



**ILUKA**

## **Notice to the Australian Stock Exchange**

**17 August 2006**

### **UPGRADE TO AMBROSIA RESOURCE EUCLA BASIN**

Iluka Resources Limited today announced that it has upgraded its resource estimate for the Ambrosia discovery, Eucla Basin, South Australia. The Ambrosia discovery was made by Iluka in October 2004.

The Ambrosia in situ Heavy Mineral (HM) resource has been increased by 75% from 1.6 million tonnes to 2.8 million tonnes. The grade for Ambrosia is 2.7%, with an average zircon assemblage of 48%. The Ambrosia resource is now estimated to contain 1.3 million tonnes of in situ zircon, which equates to approximately 400 thousand tonnes of additional zircon compared with the previous resource estimate.

In combination with the Jacinth discovery, Iluka now has 9.2 million tonnes of in situ HM resources booked in the Eucla Basin, with an average HM grade of 4.3% and an average zircon assemblage of 48%. This equates to over 4.4 million tonnes of zircon.

Additional drilling and assessment work has also resulted in the Ambrosia Mineral Resource being upgraded from an Inferred to Indicated category, as defined in the 2004 JORC Code.

According to Peter Benjamin, Iluka's Executive General Manager, Exploration:

"This substantial increase in resource size is attributed to extending and better defining the high grade core and proving up a large, surrounding halo of mineralised sand. Consequently, upon better definition of this halo of mineralised sand and in conjunction with more assemblage test work, the overall zircon assemblage now averages 48%. It should be noted that both Ambrosia and Jacinth have zircon assemblages which are nearly three times the global average for mineral sand discoveries."

"These results are enabling Iluka to gain an improved understanding of the geology of this new and, as yet, relatively lightly explored province. The latest drilling results will be integrated into our analysis of options available in order to arrive at the most appropriate development outcome for this new zircon region."

Iluka expects to announce a resource estimate later this year for the Tripitaka discovery (in joint venture with Adelaide Resources Ltd). The company has also commenced a comprehensive exploration programme in an area of approximately 23,000 square kilometres with the first stage being focussed in the area between Tripitaka and Jacinth/Ambrosia, a distance of approximately 100 kilometres. Assay and analysis work is also being undertaken in relation to several anomalous heavy mineral intersections encountered to date.

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Pre-feasibility work is underway in relation to the potential development of the Jacinth and Ambrosia deposits. This work is expected to be completed by the middle of 2007.

The Ambrosia deposit is located 2 kilometres north of the Jacinth deposit, in the south-eastern half of Iluka's wholly owned Exploration Licence 2900, approximately 200 kilometres north-west of Ceduna - refer to location map in Attachment - 1.

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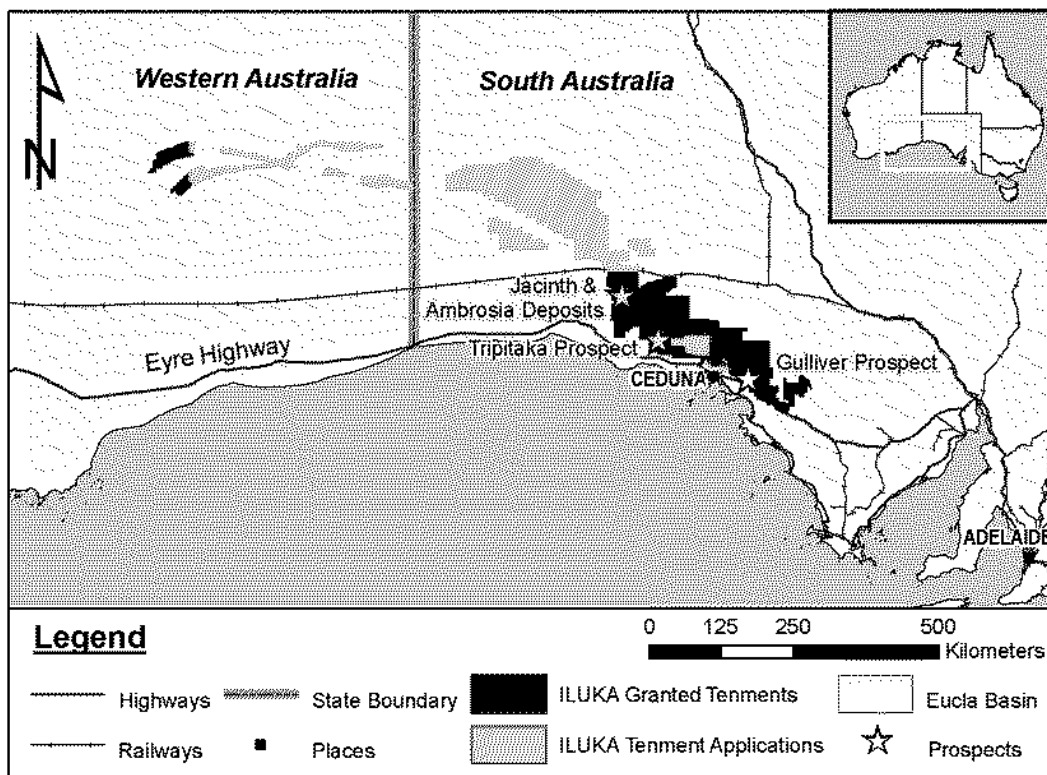
# Attachment -1

## Ambrosia Indicated Mineral Resource

The Ambrosia deposit is believed to represent classic beach placer style mineralisation with a high grade "placer" core and associated overlying mineralised dunal sands. In combination with the Jacinth discovery, Ambrosia is located at the base of the Ooldea Range which is thought to represent an Eocene beach. The Ooldea Range remains open for over 35 kilometres to the north within Iluka's tenement EL2900. This area has a high priority for further exploration by Iluka in the short term.

Iluka has completed sufficient work on this Ambrosia deposit to be able to state that the estimate has been prepared in accordance with the 2004 JORC Code. The Indicated Mineral Resource Estimate as outlined below in Table 1.

**Figure 1: Ambrosia Deposit Location Map**



**Table 1: Ambrosia Indicated Mineral Resource Estimate (+1% HM Cut-off)**

Material Tonnes (millions)	HM (%)	Clay (%)	HM Tonnes (millions)	Zircon (%)	Rutile (%)	Ilmenite (%)
104	2.7	13.3	2.8	48	4	23

Notes on Table 1:

- HM represents Heavy Mineral (grains with a specific gravity > 2.9).
- Clay is material smaller than 53 microns in size.
- Zircon, Rutile, and Ilmenite are estimates of the percentage levels within the total in situ Heavy Mineral tonnes based on laboratory results.

A comparison of the 2005 Inferred Resource and the 2006 Indicated Resource is given below in Table 2. The significant material movements have resulted from the better definition of the high grade core and definition of a very large halo of material around the high grade core.

This halo material is believed to be primarily dunal in nature derived from when the high grade beach placer mineralisation was exposed to wind erosion. As is common with a number of beach placer deposits the dunal material tends to have a slightly lower portion of the more valuable and heavier mineral grains, in particular zircon, due to the fact that wind is generally a less efficient sorting mechanism for heavy mineral concentrations compared to water.

The inclusion of this halo material has led to a slight reduction in the global HM grade and zircon level within the HM assemblage. As stated in previous ASX releases for Eucla Basin resources, preliminary economic evaluations suggest that +1% HM material may contribute to economic reserves and thus it was decided to include this material into the Indicated Resource Estimate.

**Table 2: Comparison of Ambrosia Resource Estimates (+1% HM Cut-off)**

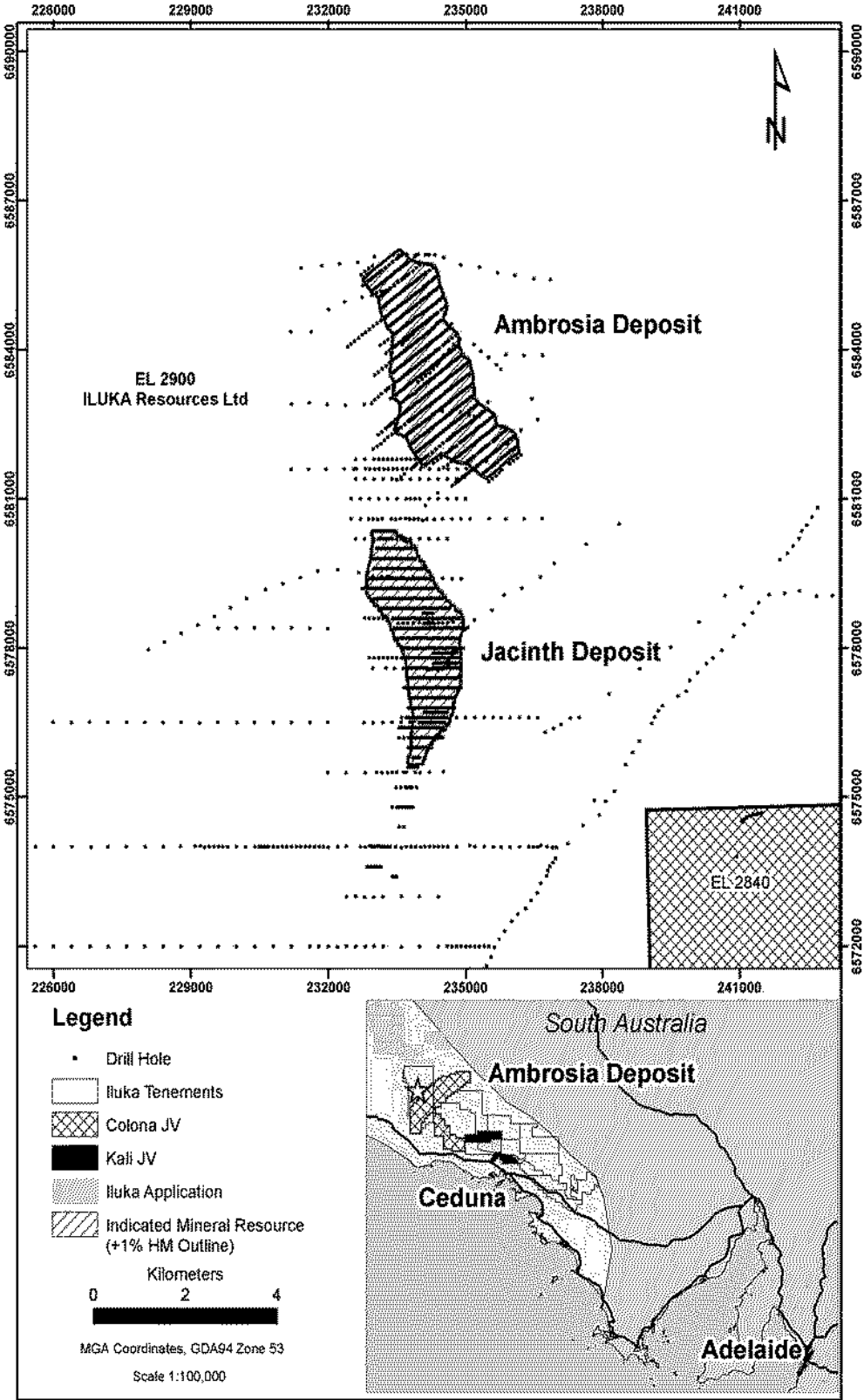
	<b>Inferred Resource</b>	<b>Indicated Resource</b>	<b>Change</b>
Material (million tonnes)	54	104	50
HM Grade %	3.0	2.7	(0.3)
HM (million tonnes)	1.6	2.8	1.2
Zircon (million tonnes)	0.9	1.3	0.4

### **Resource Model Background**

A total of 721 holes totalling some 23,000m have been drilled across the Ambrosia deposit using the Company's air core drilling rigs. All holes were drilled vertically and sampled at 1 metre increments. Drilling density is shown below in Figure 2 and has been completed on a 200 by 50 metre grid pattern. The samples were logged by company geologists on site and the samples containing anomalous mineralisation were sent to the company's laboratory for assay. Boreholes were located using differential GPS equipment with sub-metre resolution.

A total of 77 composite bulk samples were selected, across all mineralised drill sections, for mineralogical analysis. All laboratory work was conducted at Iluka's laboratories where in-house QAQC procedures are applied.

**Figure 2: Detailed Overview of the Ambrosia and Jacinth Deposits**



## **Ambrosia Resource Model**

A Geological Resource Model has been constructed using the Datamine Software package. The model was constructed using constraints as per normal company practice. Block estimation techniques were aligned to the deposit strike and other geological parameters as interpreted by company geologists. The bulk density for the model was estimated using the Iluka standard formula based on operational experience gained from mining this style of mineralisation.

Due to the high level of sampling density it has been decided to classify the Mineral Resource Estimate in the Indicated Category. Close spaced drilling and Geostatistical Analysis from sections of the adjacent, and similar style deposit Jacinth, also support this classification decision. Both internal and external reviews of the Ambrosia Resource Model support the JORC classification stated in this document.

**The description of the Mineral Resource is based on information compiled by Iluka staff under the review of Peter McGoldrick who is a member of The Australian Institute of Mining and Metallurgy and a full time employee of Iluka. Peter McGoldrick has sufficient experience which is relevant to this style of mineralisation to qualify as a Competent Person as defined in the 2004 Edition of the JORC code and consents to the inclusion in the report of the matters based on information in the form and context in which it appears.**