





Working to unlock the mineral treasures of Papua New Guinea

# **QUARTERLY REPORT**

for the period ending 30 September 2006

# **Key points**

- Initial 371 million tonne resource established for Yandera Copper-Molybdenum Project (PNG).
- 100% ownership of Yandera Project finalised.
- Pre-Feasibility Study on Yandera Project commenced.
- © Diamond drilling at Yandera continues to provide massive mineralised intersections, including 237 metres at 1.36% Copper Equivalent
- Since quarter end an A\$12.5million capital raising announced.

# contact us

For further information please visit our website at www.marengomining.com or www.irasia.com/listco/au/marengo

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or

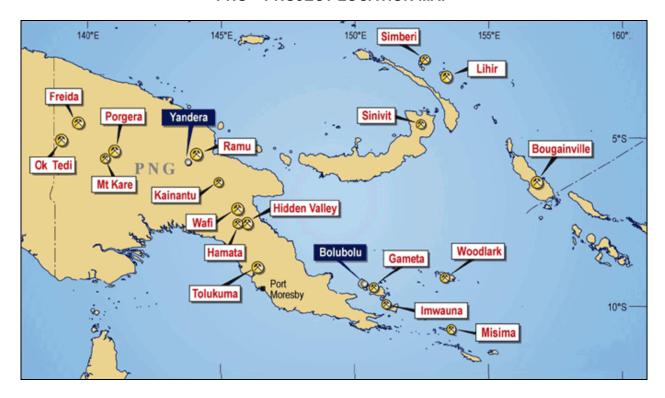
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FIGURE 1 PNG - PROJECT LOCATION MAP



# YANDERA PROJECT, MADANG PROVINCE,

(MARENGO MINING (PNG) LIMITED - 100% INTEREST)

quarter saw the Yandera Copper-The Molybdenum Project advance to a new and exciting phase, with the release of an initial mineral resource estimate and the commencement of a Pre-Feasibility Study.

With a landmark A\$12.5M capital raising announced since quarter end (see Corporate) Marengo has underpinned its ability to carry the Yandera Project through the next phase of its development.

# **Preliminary Resource Estimate**

A preliminary resource estimate has been prepared by international mining consultancy group, Golder Associates Pty Ltd, for the central portion of the Yandera Porphyry System (see Figure 2).

As previously announced this estimate comprises an:

Inferred Resource of 127 Million Tonnes @ **0.7% Copper Equivalent** (at 0.5% Copper Equivalent cut-off), which equates to 1.96

billion pounds of contained copper metal equivalent, or an

Inferred Resource of 371 Million Tonnes @ 0.49% Copper Equivalent (at 0.3% Copper Equivalent cut-off), which equates to 4.01 billion pounds of contained copper metal equivalent.

The mineralised system is large, at least 2 by 5 kilometres and extends well beyond the area with the inferred resource. This envelope has previously been tested with some widespread drilling, which identifies a "mineral inventory" with tonnages similar and fully additional to the inferred resource. These tonnages and grades cannot be placed in the resource classification at this stage.

It is Marengo's intention to increase the resource estimate and to focus on the various ways to achieve this, including drill follow up of some of the identified targets within the wider envelope of the mineralised system and further interpretation of historical and current drilling.

This current resource estimate is based on 98 diamond drill holes completed during the 1970s by BHP Limited and others, together with the results from the first 7 diamond drill holes completed by Marengo.



This initial resource estimate confirms the potential of the Yandera Project to underpin a world-class mining development, which would significant value both to Marengo shareholders and the nation of Papua New Guinea.

The preliminary Yandera resource has been classified as inferred. Tables 1 and 2 below breakdown the resource by weathering horizon and domain.

Table 1 - Inferred resource above 0.3% Cu equivalent (Cu equivalent = [Cu + (10\*Mo)]).

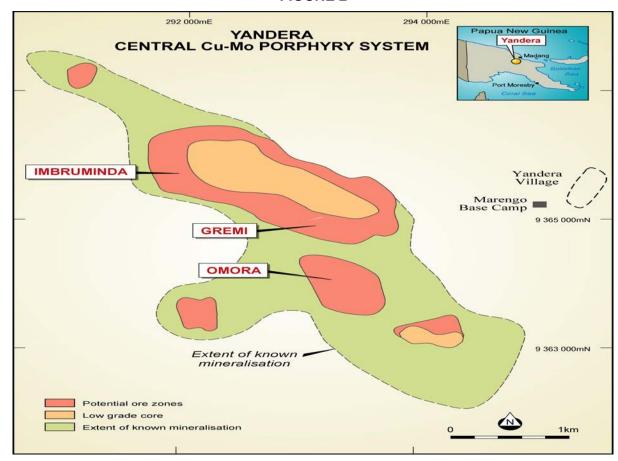
Horizon	Domain	Mtonnes	Cu%	Mo%	Cu Equivalent %
Oxide	Marginal Potassic Zone	0.9	0.28	0.004	0.32
	Clay Sericite Zone	2.8	0.18	0.018	0.37
	Omora Breccia Zone	4.0	0.34	0.003	0.37
	Gremi Structural Zone	12.5	0.35	0.013	0.48
Oxide Total		20.2	0.32	0.011	0.43
Mixed	Marginal Potassic Zone	0.0	0.27	0.004	0.31
	Clay Sericite Zone	6.2	0.35	0.005	0.41
	Omora Breccia Zone	2.9	0.55	0.082	1.37
	Gremi Structural Zone	2.6	0.36	0.016	0.53
Mixed Total		11.7	0.40	0.027	0.67
Hypogene	Marginal Potassic Zone	46.6	0.32	0.013	0.45
	Clay Sericite Zone	142.5	0.38	0.013	0.51
	Omora Breccia Zone	33.9	0.40	0.018	0.58
	Gremi Structural Zone	116.4	0.30	0.016	0.46
Hypogene					
Total		339.4	0.35	0.014	0.49
Grand Total		371.3	0.35	0.014	0.49

Table 2 - Inferred resource above 0.5% Cu equivalent (Cu equivalent = [Cu + (10\*Mo)]).

Horizon	Domain	Mtonnes	Cu%	Mo%	Cu Equivalent %
Oxide	Marginal Potassic Zone	-	-	-	-
	Clay Sericite Zone	0.0	0.14	0.039	0.53
	Omora Breccia Zone	0.1	0.51	0.004	0.55
	Gremi Structural Zone	4.8	0.43	0.016	0.59
Oxide Total		5.0	0.43	0.016	0.59
Mixed	Marginal Potassic Zone	-	-	-	
	Clay Sericite Zone	0.8	0.50	0.010	0.59
	Omora Breccia Zone	2.8	0.56	0.084	1.40
	Gremi Structural Zone	1.6	0.41	0.019	0.60
Mixed Total		5.2	0.50	0.053	1.03
Hypogene	Marginal Potassic Zone	11.8	0.44	0.026	0.71
	Clay Sericite Zone	57.0	0.52	0.016	0.68
	Omora Breccia Zone	16.4	.52	0.029	0.81
	Gremi Structural Zone	31.7	0.41	0.024	0.64
Hypogene					
Total		116.9	0.48	0.021	0.69
Grand Total		127.0	0.48	0.022	0.70



# FIGURE 2



# **Current Diamond Drilling Program**

Diamond drilling at Yandera continued throughout the quarter with two rigs operating.

Results received to date have identified a number of massive mineralised intersections, including:

237 metres @ 1.36% Copper Equivalent (from 9 to 246 metres);

240 metres @ 0.89% Copper Equivalent (from 12 to 252 metres);

204 metres @ 0.84% Copper Equivalent (from 24 to 228 metres);

As at the date of this report 12 drill holes have been completed at the Gremi and Imbruminda zones, with further holes at Imbruminda and Omora zones planned to be completed prior to the end of November (see Figure 3).





# Yandera Drill Hole Details

Hole ID	Easting (m)	Northing (m)	Collar	Total Depth	Status
	,	, ,		(m)	
YD 103	293256	9364790	-60 @ 030° mag	250.0	Complete
YD 104	293256	9364706	-60 @ 030° mag	417.6	Complete
YD 105	293154	9364866	-60 @ 030° mag	294.9	Complete
YD 106	293116	9364946	-60 @ 030° mag	307.5	Complete
YD 107	293154	9364866	Vertical	246.7	Complete
YD 108	292956	9364580	-60 @ 030° mag	297.6	Complete
YD 109	293114	9364810	-80 @ 030° mag	351.8	Complete
YD 110	292725	9365150	-60 @ 030° mag	167.9	Complete
YD 111	292965	9364860	-60 @ 030° mag	411.9	Complete
YD 112	292550	9365080	-60 @ 030° mag	420.3	Complete
YD 113	292790	9364940	-60 @ 030° mag	407.8	Complete
YD 114	292440	9365215	-60 @ 030° mag	423.9	Complete
YD 115	292320	9365295	-60 @ 030° mag	315.5	In progress
YD 116	292100	9365500	Vertical	222.4	In progress

Drill holes which have returned significant mineralisation include:

# **Yandera Drill Intercepts**

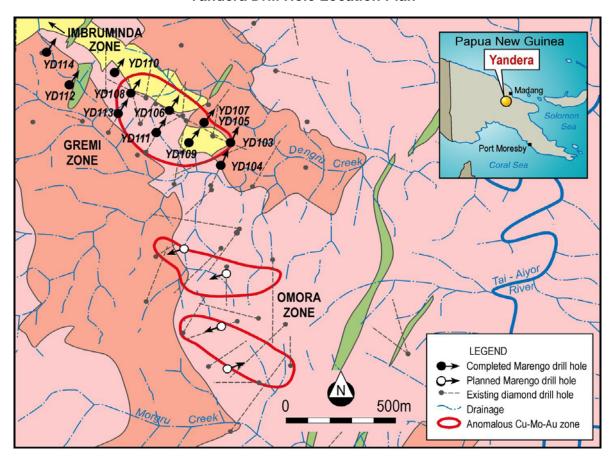
Hole ID	Zone	From (m)	To (m)	Interval (m)	Cu %	Mo (ppm)	Copper Equivalent %
YD 104	Gremi	9	72	63	0.48	230	0.71
		108	174	66	0.38	282	0.66
		186	249	63	0.27	900	1.17
YD 105	Gremi	30	84	54	0.38	243	0.62
		96	150	54	0.40	336	0.74
		192	214	22	0.42	278	0.70
YD 106	Gremi	0	180	180	0.50	238	0.74
YD 107	Gremi	9	*246	237	0.83	531	1.36
Including		39	120	81	1.35	1037	2.39
		153	186	33	1.24	684	1.92
YD 109	Gremi	0	*352	352	0.47	160	0.63
Including		24	228	204	0.63	212	0.84
YD 111	Gremi	12	252	240	0.67	217	0.89

Note (1): Copper equivalent is based on a molybdenum/copper price ratio of 10:1

Note (2); Interval boundaries based on a 0.2% Cu cut-off Note (3): Results awaited for Holes YD 112 – YD 114



FIGURE 3 Yandera Drill Hole Location Plan



# YANDERA PROJECT, MADANG PROVINCE, PNG (cont.)

When the current drill program is completed, this information, together with additional historical data, will be included in a subsequent resource estimation, scheduled for completion during the first quarter of 2007.

# **Pre-Feasibility Study**

Following the excellent results from the preliminary resource estimate, Marengo has commenced a Pre-Feasibility Study on the central porphyry zones (Gremi, Omora and Imbruminda).

Mr David Swain has been appointed to manage the study. Mr Swain is a mining engineer, with extensive experience in Africa (Zambian Copper Belt), Western Australia (Goldsworthy) and Tasmania. He has also provided consultancy services to major international project financiers and been involved in preparation, and evaluation of feasibility studies for numerous mining projects worldwide.

In addition, he was employed by Bougainville Copper Limited from 1973 to 1980, during which

time he held the positions of Pit Superintendent and Chief Mining Engineer at the Panguna Copper Mine.

The study will include preliminary mine design and open pit optimisation, metallurgical testwork. plant flowsheet design and throughput options with capital and operating cost estimates. A number of these activities have commenced.

addition, baseline studies the In for environmental and social aspects of Yandera Project development will be implemented.

# Metallurgy

Although further metallurgical testwork will be carried out during the Pre-Feasibility Study, results from testwork undertaken by AMDEL Laboratories (Adelaide) in 1976 for BHP indicated that recoveries of up to 90% for copper and 80% for molybdenum could be achieved, producing a combined copper-molybdenum sulphide concentrate by utilising a conventional flotation process.

Given the high percentage of hypogene (or primary) material identified within the resource estimate this is particularly encouraging.

With advances significant in extractive technology since that time, it is anticipated that these recoveries can be further improved. Bond Work Index tests, undertaken at that time, also demonstrated that at some 16kWh/t, the host rock would not have any abnormal power requirements during the beneficiation process.

# **Next Phase of Drilling**

In addition to the current phase of drilling at Yandera, Marengo will continue to evaluate the extensive Yandera exploration database. This comprehensive database was produced by BHP, Kennecott Copper and others during the 1960's and 1970's at an estimated historical cost of over US\$20 million, and acquired by Marengo shortly after entering the Yandera Project in early 2005.

During the next field season (commencing February/March 2007) Marengo intends to continue diamond drilling with the following aims:

Ongoing diamond drilling at the Gremi, Omora and Imbruminda zones to specifically target higher grade zones

within the current resource envelope. Such near-surface zones having the potential to maximise cashflow in the early stages of mining operations.

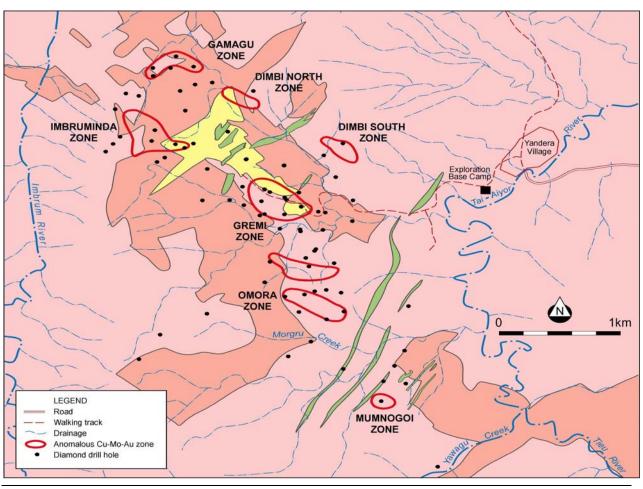
- Drilling of deeper targets at Gremi, Omora and Imbruminda which have the potential to add very significant tonnages to the existing resource.
- Selected drilling of other mineralised zones, along the extensive Yandera porphyry sequence, where earlier drilling intersected very significant coppermolybdenum mineralisation, including -

150 metres at 1.16% copper equivalent at **Dimbi South** 

66 metres at 1.01% copper equivalent at Gamagu, and

90 metres at 0.59% copper equivalent at Mumnogoi

FIGURE 4 Yandera Porphyry System





# **Project Ownership**

Marengo concluded the acquisition of the remaining interest in the Yandera Project from its former joint venture partner, Belvedere Limited (a private PNG company), by acquiring all of the issued capital in Belvedere Limited, from its existing shareholders.

With 100% ownership of the Yandera Project, Marengo now has total flexibility in considering future development options.

# **Yomi Gold Prospect**

This prospect is located approximately 20km northwest of the Yandera porphyry project, near the headwaters of the Yomi River.



Free gold can be readily panned from the river and small scale gold mining has reportedly taken place in the area in the past. Limited stream sampling by Marengo, late in 2005, confirmed the potential of this prospect when highly anomalous gold results were returned from sample sites, located up to 8km downstream. Further, more intensive BLEG stream sampling has been completed and results are awaited.

This is the highest priority gold target identified to date from within the project area.

Field inspection at Yomi has identified parallel quartz veins within fine grained sediments in zones up to 14 metres wide.

A 600 x 200 metre grid has been completed and soil samples have been collected from each 100 metre crossline at 10 metre spacings. These samples will shortly be submitted for analysis.

Whilst the Yandera copper/molybdenum mineralisation continues to be Marengo's priority, more regional field work will continue during the field season, in order to locate other gold and base metal targets from within the Yandera project area.

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

(MARENGO MINING (PNG) LIMITED - 100%)

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

The project consists of a granted exploration licence, covering some 157km<sup>2</sup>, on the eastern side of Goodenough Island.

Preliminary exploration (mapping, rock chip and soil sampling) commenced during the current quarter and results are awaited

The main target is the Bolubolu North prospect, located along the faulted contact of the metamorphic core complex and an area characterised by anomalous gold, and a zone of magnetic destruction and structural complexity. This prospect was discovered in the mid 1980's (Esso/City Resources) and has never been drill tested. Stream pan concentrate samples up to 35 g/t Au and float samples up to 25 g/t Au were reported. The best mineralised zones (trench sampling) from a fault breccia were:

- 39m at 2.1 g/t Au including 6m at 11.9 g/t Au (horizontal zone);
- 8m at 4.9 g/t Au including 4m at 6.1 g/t Au (vertical zone)

Other prospects in the area include Bolubolu South, Motouya and Goila. These prospects have anomalous gold along with highly elevated arsenic and antimony levels.





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

Marengo has 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.

No work has been reported by Hindmarsh Resources during this quarter.

# OTHER PROJECTS (WESTERN AUSTRALIA)

Poondano Exploration Pty Ltd withdrew from tenements which form the Ashburton Project and the tenements have reverted to Marengo. Discussions are currently taking place to divest this project.

# CORPORATE

# **MAJOR CAPITAL RAISING**

Since the end of the quarter the Company announced a A\$12.5million capital raising through a share placement comprising 50 million shares at 25 cents each, to be made in two tranches to both existing and new Australian, and international institutional, and professional investors.

As part of the raising, Sentient Global Resources Fund II ("Sentient") has agreed to subscribe for \$6.3 million of the placement and will, at completion of the placement, become Marengo's largest shareholder with a stake of 19.7%.

Sentient Global Resources Funds total over US\$500 million and are used for investment in development of quality metal, mineral and energy assets across the globe.

The manager of these Funds, The Sentient Group ("The Group"), is based in the Cayman Islands with subsidiary offices in Sydney, Australia and Montreal, Canada. The Group, on behalf of Sentient, has investments in a number of Australian and international resources companies, including Ivernia Inc. (lead), Queensland Gas Company (coal seam gas), Monto Minerals (industrial minerals), East Asia Minerals Corp (copper-silver) and Norsemont Mining (copper-molybdenum) and has divested a range of other successful investments, upon completion of development funding.

Investors in Sentient include institutional investors, university endowment funds, government agencies, corporate pension funds, family offices and resource industry participants. The global spread of investors complements Sentient's global mandate.

A number of the Company's current key shareholders, including Sempra Metals & Concentrate Corp (USA), have also agreed to participate in this strongly supported capital raising.

The proceeds of the placement will underpin the next key phase of activity at the Yandera Project, including the recently commenced prefeasibility study and ongoing programs of diamond drilling designed to substantially increase the initial 371 million tonne coppermolybdenum resource.

The first tranche of 10 million shares is within the limit set out in the ASX Listing Rules and will be issued immediately under Marengo's existing 15% placement capacity.

The issue of the second tranche of 40 million shares will require shareholder approval at a meeting to be held on 1 December 2006. The placement shares will rank pari passu with the Company's existing ordinary shares from the date of allotment.

Following completion of the placement, Marengo will have 128 million shares on issue, with a market capitalisation, at the placement price of some A\$32 million.

#### PORT MORESBY STOCK **EXCHANGE** LISITING

Marengo recently applied for a secondary listing of its securities on the Port Moresby Stock Exchange Limited (POMSoX), with the aim of building a local shareholder base in the Company's country of focus. This will also give PNG investors an opportunity to trade Marengo securities on a local stock exchange.

It is anticipated that POMSoX listing will take shortly.

### **ANNUAL GENERAL MEETING**

The Company's Annual General Meeting will be held at 4pm on Thursday 9th November 2006 at the Celtic Club, 48 Ord Street, West Perth, Western Australia.

All shareholders and interested investors are cordially invited to attend.

### **ONLINE SHARE REGISTER**

Shareholders can access their share details at Security Transfer Registrar's website at www.securitytransfer.com.au.

# **Finance**

### **CASH AT BANK**

At the end of the quarter the company had cash at bank of A\$1.35M.

# **Corporate Directory**

### **BOARD OF DIRECTORS**

John Horan Chairman

Les Emery Managing Director

(Email: lese@marengomining.com)

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

### **ISSUED SHARE CAPITAL (AS AT 30 SEPT 2006)**

Fully Paid Shares: 77,682,128

(ASX Code: MGO)

Listed Options (20 cents expiring 28/02/08):

48,412,574

(ASX Code: MGOO)

Unlisted Options (20-30 cents expiring 30/11/08)

14,200,000

(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)

# **SUBSIDIARIES (PAPUA NEW GUINEA)**

Marengo Mining (PNG) Limited – 100% Belvedere Limited – 100%

# **MAJOR SHAREHOLDERS**

Current major shareholders are:

RAB Special Situations Fund (UK) 10.30% Sempra Metals and Concentrates Corp. 5.15%

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Email: marengo@marengomining.com

### SHARE REGISTRY

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 Email: registrar@securitytransfer.com.au

Les Emery Managing Director

30 October 2006







### **NOTES**

# Key points relating to the Yandera September 2006 Preliminary Resource Estimate:

- 1. The resource estimate applies to coincident copper and molybdenum mineralisation within the Marginal Potassic Zone of the Yandera project in Papua New Guinea.
- 2. The deposit is delineated by 105 diamond core holes (36,384m) drilled in various directions through the deposit. The rugged terrain makes siting drill holes difficult. Holes vary in spacing from 50m by 50m over the Gremi zone to 200m by 100m in the peripheral areas. Holes are angled and vertical. Five drill holes in the Gremi structural zone have been excluded from the resource estimate. These holes have been drilled in a SE-NW orientation sampling the deposit along its strike length. These holes are regarded as anomalous and introduce a positive bias to the sample population when used.
- 3. Samples are predominantly 3m in length (94%). Sampling is half core assay. Results from new drilling to date show a reasonable correlation between the original sampling and the current program. QAQC data is not readily available for the original assaying. QAQC data for the current drilling still being processed. program is Samples were composited to 5m analysis and estimation. 6,337 Cu composites and 5,419 Mo composites were used in the estimation.
- 4. Estimation of grades was done using Ordinary Kriging. Kriging parameters derived from omnidirectional variography. Copper and molybdenum grades were estimated separately. High grade cutting was used to limit the impact of high grade outlier composites. The Cu and Mo grades were estimated in ppm. The copper equivalent grade was calculated as (cu+(10\*mo). The reported tonnes and grades were estimated using a 150m by 100m by 50m search ellipse and constrained to nominally no more than 50m below the drilling data. Blocks beyond these limits have not been included in the resource.

- 5. A Dry Bulk Density value of 2.7 was assigned to all material based on previous work in the area. Work on validating and refining bulk density values by domain and horizon is ongoing.
- 6. The resource estimate was classified based on data density and quality, and confidence levels in the geological interpretation and grade estimation. The wide spaced nature of the data, ongoing work in defining accurate dry bulk densities and confirmation of assay accuracy and precision has resulted in the preliminary resource being classified as inferred.

Sections of this report relating to drilling intercepts and mineralisation (excluding the Preliminary Resource Estimate) 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 Preliminary Resource Estimate 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 and Golder Associates Pty Ltd have previously consented in writing to the inclusion in the report of the matters based on their information in the form and context in which it appears.

Working to unlock the mineral treasures of Papua New Guinea.

### **PAPUA NEW GUINEA**

Marengo has positioned itself with projects in Papua New Guinea (PNG) which have the potential to grow into world class metal mines. A tight capital structure and funds on hand give shareholders excellent leverage to the future success of Marengo.

As Australia's nearest neighbour (some 150km from Cape York Peninsula) PNG has a long history of mining, dating back to 1878 and has historically been amongst the world's largest copper and gold producers.

Located on one of the world's most dynamic tectonic zones, PNG has and continues to produce world class ore deposits, such as Bougainville, Lihir, Misima, Ok Tedi and Porgera. In addition, recent developments have seen the discovery of medium size ore deposits, including Tolukuma, Kainantu, Hidden Valley and Simberi.

Since gaining independence in 1975, PNG has, along with other nations, suffered periods of downturn in mineral exploration investment. However, in recent years there has been a strengthening of investment back into PNG. This has occurred as a result of increasing world demand for commodities (with resultant price increases), together with a change to a more favourable fiscal regime for investment.

PNG operates a parliamentary democracy, based on the Westminster model, where all major parties support private enterprise and foreign investment.

Marengo is pleased to join many existing Australian and international companies who successfully operate both exploration and mining projects in PNG, a trend which is seen gaining momentum.

Marengo, through its subsidiary Marengo Mining (PNG) Limited, is concentrating its efforts on this richly endowed nation.







