



Working to unlock the mineral treasures of Papua New Guinea

# **QUARTERLY REPORT**

for the period ending 31 December 2006

## Key points

## Corporate

- Major A\$12.3M capital raising was completed with a significant increase in the institutional shareholder base.
- Strategic resource investment group, Sentient Global Resources Fund, becomes Marengo's largest shareholder with a 19.86% stake.
- Oual listing completed on the Port Moresby Stock Exchange (PNG).

## Yandera Copper-Molybdenum Project (PNG)

- Final excellent results received from 2006 diamond drilling campaign at Yandera, with continued broad zones of mineralisation, including;
  - 51 metres @ 0.81% Copper Equivalent (YD 113)
  - 126 metres @ 0.54% Copper Equivalent (YD 113)
  - 42 metres @ 1.19% Copper Equivalent (YD 117)
  - 66 metres @ 0.88% Copper Equivalent (YD 119)
- Significant gold-molybdenum zone (39 metres @ 3.54 g/t gold and 664 ppm molybdenum) identified at the Omora zone.
- Excellent recoveries of up to 97.9% for copper and 91.4% for molybdenum achieved for the Yandera sulphide zone.
- Significant progress with Yandera Pre-Feasibility Study including development of conceptual flowsheet with a base case throughput of 20Mt per annum.
- Identified a suitable ore haulage route (utilising rail transport) from Yandera to the coastal region of Madang for ore processing and deep sea tailings placement.
- Commenced open pit design to maximise access to existing 371 Mt Inferred Resource and beyond.

## Yandera Copper-Molybdenum Project (PNG) (cont.)

- Commenced the process to add additional resources from the existing "mineral inventory" which has tonnages similar and fully additional to the current resource.
- Secured drill rigs and helicopter support services for the 2007 field season.
- Planned the implementation of baseline studies for the social and environmental aspects of the Yandera Project development.
- Stream sediment sample results from the Yomi gold prospect (15km north west of Yandera Copper-Molybdenum Project) returns significant gold values up to 5g/t Au.

## Bolubolu Gold Project, (Goodenough Island, PNG)

- Detailed sampling and reconnaissance program produces highly anomalous gold and silver values (up to 27.2 g/t Au and 17 g/t Ag) from epithermally altered ultramafics and breccia zones.
- Additional 200 km2 exploration licence application lodged for area to north of existing Bolubolu project area.



## contact us

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

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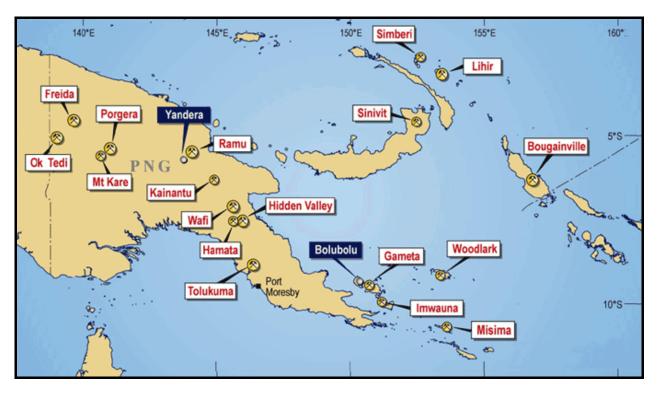
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> ASX and POMSoX Codes: Shares – MGO Options – MGOO

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## **PNG – PROJECT LOCATION MAP**

## YANDERA PROJECT, MADANG PROVINCE, PNG

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

During the quarter, Marengo focused the bulk of its efforts on advancing the Yandera Project.

The successful completion of diamond drilling for the 2006 field season, progressing several components of the Pre-Feasibility Study and planning for the commencement of the 2007 field season saw the Company achieve real advances at Yandera.

#### **Diamond Drilling**

Activities at Yandera were highlighted by the successful completion of the 2006 diamond drilling campaign, which saw 19 holes drilled for a total of 7,030 metres.

Good weather conditions allowed the program to continue until mid December and was completed without any lost time injury during the program.

The program was designed to confirm and in part provide in-fill holes to those drilled by previous operators at Yandera, including BHP and Kennecott, during the 1970's. A number of the holes drilled were also incorporated into the database used by Golder Associates Pty Ltd to establish the preliminary resource estimate of 371 Million Tonnes (Inferred) @ 0.49% Copper Equivalent (at 0.3 % Copper Equivalent cut-off), announced to the ASX on 3 October 2006 (see below).

Drilling produced numerous and very robust copper-molybdenum (and in one case goldmolybdenum) intercepts which demonstrate the substantial widths, and typical grades encountered within the Yandera Central Porphyry system.

lr	nferred	resource	above	0.3% (	Cu equi	valent (C	Cu equiv	/alent = [	Cu + (	(10*Mo)]).

Horizon	Mtonnes	Cu%	Mo%	Cu Equivalent %
Oxide	20.2	0.32	0.011	0.43
Mixed	11.7	0.40	0.027	0.67
Hypogene	339.4	0.35	0.014	0.49
Total	371.3	0.35	0.014	0.49

Drill holes which have returned significant mineralisation include:

Hole ID	Zone	From (m)	To (m)	Interval (m)	Cu %	Mo (ppm)	Copper Equivalent %
YD 103	Gremi	0	*250	250	0.31	77	0.31
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
YD113	Gremi	3	408	405	0.33	160	0.49
Including		33	84	51	0.60	211	0.81
Including		111	162	51	0.63	166	0.80
Including		264	390	126	0.33	209	0.54
YD114	Imbruminda	51	159	108	0.19	58	0.24
YD115	Imbruminda	192	225	33	0.34	159	0.50
YD116	Imbruminda	3	*404	401	0.32	56	0.38
Including		372	402	30	0.74	202	0.94
YD117	Imbruminda	252	336	84	0.29	329	0.62
		420	462	42	0.22	973	1.19
YD118	Imbruminda	216	273	57	0.27	356	0.63
YD119	Omora	93	159	66	0.75	133	0.88
YD121	Omora	54	270	216	0.37	40	0.37
		357	*400	43	0.30	37	0.30

## Yandera Drill Intercepts (2006 Program)

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): \*Denotes end of hole

In addition, Hole YD120 (Omora) identified a broad zone of high grade gold and molybdenum, with an intercept of 39 metres @ 3.54g/t Au and 664ppm Mo (ie. 0.66% Cu Eq.) from 189-228 metres.

This hole also produced a second zone of lower grade gold mineralisation (30m @ 0.97g/t Au, with trace Mo from 33-63 metres).

Hole ID	Easting (m)	Northing (m)	Collar (mag)	Total Depth (m)	Zone
YD103	293295	9364790	-60 @ 030 <sup>0</sup>	250	Gremi
YD104	293256	9364706	-60 @ 030 <sup>0</sup>	417	Gremi
YD105	293154	9364866	-60 @ 030 <sup>0</sup>	294	Gremi
YD106	293016	9364946	-60 @ 030 <sup>0</sup>	307	Gremi
YD107	293154	9364866	Vertical	246	Gremi
YD108	292855	9365065	-60 @ 030 <sup>0</sup>	297	Gremi
YD109	293114	9364810	-80 @ 030 <sup>0</sup>	352	Gremi
YD110	292725	9365150	-60 @ 030 <sup>0</sup>	167	Gremi
YD111	292965	9364860	-60 @ 030 <sup>0</sup>	411	Gremi
YD112	292550	9365080	-60 @ 030 <sup>0</sup>	420	Imbruminda
YD113	292790	9364940	-60 @ 030 <sup>0</sup>	407	Gremi
YD114	292440	9365215	-60 @ 030 <sup>0</sup>	423	Imbruminda
YD115	292320	9365295	-60 @ 030 <sup>0</sup>	405	Imbruminda
YD116	292100	9365500	Vertical	404	Imbruminda
YD117	292093	9365600	Vertical	474	Imbruminda
YD118	292000	9365700	Vertical	459	Imbruminda
YD119	293212	9363914	-80 @ 030 <sup>0</sup>	434	Omora
YD120	293298	9364087	-70 @ 030 <sup>0</sup>	454	Omora
YD121	2932374	9363740	$-70 @ 030^{0}$	400	Omora

## Yandera Drill Hole Details

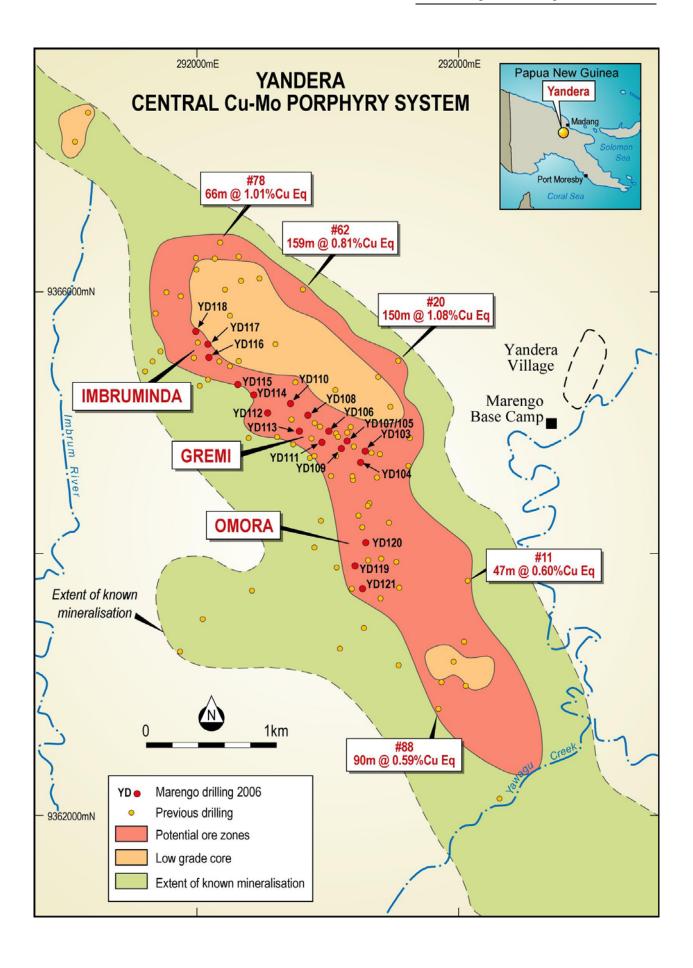
Following completion of the 2006 program and since the end of the quarter, all assay and geological data has been added to the existing database, to assist with geological modelling and the preparation of a revised resource estimate.

The existing two diamond drill rigs, operated by United Pacific Drilling (based in Madang, PNG) remain onsite and it is expected that weather conditions will allow the 2007 drilling program to commence before the end of February, initially at the Omora Zone, where both coppermolybdenum and gold-molybdenum zones were encountered during the 2006 program.



Marengo will recommence its contract with Hevilift Ltd to provide helicopter support for activities at Yandera from 18 February 2007.





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

#### **Pre-Feasibility Study**

Principal activities during the quarter involved the preparation of a conceptual flowsheet for the project, metallurgical testwork and identification of a suitable plant location and ore handling strategy.

A conceptual flowsheet has been prepared, and given the metallurgical characteristics identified for the Yandera ore, a conventional crushing and grinding circuit, with sulphide flotation circuit for the production of copper and molybdenum concentrates has been selected. A throughput of 20Mt per annum has been established for the base case, at this stage.

First metallurgical testwork results have been received from diamond drill core samples taken during the 2006 program.

Excellent recoveries have been obtained from samples of material from the hypogene

(sulphide) zone, from within which the bulk of the tonnage established to date is located (339Mt of the 371Mt Inferred Resource).

Copper recoveries of up to 97.91% and molybdenum recoveries of up to 91.38% were obtained from hypogene samples.

Recoveries of copper and molybdenum appear to be independent of grind size, although further tests are planned at a finer grind size and with lower levels of collector.

These recoveries are much improved on those completed for BHP during the 1970's and most likely are a reflection of technical advances in minerals processing.

Although lower results were obtained from the mixed zone (ie oxide and sulphide), further work will be undertaken to determine by how much these recoveries can be upgraded. This zone represents a much smaller proportion of current resource (ie 11Mt of the 371Mt Inferred Resource).

Sample	Grind	Recovery %		
	Microns	Cu %	Mo %	
Med Cu Hypogene	212	96.9	87.2	
Med Cu Hypogene	106	96.5	79.4	
High Cu Hypogene	212	97.9	90.5	
High Cu Hypogene	106	97.9	91.4	
Mixed Zone	212	81.6	54.6	
Mixed Zone	106	82.8	59.7	

## Flotation Results – Initial Tests

Assay head grades for the flotation testwork were as follows;

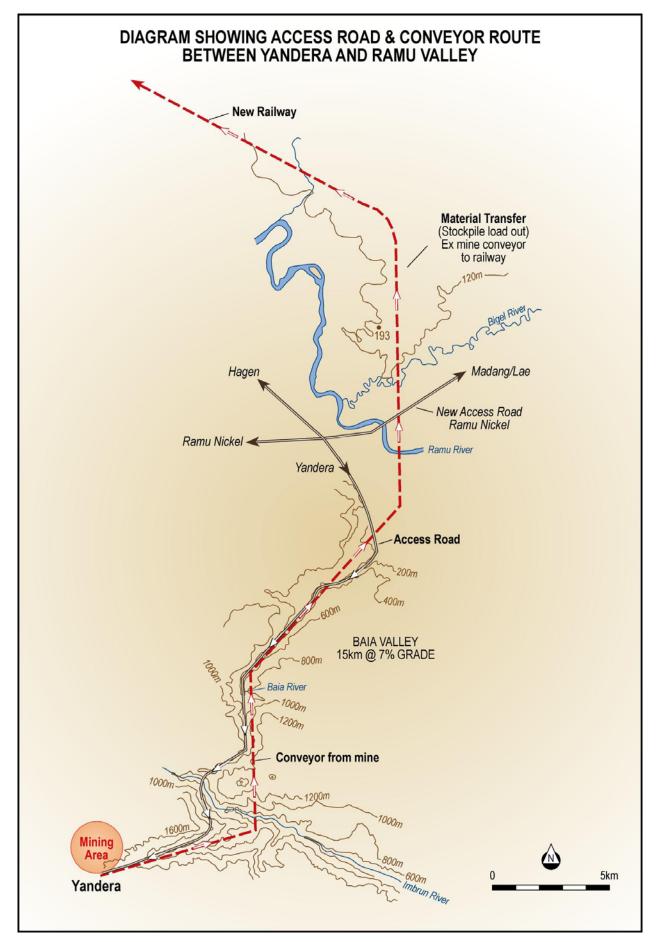
High Cu Hypogene sample	0.64% Cu	370 ppm Mo
Med Cu Hypogene sample	0.43% Cu	150 ppm Mo
Mixed Zone sample	1.62% Cu	140 ppm Mo

Bond Ball Work Index tests were also completed and produced a range from 15.4 – 16.5 kWhr/t for hypogene and mixed zone material.

Work to date has indicated that it is most feasible to locate the process plant near the coast, in the Madang region, with deep sea tailings placement being utilized. The latter is a process currently employed by other PNG operations, including Lihir Gold Ltd and recently permitted to the Ramu Nickel Project, which will also base its processing facility on the coast near Madang. The concept is to move crushed ore, possibly upgraded by screening, from the Yandera Mine area to the Ramu Valley by way of a conveyor system and by way of a transfer station loading crushed ore on a purpose built railway. Ore would be transported approximately 100 kilometres to a suitable coastal plant site.

Further work is planned to be carried out in establishing the merits of this processing option, however it does offer many operational benefits, not available by utilizing a conventional slurry pipeline for ore transport.

## YANDERA RAILWAY PLAN



Preliminary open pit design was also commenced to establish mining parameters for accessing the Gremi, Omora and Imbruminda Zones, however this will be further refined following completion of a revised resource estimation, due for completion by the end of the current quarter.

#### 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 is undertaken by the local villagers. Marengo has previously undertaken limited stream, rock chip and soil sampling programs at Yomi which, in part have generated a number of anomalous gold results.

During the quarter results of bulk leach gold analyses of 78 stream sediment samples were received. Four samples returned gold values in excess of 1g/t, up to a maximum of 5g/t.

These results are considered to be highly anomalous and will be followed up during the 2007 field season.

## BOLUBOLU PROJECT, GOODENOUGH ISLAND, PNG

(MARENGO MINING (PNG) LIMITED – 100%) The Bolubolu Project is located on Goodenough Island, Milne Bay Province, Papua New Guinea, located 350km east of Port Moresby.

A detailed sampling and reconnaissance program was conducted between August and November 2006. Final assay results were received in mid-January.

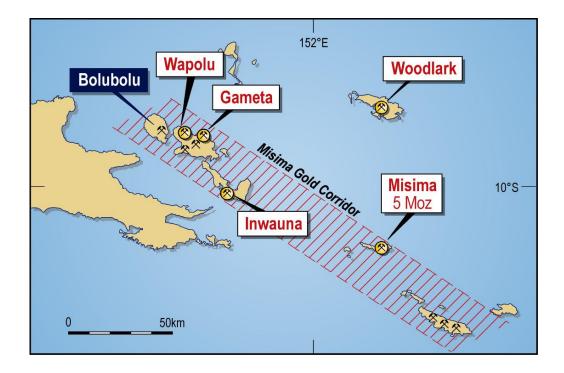
The reconnaissance work identified a new, previously unknown, mineralised area at Huba Hill in the northern part of the Island. The area is now held under application for Exploration Licence 1552 covering 200 square kilometres.

The sampling identified a northeast trending structure in three drainages with a strike extent in excess of 800m. Rock chip samples of outcrops within Budula Creek returned 7.04g/t Au and 3.8g/t Ag from a seven metre outcrop of quartz breccia at the south-western end while three outcrops in the central section of the drainage (Huba Hill) returned 7.56g/t Au and 4.4g/t Ag from a 15m outcrop of quartz breccia, and 1.08g/t Au 1.4g/t Ag and 27.2g/t Au and 17.0g/t Ag from epithermally altered ultramafics. A rock chip from Nikina Creek at the northeastern end returned 2.1g/t Au and 1.4g/t Ag.

At the Ewele Prospect, detailed channel sampling identified a steeply dipping mineralised zone within a 400m northeast - southwest trend zone identified by previous explorers. Horizontal channel sampling through a breccia zone yielded 9m at 4.25g/t Au and 3.03g/t Ag and 6m at 1.63g/t Au and 1.45g/t Ag. Vertical sampling through the same zone returned 6m at 2.11g/t Au and 1.90g/t Ag. Twenty metres to the northeast, a second, less well exposed zone returned 3m at 1.75g/t Au and 6.00g/t Ag horizontally and 1.68g/t Au and 1.3g/t Ag over 2m vertically. Sampling in this prospect area by previous companies yielded five float samples greater than 2.0g/t Au, with the highest being The better trench samples by 24.7a/t Au. previous workers, located along strike were 4m of 5.05g/t Au and 5m of 1.54g/t Au.

The mineralisation at the Huba Hill and Ewele prospects is located within northeastern structures that intersect the dome bounding Wakonai Fault which is a mantle penetrating decollement zone containing reactive ultramafic rocks. This structural setting provides an important focus for future exploration. The identification of the new Huba Hill prospect in this sparely explored area indicates the potential for the discovery of additional areas along the Wakonai Fault. Marengo now holds the entire 25 kilometres length of this important structural setting.

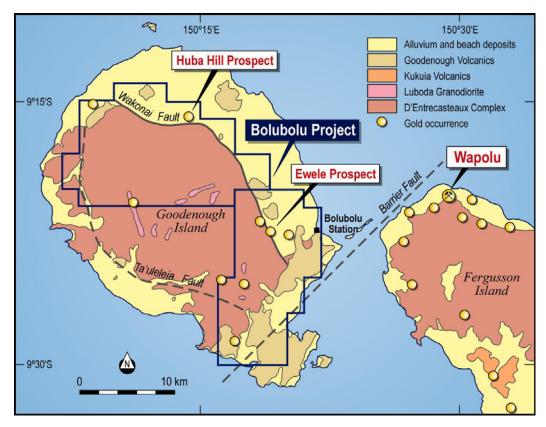
Further work on this project will be carried out during the 2007 field season.



## BOLUBOLU PROJECT LOCATION

## BOLUBOLU PROJECT

## **GEOLOGICAL SETTING**



## BOWGAN PROJECT, NORTHERN TERRITORY

(MARENGO 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 has reported that since entering the joint venture it has completed geological and geophysical interpretation of the project area. This work has identified nineteen target locations for initial ground follow-up.

Based on follow-up data collection, 21 sites have been proposed for drill testing during the 2007 field season.

### **OTHER PROJECTS (WESTERN AUSTRALIA)**

Agreement has been reached with FMG Pilbara Pty Ltd, a subsidiary of Fortescue Metals Group, for that company to acquire Marengo's remaining Ashburton tenements in exchange for a royalty participation in any iron ore product subsequently produced from the tenement area.

## CORPORATE

#### MAJOR CAPITAL RAISING

Marengo has completed an extremely successful capital raising of A\$12.3M with the issue of 49,168,500 shares at 25 cents each to both existing and new Australian, and international institutional, and professional investors.

With the completion of the placement, Sentient Global Resources Fund II, which subscribed A\$6.3M of the placement funds, becomes Marengo's largest shareholder, with a 19.86% stake.

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

A number of the Company's current key shareholders, including Sempra Metals & Concentrate Corp (USA), have also strongly supported the placement.

The proceeds of the placement will underpin the current phase of activity at Yandera, in addition to bolstering the Company's working capital position.

Following completion of the placement, Marengo has 126,880,719 shares on issue, with a market capitalisation of A\$26M, based on a current share price of A\$0.20.

## PORT MORESBY STOCK EXCHANGE LISITING

Marengo gained a secondary listing on the Papua New Guinea, Port Moresby Stock Exchange Limited (POMSoX) on 10 November 2006.

The Company will continue to build a local shareholder base in its country of focus to give PNG investors an opportunity to trade Marengo securities on a local stock exchange.

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

### ANNUAL GENERAL MEETING

The Company's Annual General Meeting was held on Thursday 9<sup>th</sup> November 2006, with all resolutions being approved.

#### **ONLINE SHARE REGISTER**

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



### FINANCE

#### **CASH AT BANK**

The Company has cash reserves of A\$10.6M.

## CORPORATE DIRECTORY

#### **BOARD OF DIRECTORS**

John HoranChairmanLes EmeryManaging Director(Email: lese@marengomining.com)Dennis WilkinsFinance DirectorDoug DunnetNon-Executive Director

#### COMPANY SECRETARY

Dennis Wilkins

#### SENIOR EXECUTIVES

Peter Dendle – Project Manager – Yandera Johan Smit – Principal Consulting Geologist

#### **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): 48,382,574 (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)

#### SUBSIDIARIES (PAPUA NEW GUINEA)

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

### MAJOR SHAREHOLDERS

Current major shareholders are: Sentient Global Resources Fund II 19.86% RAB Special Situations Fund (UK) 7.10% Sempra Metals and Concentrates Corp. 5.36%

#### **REGISTERED OFFICE**

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#### SHARE REGISTRY

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Phone: (61 8) 9315 2333 Fax: (61 8) 9315 2233 Website: www.securitytransfer.com.au Email: registrar@securitytransfer.com.au

Les Emery Managing Director

31 January 2007

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.