

ASX:LEG

23 November 2011

ASX Announcement

**EXPLORATION TARGET OF 300Mt–500Mt @ 16-40% Fe****ESTABLISHED AT MELOMBO EAST BY GEOPHYSICAL MODELLING**

- **Potential for substantial magnetite tonnage established by geophysical modelling of airborne magnetic data to depth of 150m;**
- **Grade of 16-40% Fe based on diamond drilling and rockchip sampling;**
- **Magnetite contained within magnetite gneiss host rock.**

Legend Mining Limited (Legend) is pleased to announce the results of a magnetic modelling exercise by independent geophysical consultants, Core Geophysics (Core), evaluating the magnetite potential of its Melombo East Prospect in Cameroon, West Africa, see Figure 1.

The report by Core covered the 4.7km x 1km aeromagnetic feature at Melombo East and indicated the potential for a range of 300Mt-500Mt<sup>1</sup> of magnetite. An expected grade of 16-40% Fe is considered likely based on laboratory assay results of magnetite gneiss in diamond drillholes and rockchip sampling.

Legend Managing Director Mr Mark Wilson said: “When this tonnage and grade range is considered with the proximity to the coast and the metallurgical test results reported earlier this year, Melombo East continues to shape as a substantial exploration target. Our treasury is expected to have +\$20M cash in January next year, following the recently announced \$10M capital raising and the \$7M cash sale of the Mt Gibson Project. Our challenge is now to accelerate our exploration activities to aim for a JORC Code compliant Inferred Mineral Resource at Melombo East as soon as possible. We believe the Ngovayang Project has the potential for many targets similar to Melombo East”.

Results from the current drill programme will be released to the market as they become available.

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<sup>1</sup> Core consider the global tonnage estimate to equate to 400Mt with a perceived error of  $\pm 25\%$  (300Mt-500Mt). The tonnage estimate is calculated down to a vertical depth of 150m below surface and assumes a density of 3.5g/cm<sup>3</sup>. This estimate is based on a number of assumptions and limitations, is conceptual in nature and should be considered broadly indicative at best. It is not an indication of a mineral resource compliant with the JORC code and it is uncertain if further exploration will result in the determination of a mineral resource.

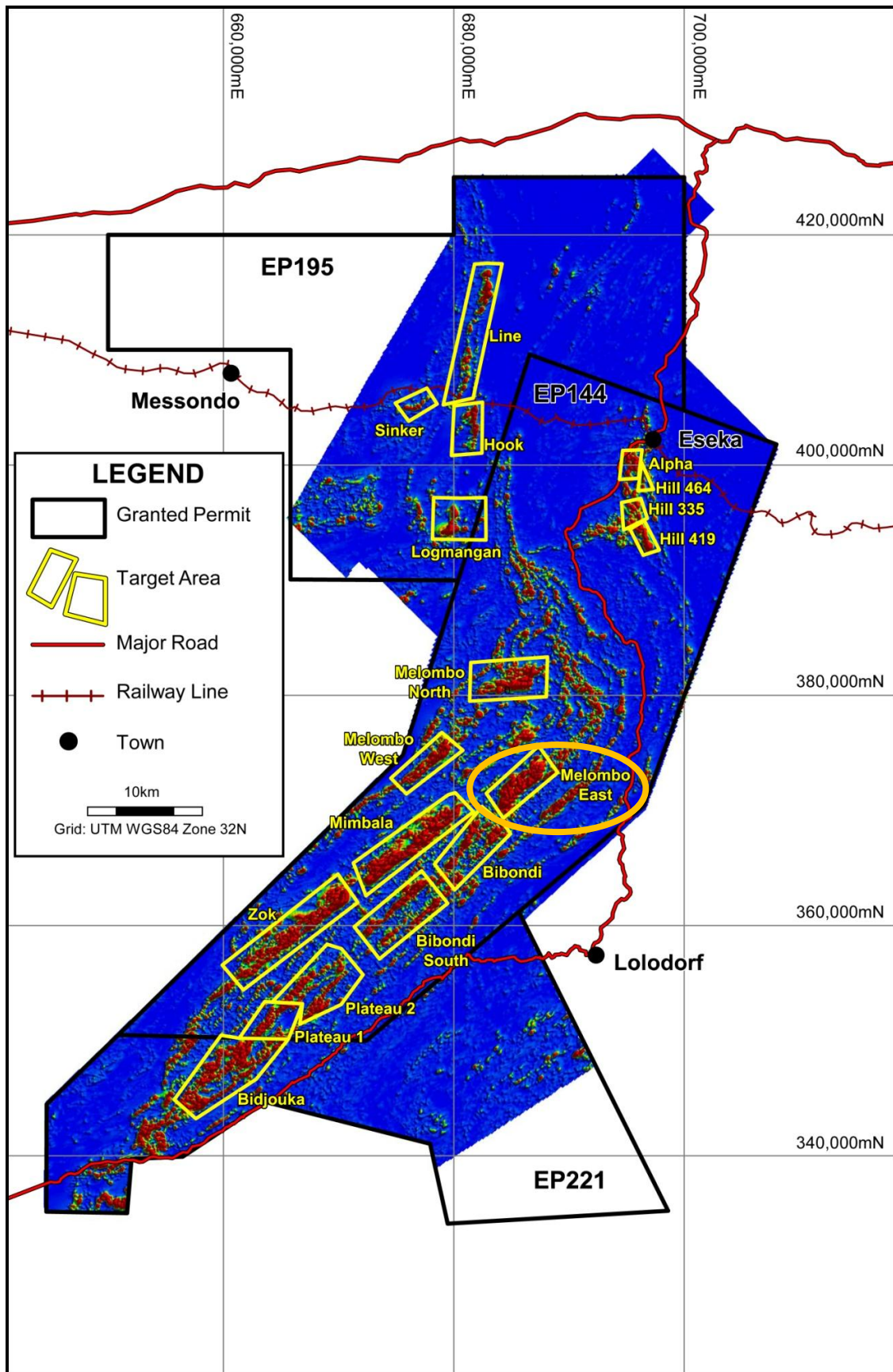


Figure 1: Ngovayang Project – Target Areas over Aeromagnetic Image (Analytical Signal of Total Magnetic Intensity)



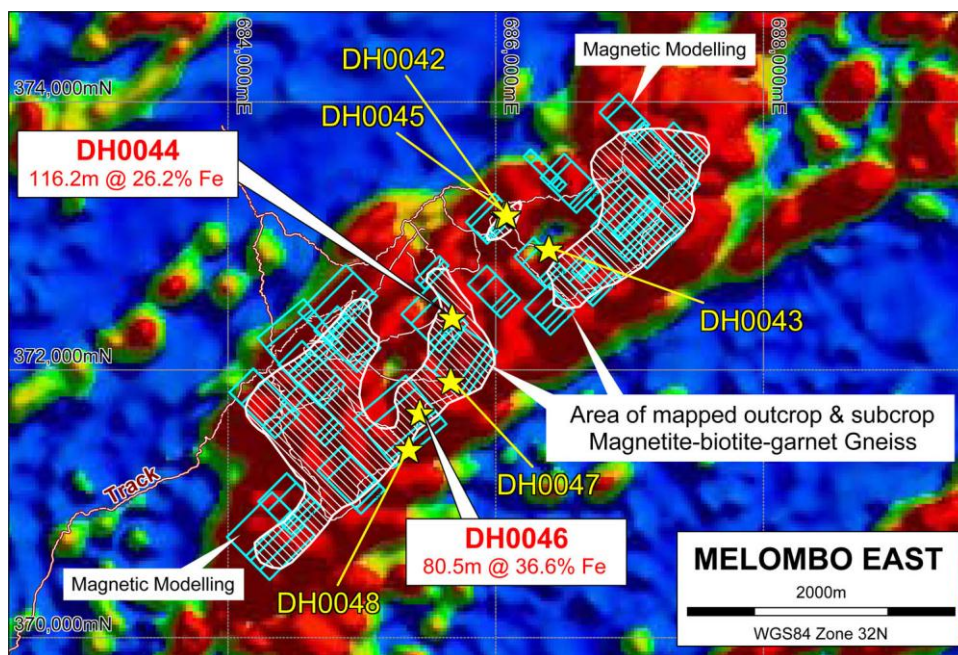
**Technical Discussion**

Core Geophysics were contracted by Legend to undertake 2D and 3D magnetic modelling over the Melombo East Prospect with the aim of providing an estimate of the potential magnetite tonnage.

The modelling was completed on the analytical signal of the total magnetic intensity due to the low latitude of the project area, highlighting a number of discrete intense anomalies, see Figure 2. The anomalies extend over an area of 4.7km x 1km, with individual modelled bodies having strike lengths between 75-500m, widths between 50-200m and a vertical depth extent of 150m below surface, see Appendix 1 for details. The bodies have an overall NE-SW strike, with dips between 45-60° to the northwest, which is consistent with observations from geological mapping.

The modelling, which used a number of assumptions and limitations<sup>2</sup>, has indicated a potential tonnage of 400Mt of magnetite contained within a host unit of magnetite gneiss. This estimate has a perceived error of ±25%, giving a potential tonnage range of 300-500Mt.

The target has an expected grade range of 16-40% Fe, with the upper limit based on laboratory assay results from diamond drillholes DH044 and DH046 (ASX announcement 11 November 2011), and the lower limit based on economic modelling of a realistic cut off grade.



**Figure 2: Melombo East Aeromagnetic Image with Individual 2D Modelled Bodies**

**Competent Persons Statements**

*The information in this announcement that relates to Exploration Results has been compiled by Mr Derek Waterfield, a Member of the Australian Institute of Geoscientists and a consultant to Legend Mining Limited. Mr Waterfield has sufficient relevant experience in the styles of mineralisation and types of deposit under consideration, and in the activity he is undertaking, to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code), and consents to the inclusion of the information in the form and context in which it appears.*

*The information in this announcement that relates to Exploration Targets has been prepared by Mr Mathew Cooper, a Principal of Core Geophysical and a Member of the Australian Institute of Geoscientists and a consultant to Legend Mining Limited. Mr Cooper has sufficient relevant experience in the styles of mineralisation and types of deposit under consideration, and in the activity he is undertaking, to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code), and consents to the inclusion of the information in the form and context in which it appears.*

<sup>2</sup>The global exploration target for magnetite has been estimated based on the modelling of the analytic signal of the total magnetic intensity with the results determined according to a number of assumptions and limitations. In addition to those previously mentioned these may also include:

- The strike length of the modelled magnetic anomalies represents ore grade mineralisation;
- The geometry of the magnetic sources remain constant over their entire length;
- The model depth extent has been fixed to 150m based on initial drilling results, although this is not accurately known over the entire project;
- 100% recovery and no dilution;
- The specific gravity of the mineralisation is 3.5t/m<sup>3</sup>, though this has not been determined.
- A magnetic susceptibility of 1SI was used for all of the models which correlates to a theoretical 25% magnetic mineral content.
- No reconciliation for the material located above the calculated magnetic model and ground level has been applied and no correction or adjustment has been made for changes in the topography with respect to the model depth or width over its strike length.
- No correction for remanent magnetisation has been applied, even though it is likely to influence the magnetic responses within the prospect.
- The exploration target estimate presented here could change considerably if lower or higher magnetic susceptibilities or densities were used.

**Exploration Target**

*While the company remains optimistic it will report resources and reserves in the future at its Cameroon Project, any discussion in relation to exploration targets, resource potential, reserves or 'ore' is only conceptual in nature, there has been insufficient exploration to define a Mineral Resource at the company's Cameroon Project and it is uncertain if further exploration will result in the determination of a Mineral Resource.*

Visit [www.legendmining.com.au](http://www.legendmining.com.au) for further information and announcements.

**For more information:**

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**Appendix 1: Melombo East – Forward Modelling Tonnage Estimate**

| Model        | X      | Y      | Z   | Depth | Strike | Slope | SI | Width | Length | Depth Extent | Tonnage (Mt)  |
|--------------|--------|--------|-----|-------|--------|-------|----|-------|--------|--------------|---------------|
| 1            | 685398 | 371482 | 895 | 65    | 040    | 30    | 1  | 125   | 500    | 150          | 32.81         |
| 2            | 685885 | 371971 | 787 | 25    | 055    | 40    | 1  | 80    | 400    | 150          | 16.80         |
| 3            | 685649 | 372275 | 681 | 55    | 045    | 40    | 1  | 100   | 300    | 150          | 15.75         |
| 4            | 684654 | 372071 | 640 | 55    | 040    | 35    | 1  | 100   | 450    | 150          | 23.63         |
| 5            | 685015 | 372108 | 636 | 80    | 045    | 30    | 1  | 100   | 250    | 150          | 13.13         |
| 6            | 686462 | 372385 | 793 | 60    | 045    | 55    | 1  | 100   | 250    | 150          | 13.13         |
| 7            | 686026 | 373066 | 567 | 55    | 045    | 55    | 1  | 50    | 300    | 150          | 7.88          |
| 8            | 685525 | 372725 | 543 | 50    | 045    | 90    | 1  | 100   | 250    | 150          | 13.13         |
| 9            | 687055 | 373138 | 816 | 50    | 045    | 40    | 1  | 75    | 400    | 150          | 15.75         |
| 10           | 687244 | 372926 | 848 | 50    | 046    | 40    | 1  | 75    | 400    | 150          | 15.75         |
| 11           | 687092 | 372977 | 859 | 65    | 046    | 40    | 1  | 75    | 400    | 150          | 15.75         |
| 12           | 686663 | 373288 | 681 | 50    | 046    | 40    | 1  | 75    | 250    | 150          | 9.84          |
| 13           | 686474 | 373383 | 633 | 30    | 046    | 40    | 1  | 75    | 75     | 150          | 2.95          |
| 14           | 687496 | 373607 | 731 | 55    | 045    | 45    | 1  | 75    | 100    | 150          | 3.94          |
| 15           | 687423 | 373344 | 793 | 75    | 045    | 45    | 1  | 85    | 200    | 150          | 8.93          |
| 16           | 687049 | 373788 | 661 | 70    | 045    | 45    | 1  | 75    | 200    | 150          | 7.88          |
| 17           | 687249 | 373586 | 747 | 65    | 045    | 45    | 1  | 75    | 150    | 150          | 5.91          |
| 18           | 686805 | 372610 | 824 | 70    | 045    | 45    | 1  | 75    | 300    | 150          | 11.81         |
| 19           | 686681 | 372729 | 749 | 75    | 045    | 45    | 1  | 70    | 150    | 150          | 1.84          |
| 20           | 686416 | 372710 | 669 | 80    | 045    | 45    | 1  | 80    | 200    | 150          | 8.40          |
| 21           | 684908 | 372400 | 560 | 50    | 045    | 45    | 1  | 80    | 500    | 150          | 21.00         |
| 22           | 684545 | 370910 | 851 | 75    | 045    | 45    | 1  | 100   | 300    | 150          | 15.75         |
| 23           | 684407 | 370672 | 822 | 60    | 045    | 45    | 1  | 200   | 475    | 150          | 49.88         |
| 24           | 685046 | 371050 | 909 | 55    | 045    | 35    | 1  | 100   | 250    | 150          | 13.13         |
| 25           | 684397 | 371624 | 722 | 30    | 045    | 35    | 1  | 125   | 250    | 150          | 16.41         |
| 26           | 684752 | 371839 | 745 | 45    | 045    | 35    | 1  | 100   | 250    | 150          | 13.13         |
| 27           | 684757 | 371539 | 795 | 40    | 045    | 35    | 1  | 100   | 200    | 150          | 10.50         |
| 28           | 686074 | 372494 | 585 | 120   | 045    | 45    | 1  | 100   | 200    | 150          | 10.50         |
| <b>Total</b> |        |        |     |       |        |       |    |       |        |              | <b>395.31</b> |

**Table Parameters:**

|              |  |
|--------------|--|
| X, Y, Z      | East, north and RL coordinates for the top of model.                                       |
| Depth        | Depth to top of model.   |
| Strike       | Strike direction of the model.   |
| Slope        | Dip of the model.  |
| SI           | Magnetic susceptibility.   |
| Width        | True thickness of the model.   |
| Length       | Strike length of model.  |
| Depth Extent | Down dip depth extent of the model.  |
| Tonnage      | Tonnage calculated from strike, thickness, depth and assumed 3.5g/cm <sup>3</sup> density. |