



## Energia Minerals Ltd (ASX:EMX)

### Developing a High-Grade Zinc Project in Italy

Alexander Burns, Executive Chairman – Diggers & Dealers 2016



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# Company Highlights

- Focussed on growth in the zinc mining business – initially targeting evaluation & fast-track development of 100% owned Gorno Zinc Project in northern Italy.
- Gorno is a brownfield zinc project in a mining-friendly jurisdiction that benefits from extensive infrastructure from historic ENI operations & strong local support.
- Scoping Study completed based on maiden JORC Resource of **3.87Mt grading 7.7% Zn+Pb, 25g/t Ag**.
- Internally funded drilling & associated work program on track for completion of DFS in December 2016.
- Significant additional upside potential through high quality exploration portfolio in Italy & Australia.



# Project Portfolio and Location Maps



## ZINC – Italy

- Gorno
- Predil
- Salafossa

## BASE METALS – Australia

- Paterson
- McArthur
- Nabberu



## URANIUM – Australia

- Nyang



# Board and Executive Management Team



## **Alexander Burns – Executive Chairman**

- Former MD of Sphere Minerals Ltd from 1998-2010 - focused on large scale iron ore projects in Mauritania; acquired by Xstrata PLC in Nov 2010 for \$514M cash. Former Chairman of Shield Mining Ltd from 2006-2010 - Gold and base metals exploration in Mauritania; acquired by Gryphon Minerals Ltd in 2010 for \$26M scrip.



## **Kim Robinson – Managing Director**

- Past Executive Chairman of Forrestania Gold NL, Kagara Ltd, Chairman of Carbon Energy and Apex Minerals and Director of Jubilee Mines and part of a team that developed the Bounty and Mt McClure gold mines, Kagara's numerous zinc-copper-lead mines in North Queensland; the Wiluna gold mine, Cosmos and Lounge Lizard nickel mines as well as the greenfields discoveries of the Bounty gold deposit, Maggie Hays nickel deposit, Emily Ann nickel deposit, Cosmos nickel deposit and the Lounge Lizard nickel deposit.



## **Marcello Cardaci – Non-Executive Director**

- Partner of Gilbert & Tobin's Corporate Advisory Group. Advises on a range of corporate and commercial matters including public and private equity fund raisings and public and private mergers, acquisitions and divestment.



## **Graeme Collins – Director of Operations**

- Former Chief Operating Officer of Kagara Ltd from 1999-2010. Developed Mt Garnet Zinc Project; growth from a junior to a \$1.2 billion multi-mine base metals producer. Former General Manager of Operations of Wolfram Camp Mining Pty Ltd to 2014 - managed a wolframite mine in Queensland.

# Corporate Information (ASX Code:EMX)

## Capital Structure

Share Price (as at 29 Jul 2016)	\$0.048
Shares on Issue	609M
Market Capitalisation	\$29.2M
Cash at Hand (as at 30 June 2016)	\$2.5M
Listed Securities at Market Value (as at 30 June 2016)	\$3.9M
Enterprise Value	\$22.8M
Unlisted Options ( \$0.05 - \$0.30 Exercise Price )	39.7M



## Top 10 Shareholders

Shareholder	Million Shares	% of Total
*Alexander Burns <small>(direct and indirect)</small>	139.8	23.0
Zero Nominees Pty Ltd	58.8	9.6
*Marcello Cardaci <small>(indirect)</small>	25.3	4.2
*Kim & Jennifer Robinson <small>(direct and indirect)</small>	20.2	3.3
J P Morgan Nom Aust Ltd	19.6	3.2
SHL Pty Ltd	17.0	2.8
Jetosea Pty Ltd	15.9	2.6
Cairnglen Inv Pty Ltd	9.5	1.6
John Barry Roberts	8.6	1.4
Rentier Inv Pty Ltd	8.0	1.3
<b>Total Top 10 Shareholders</b>	<b>322.7</b>	<b>53</b>

\*Total directors and associates holdings – 185.3M shares (30.5%)

# Strong Zinc Market Fundamentals

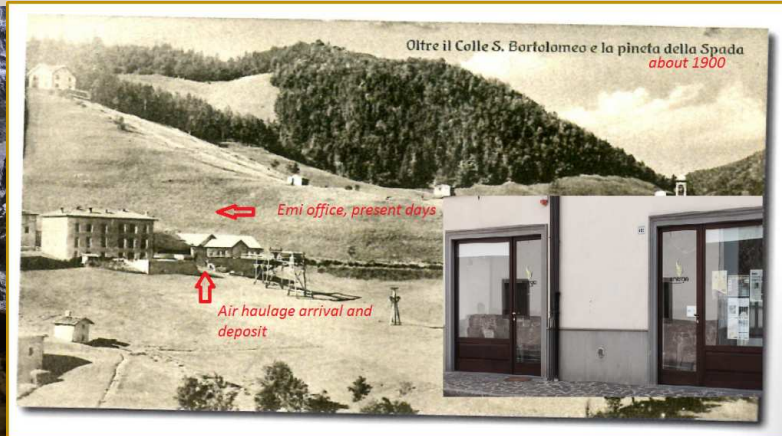
- Zinc market forecast to be in deficit through to at least 2019, with very large deficits for the next two years.
- Total zinc stocks have declined for each of the last four years.
- LME stockpiles at 12 year lows.
- Additional 3.0 - 3.5Mt of zinc needed for the next 5 years to meet forecast demand and balance current deficit.
- Century and Lisheen mine closures has recently removed 600-700kt per year.
- Current low prices expected to result in more closures and reduced production (e.g. Glencore's announcement of a 500kt reduction) resulting in continuing tight concentrate supply and reduced smelting charges.
- Average C1 production costs expected to peak in 2018 and stabilise above US\$0.60/lb maintaining pressure on high cost production.
- Zinc market fundamentals remain strong and continue to improve.





# Gorno Zinc Project – History

- Historical high-grade zinc mine dating back to Celtic days (2,500 years) with established access to unmined areas with near-term development potential.
- Italian multi-national corporation ENI was preparing to mine the newly discovered Colonna Zorzone deposit before closing down its worldwide base metal and uranium operations in the early 1980's.



- 6Mt of sulphide/oxide zinc ore averaging 14.5% Zn+Pb mined historically since the 1890's.
- 230km of historical underground development and other infrastructure selectively being used by EMX for drilling & other ongoing work – deepest historical intersections on Colonna Zorzone at 600 level.



# Gorno Zinc Project – Location





# Gorno Zinc Project – Work completed by Energia

- Maiden Resource of **3.87Mt** grading **7.7% Zn+Pb, 25g/t Ag** – 16 March 2016.
- Positive Scoping Study completed – April 2016.
- 1,560m of adit stripping and refurbishment.
- Exploration Decline advanced to 309m.
- 92 diamond drill holes completed for 7,500m.
- Crosscut through Colonna Zorzone ore body for metallurgical bulk sample.
- Metallurgical testwork well advanced with locked cycle and batch testing in progress.
- Very positive results achieved from Ore Sorting testwork – 60% rejection for 94% recovery.
- DFS well advanced & on track for completion by year-end.





# Work completed by Energia – Ca' Pasi Access Road



Municipality of Oltre il Colle, authorisation  
no. 5729 dated 20/11/2015



# Work completed by Energia – Ca' Pasi Site Offices



Regione Lombardia decree  
no. 845 dated 06/02/2015



# Work completed by Energia – Ca' Pasi Access Tunnel



Regione Lombardia decree no. 5279  
dated 24/06/2015



# Work completed by Energia – Ca' Pasi Road



Comunità Montana Valle Brembana landscape approval no. 8/15 dated 30/03/2015

Parco delle Orobie Bergamasche landscape approval 1859 dated 15/05/2015



# Work completed by Energia – Ca' Pasi Bridge

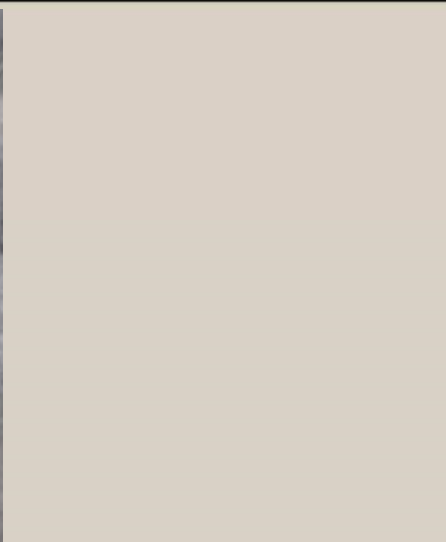


Parco delle Orobie Bergamasche  
Impact Assesment dated 15/05/2015

Municipality of Oltre il Colle, decision  
making conference dated 18/05/2015



# Work completed by Energia – Forcella Tunnel (before)



Regione Lombardia decree no. 5279  
dated 24/06/2015

Regione Lombardia approved service  
order no. T1.2015.0036807 dated  
14/07/2015



# Work completed by Energia – Forcella Tunnel (after)



Regione Lombardia decree  
no. 4230 dated 13/05/2016  
for the future work program



# Work completed by Energia – Exploration Decline

Regione Lombardia Decree no. 8245 dated  
08/10/2015

Regione Lombardia Decree no. 855 dated  
25/01/2016

Regione Lombardia approved service  
order no. T1.2016.0007831 dated  
16/02/2016

Regione Lombardia approved service  
order no. T1.2016.0023996 dated  
16/05/2016

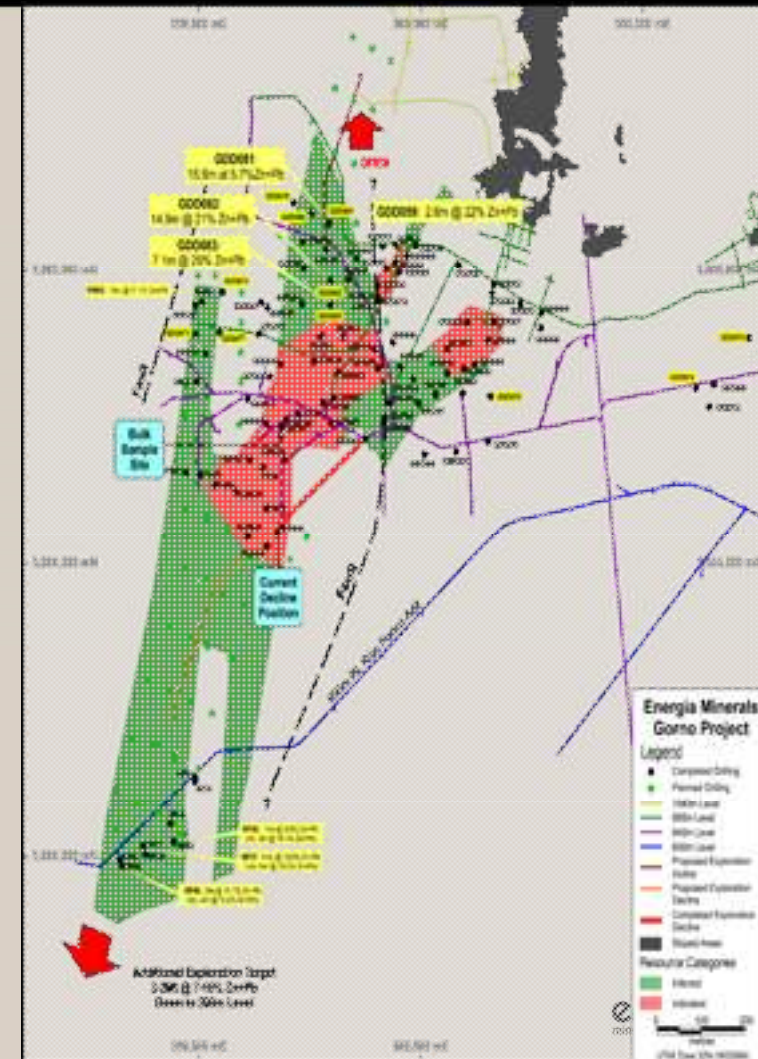




# Resource and Exploration Target

- High grade carbonate hosted Mississippi Valley Type (MVT) deposit
- Combined Indicated and Inferred Resource of **3.87Mt grading 6.1%Zn, 1.6%Pb and 25g/t Ag** using a 1.0% Zinc cut-off grade
  - Indicated Resource **0.97Mt grading 7.0% Zn, 1.9% Pb, 29g/t Ag**
  - Inferred Resource **2.9Mt grading 5.8% Zn, 1.5% Pb, 23g/t Ag**
- Additional Exploration Target of **7-11Mt grading 7-10% Zn+Pb**

This Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if future exploration will result in the estimation of a Mineral Resource. This revised target has been generated by extending the known resource and including prospects that have been drilled and/or partially developed by ENI subsidiary SAMIM during the 1970's. Energia plans to commence testing these targets during 2016 and 2017, using a combination of mapping, face sampling and drilling.





# High-grade Zinc Mineralisation in 940 level Cross-cut





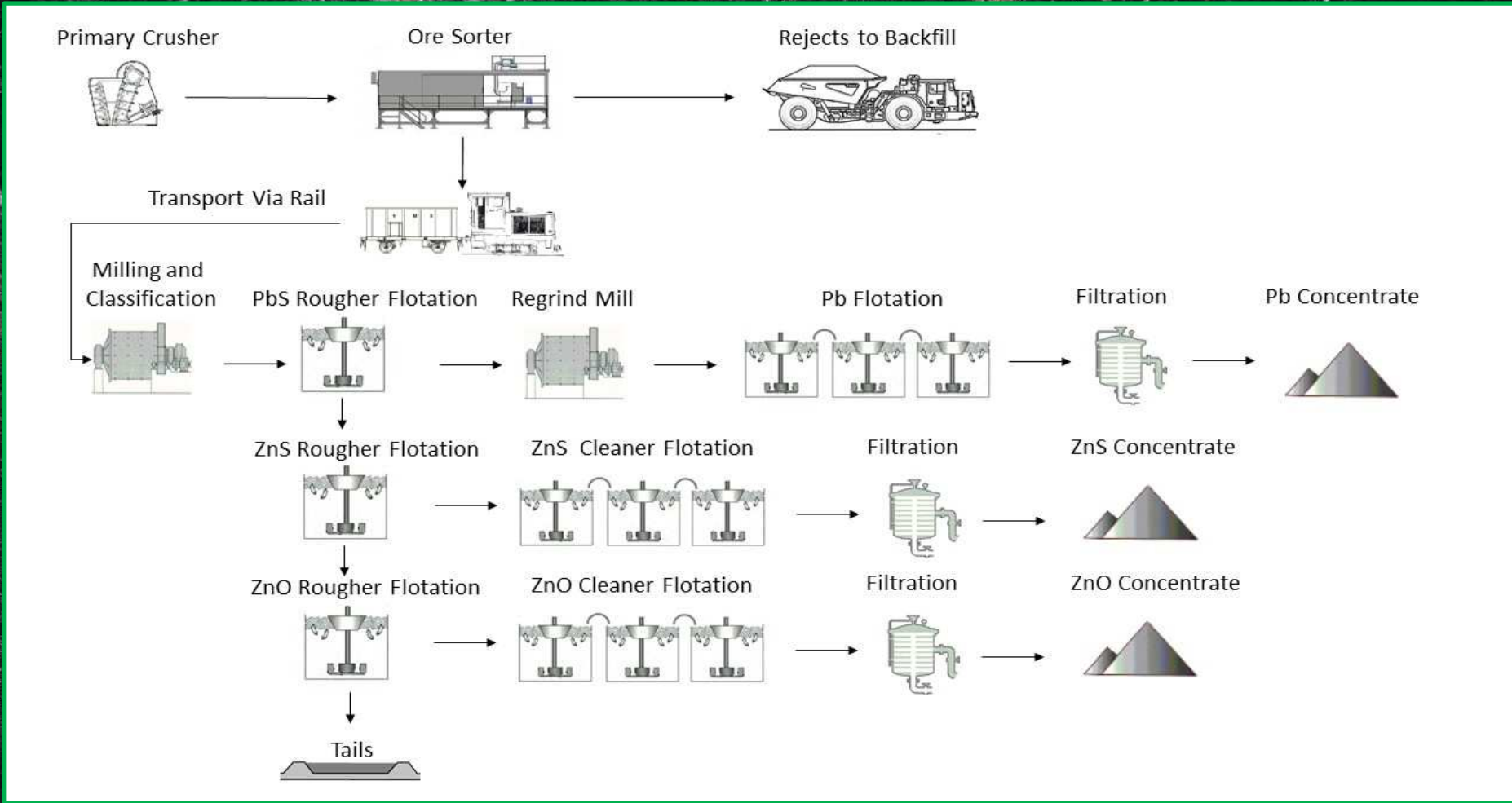
# Mineral Resource Statement

March 2016 OK Estimate  
Reported using a 1.0% Zinc cut-off grade  
Subdivided by JORC Code 2012 Resource Categories using **ROUNDED** figures

Category	Tonnes (Mt)	Zinc (%)	Contained Zinc (Kt)	Lead (%)	Contained Lead (Kt)	Silver (g/t)	Contained Silver (Moz)
Indicated	0.97	7.0	68	1.9	19.0	29	0.9
Inferred	2.90	5.8	170	1.5	44.0	23	2.2
Total	3.87	6.1	238	1.6	63	25	3.1



# Conceptual Flow Diagram





# Project Objectives for 2016

- Continue drilling program – convert inferred tonnes to indicated
- Carry out mine design work and optimise production scenarios
- Complete metallurgical testwork and preliminary plant design
- Continue environmental baseline data collection for permitting
- Complete a financeable Definitive Feasibility Study by year-end
- Preparatory work for 2017 “kick off” – Riso-Parina rehabilitation



# Fast-Track Project Development Strategy

- Accelerated development of Gorno assisted by:
  - Granted Mining Concession
  - Strong regional and local support
  - Low capital costs given historical operations
  - Minimal ground water and rail ore haulage
  - Well-established haulage routes
  - Excellent metallurgical characteristics
  - Established Resource
  - Local mining expertise
  - Strengthening market conditions for zinc





# Summary and Investment Highlights

- Experienced management team led by:
  - Kim Robinson – 45 years exploration, mining and processing experience
  - Graeme Collins – extensive experience in mine development and operations
  - Alex Burns – grew Sphere from A\$1M junior to \$514M takeover by Xstrata
- 100% ownership in low-risk, historical mining locations in Italy & Australia
- Zinc pricing upside with supply crunch looming following closure of large mines
- Gorno Zinc Project - Initial JORC Resource of 3.87Mt @ 7.7% Zn+Pb, 25g/t Ag
- Definitive Feasibility Study well advanced & on track for year-end completion
- Significant news flow from ongoing evaluation work & project development
- Well-funded work program – approximately A\$6.4M cash & listed securities
- Exploration upside within Gorno area, Salafossa/Predil & Australian projects





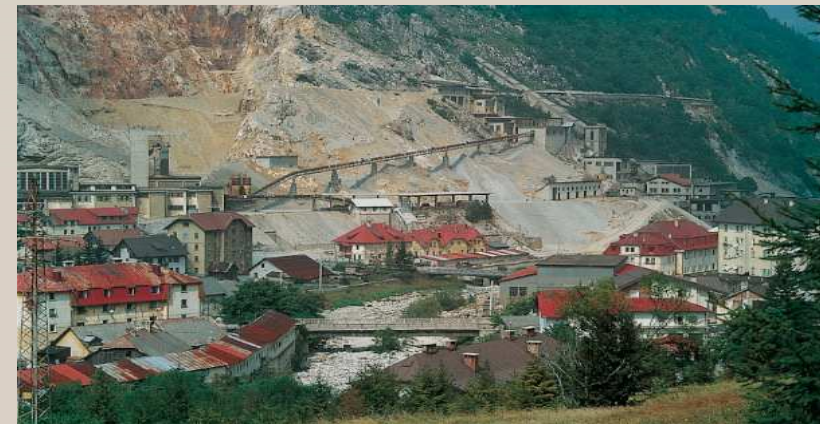


# Appendix – Other Projects



# Salafossa and Predil Zinc Projects

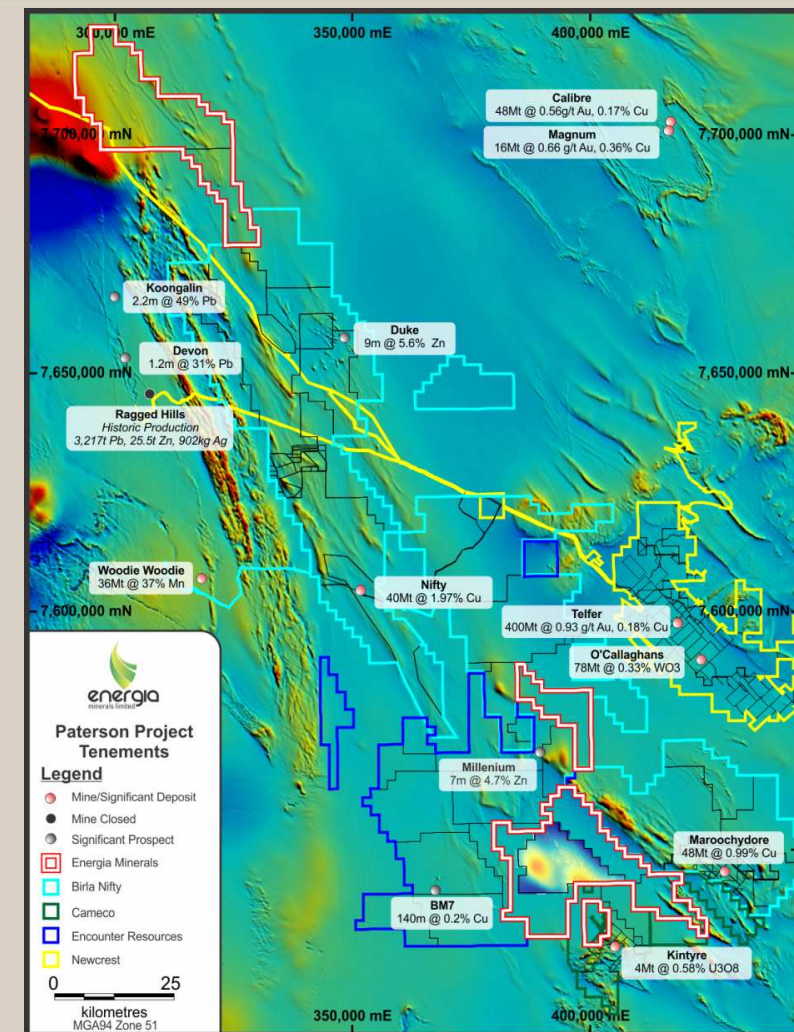
- Applications over two historical zinc-lead mines in the far north-east of Italy, ~400km by road from Gorno Zinc Project.
- Salafossa is located north of the town of San Pietro di Cadore and within 7km of the Austrian border and produced 10.95Mt of sulphide ore grading 5.0% zinc and 1.0% lead at an average production rate of approximately 500,000tpa over 22 years:
  - Production was from a single flat-lying deposit with dimensions of 750m by 200m and up to 30m wide which facilitated mining by low cost, large scale open stoping.
- Predil is estimated to have produced 30Mt of ore grading 5.0% zinc and 1.2% lead (1.9Mt of contained Zn+Pb) and was producing approximately 50,000tpa of zinc and lead concentrates at the time of its closure:
  - Concentrates were transported to Gorno and treated through the Ponte Nossa Refinery which still operates today.
  - Deposit remains open at depth.





# Paterson Project

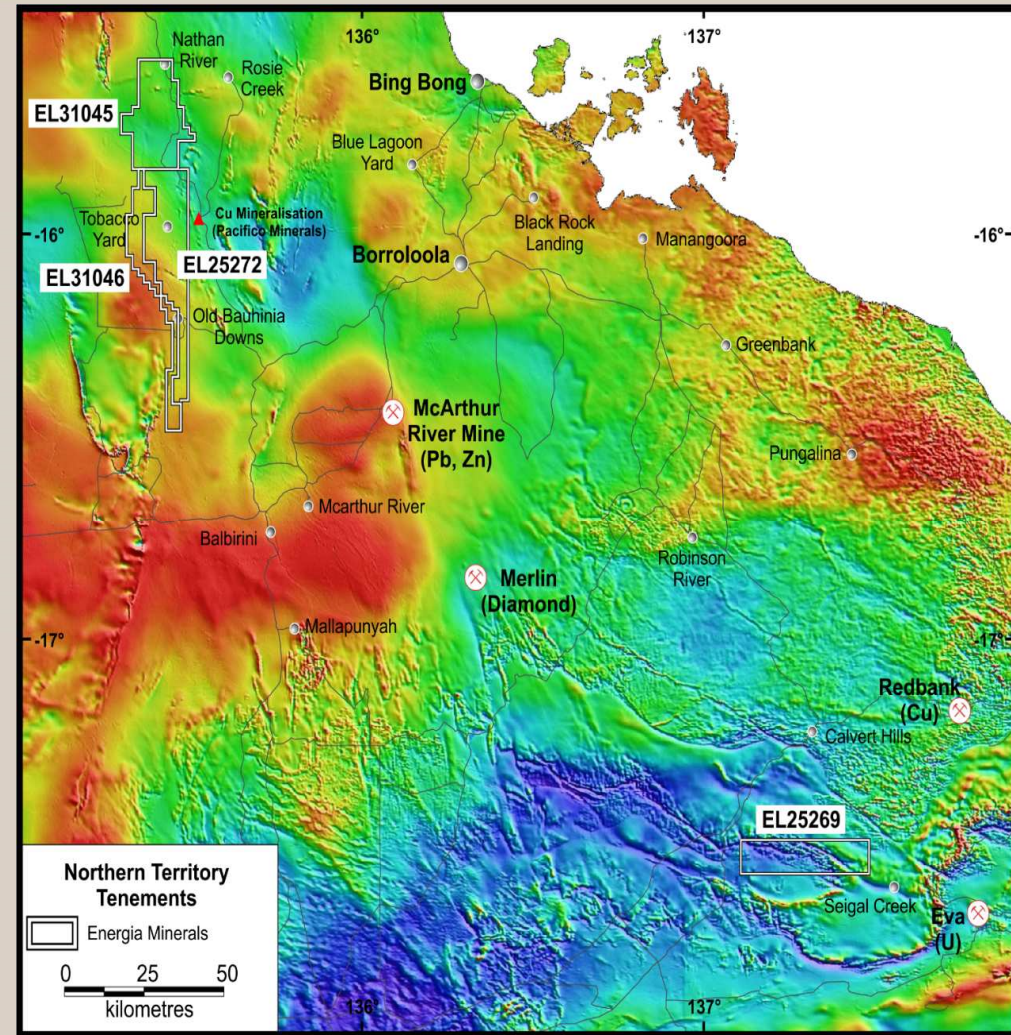
- Strategic initiative in the emerging Paterson Province in the Eastern Pilbara region of Western Australia.
- Nine granted tenements totalling 1,616km<sup>2</sup> – prospective for base metals and uranium.
- Area contains several world-class deposits – Telfer, Nifty and Kintyre.
- Recent zinc discovery (70m @ 2.3% zinc) by Encounter Resources at Millennium.
- Gravity Survey planned in western part of EL2886 planned to identify potential drill targets.





# McArthur Project

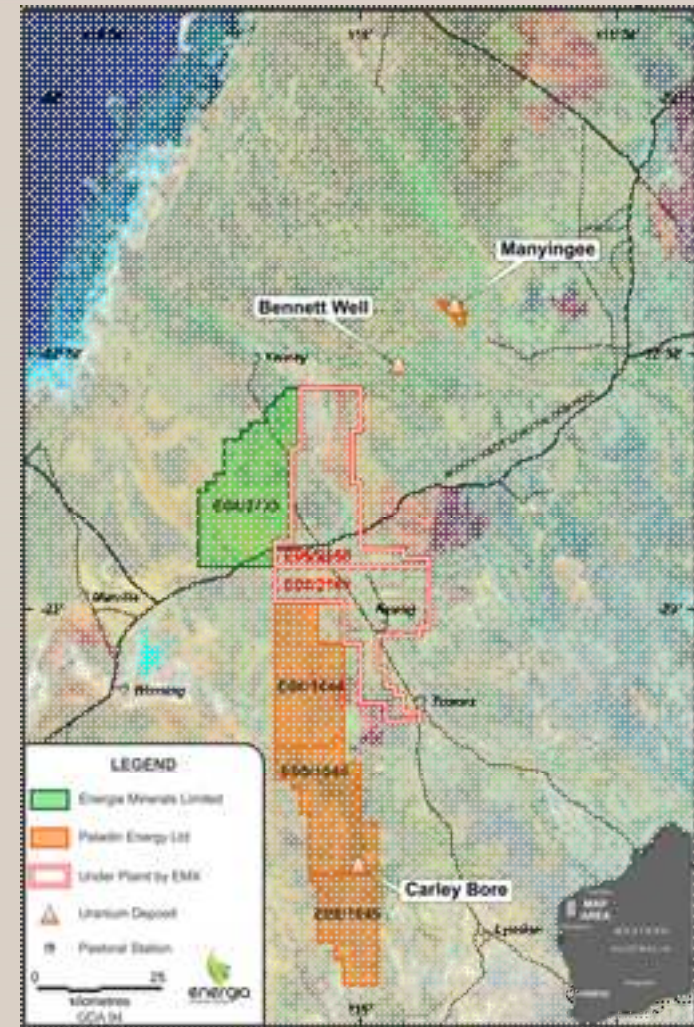
- Four tenement applications totalling 1,610km<sup>2</sup> covering the western margin of the McArthur Basin in the Northern Territory over a 100km strike length.
- Barney Creek Formation (hosts Glencore's McArthur River Mine and Teck/Rox Teena zinc deposit) dips to the west at shallow depth beneath EMX's tenements.
- Area contains numerous small historical mines with recorded grab samples of up to 41% Cu, 668g/t Ag.
- Historical intersections reported of 8.3m @ 2.66% Pb, 18g/t Ag & 6m @ 0.27% Pb from very limited drilling.
- Pacifico Minerals' Coppermine Creek copper discovery (4m @ 4% Cu) is located 3km to the east.





# Nyang Uranium Project

- Strategic tenement application E08/2735 located between Paladin Resources' Manyingee and Carley Bore ISR uranium deposits in the Carnarvon Basin uranium province in WA.
- As a result of EMX's sale of Carley Bore to Paladin Energy, the economics of a combined Manyingee and Carley Bore project containing 41Mlb  $U_3O_8$  have improved significantly – potentially bringing forward production.
- E08/2160 and E08/2161 are currently under plaint by EMX for substantial under-expenditure. An Expenditure Exemption applied for by Cauldron Energy has recently been rejected by the Minister. The matter is back before the Warden who is now considering EMX's application for forfeiture of both tenements.





# Competent Person Statements

*Information in this presentation that relates to Exploration Targets and Exploration Results is based on information prepared by Mr David Andreatza and Mr Kim Robinson who are both Competent Persons and Members of the Australian Institute of Geoscientists. Mr Andreatza and Mr Robinson are full-time employees of Energia Minerals Limited. Mr Andreatza and Mr Robinson have sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities 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 Andreatza and Mr Robinson consent to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.*

## **Competent Person Reference**

*The information in this presentation that relates to Mineral Resources is based on, and fairly represents, the Mineral Resources and information and supporting documentation extracted from the report, which was prepared by Mr James Ridley as Competent Person in compliance with the JORC Code (2012 edition) and released to ASX by the Company on 16 March 2016. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. All material assumptions and technical parameters underpinning the Mineral Resource estimates in that previous release continue to apply and have not materially changed.*