

## DECEMBER 2011 QUARTERLY REPORT

23 JANUARY 2012

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### PROJECTS

**Cameroon:** iron ore, gold

**Pilbara:** nickel, copper, zinc,  
iron ore

**Mt Gibson:** zinc, copper, gold

### HIGHLIGHTS

- **Significant intercepts of magnetite gneiss (80-134m) in four holes at Melombo East**
- **Treasury boosted by capital raising (\$7.2M) and future sale of Mt Gibson Project (\$7M)**
- **New drill rig and equipment ordered to accelerate exploration activity**
- **Assays and Exploration Target \* (300-500mt) confirm potential of Melombo East**

### OVERVIEW

Melombo East continues to grow as the most prospective target drill tested so far at the Ngovayang Project in Cameroon. The grades and incepts of magnetite coupled with the Exploration Target\* announced 23 November 2011 are very encouraging.

The money raised in November and the imminent settlement of the Mt Gibson Project sale has given Legend the capability to accelerate exploration activities.

A new track mounted diamond drill rig has been ordered which will enable deeper drilling to be carried out. Once this rig is commissioned the man portable rigs will be deployed to the Plateau Prospect, so the news flow will be from two locations. The access track to Plateau is almost complete and pad preparation will commence thereafter. Recommencement of drilling with the man portable rigs is now expected early in February.

\*Footnote & refer ASX release 23 November 2011:

*Modelling has produced a potential tonnage of 400Mt of magnetite contained within a host unit of magnetite gneiss. The estimate has a perceived error of  $\pm 25\%$ , giving a potential tonnage range of 300-500Mt<sup>2</sup>. 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.*

## 1. CAMEROON PROJECT

The Cameroon Project comprises three granted exploration permits covering an area of approximately 2,970km<sup>2</sup> and is considered prospective for iron ore and gold, see Figure 1. Discovery of 50Mt of direct shipping ore (DSO) is the primary objective, however magnetite-gneiss ore (lower grade but potential very high tonnage) is also being targeted.

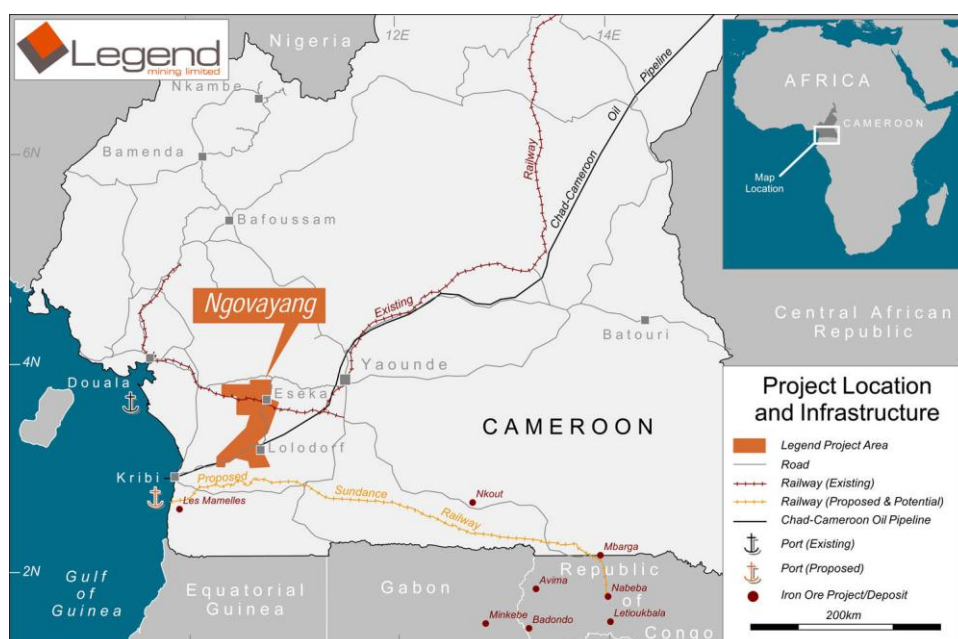
### *Drilling Ongoing*

Diamond drilling continued during the December quarter. The proposed programme is targeting a combination of aeromagnetic and topographic highs associated with +50% Fe rockchip sample results. Drill testing of the priority target area of Melombo East has been the focus of activity this quarter.

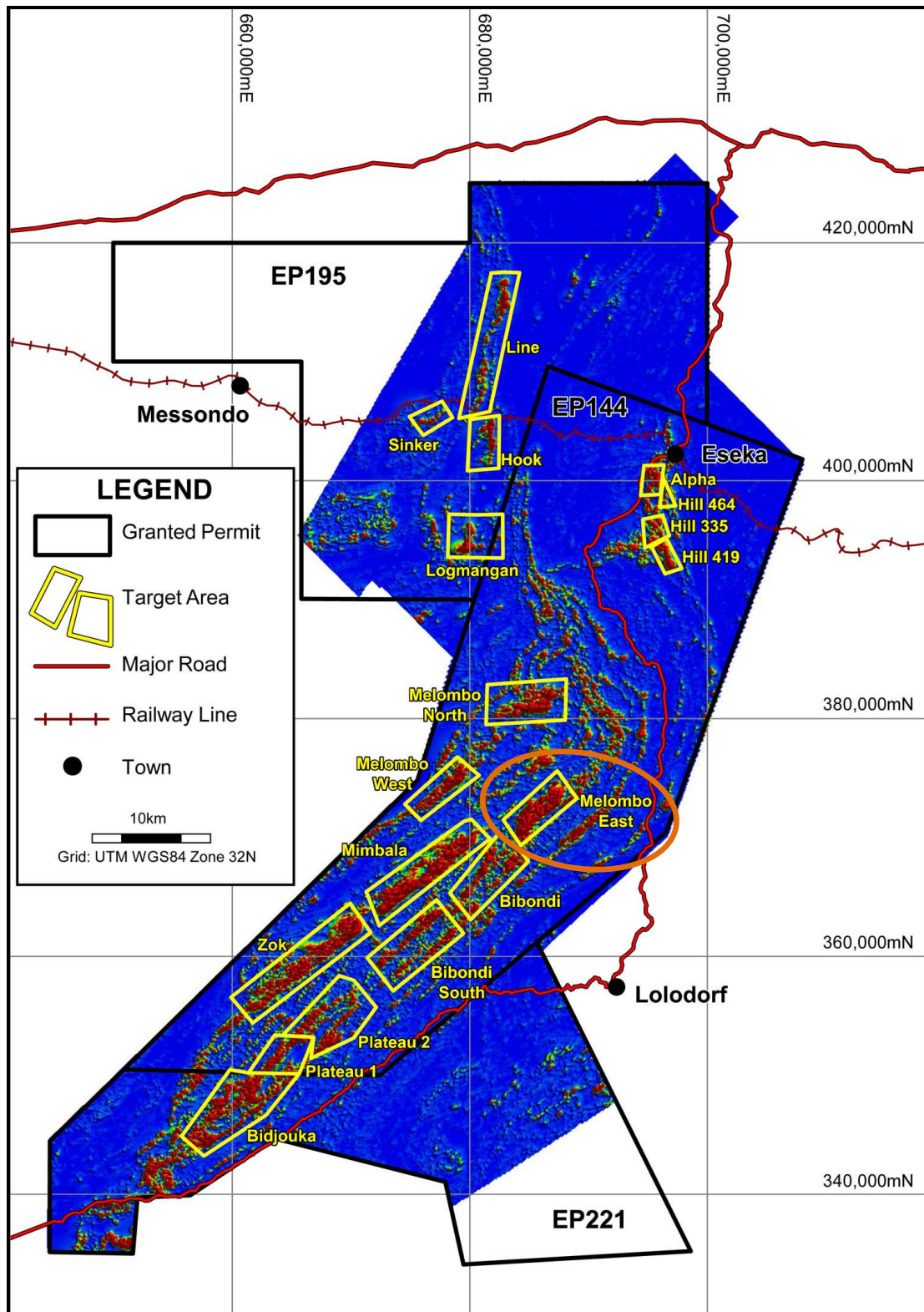
On 11 October 2011 Legend concluded an agreement with contractor Geosearch to acquire Geosearch's drilling assets at Eseka for US\$440,000 including four drill rigs (two in operational order, two for spares), two Toyota Landcruisers, and the Geosearch field workshop. The workshop includes all tools, down hole equipment and spares. In addition the company has now employed a drill supervisor, an experienced mechanic and support drilling staff.

### *New Equipment Ordered*

Legend has placed an order for a new track mounted diamond drill rig and ancillary equipment from a South African based supplier. The rig is scheduled for delivery in March 2012 and is planned to be deployed to Melombo East.



**Figure 1: Cameroon Project Location and Infrastructure**



**FIGURE 2: Ngovayang Project - Target Areas over Aeromagnetic Image  
(Analytical Signal of Total Magnetic Intensity)**

## Melombo East

### Drilling

The drilling at Melombo East is testing a large (6km x 1.5km) complex aeromagnetic feature, which follows the dominant NE-SW trend of the southern Ngovayang massif, see Figure 2. Detailed geological mapping has defined two large areas (2km x 1km) and (1.5km x 0.8km) of outcropping and subcropping magnetite±biotite±garnet gneiss, as shown on Figure 3.

To date, a total of nine drillholes have been completed, three abandoned due to bad ground conditions, and a further two holes yet to be completed for a total of 1,032.14m. Details of the programme are provided below in Table 1, while drillhole locations are shown on Figure 3 in relation to aeromagnetics and mapped magnetite gneiss.

Table 1: Melombo East - Diamond Drillhole Details				
Hole ID	Easting	Northing	Dip/Azimuth	Final Depth
DH042	686065	373167	-60/135	16.52*
DH043	686398	372915	-90/000	95.98
DH044	685676	372406	-90/000	149.98
DH045	686082	373171	-90/000	29.98*
DH046	685435	371695	-90/000	100.46
DH047	685664	371930	-90/000	83.96
DH048	685351	371421	-90/000	100.41
DH049	684773	370886	-90/000	100.68
DH050	684313	371615	-90/000	15.22*
DH051	684305	371618	-90/000	99.99
DH052	684605	371523	-90/000	89.11
DH053	685020	371068	-90/000	101.66
DH054	684578	372111	-90/000	29.98**
DH055	684834	371194	-90/000	18.21**
<b>Total</b>				<b>1,032.14</b>

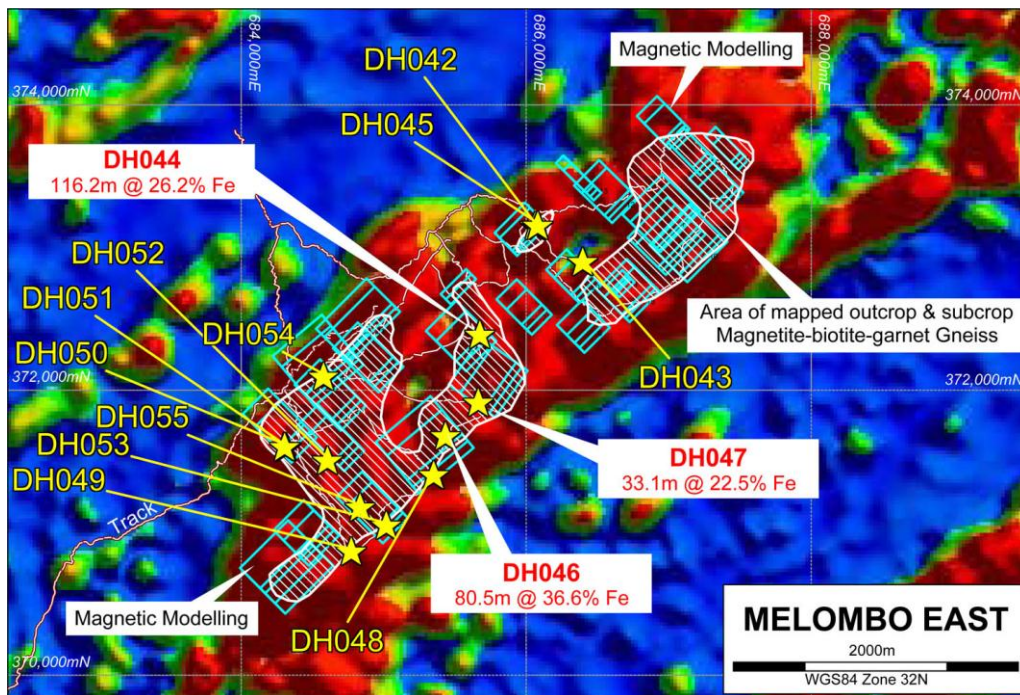
\* Drillhole abandoned due to bad ground conditions.

\*\* Drillhole yet to be completed.

Drilling utilised an Ingetrol man portable diamond drilling rig – HQ and NQ core sizes.

Co-ordinates: Universal Transverse Mercator WGS84, Zone 32, Northern Hemisphere.





**Figure 3: Drillhole Location with Magnetite Gneiss Outcrop/Subcrop over Aeromagnetics with 2D Modelled Bodies**

Significant thicknesses (80-134m) of magnetite bearing gneiss have now been intersected in four drillholes; DH044, DH046, DH051 and DH053, all of which ended in magnetite gneiss. Of the remaining ten holes, including those either abandoned or incomplete, nine intersected magnetite gneiss and importantly six of these also ended in magnetite gneiss, see Table 2.

Hole ID	From	To	Int	Description
DH042	0	16.52 (EOH)	16.52	Hole abandoned – ended in magnetite gneiss
DH043	-	-	-	No significant magnetite gneiss
DH044	16	149.98 (EOH)	<b>133.98</b>	Signif. intersection – ended in magnetite gneiss
DH045	0	29.98 (EOH)	29.98	Hole abandoned – ended in magnetite gneiss
DH046	20	100.46 (EOH)	<b>80.46</b>	Signif. intersection – ended in magnetite gneiss
DH047	0	56.56	56.56	67% of hole contains magnetite gneiss
DH048	0	34.46	34.46	34% of hole contains magnetite gneiss
DH049	31.44	50.35	18.91	Layered magnetite gneiss
	76.8	100.68 (EOH)	23.88	Hole ended in magnetite gneiss
DH050	9.45	15.22 (EOH)	5.77	Hole abandoned – ended in magnetite gneiss
DH051	0	99.99 (EOH)	<b>99.99</b>	Signif. intersection – ended in magnetite gneiss
DH052	75.2	82.61	7.41	8% of hole contains magnetite gneiss
DH053	15.65	101.66 (EOH)	<b>86.01</b>	Signif. intersection – ended in magnetite gneiss
DH054	0	29.98 (EOH)	29.98	To be completed – currently in magnetite gneiss
DH055	0	18.21 (EOH)	18.21	To be completed – currently in magnetite gneiss

Note: Intersections are downhole widths and not necessarily true thicknesses.

A summary of all assay results from Melombo East drillholes is provided below in Table 3.

Table 3: Melombo East – Diamond Drillhole Results								
Hole	From	To	Int	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P%	LOI%
*DH044	33.8	149.98 EOH	116.18	26.2	48.9	5.4	0.092	0.04
Incl.	70.9	149.98 EOH	79.08	29.7	48.1	3.7	0.096	0.01
*DH046	20	100.46 EOH	80.46	36.6	44.6	0.2	0.103	0.04
DH047	0	33.1	33.1	22.5	30.4	23.4	0.049	13.1

Assay Method Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P by fusion XRF – OMAC Laboratory, Ireland.

LOI – Loss on Ignition at 1,000°C determined gravimetrically.

Drillholes DH051 and DH053 have been sent for assay and will be reported when received.

Melombo East continues to return highly encouraging results, with respect to both magnetite gneiss intersection thickness and iron assay grade. The fact that ten of the drillholes contain magnetite gneiss in the bottom of the hole and with support from the magnetic modelling, suggests that magnetite gneiss thicknesses may be much greater.

### Geophysical Modelling

As released to the ASX on 23 November 2011, Core Geophysics was 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 3. 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>1</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<sup>2</sup>.

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.

**Note:** 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.

## Melombo West

As reported to the ASX on 16 December 2011, assay results have been received from three diamond drillholes (NMLWD001, 002, 006) at Melombo West, as originally reported to the ASX on 15 August, and are summarised below in Table 4.

Table 4: Melombo West – Diamond Drillhole Results								
Hole	From	To	Int	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P%	LOI%
<b>NMLWD001</b>	55.13	97.80	42.67	23.5	49.1	10.6	0.046	-0.01
Incl.	79.7	94.7	15.0	30.3	45.4	6.6	0.083	-0.01
<b>NMLWD002</b>	0	125.98 EOH	125.98	18.8	50.4	14.4	0.029	1.11
Incl.	0	28.62	28.62	24.7	41.7	14.1	0.031	4.86
Incl.	33.80	43.27	9.47	22.7	49.6	11.9	0.035	-0.01
Incl.	68.83	93.46	24.63	19.4	50.7	14.3	0.029	-0.01
Incl.	102.16	125.98 EOH	23.82	19.7	49.8	14.8	0.027	-0.01
<b>NMLWD006</b>	0	42.0	42.0	27.6	42.2	10.6	0.060	6.23

Assay Method Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P by fusion XRF – OMAC Laboratory, Ireland.

LOI – Loss on Ignition at 1,000°C determined gravimetrically.

The drill results have confirmed significant thicknesses (42m to 125.98m) of banded/interlayered magnetite-garnet-biotite-chlorite gneiss with iron grades ranging between 18.8% and 27.6% Fe.

Diamond drilling at Melombo West comprised a total of seven drillholes, (NMLWD001-007) for a total of 698.47m. The drilling was testing a 6km NE-SW trending ridge with associated aeromagnetic high containing occasional outcrop of garnet-magnetite gneiss. All drillholes intersected “magnetic” units of variable intensity, explaining the aeromagnetic feature.

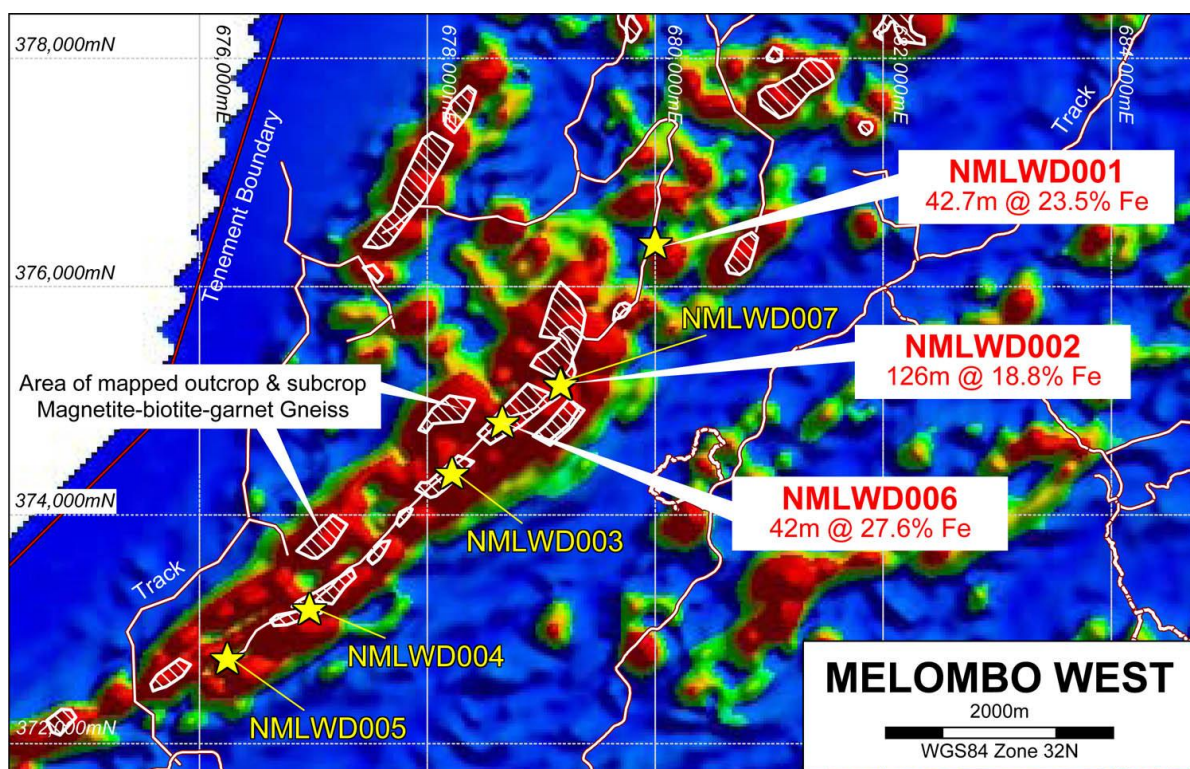
Details of the drilling are provided below in Table 5 and shown on Figure 4.

Table 5: Diamond Drillhole Details – Melombo West				
Hole ID	Easting	Northing	Dip/Azimuth	Final Depth
NMLWD001	680004	376406	-90/000	116.98
NMLWD002	679174	375179	-90/000	125.98
NMLWD003	678217	374389	-90/000	98.99
NMLWD004	676967	373203	-90/000	95.98
NMLWD005	676244	372767	-90/000	89.98
NMLWD006	678657	374838	-60/135	83.78
NMLWD007	679171	375168	-60/135	86.78
<b>Total</b>				<b>698.47</b>

Drilling utilised an Ingetrol man portable diamond drilling rig – HQ and NQ core sizes.

Co-ordinates: Universal Transverse Mercator WGS84, Zone 32, Northern Hemisphere.





**Figure 4: Drillhole Location with Magnetite Gneiss Outcrop/Subcrop over Aeromagnetic Image**

Recent geological mapping has identified sporadic outcrop/subcrop of magnetite gneiss over a strike length of approximately 4km on the main SW-NE trending ridge, see Figure 4. This work along with the geological mapping confirms the potential for a large tonnage of magnetite at Melombo West.

Further evaluation of the Melombo West target is planned incorporating magnetic modelling, which has been successfully implemented at Melombo East before a decision for further drill testing can be taken.

## 2. PILBARA PROJECT

### *Extension of settlement date*

As announced to the ASX on 30 August 2011 Legend signed a Sale Agreement over its Pilbara Project tenements, including the sale of its wholly owned subsidiary Armada Mining Limited, with a wholly owned subsidiary of Karratha Metals Limited ("KML"). The sale is conditional upon KML successfully completing a capital raising and obtaining approval to list on the Australian Securities Exchange and the consideration is 10,000,000 fully paid shares in KML. KML and Legend have agreed to extend the settlement date to 15 June 2012 and KML has paid Legend an extension fee of \$50,000, per the Sale Agreement, on 15 December 2011.

### *Mt Marie JV (Legend 40% earning 70% from Fox Radio Hill PL)*

No activity to report.



### 3. MT GIBSON PROJECT

On 22 November 2011, Legend announced that it signed an Asset Sale Agreement with Top Iron Pty Ltd ("Top Iron") to sell Legend's Mt Gibson Gold Project to Top Iron for the cash consideration of \$7,000,000. In addition to the consideration, the \$1,400,000 term deposit securing the environmental bonds on the site will be returned to Legend's working capital account.

The transaction was subject to a 60 day due diligence period which included FIRB approval, and was scheduled to settle on 20 January 2012.

On 11 January 2012 Legend announced that Extension Hill Pty Ltd (EHPL) has exercised a right of first refusal, with respect to the sale to Top Iron, pursuant to the existing licence agreement. The transaction is now scheduled to settle no later than 12 March 2012 subject to the satisfaction of conditions including a 60 day due diligence period and FIRB approval.

### 4. CORPORATE

On 17 November 2011 Legend announced that it arranged a placement to raise \$10 million (before costs) at 3c a share. The purpose of the placement was to accelerate exploration and development of its Ngovayang Project in Cameroon and to provide additional working capital.

Azure Capital Limited ("Azure") was appointed as lead manager to the placement which comprised 333,333,333 shares. The shares were allocated mainly to Overseas and Australian institutional clients of Azure.

The offer of the securities exceeded the Company's current 15% new issues capacity, therefore the placement was to be completed in two tranches as follows:

- the initial tranche of 240 million new shares to raise \$7.2 million; and
- a second and final tranche of 93,333,333 shares to raise \$2.8 million.

The initial tranche settled on 25 November 2011. The second tranche of the placement required shareholder approval at a General Meeting, which was held on 20 December 2011.

Following the General Meeting Legend determined, in consultation with Azure, not to proceed with the second tranche. The decision was made having regard to the anticipated cash inflow (\$7 million) from the sale of Legend's Mt Gibson assets and current market conditions. Compensation due to Azure under the capital raising mandate was reduced pro-rata including a reduction in the number of Options to be issued to Azure.

## 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>1</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.

<sup>2</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.

## 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.