



Exploration Update

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Minotaur Exploration Ltd ASX:MEP





Highlights of 2012

Corporate

- Sold Tunkillia gold interest for \$6 million
- Divested several Gawler Craton tenements to BHPB for \$10million
- Southern Gawler tenement vend into successful listing of Spencer Resources
- New Gawler IOCG tenement package being assembled
- No heavily discounted share placements or SPPs and a healthy budget going forward

Development

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Exploration

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Highlights of 2012 Corporate

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Development

- Moving the Poochera Kaolin project along the development path as a high value-high return mining proposition.
- Resource upgraded to measured status and regional Exploration Targets defined
- Hydrous and Calcined product output from Poochera Kaolin pilot plant
- Moving the Mutooroo Magnetite project through project definition to allow a global major to invest with confidence
- Native Title agreement reached
- An expanded Exploration Target to complement the Muster Dam resource completed
- Further metallurgical studies underway to increase Fe recovery from hematite component

Exploration



Major focus has been the Carey's Well deposit.

Other major deposits within 20km make this a kaolin region of global significance



Poochera Kaolin



Poochera Kaolin

 ♦ 16 million tonnes JORC resource of world's highest quality kaolin defined at Carey's Well. The resource remains open laterally
♦ Exploration Target of 570 to 810 million tonnes in five

 	Brightness category	ISO BRIGHTNES S R ₄₅₇	JORC Category	TONNES Kaolinised Granite ¹ (million)	AVERAGE -45µm kaolin content (%)	TONNES -45µm kaolin (million)	AVE ² Fe %	AVE² Ti %
<> </th <td>Ultra High Brightness</td> <td>>84</td> <td>Measured</td> <td>6.9</td> <td>59</td> <td>4.1</td> <td>0.28</td> <td>0.21</td>	Ultra High Brightness	>84	Measured	6.9	59	4.1	0.28	0.21
	High Brightness	>80 <84	Measured	4.9	54	2.6	0.33	0.23
	Moderate Brightness	>75 <80	Measured	4.5	29	1.3	0.42	0.19
	TOTAL Bright White	>75	Measured	16.3	49	8.0	0.32	0.21



Poochera Kaolin

Exploration Target of 570 to 810 million tonnes in five other deposits – a truly world class kaolin province

\diamond	Kaolin Deposit	Exploration Target	-45µ kaolin Range	ISO Brightness Estimate	
\diamond	Condooringie Well	40 to 48 million tonnes	40% - 60%	R ₄₅₇ ≥80	
	Carey's Well Extended	50 to 60 million tonnes	40% - 60%	R ₄₅₇ ≥80	
	Tootla	47 to 57 million tonnes	40% - 60%	R ₄₅₇ ≥80	
	Karcultaby South	23 to 27 million tonnes	40% - 60%	R ₄₅₇ ≥80	
	Tomney	410 to 620 million tonnes	40% - 60%	R ₄₅₇ ≥80	
	Total	570 to 810 million tonnes	40% - 60%	R ₄₅₇ ≥80	



The term 'Exploration Target' should not be construed as an estimate of Mineral Resources and Reserves as defined in the JORC Code (2004) and the term has not been used in that context. The term is conceptual in nature and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Poochera Kaolin

New calcining circuit added to pilot plant and a range of products produced for specific markets

PRODUCT	PW55	PW90UB	PW90B	PB80
Kaolin Type	Hydrous	Hydrous	Hydrous	Calcined
Brightness (R ₄₅₇ ISO)	87.4	89.3	90.0	95.5
Yellowness (b*)	2.5	2.5	1.8	0.8
Minus 2µm (wt%)	55 ±2	90 ± 2	90 ± 2	80 ± 3
Al ₂ O ₃ (%)	38	38	38	44.5
Fe ₂ O ₃ (%)	0.45	0.42	0.35	0.4
TiO ₂ (%)	0.09	0.03	0.03	0.04
Kaolinite \pm Halloysite (%)	97 ±3	100	99 ±1	not applicable
Quartz (%)	<1	<1	<1	not applicable
Mica (%)	1	0	0	not applicable
Microcline ± albite	1 ±1	0	0	not applicable
Anatase (%)	not determined	0	1	not applicable

Mutooroo Magnetite Project



Mutooroo Magnetite Project Muster Dam Resource

An infrastructure-rich environment, 80km southwest of Broken Hill on the SA-NSW border. Scoping study based on an initial inferred resource at Muster Dam nearing completion.

An Inferred Resource of 1.5 Billion Tonnes @ 15.2% DTR and 18.0% Fe (head grade) at 10% DTR cut-off capable of producing 228 Mt of 70% Fe in magnetic concentrate.

(not including haematite component which comprises 35% of the Fe mineralisation)





Mutooroo Magnetite Exploration Target

Target Area	Bands	Strike (km)	Thickness (m)	Volume (B m³)	Tonnage (B t)
Muster South	1	1.7 to 2.3	80 to 120	0.05 to 0.1	0.15 to 0.3
Muster Catch	2	1.7 to 2.3	80 to 150	0.05 to 0.12	0.15 to 0.3
Duffields 1	1	4.5 to 5.0	150 to 450	0.3 to 0.65	1.0 to 1.9
Duffields 2	2	1.5 to 2.5	80 to 100	0.05 to 0.08	0.15 to 0.2
Surrender Dam	4	3.0 to 3.5	80 to 150	0.1 to 0.17	0.3 to 0.5
Peaked Hill	1	1.0 to 1.2	40 to 60	0.015 to 0.025	0.05 to 0.08
Peaked Hill West	1	1.0 to 2.0	50 to 100	0.03 to 0.06	0.09 to 0.18
Pegline Dam	1	1.0 to 1.5	120 to 230	0.07 to 0.1	0.2 to 0.3
Red Dam	1	0.8 to 1.0	120 to 230	0.055 to 0.07	0.15 to 0.2
475000 44	80 000	485000	490,000	0.7 to 1.4	2.2 to 4.2



Exploration Target of 2.2 to 4.2 Bt at 15 – 18% DTR

plus 1.5 Bt Muster Dam Resource

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Mutooroo Magnetite Project Muster Dam Resource

Further metallurgy on potential for additional hematite extraction



Petrological Observations – MDD005 200m

- Mag and Hm occur as monomineralic particles free of inclusions in 60:40 ratio
- Bonding of oxide grains to rock gangue is weak indicating easy liberation
- Av. visual magnetite grainsize 25-60um indicating grindsize of <45um to liberate grains
- No evidence of martitisation of magnetite or complex intergrowths that are a result of secondary hm replacement of magnetite







Highlights of 2012

Corporate

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Development

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Exploration

- Copper Lake, Nova Scotia (Cu-Au)
- Cloncurry, FNQ (Cu-Au)
- Gawler Craton, SA (Cu-Au)
- Border, SA (Cu-Au)
- Stavely, Victoria (Cu-Au)
- Arthurville, NSW (Cu-Au)

Nova Scotia IOCG Project



Drill testing a gravity target adjacent to historic copper mines at Copper Lake with a single drillhole to 547m.

Support through Nova Scotia Mineral Incentive Program





Nova Scotia IOCG Project

Drill hole intersected repeated intervals of intense silica-sericite alteration accompanied by swarms of quartz-haematite, quartzmagnetite and quartz-carbonate veinlets and associated iron sulphides.

The cumulative effect of alteration and vein swarms is believed to account for the gravity anomaly.

Gold, copper, silver and the rare earth elements cerium and lanthanum are anomalous but no values of economic significance were returned.



Cloncurry, Qld, IOCG Projects



JOGMEC JV

♦ 500km² tenement package north of Ernest Henry

- ♦ JOGMEC spending \$4M to earn 51%
- Incl. target generation and drill testing at COTSWOLD and CORMORANT

MEP 100%

- Another 3,000km² of tenure around Ernest Henry, Osborne & Eloise
- All tenements are under thin (<200m) but highly conductive cover. Innovative geophysical techniques refined to "see through" ultraconductive cover
- A range of geophysical surveys currently underway to define next tier of drill targets





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JOGMEC JV

Cotswold is an 'Ernest Henry' Cu-Au EM look alike (a similar high-amplitude magnetic anomaly, 25km to south-east)

Cormorant is an 'Eloise' style magnetic linear feature. Cormorant confirmed as a significant mineralized structure with copper grades of up to 3.4% in individual assay intervals



Cotswold:

- Cotswold Anomaly proven to be an Ernest Henry – style disseminated mineralisation target with average copper assay of 0.11% recorded over the entire 315m down-hole drill intercept.
- Cotswold represents a very significant copper-mineralised system warranting further investigation.
- A suite of new geophysical surveys are planned to focus more intently in and around this complex.







New regional targeting based on innovative geophysics including latest JOGMEC squitem system underway





TYPE A RATION

Osborne Area



Osborne Area

Historical drillholes greater than 100m depth





Osborne Area

+3,000 km2 of tenements being granted.

Initial target generation from available geol/geophys/geochem data including Falcon Airborne Gravity. Selected targets to be further geophysically probed.

Note: Osborne style mineralisation is not directly coincident with magnetic or gravity centres.



Gawler Craton IOCG Projects

Southern GRV (Minotaur 20-30%) Spencer Resources focused on epithermal gold, silver and base metal mineralisation similar to Paris Silver (Investigator Resources) and Menninnie Dam (Terramin).



Spencer has completed VTEM survey from which an exciting cluster of targets has emerged (see Spencer Resources ASX

Legend

mtdouble v

<all other</p> Rating Hic

\$ Events

South Australia IOCG Projects



South Australia IOCG Projects

Central GRV: IOCG and Epithermal Gold-Silver potential at the base of the GRV pile. Need to explore through thin GRV cover targeting fractures and intrusive domes below. (GRV fronts in yellow)



South Australia IOCG Projects

Southern GRV margin: Setting for Paris Ag and Menninnie Dam Ag-Pb-Zn mineralisation styles



Border Project with Sumitomo - Copper- Gold Targets South Australia

Ongoing regional targeting





Border Project Catch Dam - Copper- Gold Target



Victoria Cu-Au Project

The volcanic arc sequences of western and central Victoria are structurally dismembered and largely masked by younger cover, either Murray Basin stratal sequences or flat lying Quaternary basalts. Small windows of exposure in the Ararat area have lead to the discovery of a number of copper and gold deposits. Two new tenements in western Victoria have now been granted over largely masked sequences of the Mount Stavely Volcanic Complex– Chatsworth and Lexington

The Mount Stavely Volcanic Complex has been geochemically correlated with the Cambrian Mount Read Volcanics of western Tasmania, a prolifically mineralized area, hosting the polymetallic base metal plus gold deposits at Rosebery, Mt Lyell, Hercules, Que River and Hellyer.

These deposits are zinc and lead - rich. Recent discoveries in the Stavely Zone indicate similar, though more copperrich, styles.



Victoria Cu-Au Project - Chatsworth



Parallel belt to the Mt Stavely Volcanic hosted Thursday Gossan, Junction, Wickliffe prospects (Porphyry and VHMS Cu-Au)

Thursday Gossan Prospect (10.6Mt @ 0.45% Cu), the Junction Prospect (best intercept 35m @ 3.9% Cu)

Under-explored, and largely under thin basalt cover



Victoria Cu-Au Project - Lexington



Mt Stavely Volcanic complex as footwall to the Moyston Fault and overthrust zone of besshi style fore-arc volcanics.

Ararat Copper Prospect (700,000 t Cu@ 2.7%Cu, 0.8 g/t Au)



Victoria Cu-Au Project - Lexington



Arthurville, NSW Cu-Au Project



Cloncurry

Joint Venture between Minotaur Exploration, Mitsubishi Materials Corporation and Mitsubishi Corporation to explore for porphyry style copper-gold in the Molong Volcanic belt of the Lachlan on Arthurville tenement.

Minotaur holds 100% of Wallaby Creek tenement.



Arthurville, NSW Cu-Au Project

Airborne (VTEM) survey over key geological sectors integrated with geology, magnetics and outcrop alteration indicators provides the initial target prioritisation tools

Ground geophysical follow-up about to

commence







Arthurville, NSW Cu-Au Project

Example Target A101: A significant VTEM response on two lines (180m apart)

Magnetic data indicate the target is adjacent to a demagnetised zone within a regional magnetic high – a signature often associated with porphyry copper deposits.



MEP Facts as at 30 September

Market Capitalisation @ 18c	\$19 million
- Cash in Bank	\$12 million
- Value of Investments in ASX listed explorers	\$4 million
- Enterprise Value	\$3 million
Issued Capital	104 million
1 Year Price Range	\$0.12 - \$0.26
Substantial Shareholders	
Oz Minerals	7.8%
Newmont	5.1%





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Competent Person's Statement

Information in the foregoing presentation that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr A. P. Belperio, who is a Director and full-time employee of the Company and a Fellow of the Australasian Institute of Mining and Metallurgy. Dr A. P. Belperio has a minimum of 5 years experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking, 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 A. P. Belperio consents to inclusion in the presentation of matters based on his information in the form and context in which it appears.