



# ARAFURA RESOURCES LTD

## QUARTERLY REPORT

FOR THE PERIOD ENDED 31 March 2010

### Highlights

- Placement and rights issue raises A\$19.5 million
- Nolans project activities stepped-up following receipt of funds from successful capital raising
- Mine optimisation study underway
- Mine site environmental study commences with hydrological drilling
- Successful laboratory scale activities from planned technical development program. Larger scale testing programs have now commenced:
  - Rare Earth separation
  - Recycle of chlorine from calcium chloride
- Demonstration of new technology steps now included in Nolans scope to verify design data and de-risk
- Commercial and regulatory discussions regarding shortlisted chemical processing plant sites progressing well
- Nolans Project remains on schedule for production 2013



## CORPORATE

In February, Arafura Resources (“Arafura” or “the Company”) was pleased to announce it had raised approximately A\$19.5 million through a placement of shares to sophisticated and institutional investors, and a renounceable Rights Issue on a 1 for 10 basis to existing shareholders. The remaining residual shortfall shares can be placed within 3 months of the rights issue which concluded on March 25<sup>th</sup>, at a price no less than the offer price of A\$0.62. The capital raising was effected following a positive response to a series of investor briefing presentations around the world.

A further series of briefings to shareholders and investors will be held throughout the year as part of the wider communications strategy including ASX Open Briefings.

Arafura accepted an invitation to present to the United States Geological Survey (“USGS”) during the quarter. The USGS is the world’s pre-eminent geological agency and the invitation to Arafura is testament to the quality and strategic importance of the Nolans deposit. At the same time, the US Congress were drafting legislation requesting funds be appropriated for the Rare Earths Supply-Change Technology and Resources Transformation Act of 2010 which seeks to re-establish a domestic rare earths industry. To this end, Arafura was also invited to present at the TREM Conference (TREM: Technology and Rare Earth Metals for National Security and Clean Energy) in Washington DC. A key concern to emerge from the event was the apparent shortage of potential suppliers into the rare earths market in the near term. Very few projects, of which Arafura is one, are sufficiently advanced to be realistically considered as potential suppliers in the next few years.

Feedback from delegates at TREM has been positive and is ongoing.

## NOLANS PROJECT

Nolans project activities were stepped-up upon receipt of funds from the successful capital raising. The Nolans project remains on target to commence production in 2013.

Planned work on the separation of rare earth oxides has shown encouraging results in the laboratory and further development work is underway to improve quality and to consider other options for enhanced CAPEX/OPEX returns.

Arafura has successfully proven, at laboratory scale, the treatment of calcium chloride with sulphuric acid to produce gypsum and recirculated hydrochloric acid. The aim of this study was to create efficiencies in the chlorine recycle process to minimise front end raw material costs and improve chemical efficiencies. Pilot scale demonstration of this process is now being planned.



Other optimisation work has identified that a significant reduction in the size of a chlor-alkali plant for hydrochloric acid supply is possible. Combined with a sulphuric acid plant to deliver reagents for the recycling of chlorine from calcium chloride, the current heat (energy) balance is continuing to indicate a net return back into the grid when all operational units are on-stream. The reduction of the support power systems will significantly reduce infrastructure needs.

The success of the above test work has encouraged Arafura to expand the project scope to include production plants of the major feed chemicals (chlor-alkali and, sulphuric acid) and calcium chloride recycle plant. This study is progressing on schedule to support plant commissioning in 2013.

Commercial and regulatory discussions are progressing in relation to the chemical plant location.

A small shortlist of potential sites is now under close scrutiny. Nolans has an expected mine life of at least 20 years; consequently it is extremely important to ensure the site selection optimises the economic return of the project and enables long term access to key raw materials and inputs. Considerable savings in CAPEX and OPEX have been identified by locating the processing plant adjacent to established infrastructure, including port facilities, labour, power, gas and other resources. An announcement on the preferred location of the chemical plant is expected shortly.

During the reporting period, an independent risk assessment of the Nolans Project was conducted by external parties including engineering and project finance organisations. This was a self-assessment activity as part of Arafura's on-going risk mitigation strategy. Arafura has subsequently decided to undertake a demonstration scale testing to further de-risk aspects of its new technology with the key aim of minimising scale up risk and to verify design data. The demonstration testing will also produce significant quantities of Rare Earth Oxides for potential end user assessment. Planning for this work has commenced and it is anticipated the results will feed directly into detailed engineering design later this year.

A detailed mine optimisation study commenced in March and is expected to be completed in late 2010. This study involves a full economic, financial and engineering review of the mining of the Nolans deposit over the life of the project. The results will feed into a detailed operational and financial plan, and will include a statement of Ore Reserves, pit design and optimum mining strategy.

Despite a wetter than average March and April, drilling rigs were mobilised to site to commence the groundwater (hydrological) drill program. This work will provide important data feed into the environmental impact assessment (EIS), identify water sources for subsequent mine operations and provide Aileron pastoral station with an alternate to Nolans Bore which will be lost on commencement of mining.

Tenders have been received for a major RC/diamond drilling program at Nolans, scheduled to commence around midyear. This program is aimed at defining the limits of the Nolans resource and will, in the process, assist in improving confidence levels in the resource away from the Central North



Zone. Detailed evaluation of the tenders, and final scoping of the drill program, awaits first pass optimization results from Whittle Consulting.

## OTHER

### AILERON-REYNOLDS

- Data analysis in relation to the 2009 Aileron-Reynolds exploration program is ongoing. Planning for the 2010 field season, incorporating target confirmation/testing on SEL 23671 and EL 23571, and first pass geological and geophysical reconnaissance on ELs 27335, 27336 and 27337, is underway.

### JERVOIS

- A market release advising of the termination of the ARU-ECE Jervois JV Letter of Intent was made on 22 February. Consequently, ARU will reassume control of expenditure obligations on the Jervois Project tenements. To that end, metal recovery and geochemical analysis of selected mineralized material from the 2008 drill program has recommenced. This work was suspended in late-2008 due to fiscal constraints, and ongoing JV negotiations with ECE during 2009 added further delays.

## MARKET UPDATE

### *Industry activity*

The industry future supply/demand dynamics have been the subject of much interest. There is growing awareness and concern of the potential tightness in supplies of rare earths outside of China, currently approximately 97% of global production occurs in China where commercial and regulatory moves are limiting exports. End users worldwide have begun to assess alternate potential supplies from outside China.

The growing global realisation of critical supply shortages was evidenced by the hasty introduction of the RESTART bill (Rare Earths Supply-chain Technology and Resources Transformation Act of 2010) in the United States to secure supply of strategic Rare Earth materials for the US Domestic market. The Act was introduced in March 2010 and is currently with the House of Financial Services for referral.

The Chinese Ministry of Commerce released the first batch of export quotas for rare earths in early January 2010. The quotas totaled 16,304 tonnes, representing an increase of 1,261 tonnes compared the corresponding period of 2009. This represented the first increase in export quotas since their introduction in 2007.



There is, however, increasing supply pressure to fulfill Chinese domestic demand evidenced by the imminent implementation of a strategic rare earth reserve plan by a subsidiary of China's Baotou Steel Rare-Earth, which represents about 75% of China's total rare earths production. This is further evidence that Arafura holds a strategic position in future supply opportunities to meet global demand markets outside China.

### *Rare earth prices*

The continuing trend of improving rare earths prices across all rare earths products is tabled below.

Price increases have been initiated by major Chinese producers. Suppliers in northern China have further raised their prices for rare earth carbonate recently with carbonates containing neodymium commanding the largest price increases. An increase in concentrate prices has a flow-on effect to oxide prices which are anticipated to increase further.

Heavy rare earths predominately sourced from southern China have also seen steady price increases predominately as consumers throughout the world rebuild stocks to feed into the growing demand from technological sectors and this price trend is expected to continue.

Rare earth oxide prices comparing Q1 prices over the last 5 years are shown below. The table indicates that prices have begun to improve and return to pre-global financial crisis levels, especially in Q1 of 2010.

Q1 Average REO Prices 2004-2010							
FOB China (US\$/kg)							
REO	Q1 2004	Q1 2005	Q1 2006	Q1 2007	Q1 2008	Q1 2009	Q1 2010
Lanthanum Oxide	\$1.60	\$1.41	\$1.63	\$2.03	\$5.58	\$6.88	\$5.75
Cerium Oxide	\$1.66	\$1.33	\$1.39	\$1.61	\$3.77	\$4.53	\$4.18
Praseodymium Oxide	\$5.91	\$7.54	\$9.65	\$20.17	\$31.00	\$14.25	\$26.83
Neodymium Oxide	\$5.18	\$5.88	\$9.68	\$20.91	\$31.00	\$14.25	\$27.83
Samarium Oxide				\$3.00	\$4.47	\$4.50	\$4.50
Europium Oxide	\$256.00	\$292.67	\$218.33	\$230.33	\$426.33	\$436.67	\$496.67
Gadolinium Oxide				\$8.00	\$10.00	\$6.92	\$7.70
Dysprosium Oxide	\$24.00	\$35.00	\$53.00	\$74.00	\$106.67	\$92.33	\$150.50
Terbium Oxide	\$281.00	\$302.67	\$339.00	\$485.67	\$700.00	\$358.33	\$453.33
Yttrium Oxide				\$4.00	\$13.50	\$15.25	\$10.67
Lanthanum Metal	\$3.37	\$3.50	\$4.05	\$4.25	\$10.17	\$11.08	\$10.08
Neodymium Metal	\$7.91	\$8.39	\$13.63	\$28.33	\$39.50	\$17.50	\$38.17
Mischmetal (Low Zn/Mg)	\$3.50	\$3.43	\$3.87	\$4.50	\$15.00	\$11.25	\$12.33
Mixed RE Carbonate (42%-45%)	\$0.58	\$0.57	\$0.74	\$2.05	\$4.62	\$3.63	\$4.08

**Source:** Industrial Minerals, Metal Pages 2004-2010. Prices have been rounded.



### *Nolans Rare Earths Average Values 2004-2010*

When these prices are translated into a 1kg mix of Nolans product the following positive trend can be seen

	<b>Nolans REO</b>	<b>Q1 2004</b>	<b>Q1 2005</b>	<b>Q1 2006</b>	<b>Q1 2007</b>	<b>Q1 2008</b>	<b>Q1 2009</b>	<b>Q2 2009</b>	<b>Q3 2009</b>	<b>Q4 2009</b>	<b>Q1 2010</b>
Lanthanum Oxide	19.74%	\$1.60	\$1.41	\$1.63	\$2.03	\$5.58	\$6.88	\$5.77	\$5.48	\$5.43	\$5.75
Cerium Oxide	47.53%	\$1.66	\$1.33	\$1.39	\$1.61	\$3.77	\$4.53	\$4.55	\$3.62	\$3.95	\$4.18
Praseodymium Oxide	5.82%	\$5.91	\$7.54	\$9.65	\$20.17	\$31.00	\$14.25	\$14.25	\$14.25	\$20.00	\$26.83
Neodymium Oxide	21.20%	\$5.18	\$5.88	\$9.68	\$20.91	\$31.00	\$14.25	\$14.28	\$14.17	\$19.33	\$27.83
Samarium Oxide	2.37%				\$3.00	\$4.47	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50
Europium Oxide	0.40%	\$256.00	\$292.67	\$218.33	\$230.33	\$426.33	\$436.67	\$460.00	\$483.33	\$490.00	\$496.67
Gadolinium Oxide	1.00%				\$8.00	\$10.00	\$6.92	\$6.75	\$6.48	\$6.30	\$7.70
Dysprosium Oxide	0.33%	\$24.00	\$35.00	\$53.00	\$74.00	\$106.67	\$92.33	\$105.00	\$108.33	\$112.33	\$150.50
Terbium Oxide	0.08%	\$281.00	\$302.67	\$339.00	\$485.67	\$700.00	\$358.33	\$350.00	\$350.00	\$350.00	\$453.33
Yttrium Oxide	1.32%				\$4.00	\$13.50	\$15.25	\$15.25	\$13.42	\$10.50	\$10.67
<b>Weighted Average Nolans Value</b>	<b>100.00%</b>	<b>\$3.87</b>	<b>\$4.12</b>	<b>\$4.92</b>	<b>\$8.53</b>	<b>\$14.27</b>	<b>\$10.08</b>	<b>\$10.00</b>	<b>\$9.55</b>	<b>\$11.13</b>	<b>\$13.76</b>



## ARAFURA RESOURCES LTD

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### CORPORATE OFFICE

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### BOARD

Ian Laurance	Chairman
Stephen Ward	Managing Director
Irvin (Mick) Muir	Director
Ian Kowalick	Director
Terry Jackson	Director
Shasha Lu	Director
Alex Losada-Calderon	Director
Gavin Lockyer	Company Secretary

### MANAGEMENT

Stephen Ward	Chief Executive Officer
Gavin Lockyer	Chief Financial Officer
Steven Mackowski	GM – Project Development
Richard Brescianini	GM – Strategy & Exploration
Brian Fowler	GM – Sustainability
Shasha Lu	EM – Chinese Operations

### SHARES & OPTIONS

Shares 290.6 million ordinary shares

### ASX CODE

ASX: ARU

### STRATEGY

Our Vision is to be the pre-eminent supplier of rare earths to the world. We will do this by:

- Developing the Nolans Rare Earths-Phosphate-Uranium Project; and
- Pursuing long-term strategic growth opportunities in rare earths through exploration success and strategic partnerships

Mission: We will relentlessly pursue growth in shareholder value in a sustainable way.

### GROWTH – DEVELOPMENT

Arafura's primary focus is the development of its 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.

Further drilling is planned at Nolans to establish the full extent of the resource and possibilities for expansion beyond the initial Nolans Project.

### GROWTH – EXPLORATION

Long term sustainable development and the creation of shareholder wealth can also be realised through exploration success. Arafura will assess other exploration opportunities that are consistent with additional growth beyond the Nolans Project.





Appendix 5B

MINING EXPLORATION ENTITY QUARTERLY REPORT

ARAFURA RESOURCES LTD

ACN or ARBN

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Quarter ended ("current quarter")

31 March 2010

*Consolidated statement of cash flows*

	Current Qtr \$A'000	Year to Date (9 months) \$A'000
<b>Cash flows related to operating activities</b>		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for: (a) exploration and evaluation	(2,719)	(10,433)
(b) development	(413)	(1,346)
(c) production	-	-
(d) administration	(1,502)	(5,302)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	187	390
1.5 Interest and other costs of finance paid	(1)	(4)
1.6 Income taxes paid	-	-
<b>Net Operating Cash Flows</b>	<b>(4,448)</b>	<b>(16,695)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	(6)	(191)
1.9 Proceeds from sale of: (a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10 Loans to/from other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
<b>Net Investing Cash Flows</b>	<b>(6)</b>	<b>(191)</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(4,454)</b>	<b>(16,886)</b>





1.13 Total operating and investing cash flows (brought forward)	(4,454)	(16,886)
<b>Cash flows related to financing activities</b>		
1.14 Proceeds from the issue of shares, options, etc.	19,484	33,924
1.15 Proceeds from the sale of forfeited shares	-	-
1.16 Proceeds from borrowings	-	-
1.17 Repayment of borrowings	-	-
1.18 Dividends paid	-	-
1.19 Other – Capital Raising Expenses	(911)	(937)
<b>Net financing cash flows</b>	<b>18,573</b>	<b>32,987</b>
<b>Net increase (decrease) in cash held</b>		
1.20 Cash at beginning of quarter/year to date	14,119	16,101
1.21 Exchange rate adjustments	13,056	11,114
	(55)	(95)
1.22 <b>Cash at end of quarter</b>	<b>27,120</b>	<b>27,120</b>

**Payments to directors of the entity and associates of the directors**

**Payments to related entities of the entity and associates of the related entities**

	Current Qtr \$A'000
1.23 Aggregate amount of payments to the parties included in item 1.2	(256)
1.24 Aggregate amount of loans to the parties included in item 1.10	Nil
1.25 Explanation necessary for an understanding of the transactions	

Directors fees, salaries & superannuation

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

Nil



2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Nil

### Financing facilities available

*Add notes as necessary for an understanding of the position*

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	Nil	Nil
3.2 Credit standby arrangements	20,000	Nil

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	8,125
4.2 Development	2,504
<b>Total</b>	<b>10,629</b>

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to related items in the accounts as follows.

	Current Quarter \$A'000	Previous Quarter \$A'000
5.1 Cash on hand and at bank	27,070	13,006
5.2 Deposits at call	50	50
5.3 Bank Overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter</b> (Item 1.22)	<b>27,120</b>	<b>13,056</b>

### Changes in interests in mining tenements

Tenement Reference	Nature of interest	Interest at Beginning of Quarter	Interest at End of Quarter
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6.1 Interests in mining tenements relinquished, reduced or lapsed

6.2 Interests in mining tenements acquired or increased

-	-	-	-
EL 27337	Lease	Nil	81 blocks

### Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Number Issued	Number quoted	Issue price per security (cents)	Amount paid up per security (cents)
<b>7.1 Preference securities</b> (description)				
7.2 Issued during Quarter				
<b>7.3 Ordinary securities</b>	290,637,942	290,637,942		
7.4 Issued during Quarter	31,423,963	31,423,963	\$0.62	\$0.62
<b>7.5 Convertible debt securities</b> (description)				
7.6 Issued during quarter				
<b>7.7 Options</b>				
ARUAB exp 30-6-10 (75c)	500,000	-		
ARUAC exp 30-6-11 (\$1.60)	100,000	-		
ARUAI exp 31-12-13 (85c)	4,425,000	-		
ARUAM exp 30-6-11 (\$1.72)	820,000	-		
ARUAO exp 31-12-12 (\$1.19)	9,140,000	-		
ARUAS exp 30-06-11 (\$1.31)	300,000	-		
ARUAZ exp 30-06-11 (\$1.70)	200,000	-		
7.8 Issued during Quarter	-	-	-	-



7.9 Exercised during	-	-	-	-
7.10 Expired during	-	-	-	-
7.11 <b>Debentures</b> (totals only)				
7.12 <b>Unsecured notes</b> (totals only)				

**Statement**

1. This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
2. This statement does give a true and fair view of the matters disclosed.

Sign here: \_\_\_\_\_  
Gavin Lockyer  
Company Secretary

Date: 30/04/10

**Notes**

1. The quarterly report is to provide a basis for informing the market how the activities of the entity have been financed for the past quarter and the effect on its cash position. Any entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
2. The “Nature of Interest” (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
3. **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
4. The definitions in, and provisions of, AASB 1022: Accounting for Extractive Industries and AASB 1026: Statement of Cash Flows apply to this report.
5. **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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