



# Quarterly Report

for the period ending 30 June 2007



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

Share Code: MGO  
Option Code: MG00

- 📍 **Conceptual Mining Study completed for Yandera Copper – Molybdenum Project shows an initial 10 year mine life producing separate copper and molybdenum concentrates**
- 📍 **Board commits to proceed with Bankable Feasibility Study for Yandera Project**
- 📍 **Updated resource estimate for Yandera Project completed with a 78% increase on the previous estimate**
- 📍 **Drilling at Yandera continues to intersect broad zones of mineralisation, including:**
  - **99 metres @ 0.51% Cu, 145ppm Mo (0.65% Cu Eq) – including 12 metres @ 1.24% Cu, 319ppm Mo (1.56% Cu Eq)**
  - **90 metres @ 0.54% Cu, 221ppm Mo (0.76% Cu Eq)**
- 📍 **Since quarter end a A\$15 million share placement (including North American investors) has been announced**



*Working to unlock the mineral treasures of Papua New Guinea*

**PNG – PROJECT LOCATION MAP**  
Figure 1



**YANDERA PROJECT, MADANG PROVINCE, PNG**

(MARENGO MINING LIMITED – 100%)

**Conceptual Mining Study**

Since the end of the quarter the completion of a Conceptual Mining Study (“CMS”) has been announced.

The CMS, which commenced in October 2006, has confirmed that the Yandera Project has the potential to become a significant open pit copper-molybdenum mine. On the basis of the positive outcomes of the CMS, Marengo’s Board has committed to proceed with a Bankable Feasibility Study (“BFS”) on the Yandera Project.

**Summary**

Key outcomes of the Yandera Project CMS include:

- a conceptual open pit encompassing 406Mt to underpin an initial 10-year mine life;
- initial mining rate of 25Mtpa for the first two years increasing to 40Mtpa;

- production of 112,000t and 88,000t of contained copper for the first two years, increasing to an average of 124,000tpa from the third year onwards.
- production of 4,200t of contained molybdenum for the first two years, increasing to an average of 6,700tpa from year three onwards.
- initial US\$942M capital cost estimate with additional US\$198M to complete the ramp-up to 40Mtpa;
- forecast cash operating costs of US\$10.09/tonne (US\$0.75/lb) for the first two years, and US\$9.09/tonne (US\$0.86/lb) at 40Mtpa;
- strong economic parameters using a copper price of US\$1.50/lb and molybdenum price of US\$15.00/lb.

The CMS has confirmed the potential of the Yandera Project to become a very significant strategic source of copper and molybdenum production in global terms, with a successful development expected to generate substantial value for Marengo shareholders and the nation of PNG.

## Study Parameters

The study has examined a number of production options for mining and processing potential ore from 20 Mtpa to 40 Mtpa for an initial mine life of 10 years. Given the substantial mineral resources previously reported, the mine can be expected to continue operation well beyond 10 years.

Benchmark Commodity Prices ("BCP") used in the CMS has been set at US\$1.50/pound for copper and US\$15.00/pound for molybdenum oxide (US\$22.50/pound of molybdenum metal).

The CMS has determined that optimum mining rates for the first 10 years of production will commence at 25Mtpa for the first two years followed by an increase to 40 Mtpa for the next 8 years). This increase in throughput could be deferred in the event of metal prices being greater than the BCP and/or further drilling delineating additional zones of higher grade ore.

However, regardless of these events, an increase in throughput in Year 3 of operations may be implemented to maximise project cashflows.

## Key Parameters

Item	US\$
Copper	1.50/lb
Molybdenum Oxide	15.00/lb
Molybdenum Metal	22.50lb
Fuel Cost	0.80/Litre
Power Cost	0.048/kWhr
Operating Cost 25Mtpa	10.09/t
(Mining and Processing)	0.75/lb
Operating Cost 40Mtpa	9.09/t
(Mining and Processing)	0.86/lb
Waste : Ore Strip Ratio	2.7

## Production Statistics

Year	1	2	3 - 10
Tonnes	25Mtpa	25Mtpa	40Mtpa
Copper %	0.52	0.41	0.36
Molybdenum %	0.02	0.02	0.02
Cu Eq %	0.72	0.61	0.56

Year	Production Year (tonnes x M)	Contained Copper (tonnes x 000's)	Contained Copper (pounds x M)	Contained Molybdenum (tonnes)	Contained Molybdenum (pounds x M)
1	25	112	246	4,200	9
2	25	88	194	4,200	9
3-10	40	124	273	6,700	15

**Note:** Based on mill recovery of 86% for copper and 84% for molybdenum

## Capital Costs

Planned Expenditure		US\$M	Planned Production
Years -1 & -2	Initial Construction	US\$942M	25Mtpa
Year +2	Upgrade	US\$198M	25Mtpa
Year +3	Total =	US\$1,140M	40Mtpa

### Major Components of Capital Costs: 25Mtpa

Items	US\$M
Process Plant	356
Railway (Ore Haulage), Rolling Stock, Bridges, Loading/Unloading facilities	224
Shiploader/Jetty	63
Housing / Townsite (processing plant & minesite)	43
Conveyor to Loadout Stockpile (railhead)	34
First fill reagents /fuel etc	33
Mine Roads/Shovel Pits/Waste Dump	24
Engineering Project Construction Management	28
Power Reticulation	20
Access Roads	16

A significant component of the capital cost is the construction of a railway line and provision of rolling stock and ore loading and unloading facilities. The railway line will transfer ore over a distance of some 100km from the Ramu Valley to a coastal site near Madang where the processing facility would be located.

The rail installation is designed on Australian National Railway construction criteria and during the next stage of development a major focus will be on achieving significant cost reductions. In addition the Company will investigate options for the separate funding of this infrastructure from a number of sources, including organizations which provide infrastructure funding for developing nations.

#### Mineral Resources

The CMS was based on the previously announced Mineral Resources, (refer ASX release 22 May 2007) which comprises;

**Indicated Resource        163 Mt @ 0.34 % Cu  
& 0.015 % Mo (0.49 % Cu Eq.)**

**Inferred Resource        497 Mt @ 0.34 % Cu  
& 0.013 % Mo (0.48 % Cu Eq.)**

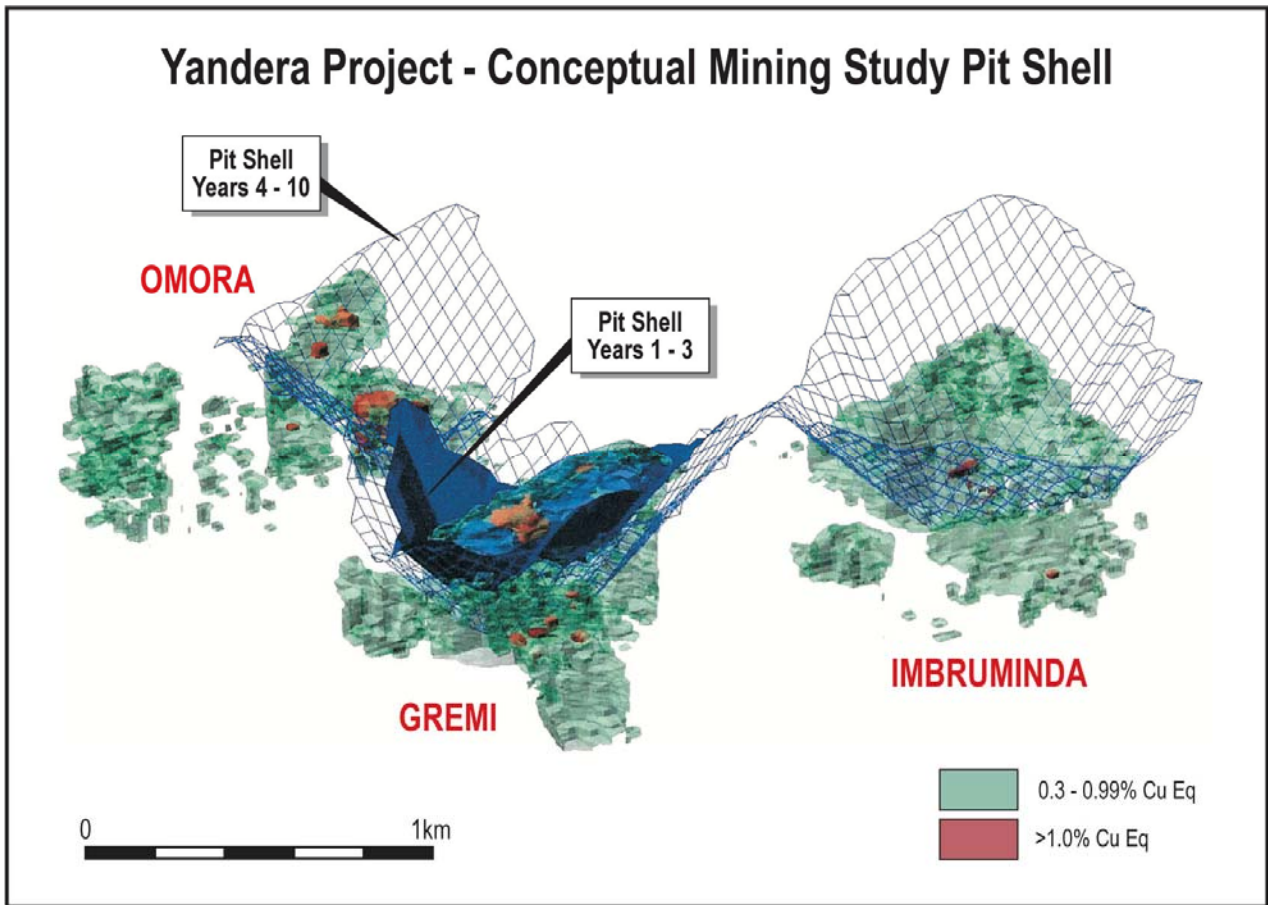
The CMS mining plan is based on a Whittle open pit optimisation of the current resource and includes indicated, inferred resources and extrapolated material totalling 406Mt. The conceptual mining schedule is;

Year	Tonnes	Copper (%)	Molybdenum (%)	Copper Eq. (%)
1	25,000,000	0.52	0.02	0.72
2	25,000,000	0.41	0.02	0.61
3 – 10	320,000,000	0.36	0.02	0.56
Total	370,000,000	0.38	0.02	0.58

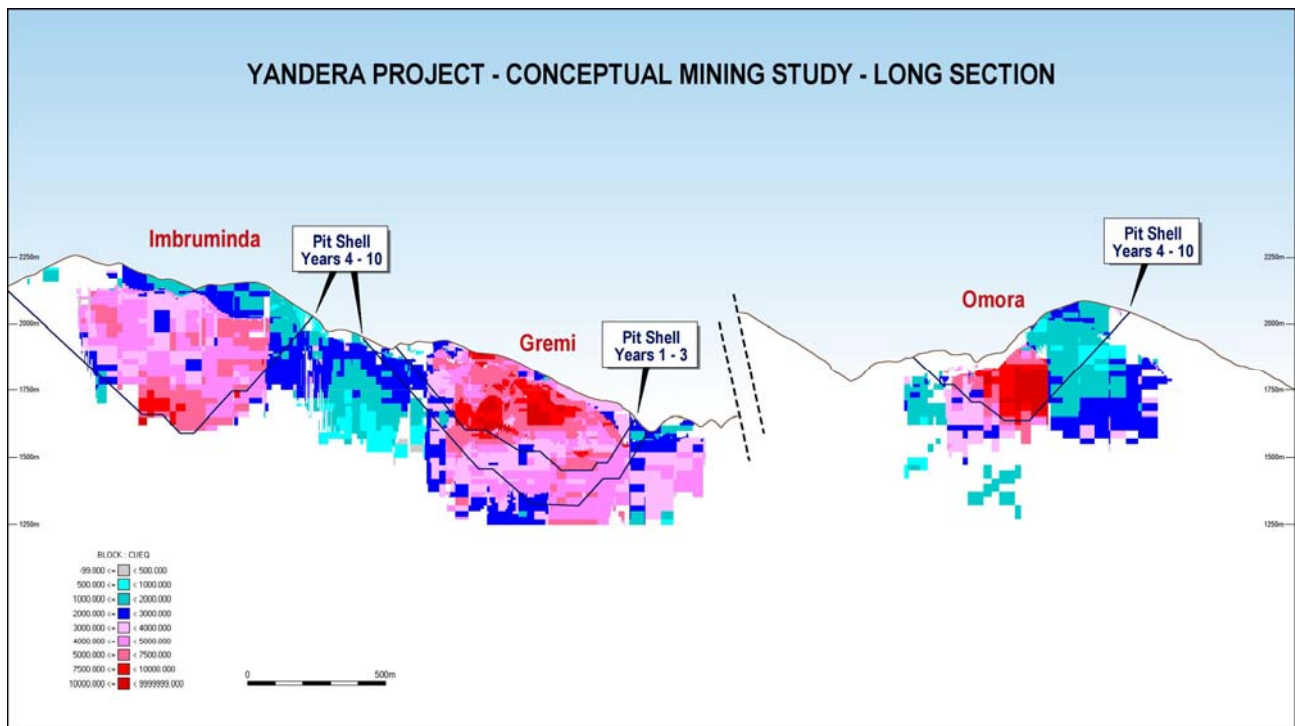
Note: Copper Equivalent (Cu Eq) = [Cu + Mo x 10] based on a 10:1 Mo:Cu price ratio.

The Conceptual Mining Study was completed by Mr H.D. Swain, FAusIMM, FIMM, Principal of Swain Associates, Consulting Mining Engineers of Western Australia.

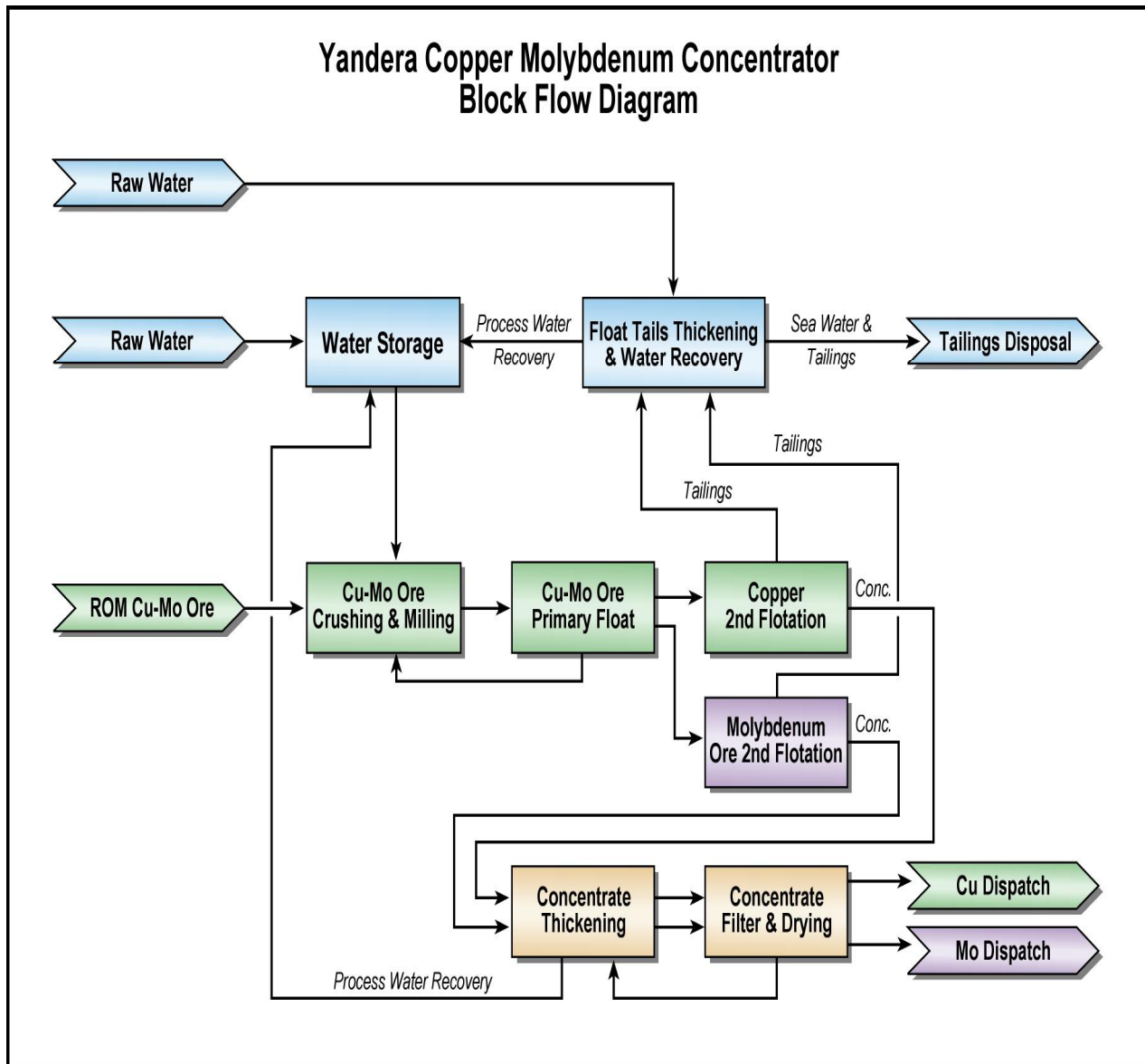
# Yandera Project - Conceptual Mining Study Pit Shell



## YANDERA PROJECT - CONCEPTUAL MINING STUDY - LONG SECTION



## Yandera Copper Molybdenum Concentrator Block Flow Diagram



### Bankable Feasibility Study

The Board of Marengo Mining Limited has committed to proceed with a Bankable Feasibility Study ("BFS") for the development of the Yandera Copper-Molybdenum Project.

This decision is based on the positive outcome of the CMS and the current and forecast strength of the both copper and molybdenum markets.

The Company has recently announced a funding strategy to provide the first stage of funding for the BFS and will move to recruit additional key staff.

In addition the Company will be engaging a

suitably qualified engineering group to coordinate the BFS.

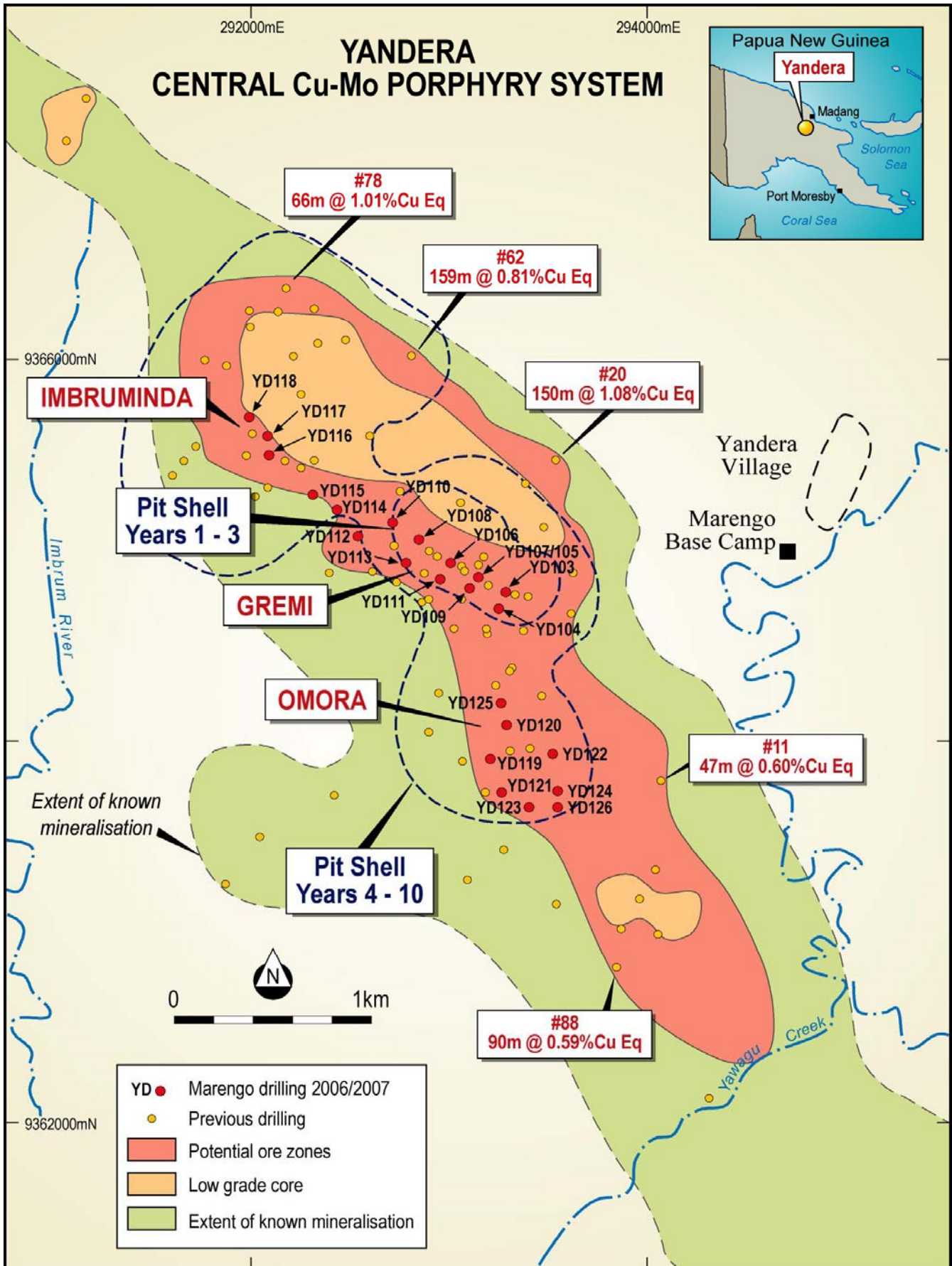
The following timeline sets out an indicative course for the Yandera Project, based on successful completion of the BFS.

Bankable Feasibility Study & Permitting Completion – June 2009

Financing Completion, Order of Long Lead Items & Construction Commencement – September 2009

Construction Completion – March 2011

First Production – June 2011



## Mineral Resource Upgrade

During the quarter the Company announced an updated mineral resource statement for the Yandera Project.

The updated resource comprises:

- **Inferred Resource of 497 million tonnes @ 0.48% Copper Equivalent** (at a 0.3% Copper Equivalent cut-off); and
- **Indicated Resource of 163 million tonnes @ 0.49% Copper Equivalent** (at a 0.3% Copper Equivalent cut-off).

This equates to an increase of approximately **78%** on the previous Inferred Resource of 371 million tonnes at 0.49% copper equivalent (at a 0.3% Copper Equivalent cut-off) announced in October last year.

The updated resource statement was prepared by international mining consultancy group, Golder Associates Pty Ltd, which prepared the October 2006 initial resource estimate for Marengo.

The updated mineral resource statement, which covers the Gremi, Omora and Imbruminda zones at Yandera, is based on data from Marengo's 2006 diamond drilling program, together with earlier drilling data from BHP and Kennecott (comprising over 40,000 metres of diamond drilling in total).

The 2006 drilling successfully converted a substantial portion of the previously identified mineral inventory at Yandera to the Inferred Resource category, significantly increasing the global resource tonnage and contained metal inventory, calculated pursuant to JORC. A substantial additional tonnage of mineral inventory remains and, while this material cannot be reported pursuant to JORC at this stage, it is anticipated that some portion of it will be added to the Yandera resource base with further drilling.

Higher-grade, near surface mineralisation has the potential to underpin a "starter pit" within the Gremi Zone which could significantly enhance the economics of a future mining operation at Yandera because of the potential low strip ratio.

Although the Yandera mineralisation contains quantities of gold, silver and rhenium, these metals have not been included in the current resource estimate.



## Diamond Drilling

During the quarter 4 holes (YD125 to YD128) were completed and 2 holes (YD129 and YD130) were in progress for a total drilling advance of 2,065.50 meters. The drilling rate during the period was reduced due to mechanical breakdowns which have now been rectified. All drill holes completed and in progress are located at the Omora deposit.

Following the release of the revised resource figures a forward drilling programme has been planned to test the starter pit areas with the objective of increasing the ore tonnage within the pit and testing extensions of the Gremi and Omora zones. An additional two contract drilling rigs have been sourced to accelerate this program.

## Assay Results

Hole YD122 (Omora) EOH 355.3m Drilled away from known mineralisation No significant results were obtained.

Hole YD123 (Omora) EOH 433.30m Drilled from the site of historic hole DDH017 but orientated to the NE (-60° @ 30° mag). This hole returned the following results:



From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au ppm	Ag ppm	CuEq%
0	18	18	0.35	8	-	-	0.35
18	186	168	0.08	8	.01	.90	0.08
186	246	60	0.17	42	.03	1.3	0.21
246	258	12	1.24	319	0.09	11.9	1.56
258	345	87	0.41	121	0.06	2.3	0.53
345	375	30	0.26	44	0.03	1.5	0.30

The above includes a broader intersection of:

<b>246m</b>	<b>345m</b>	<b>99m</b>	<b>0.51</b>	<b>145</b>	<b>0.06</b>	<b>3.4</b>	<b>0.65</b>
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The mineralization is associated with typical Omora breccias and is dominantly vein chalcopyrite.

Hole YD124 (Omora) EOH 421.70m

Targeted at extensions of the Omora mineralisation to the SE.

From (m)	To (m)	Width (m)	Cu %	Mo ppm	Au ppm	Ag ppm	CuEq%
6	78	72	0.09	13	0.01	1.49	0.09
78	168	90	0.54	221	0.06	4.30	0.76
168	261	93	0.19	19	0.01	1.95	0.20
261	297	36	0.38	31	0.02	3.86	0.41
297	421.7	124.7	0.12	13	0.02	1.21	0.13

The above includes a broader intersection of:

<b>78</b>	<b>297</b>	<b>219m</b>	<b>0.37</b>	<b>103</b>	<b>0.03</b>	<b>3.12</b>	<b>0.43</b>
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Note: Copper Equivalent (CuEq) = [Cu + Mo x 10] based on a 10:1 Mo:Cu price ratio

### Geological Interpretation

During the quarter the geological model was updated using data from the 2006 drilling programme and reinterpretation of the historical detailed surface mapping. Additional mapping is being carried out in the Gremi area in part directed at structural features and the interpreted quartz core to the north-east. Drill core and surface samples have been collected for thin section work, whole rock analyses, and zircon dating. Results of this work will be available towards the end of the year.

Previous geophysical magnetic and IP data has been reprocessed and plotted for both regional and local (Yandera) areas. Included in this work is the aeromagnetic and radiometric survey carried out by the European Union Geomap programme during 2006.

### Regional Reconnaissance

A geological reconnaissance and stream sediment sampling programme was carried out at the Queen Bee area some 10km NW of Yandera. Copper mineralisation as chalcopyrite fracture filling altered granodiorite was noted, and the general structural setting with NW/SE and NE/SW trends is similar to Yandera. No porphyry intrusives were seen however chalcopyrite/bornite mineralisation was noted in diorite.

The general geological setting of the area being along strike from Yandera with Cu, Zn, and Mo mineral occurrences, although as yet not extensive, warrants further exploration. A work programme will be proposed following the stream sediment sampling results which should enable the more prospective areas to be targeted.

## **BOLUBOLU PROJECT, GOODENOUGH ISLAND, PNG**

*(MARENGO MINING LIMITED – 100%)*

The Bolubolu Project is located on Goodenough Island, Milne Bay Province, Papua New Guinea, 350km east of Port Moresby.

The project area of some 360km<sup>2</sup> has the potential to host significant deposits associated with emergent metamorphic core complexes.

No field activities were undertaken during the quarter

## **BOWGAN PROJECT, NORTHERN TERRITORY** *(MARENGO MINING LIMITED DILUTING TO 25%)*

Marengo entered into a joint venture agreement with Hindmarsh Resources Limited, whereby Hindmarsh will be entitled to earn a 51% interest in the project, by spending \$200,000 on exploration within 3 years.

Hindmarsh have reported that project activities to date include ground magnetics and radiometrics, followed by reverse circulation drilling of two holes for a total of 234m.

The highest uranium value intersected in Hole 06RCBG01 was 66ppm for the interval 52-56m and in Hole 06RCBG02 was 12 ppm for the interval 56-60m and 12 ppm from 111-112m.

In addition a limited program of soil sampling failed to identify any anomalous uranium values.

Hindmarsh proposes to complete a 5 to 10 hole reverse circulation drilling program during the second half of 2007

## **MOLYBDENUM**

Molybdenum is truly the metal of the 21<sup>st</sup> century.

Its unique properties, which enhance the strength and corrosion resistance of many steel products (particularly stainless steel), has seen rapidly growing consumption and a consequent price rise.

Molybdenum also plays an increasing role in the petroleum industry, from corrosion resistant pipelines to the catalyst used for the removal of sulphur and other impurities in crude oil. It also has an important role in industries as diverse as nuclear power, automotive and aerospace.

With increasing pressure on supplies to feed a world market of some 400 million pounds of consumption per year, the price of molybdenum oxide (the compound which is generally quoted on world markets) has risen to around US\$35 per pound from a price of US\$5 per pound in 2003.



## **CORPORATE**

### **CAPITAL RAISING**

Since the end of the quarter the Company has announced a share placement to raise A\$15 million.

Marengo has engaged Paradigm Capital Inc ("Paradigm") of Toronto, Canada to arrange to place a portion of the shares with North American investors.

The placement of 41,666,667 shares at A\$0.36 per share to raise A\$15.0 million is expected to close on or around 8 August and funds raised from the placement will be used to advance work at the Company's 100% owned Yandera copper-molybdenum project in Papua New Guinea, and for general corporate purposes.

A General Meeting is to be held on or around 3 September 2007, at which Marengo will seek approval from its shareholders to issue that portion of the placement that exceeds the 15% maximum, automatically available to Marengo under Australian Securities Exchange Listing Rules.

The equity raising is being made to North American and other international, institutional investors, and in addition to Australian investors. The introduction of these overseas investors to

the Company's share register at this time is expected to facilitate interest in Marengo ahead of a planned prospectus filing in Canada later in 2007, for which Marengo is also pleased to announce that Paradigm has been engaged to act as the Company's exclusive lead agent.

The placement was expanded from the previously announced level of A\$12.5 million, to cater for excess demand.

#### **AMALGAMATION**

During the quarter the Company completed the process of amalgamation of its two PNG subsidiaries. Belvedere Limited has now been amalgamated with Marengo Mining (PNG) Limited.

#### **PORT MORESBY STOCK EXCHANGE LISTING**

Since listing of the Company's securities on the

Papua New Guinea, Port Moresby Stock Exchange Limited (POMSoX) late in 2006, the Company has seen active trading in its stock.

The listing has seen an increasing number of PNG holders join the Company's register.

POMSoX codes for Marengo are the same as the ASX ie. MGO (shares) and MGOO (options).

#### **ONLINE SHARE REGISTER (AUSTRALIA)**

Shareholders can access their share details at Security Transfer Registrar's website at [www.securitytransfer.com.au](http://www.securitytransfer.com.au).

### **FINANCE**

#### **CASH AT BANK**

As at 30 June 2007 the Company had cash reserves of A\$7.2m.



## CORPORATE DIRECTORY

### BOARD OF DIRECTORS

John Horan	Chairman
Les Emery	Managing Director (Email: <a href="mailto:lese@marengomining.com">lese@marengomining.com</a> )
Dennis Wilkins	Finance Director
Doug Dunnet	Non-Executive Director

### COMPANY SECRETARY

Dennis Wilkins

### SENIOR EXECUTIVES

Peter Dendle – Project Manager – Yandera

Johan Smit – Principal Consulting Geologist

### SUBSIDIARY (PAPUA NEW GUINEA)

Marengo Mining (PNG) Limited – 100%

### MAJOR SHAREHOLDERS

Current major shareholders are:

Sentient Global Resources Fund II	19.86%
Merrill Lynch Australia	5.36%
ANZ Nominees Limited	4.48%

### REGISTERED OFFICE

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Fax: (61 8) 9429 0099

Website: [www.marengomining.com](http://www.marengomining.com)  
Email: [marengo@marengomining.com](mailto:marengo@marengomining.com)

### ISSUED SHARE CAPITAL (AS AT TODAY'S DATE)

Fully Paid Shares:	126,880,719 (ASX Code: MGO)
Listed Options (20 cents expiring 28/02/08):	47,731,843 (ASX Code: MGOO)
Unlisted Options (20-30 cents expiring 30/11/08)	14,300,000 (ASX Code: MGOAQ)
Unlisted Options (30 cents expiring 30/11/08)	500,000 (ASX Code: MGOAQ)
Unlisted Options (20-30 cents expiring various dates):	500,000 (ASX Code: MGOAS)

### SHARE REGISTRY (Australia)

Security Transfer Registrars Pty Ltd  
770 Canning Highway  
APPLECROSS WA 6153  
(PO Box 535, APPLECROSS WA 6953)

Phone: (61 8) 9315 2333  
Fax: (61 8) 9315 2233  
Website: [www.securitytransfer.com.au](http://www.securitytransfer.com.au)  
Email: [registrar@securitytransfer.com.au](mailto:registrar@securitytransfer.com.au)

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Level 2, AON Haus, MacGregor St  
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Les Emery  
Managing Director

31 July 2007

**Enquiries to: Les Emery ph: (+61) 8 9429 0000 or [marengo@marengomining.com](mailto:marengo@marengomining.com)**

Sections of this report were prepared by Mr Peter Dendle who 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 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.

The section of this report relating to the Yandera Mineral Resource was prepared by Mr Stephen Godfrey of Golder Associates Pty Ltd. Mr Godfrey is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken 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 Godfrey consents in writing to the inclusion in the report of the matters based on the information in the form and context in which it appears.