



Yandera Community

# Marengo Mining Limited

## March 2010 Quarterly Activities Report

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[www.marengominig.com](http://www.marengominig.com)

ASX/POMSoX Share Code: MGO  
TSX Share Code: MRN

### HIGHLIGHTS

#### YANDERA COPPER-MOLYBDENUM-GOLD PROJECT

##### Exploration

- Resource drilling at Imbruminda Zone intersects significant copper, molybdenum and gold mineralisation, including:

395 metres @ 0.46% Cu (including 213 metres @ 0.61% Cu & 0.32 g/t Au)

108 metres @ 0.51% Cu & 0.28 g/t Au

36 metres @ 0.50% Cu

42 metres @ 714 ppm Mo

Deep drilling program commenced at Imbruminda with a 1000 m depth capacity rig.

- Interpretation of airborne survey identifies new targets and further defines existing targets.

##### Definitive Feasibility Study (DFS)

- DFS on track for completion in December 2010
- Contract let for full hydroelectric study
- Bathymetric survey completed for Deeps Sea Tailings Placement

##### Corporate

- Canadian Preliminary Short Form Prospectus lodged since the end of the quarter.
- Appointment of Craig McGown as Vice President – Corporate Development
- Cash balance at quarter end of A\$12.35M (C\$11.6M)



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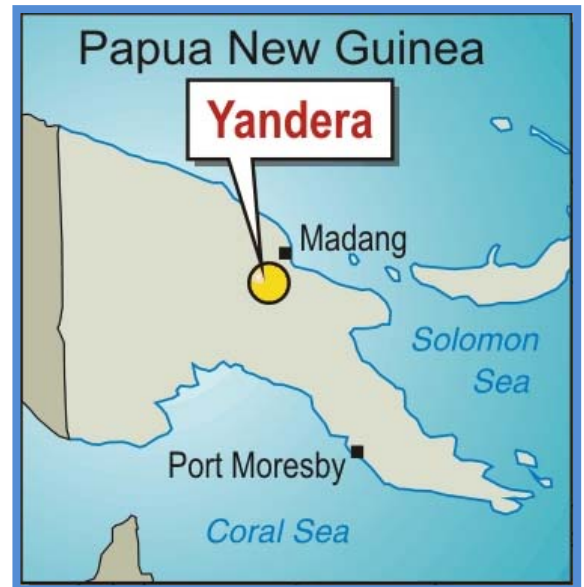
## ABOUT MARENGO MINING

Marengo Mining Limited is an Australian-based metals company focused on the development of its 100%-owned Yandera Copper-Molybdenum-Gold Project in Papua New Guinea (PNG).

With its headquarters in Perth, Western Australia, Marengo listed on the Australian Securities Exchange on November 13, 2003 and subsequently on Papua New Guinea's POMSx on November 10, 2006. Marengo reinforced its global development strategy with the successful completion of a listing on the Toronto Stock Exchange in April 2008.

Since 2007 Marengo has successfully raised A\$68 million, underpinning the current Definitive Feasibility Study and exploration programs, on the Yandera Project.

For current resource estimates for the Yandera Project refer to the Company's website ([www.marengominig.com](http://www.marengominig.com))



## Exploration

### Drilling

The drilling campaign during the first part of 2010 has concentrated on developing the high grade zones around the Imbruminda zone (refer Fig 2). A prolonged and intense wet season has stifled progress, however results from four resource holes were obtained during the quarter. In all of these holes, elevated gold grades were noted, together with good zones of consistent copper and molybdenum intersections being encountered.

#### **YD246 (Imbruminda) -65° dip @ 215° mag – depth 413.10 m**

This hole was drilled on the site of historical hole, DDH100, which was vertical. YD246 was designed to follow up on high grade intersections encountered in the Imbruminda area and to provide continuity in the geological model. Mineralisation starts at 72 m with veined copper oxide, and chalcocite. Bornite + chalcopyrite + molybdenum occur as fracture filling, veins and along structures.

The following assay results were obtained for this hole:

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au g/t	Ag g/t	CuEq %
72	108	36	0.50	35	0.18	1.91	0.54
138	180	42	0.44	714	0.16	2.61	1.15
In addition there is a noteworthy Au intersection at the top of this hole:							
3	81	78	0.26	4	0.32	0.46	0.22

$$\text{CuEq\%} = \text{Cu\%} + [\text{Mo\%} \times 10]$$

#### **YD247 (Imbruminda) -70° dip @ 220° mag - depth 405.40m**

This hole was sited on the pad of YD116 (drilled in 2006), and as with YD246 was designed to follow up on the high grade zone. The following assay results have been obtained, and it is particularly worth noting the overlapping nature of these polymetallic intersections:

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au g/t	Ag g/t	CuEq %
102	174	72	0.46	154	0.29	1.93	0.61
219	327	108	0.51	118	0.28	2.58	0.63
Of note is the Mo content of the following intersection:							
54	120	66	0.32	314	0.27	1.29	0.64

$$\text{CuEq\%} = \text{Cu\%} + [\text{Mo\%} \times 10]$$

#### **YD248 (Imbruminda) -70° dip @ 220° mag - depth 452.60m**

As with YD246 & 247, YD248 was designed to test the Imbruminda high-grade zone and was located on the drill pad of YD212, drilled in 2008. Logging of this hole has indicated an oxide zone down to ca 40 m (down hole) with chrysocolla and cuprite. Covellite occurs in a mixed zone down to 81 m. The following assay results have been obtained from YD248:

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au g/t	Ag g/t	CuEq %
45	174	129	0.36	130	0.25	1.98	0.49
<b>Within this broad intersection the following higher grade zone can be recognised:</b>							
132	174	42	0.45	198	0.38	2.38	0.65
The top of this hole is marked by following Au only intersection:							
3	45	42	0.13	12	0.43	0.49	0.14

$$\text{CuEq\%} = \text{Cu\%} + [\text{Mo\%} \times 10]$$

**YD258 (Imbruminda) -65° dip @ 210° mag - depth 461.70m**

This hole continues the strategy of testing the Imbruminda high grade zone. The first 57 m of this hole are weathered with the occurrence of malachite and Iron oxides as fracture fill. Chalcocite is found from 75 m to 185 m in fractures, whilst chalcopyrite and bornite occur from about 160 m in veins and disseminations. Molybdenite was noted in veins and fracture in-fills from 180 m to the end of hole.

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au g/t	Ag g/t	CuEq %
162	321	159	0.38	221	0.23	1.73	0.60
Within this broad zone the following higher grade intersections are noteworthy:							
183	243	60	0.39	344	0.30	2.04	0.73
279	303	24	0.57	169	0.21	2.10	0.74

CuEq% = Cu% + [Mo% x 10]

**YD 259 (Imbruminda) -700 dip @ 2200 mag – depth 401.30m**

This hole continues to test the Imbruminda zone and intersected a significant zone of mineralisation within multiple porphyry intrusives, well fracture filled with bornite and chalcopyrite and some molybdenite. Copper mineralisation is good throughout the hypogene zone, with good bornite mineralisation contributing to elevated copper assays of +1%.

The bottom sample (399m – 401m) returned 0.7% Cu however the rig was unable to drill further.

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au g/t	Ag g/t	CuEq %
6.00	401	395	0.46	73	0.20	2.24	0.53
6.00	219	213	0.61	92	0.32	2.92	0.70
Included are the following intersections:							
33	87	54	0.50	35	0.47	2.93	0.54
87	219	132	0.71	131	0.26	3.23	0.84

CuEq% = Cu% + [Mo% x 10]

Drill holes YD249 to YD257 (inclusive) are engineering holes and have not been assayed to date.

In addition to these positive drilling results from the Imbruminda area, further holes to fully test the Dimbi and Tumuanogoi zones have been planned. This is a necessary follow up to the broad zone of mineralisation encountered in YD245 and reported in the December 2009 Quarterly Report.

The end of this quarter has also seen the mobilization to site of a larger rig that will enable the company to carry out deeper drilling, initially at the Imbruminda zone. This depth testing will be in the form of vertical holes of some 1000 m in depth, where previous resource holes have terminated in mineralisation (refer Fig 1).

**Figure 1.  
Yandera Central – Long Section**

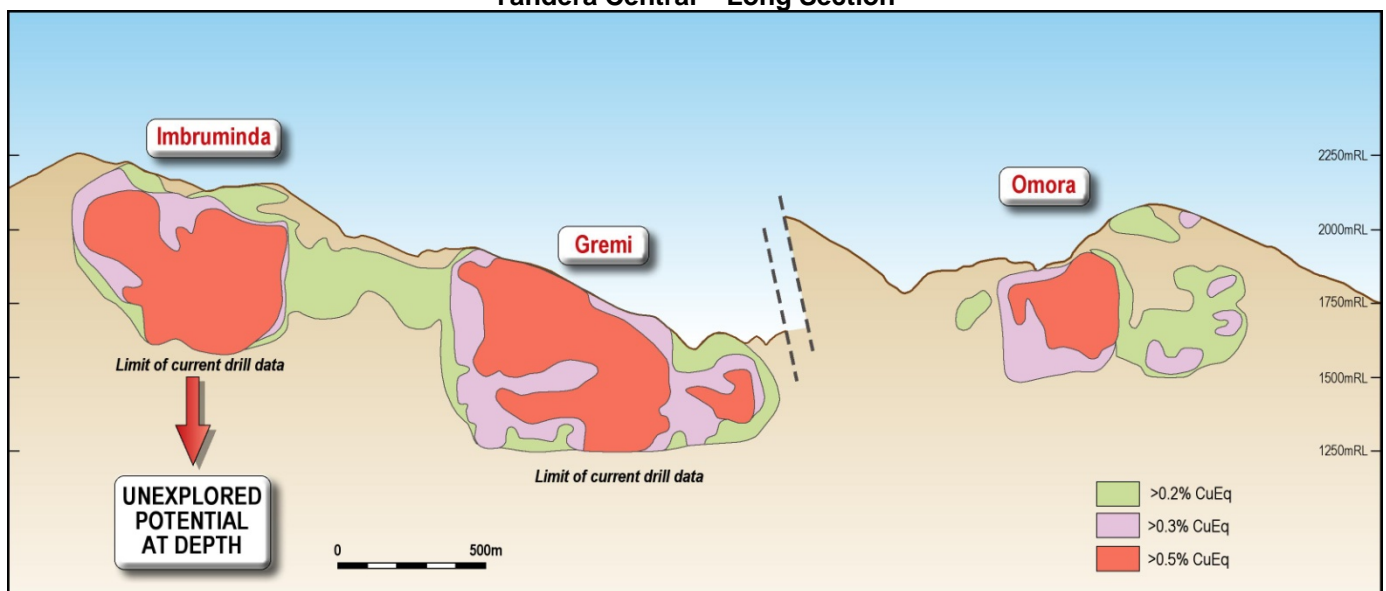
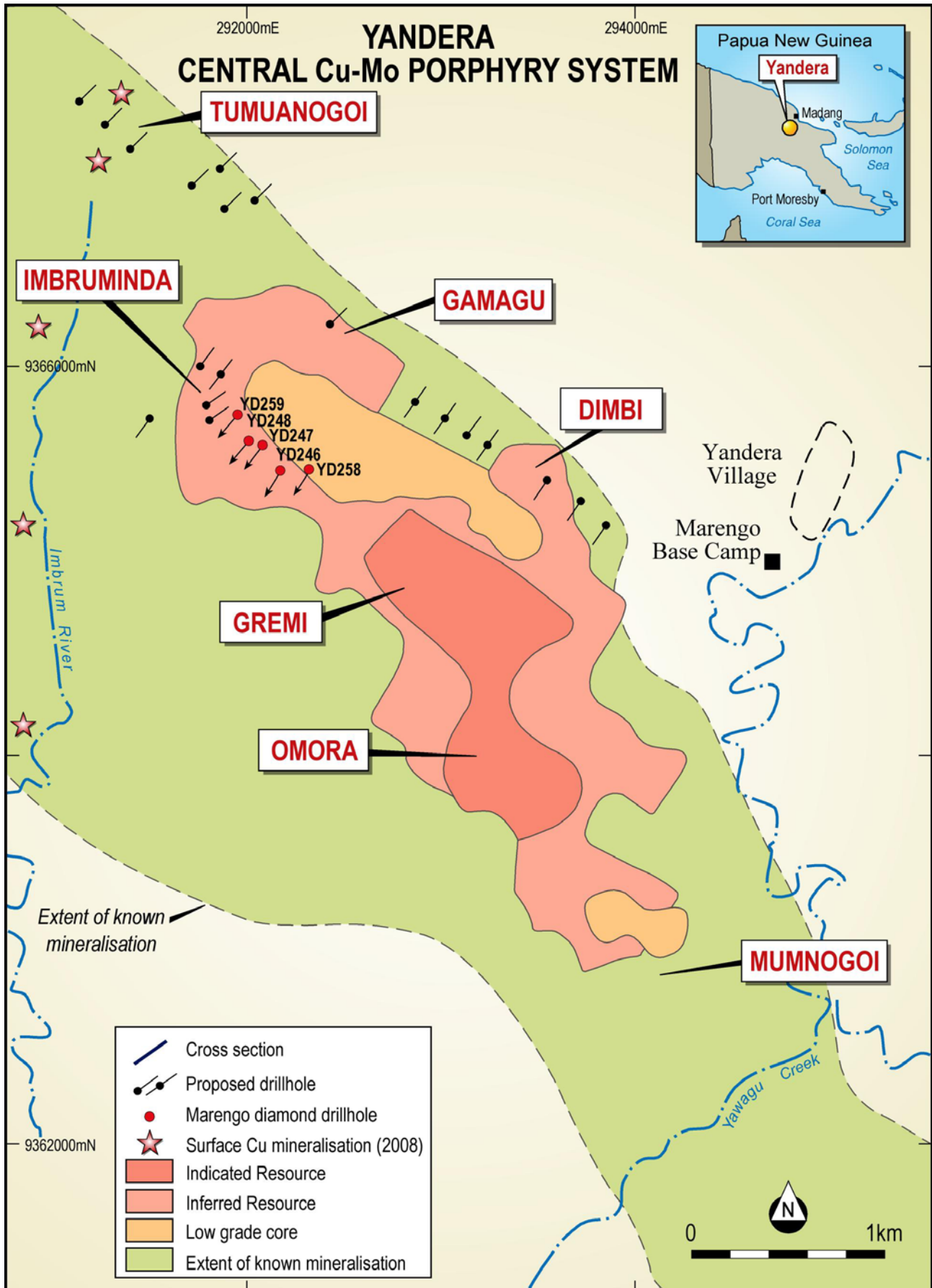


Figure 2.  
Yandera Central Porphyry



## Regional Exploration

The results of the airborne magnetic and radiometric survey flown for Marengo Mining by UTS Aeroquest during November-December 2009 have now been fully processed and interpreted (Fig 3). The interpretative work has highlighted the importance of the structural evolution of the area in focussing fluid flow and magmatism, in particular the interplay between ENE-WSW structures with prominent NW-SE orogen parallel structures. Similar structural features related to porphyry mineralisation are already well-known in South America.

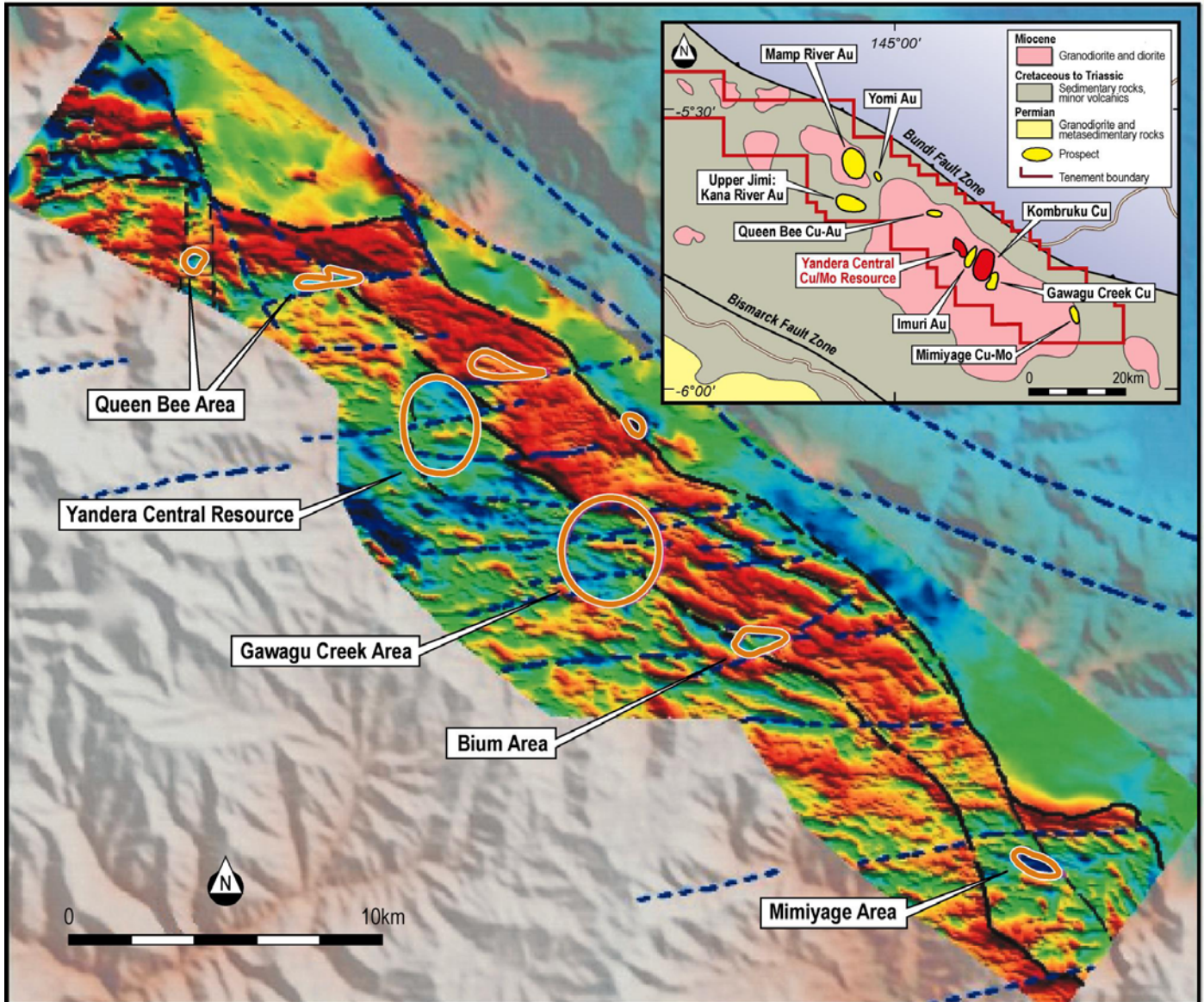
Additionally, comparison of the two datasets has allowed the company to identify a batch of exploration targets fairly local to the Yandera Central Resource. Two targets fall within the Queen Bee area associated with N-S and WNW-ESE faulting. The Yandera Central Resource is clear, mantling a conspicuous magnetic low. Another target to the north of this may well represent an extension of the Dimbi mineralisation to the NE. Directly to the east of the Yandera Central Resource is another very obvious magnetic low associated with the Bundi fault zone. Reconnaissance mapping slightly to the NW of this magnetic low has reported mineralisation, however the principal anomaly has yet to be investigated.

The Gawagu Creek area is of interest due to the density of ENE-WSW structures running through that area with several magnetic lows. A similar setting can be found in the Bium area. Finally, there is a prominent magnetic low in the far SW of the area around Mimiyaage, which also corresponds with elevated potassium/thorium over that area pointing to the possible presence of zones of argillic alteration.

The company has also initiated a reappraisal of the IP dataset obtained during the latter half of 2009, which was carried out over the Kombruku area. This work has made great use of the newly acquired airborne data. The positive outcome of this study has been to identify a possible porphyry target at depth that did not show up in the previous interpretation and hence was not drilled in last year's campaign. Future exploration activities in this area will focus on this feature.



**Figure 3.**  
**Yandera Project – Airborne Geophysics**



## Definitive Feasibility Study

A series of financial modelling and mine planning exercises conducted during the quarter have revealed a number of favourable scenarios for the Yandera Cu-Mo-Au Project. The optimum scenario sees the initial life of mine pushed out to approximately twenty years, with an initial ten year higher grade mining sequence. Further work currently being undertaken is expected to confirm this.

The geotechnical test drilling commenced in mid-January as part of the season's commencement of field activities. Two drill rigs undertook pit slope investigations which will determine safe pit wall angles within the different geological domains encountered within the open pits. Hydrogeological packer testing will be performed in most of these holes. One of these drills also tested the proposed comminution site for foundation geotechnical investigations. This is to determine the suitability of the site for the siting of heavy vibrating equipment such as crushers, screening plant and ball mills. Some of these holes will be equipped for water level monitoring for hydrogeological purposes.

During the current quarter, a smaller drill rig will examine buildings and infrastructure sites around the proposed minesite, and then will be moved into the Ramu Valley to test a number of power plant sites. It will later be moved near the coast to test the proposed concentrator, tailings and port sites. Some hydrogeological monitoring will be performed for engineering and environmental reasons.

The Deep Sea Tailings Placement (DSTP) bathymetric survey was completed by the middle of February. The data was sent to Australia where it has undergone digital modelling and GPS extrapolation, to produce sea floor imagery to determine possible locations for DSTP outfalls. Oceanographic monitoring equipment has been sent from the

United States for set-up, and is expected to be deployed into Astrolabe Bay during the current quarter. As required under PNG environmental legislation, the monitoring will take place over a minimum duration of twelve months.

Further examination of in-pit crushing and conveying (IPCC) concepts, have resulted in several additional introductory meetings with consultants with relevant experience. This is paving a foundation for the progress of this study which is to be included as a possible component in implementation. Many bulk mining operations are embracing IPCC applications to reduce operating costs.

Planning for the bulk sample collection, for use in the pilot plant test program, is well under way. The selected option is for the construction of an exploration adit. Approval from the PNG Mineral Resources Authority is awaited, prior to awarding the management to one of four contractors who have submitted quotations. A local mining consultant has been engaged on Marengo's behalf to assist with prior planning and the site management of during implementation.

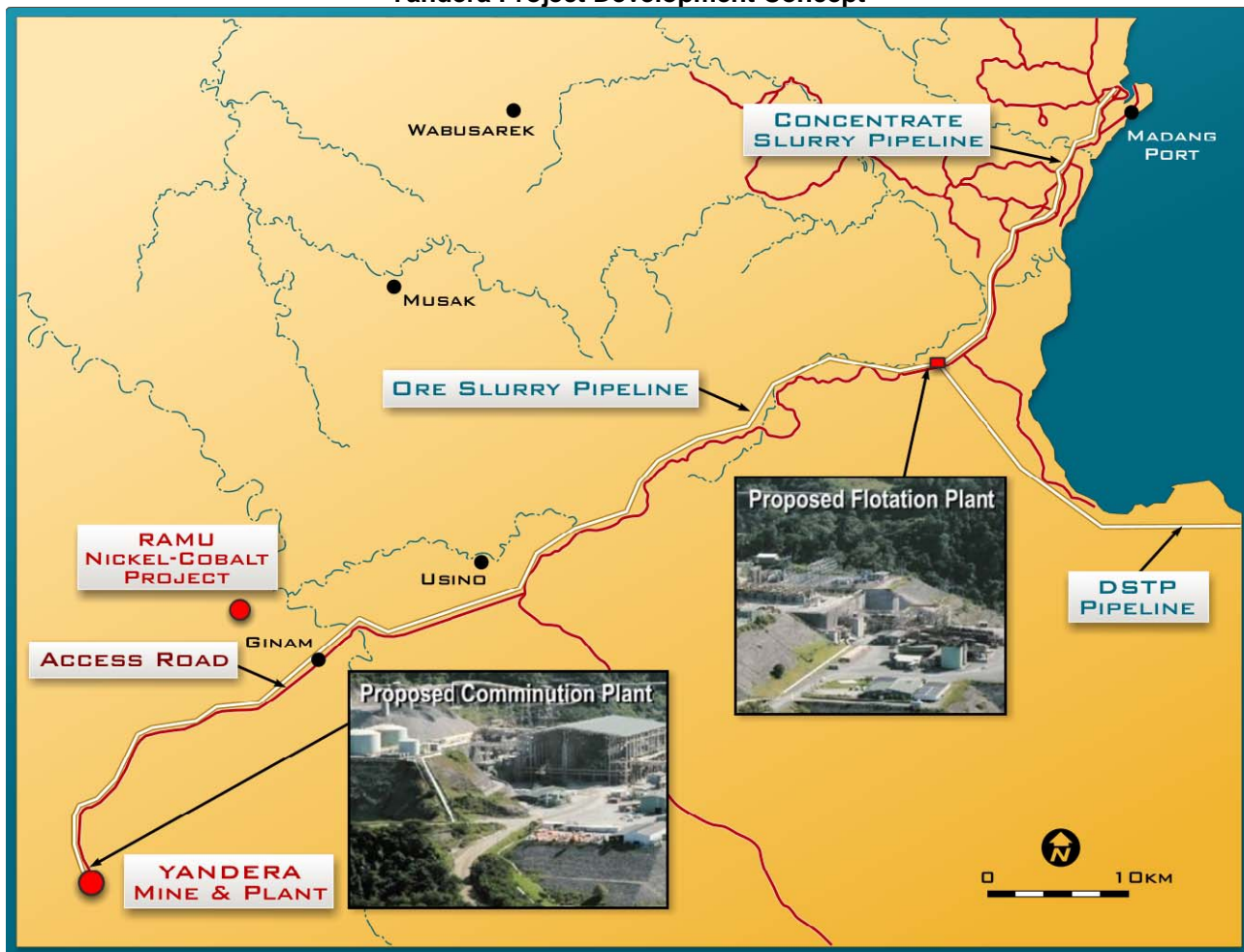
Following the favourable outcomes of the "The Imbrum II Hydroelectric Project (HEP) Power Augmentation Report" late in 2009, the Snowy Mountain Engineering Company (SMEC) has been awarded a contract to complete a study to DFS level, to coincide with the completion of the Yandera DFS in December of this year. Hydroelectric power is an important inclusion into the Yandera Project DFS and its ultimate implementation would be a significant economic contributor, and an important leverage point for the project.

Further investigations of potential near-coast concentrator sites were conducted during the quarter and although the area has experienced an unusually wet season, making access difficult, a number of suitable sites have been identified.

Further access road design was performed during the quarter and final designs, and cost modelling are expected by mid-year. This will also coincide with completion of the mine office, service and accommodation buildings component of the DFS.

Numerous meetings were held with various government (national and provincial) individuals and departments, contractors and suppliers over the quarter.

**Figure 4.**  
**Yandera Project Development Concept**



## Community Matters



Marengo continues to maintain excellent relationships with communities at and around Yandera.

### **Landowner Association**

During the quarter the Yandera Project Landowner Association (LOA) constitution was registered by the National Government authorities. It is anticipated that local elections will shortly be held for office bearers under the supervision of Provincial Government officers.

The Company's community relations team continue to engage with local communities to provide them with updates on Marengo's activities and future plans. These visits give local residents an opportunity to ask questions or put forward suggestions regarding the Company's activities.

### **Health, Safety & Environment**

Marengo is committed to providing a safe and healthy workplace, and continues to take steps to ensure that this is practised at all levels, within the Company. It is pleasing to report that during the quarter the Yandera site continued to operate without any serious work injuries.

The Yandera site employs health professionals to ensure that site staff receive immediate attention resulting from any injuries or health issues, should they occur. Since implementation this facility has expanded to provide general medical assessment and initial treatment to local communities. More substantial medical treatment is provided by government officers at regional centres and in emergency situations Marengo provides helicopter evacuation.

At all times Marengo aims to operate to world class environmental standards and continues to operate without any significant effect on the environment or local communities.



### Canadian Preliminary Short Form Prospectus Filed

Subsequent to the end of the quarter the Company announced that it had filed and received a receipt for a preliminary short form prospectus with the securities regulatory authorities in the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick and Nova Scotia, in connection with a best efforts offering of units of the Company consisting of ordinary shares and subscription receipts convertible upon shareholder approval for issue of the underlying shares (the "Offering").

The Company intends to use the net proceeds from the Offering to finance its district exploration program at the Yandera Project, the DFS and for general working capital purposes.

The Offering is being led by Paradigm Capital Inc, with a syndicate comprising Fraser Mackenzie Limited. Final pricing and determination of the number of ordinary shares to be sold pursuant to the Offering will be determined in the context of the market immediately prior to the filing of the final short form prospectus in respect of the Offering.

Completion of the Offering is subject to receipt of shareholder approval to the issuance of the ordinary shares underlying the subscription receipts sold pursuant to the Offering, in accordance with the applicable listing rules of the Australian Securities Exchange, the approval of the Toronto Stock Exchange and applicable securities regulatory authorities

A shareholder meeting to seek the above approval has been set for 11.00 am (WST) on Monday, 31 May 2010 and will be held at Level 2, 9 Havelock Street, West Perth, Western Australia.

### Senior Appointment: Craig McGown, Vice President – Corporate Development



The Company is pleased to announce that since the end of the Quarter it has appointed Mr Craig McGown to the newly created position of Vice President - Corporate Development.

Mr McGown has more than 35 years experience in corporate finance, covering mergers and acquisitions, capital raisings in both domestic and international financial markets, asset acquisitions and asset disposals, initial public offerings and corporate restructurings.

He holds a Bachelor of Commerce degree from the University of Western Australia, is a Fellow of the Institute of Chartered Accountants and an Affiliate of the Financial Services Institute of Australasia (FINSIA).

Mr McGown has significant experience with capital raisings in both domestic and foreign financial markets and has been involved in many successful capital raising transactions. Mr McGown has also served on the boards of a number of listed and unlisted companies including Resource Finance Corporation Limited as an executive director, as the executive chairman of Perth based stockbroker, DJ Carmichael Pty Limited, and a director of New Holland Capital.

With the Yandera Project DFS due for completion in December 2010, Mr McGown will assist the Company in developing and implementing funding strategies for the future development of the Project

### Cash Reserves

At the end of the quarter the Company had cash at bank of A\$12.35 (C\$11.6M).

A handwritten signature in black ink, appearing to read 'Les Emery', written over a horizontal line.

**Les Emery**  
**Managing Director / CEO**  
**27 April 2010**

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For further information:

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## NOTES

Certain statements in this report contain forward-looking information. These statements address future events and conditions and, as such, involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the statements. Such factors include, among others, the results of future exploration, risks inherent in resource estimates, increases in various capital costs, availability of financing and the acquisition of additional licences, permits and surface rights. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date the statements were made, and readers are advised to consider such forward looking statements in light of the risks set forth in the company's continuous disclosure filings as found at [www.sedar.com](http://www.sedar.com)

Scientific and technical information in this report including that relating to drilling intercepts and mineralisation but excluding the Yandera resource estimate were prepared by Mr Peter Dendle. Mr Dendle is a member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Marengo Mining Limited. Mr Dendle has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which 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 (The JORC Code, 2004 Edition). Mr Dendle is also a "Qualified Person" as defined by National Instrument 43-1-1 "Standards of Disclosure for Mineral Projects" ("NI 43-101") Mr Dendle verified the data underlying the information in this report prepared by him.

Except to the extent not set out herein, for a (i) summary description of rock types, geological controls and dimensions of mineralised zones, and the identification of any significantly higher grade intervals within a lower grade intersection; (ii) a summary of the relevant analytical values, widths and, to the extent known, the true widths of the mineralised zones; (iii) a summary description of the geology, mineral occurrences and nature of the mineralisation found; and (iv) a summary description of the type of analytical or testing procedures utilized, sampled, sample size, the name and location of each analytical or testing laboratory used and any relationship of the laboratory to the issuer please refer to the Company's technical report filed on SEDAR and dated November 9, 2007. There is no drilling, sampling, recovery or other factors that could materially affect the accuracy or reliability of the data referred to below.

Mr Dendle consents in writing to the issue of this report, to the extent of matters based on his information in the form and context in which it appears.

**DIRECTORS**

John Horan  
*Chairman*

Les Emery / CEO  
*Managing Director*

Doug Dunnet  
*Non-Executive Director*

Sir Rabbie Namaliu  
*Non-Executive Director*

Susanne Sesselmann  
*Non-Executive Director*

John W Hick  
*Non-Executive Director*

Elizabeth Martin  
*Non-Executive Director*

**COMPANY SECRETARY**

John Ribbons  
*Company Secretary & CFO*

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**STOCK EXCHANGE LISTINGS**

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Papua New Guinea – POMSoX

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MGO

**TSX CODE**

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