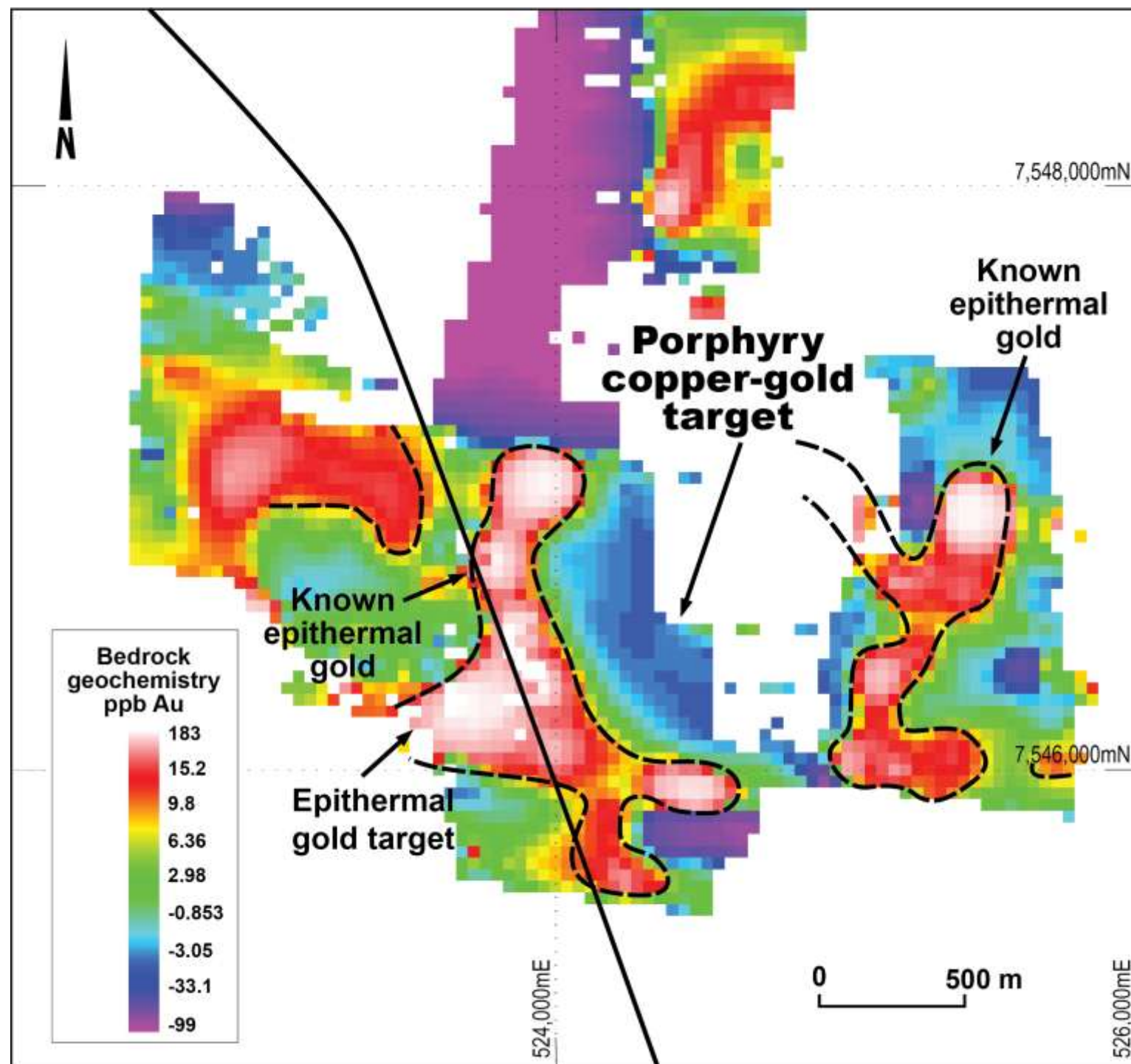
**Right:** Potassium channel radiometric image showing semi-circular anomaly and planned I.P lines

**右图：**钾辐射图像显示半圆形异常和计划中的电极定位测试路线





## Regional Targets - Cudjee Park 区域内靶区 – 卡支公园

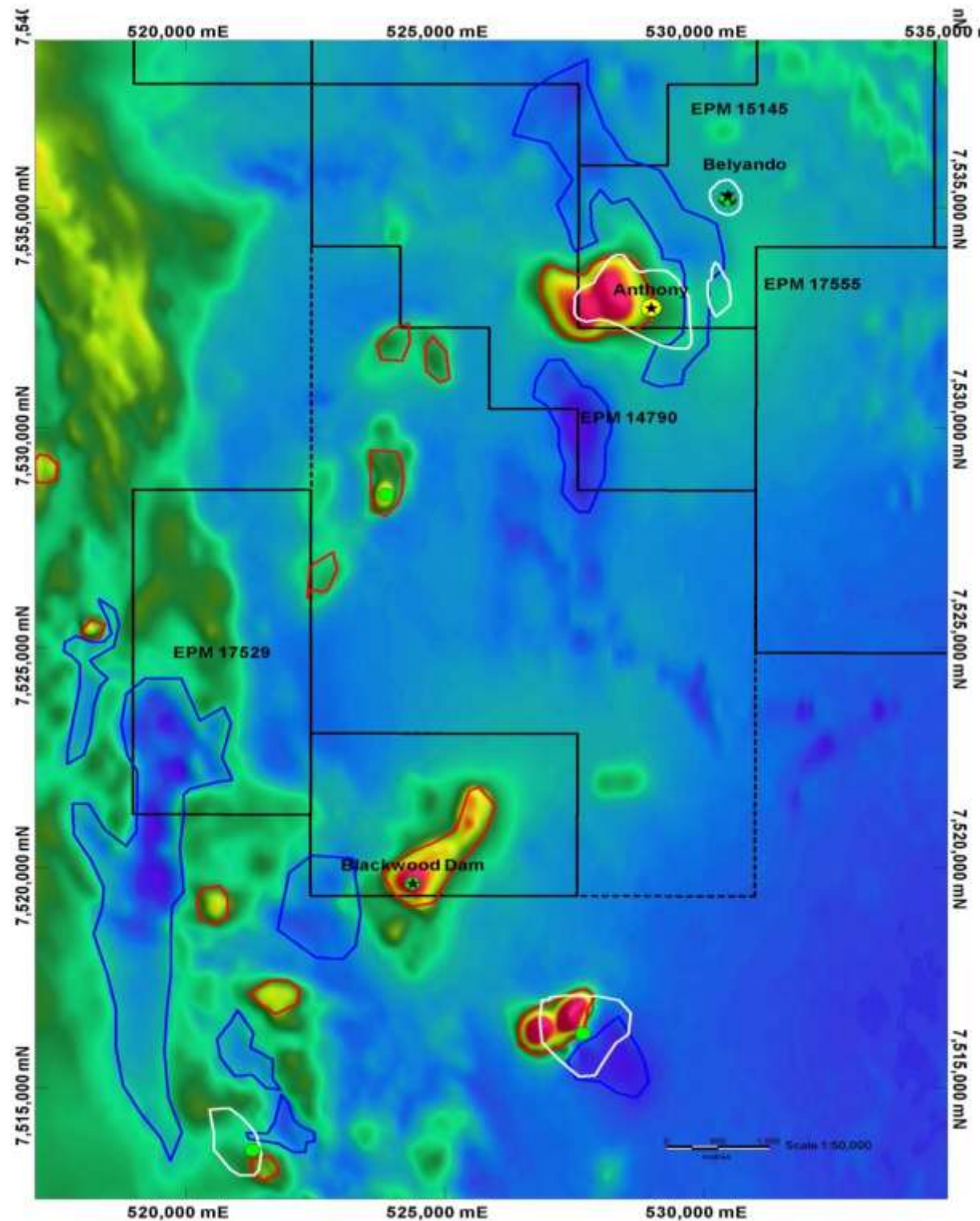


- A potassium radiometric anomaly, 3 kms across, indicates an underlying igneous intrusive body. 三公里长的钾辐射异常隐射出地下侵入类型火成岩体
- Red areas show gold geochemical anomalies. 7,000 oz gold was recovered from the Lucky Break open-cut mine. 红色区域表示金地化异常，拉柯布睿克露天矿曾开采出7千盎司黄金。
- The semi-circular gold geochemical anomaly (pink & red areas) could represent an epithermal gold system above a large porphyry copper body at depth 半圆形金地化异常（粉红和红色区域）可能代表一个热液金体系覆盖在一个位于地下深处的大型斑岩铜矿矿体之上





## Regional Targets - Blackwood Dam 区域内靶区 - 布莱克伍德坝

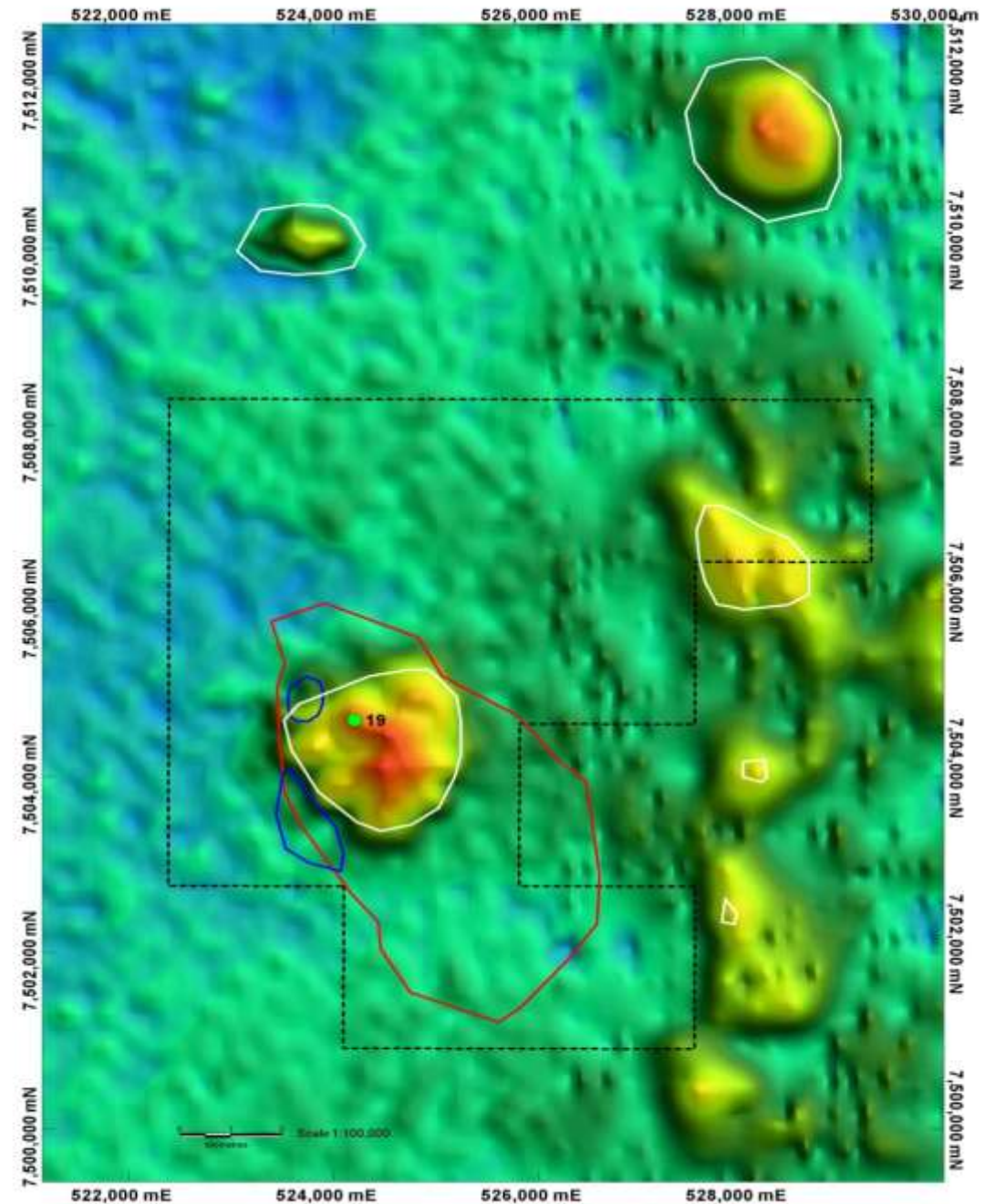
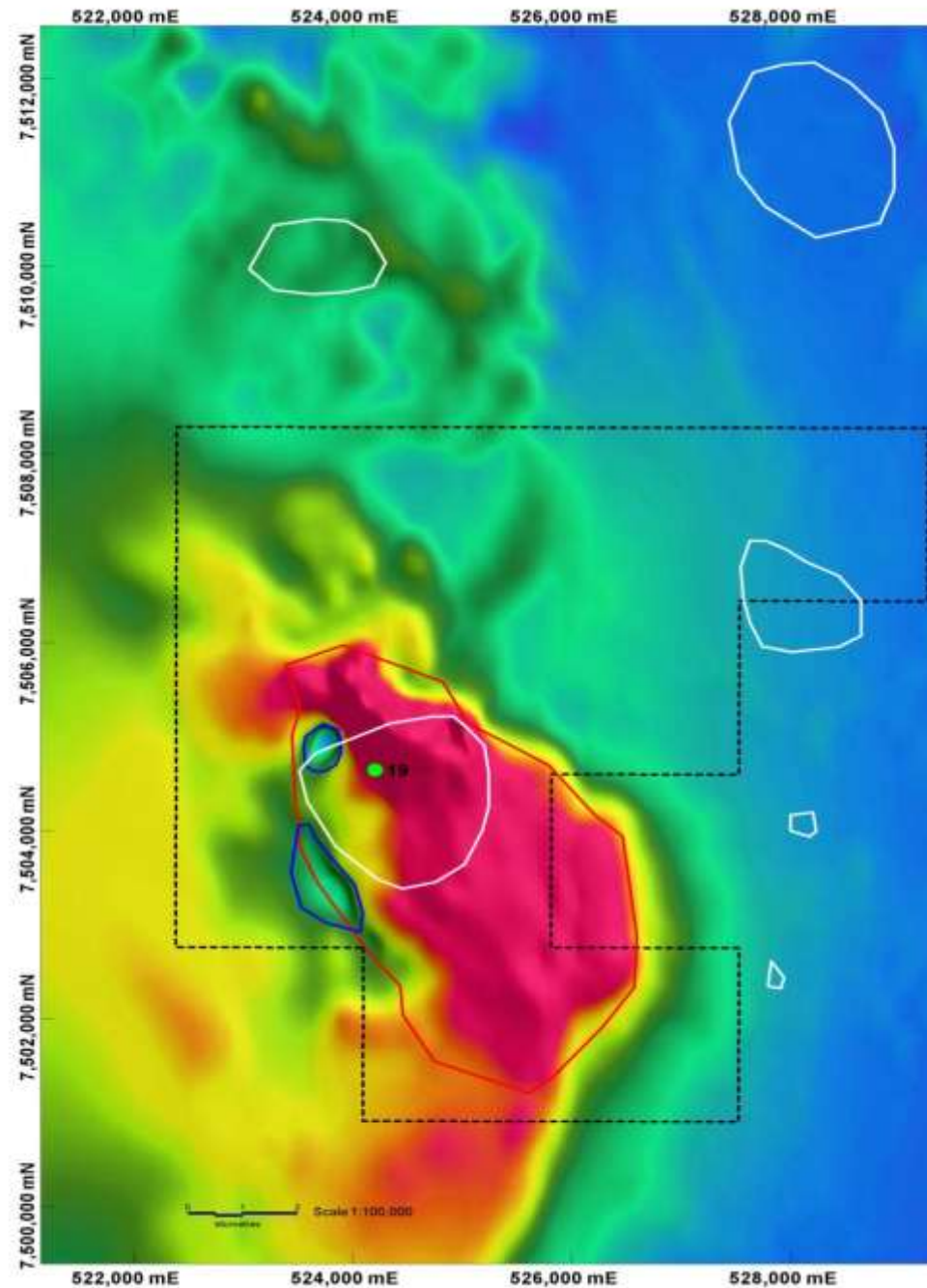


- The target area is a magnetic anomaly which indicates an intrusive igneous complex 靶区范围为磁异常隐射的侵入类型火成岩综合体
- There is no rock outcrop and the target area has never been explored 该区域没有岩石露头，靶区内从未进行过勘探工作
- Zamia is now conducting an electrical geophysical (I.P.) survey over the target area 赞米亚公司目前正在靶区范围内进行电极地球物理（电极定位）勘查工作





## Regional Targets - Dingo Range 区域内靶区 – 丁篝岭



The target is an untested magnetic anomaly with a coincident potassium anomaly indicating an intrusive igneous complex. There has been no previous detailed exploration 该靶区是未经勘测的磁异常及钾异常重合，隐射出侵入类型火成岩综合体。该处之前从未进行过详尽的勘探工作



## Forward-Looking Statements 就前瞻性问题的说明

This document contains certain “forward-looking statements”, including, but not limited to, statements concerning current and future drilling programmes, estimation of mineral resources, the continuing development plan, the type of mineralisation present and expected results. 该文件含有某些“前瞻性声明”，包括但不限于，涉及现有和待实施钻探计划、矿产资源估算、持续开发计划、现有矿化类型以及预期结果之声明。

Information inferred from the interpretation of drilling results may be deemed to be a forward looking statement, as it constitutes a prediction of what might be found to be present when and if a project is actually developed. 源于对钻孔结果解释推断之信息可被认作前瞻性声明，因其含有对项目进入或假设进入实质开发阶段时可能发现事实之预测。

Statements and estimates concerning mineral resources may also be deemed to be forward looking statements in that they involve estimates, based on certain assumptions, regarding the mineralisation that would be encountered if and when a mineral deposit is actually developed and mined. 关于矿产资源之声明和估算可能亦被认作前瞻性声明，因其涉及对矿藏进入实质开发和开采阶段或者假设进入实质开发和开采阶段时可能发现之矿化综合体基于特定假设之估算。

Forward looking statements are not historical facts, and are subject to a number of risks and uncertainties beyond management’s control. There can be no assurance that such statements will prove to be accurate. Actual results and future events could differ materially from those anticipated in such statements. Risks and uncertainties that could cause results or future events to differ materially from current expectations expressed or implied by the forward-looking statements include, among other things, but without limitation, those set forth in the Annual Report and the website ([www.zamia.com.au](http://www.zamia.com.au)) of Zamia Metals Limited (‘Zamia’). 前瞻性声明非历史实据，并受管理层控制之外多种风险和不确定因素之影响。该声明不具准确性证实之保证。事实结果和未来事件可能与该声明所预见有相当出入。风险和不确定因素可致结果和未来事件与源自现有前瞻性声明含，除此之外，但不限于，年报中及网站([www.zamia.com.au](http://www.zamia.com.au))内诸多内容，所表达或者暗示之期望有相当出入。

For more information about the Company’s properties and projects, please refer to the Annual Report. 有关公司资产和项目之相关信息如有需要请参照年报。

The technical information contained in this document was compiled by Dr Ken Maiden, Director of Zamia Metals Limited. Dr Maiden is a Member of the Australian Institute of Geoscientists and a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience to qualify as a Competent Person as defined in the September 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. 该文件中之技术信息由赞米亚金属有限公司董事Ken Maiden博士编撰。Maiden博士是澳洲地球学家学会会员及大洋洲采矿和冶金学会院士。他具备足够之经验有资格作为2004年9月版“大洋洲勘探结果、矿产资源和矿石储量报告准则”限定之资质专家。Maiden博士同意以如是形式和内容收录事项详情。







## Zamia Metals Limited 赞米亚金属有限公司

**Address:** Suite 60, Level 6 Tower Building  
Chatswood Village  
47-53 Neridah Street  
Chatswood NSW 2067 Australia

**地址:** 澳大利亚新南威尔士州悉尼Chatswood区  
Neridah街47-53号6层

**Telephone:** 电话 +61 (2) 8223 3744

**Email:** 电子信箱 [info@zamia.com.au](mailto:info@zamia.com.au)

**Website:** 网站 [www.zamia.com.au](http://www.zamia.com.au)