



ABN 22 080 933 455

**ARAFURA RESOURCES LIMITED (ASX: ARU)**  
**NOLANS RARE EARTHS PROJECT, NORTHERN TERRITORY**  
**(ARU 100%)**

18 NOVEMBER 2008

**NOLANS PROJECT IMPROVES IN VALUE**

Arafura Resources Limited recently announced a substantial resource upgrade at its Nolans rare earths-phosphate-uranium project in the Northern Territory (ASX: ARU 11/11/08). Total resources of 30.3 million tonnes have now been identified, a 62.9% increase on the previous resource estimate published in November 2005, establishing Nolans as a rare earths deposit of global significance.

The Company is pleased to provide an update on activities that further improve the value of the Nolans Project.

Arafura has just completed a design review in Israel with the Bankable Feasibility Study (BFS) managers, Bateman Litwin NV (Bateman), including involvement of GHD consultants in mining, beneficiation, infrastructure, transport and capital structure.

This review has now captured the transfer of laboratory, pilot plant and additional optimisation test work data into mass balances and Process Flow Diagrams (PFDs). Piping and instrumentation diagrams (P&IDs) can now be developed for mine site concentration (Beneficiation Plant), and the chemical plant.

Significant developments have been achieved through this process. These include:

- Commencement of operations using higher grade mineralisation in the Central North Zone (CNZ) that will allow for lower start-up capital costs (CAPEX) with the potential for a staged expansion after possibly 5 years to treat other mineralisation. These capital cost savings will be progressively reported as the Front End Engineering Design (FEED) progresses. These options will be further investigated during 2009 as the life of mine resource modelling is optimised.

- Reductions in chemical consumption through the demonstration pilot plant development, operation and optimisation. Bateman's beneficiation team and their phosphoric acid group, in partnership with the Australian Nuclear Science and Technology Organisation (ANSTO) and other Australian process laboratories, have achieved:
  - 25% reduction in hydrochloric acid (HCl) consumption; and
  - 50% reduction in sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) consumption.

**These improvements in chemical consumption have the effect of reducing operating costs by A\$50 million per annum directly compared with estimates presented in the October 2007 pre-feasibility study.**

Further operating cost savings are possible given that current prices for chemicals are significantly lower.

The above works were performed using the A\$3.3 million AusIndustry Commercial Ready grant, awarded to Arafura in November 2006.

Arafura has also completed a comprehensive analysis of the relative abundances of individual rare earth elements in the Nolans deposit (see Table) following the recent resource upgrade.

This analysis highlights a more desirable rare earth mix and a commensurate improvement in the value of that mix – from US\$14.42/kg to US\$14.70/kg – due to enhanced content in the high-value rare earths of Europium and Neodymium.

Rare Earth Element REE	REO Price 2008 to date <sup>1</sup> (US\$/kg)	Original content <sup>2</sup>	<b>Current content</b>	Original value <sup>3</sup> (US\$/kg)	<b>Current value (US\$/kg)</b>
Lanthanum	\$7.70	20.40%	<b>20.0%</b>	\$1.57	<b>\$1.54</b>
Cerium	\$4.28	48.32%	<b>48.2%</b>	\$2.07	<b>\$2.06</b>
Praseodymium	\$29.96	5.91%	<b>5.9%</b>	\$1.77	<b>\$1.77</b>
Neodymium	\$30.11	21.06%	<b>21.5%</b>	\$6.34	<b>\$6.47</b>
Samarium	unvalued	2.37%	<b>2.4%</b>	unvalued	<b>unvalued</b>
Europium	\$462.67	0.37%	<b>0.41%</b>	\$1.71	<b>\$1.90</b>
Gadolinium	unvalued	0.95%	<b>1.0%</b>	unvalued	<b>unvalued</b>
Terbium	\$711.11	0.08%	<b>0.08%</b>	\$0.57	<b>\$0.57</b>
Dysprosium	\$113.11	0.34%	<b>0.34%</b>	\$0.39	<b>\$0.39</b>
Other	unvalued	0.20%	<b>0.17%</b>	unvalued	<b>unvalued</b>
<b>Weighted Average Nolans</b>		100.00%	<b>100.00%</b>	\$14.42	<b>\$14.70</b>

Sources: 1 Year to date average - Metal Pages  
 2 ASX: ARU 28/09/04  
 3 ASX: ARU 30/10/08

Europium is an essential element in the production of phosphors, used in plasma panel screens for televisions and computer monitors, and in energy efficient lighting. The demand for these products is currently growing at an annual rate of 15-20%.

Nolans is highly enriched in Neodymium when compared against any other primary rare earth deposits in the world. Neodymium is used in the production of high-strength permanent magnets used in the electric motors of hybrid vehicles and wind turbines. These magnets help achieve reductions in fuel consumption, and superior output. The market growth in Neodymium magnets is currently 15-20%.

The growth in demand for both Europium and Neodymium is being driven by the need to deliver energy efficient solutions to transport and power generation.

The information in this press release that relates to exploration results and geological interpretation has been compiled by Mr Richard Brescianini BSc (Hons), and the information in this press release that relates to metallurgical results and interpretation has been compiled by Mr Steven Mackowski BAppSc, both full-time employees of Arafura Resources Limited. Mr Brescianini is a Member of the Australian Institute of Geoscientists and has the necessary professional qualifications and sufficient experience relevant to this style of mineralisation to qualify as the Competent Person as defined in the *Australasian Code for Reporting of Mineral Resources and Ore Reserves* (JORC Code) for reporting these exploration results. Mr Mackowski is a Fellow of the Australian Institute of Mining and Metallurgy and has the necessary professional qualifications and sufficient experience relevant to this style of mineralisation to qualify as the Competent Person as defined in the *Australasian Code for Reporting of Mineral Resources and Ore Reserves* (JORC Code) for reporting these metallurgical results. Both Mr Brescianini and Mr Mackowski consent to the inclusion in this report of the contained technical information in the form and context in which it appears.

### Nolans Tenure & Resources

The Nolans phosphate-hosted rare earths-uranium deposit is located within Arafura's Substitute Exploration Licence 23671 (SEL 23671 & MLA 26659) near Aileron, about 135 kilometres NNW of Alice Springs in the Northern Territory.

Identified resources at Nolans are currently estimated to be:

Resources	Tonnes (million)	Rare Earths REO %	Phosphate P <sub>2</sub> O <sub>5</sub> %	Uranium U <sub>3</sub> O <sub>8</sub> lb/t
Measured	5.1	3.2	13.5	0.57
Indicated	12.3	2.8	13.4	0.43
Inferred	12.8	2.6	12.2	0.40
<b>TOTAL</b>	<b>30.3</b>	<b>2.8</b>	<b>12.9</b>	<b>0.44</b>

(This resource meets the guidelines of the JORC Code, ASX: ARU 11/11/08)

### Nolans Demonstration Plant

The Company is currently demonstrating the recovery of rare earths, phosphoric acid and uranium at a pilot plant located at ANSTO (Australian Nuclear Science and Technology Organisation) in Sydney. The demonstration plant has successfully completed the recovery of premium quality fertiliser grade and technical grade phosphoric acid. The rare earths recovery process to a carbonate product is currently underway.

### Nolans Bankable Feasibility Study

In July 2008 the Company commenced the bankable feasibility study for the Nolans Project, lead and managed by Bateman Litwin.

### Arafura Resources Strategy

Arafura has an exploration and development program to grow its position in rare earth projects that are consistent with additional growth beyond the Nolans Project. The Company will focus on the identification and development of rare earth projects and specialise in rare earths products and their markets.

### Growth through Development

Arafura's primary focus is the development of the Nolans rare earths-phosphate-uranium project. The deposit has a resource to sustain a mine life of over 20 years and Arafura has developed a processing flow sheet that optimises the extraction of rare earths, phosphoric acid, and uranium.

For more information:

Fact sheets on Arafura can be found on the Arafura Resources website at [www.arafuraresources.com.au](http://www.arafuraresources.com.au)