

Quarterly Activities Report and Appendix 5B

For the period
ending
31 March 2012

ASX: ARU



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HIGHLIGHTS

- **Rare Earth Oxide samples produced from Nolans Bore**
- **Customer analysis of samples underway**
- **Major 52% resource upgrade to 46 million tonnes**
- **A\$8 million raised in successful Share Purchase Plan**
- **Customer and strategic investors visit Arafura facilities**
- **Board and management restructure**
- **Cost management and project review implemented**



Rare Earth Oxide samples for customer evaluation produced from Nolans Bore mineral concentrate.

ARAFURA RESOURCES LIMITED

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SUMMARY

Significant progress has been made through the quarter, the highlight being the announcement on 17 January that the Company successfully produced three separated Rare Earth Oxide ("REO") products from the Nolans Bore resource, at mini-pilot scale, in quantities sufficient for customer evaluation.

The three REO products developed at 99% Total Rare Earth Oxide levels are:

- A mixed 'Heavy' REO product (Tb+Dy+Ho+Er+Tm+Yb+Lu+Y): 'HRE' oxide;
- A mixed 'Mids' REO product (Sm+Eu+Gd): 'SEG oxide'; and
- A 'Didymium' REO product (Nd+Pr): 'Nd/Pr oxide'.

The production of separated REO products from Nolans Bore mineralisation and their provision to customers to be assessed for commercial acceptability represents a landmark achievement for Arafura and the industry outside China. Work continues on the separation of Cerium and Lanthanum and early bench-scale test work shows positive results. The targeted completion date for this work is the end of the second quarter.

On 12 March, Arafura announced another significant event to the market that the Nolans resource had been substantially upgraded by 52% to 46 million tonnes @2.5% REO, 11% P₂O₅, 0.41 lb/t U₃O₈. Work streams in support of resource optimisation and mine planning are in progress.

The Board was extremely pleased with the successful outcome of the recent Share Purchase Plan and thanks all shareholders who participated. The Company now has approximately A\$27 million with which to progress its work programs and feasibility study. The major work streams are:

- Resource optimisation and mine planning;
- Separation of Cerium Oxide and Lanthanum Oxide products;
- Customer analysis of REO products;
- Process flow sheet refinement; and
- Environmental studies at Nolan Bore and Whyalla.

Construction of the Company's Rare Earth sulphation and purification demonstration plant at the Australian Nuclear Science and Technology Organisation ("ANSTO") in Sydney was completed during the quarter and the Company was pleased to showcase the facility to a range of interested parties, including potential strategic customers from Asia and Europe and a number of stakeholders and analysts. The Company hopes to operate the plant when further funding becomes available.

During the quarter, ThyssenKrupp executives visited Arafura's Nolans Bore mineral deposit and the sulphation demonstration facility. During this visit the companies agreed to progress their Letter of Intent (LOI) to a more formal commercial off-take arrangement. The companies are also in discussions to broaden the existing LOI to include additional European countries.

Subject to funding being available, Arafura intends to operate the demonstration plant in coming months in order to produce several tonnes of a mixed Rare Earth Carbonate intermediate product as feed stock for additional downstream solvent extraction ("SX") test programs and production of separated REO products for customer evaluation. Several potential customers and investors have expressed interest in seeing the plant in operation and Arafura would expect to



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gain useful operating insights and experience in the areas of systems, process refinement, controls and materials handling.

During the quarter the Company was pleased to announce the re-appointment of Mr Ian Kowalick to the Board and into the position of Chair following discussions with the Company and its largest shareholder, ECE.

In February, the Board decided to focus the Company's available capital on activities aimed at resolving outstanding technical issues and progressing current discussions with international investors with a strategic interest in rare earths. As a consequence, the input required of the Board was considered to have changed such that Mr Lloyd Jones and Ms Loretta Reynolds elected to retire and Mr Ian Laurance and Mr Terry Jackson, who were expected to step down at the next AGM, elected to retire early. With the development strategy now being realigned, Dr Steve Ward also stepped down as Managing Director and Chief Executive Officer.

In late March, the Board announced that Non-executive Director, Chris Tonkin, would assist the Company in an interim capacity as Chief Executive Officer while the company works through the current transitional period.

The Company's main focus during the second half of the quarter has been on identifying and prioritising the activities necessary to advance the project feasibility study and on identifying sources of short and medium term capital to enable it to complete its programs. In addition, the Board actioned a range of targeted cost saving measures during the quarter to conserve cash while maintaining progress on key technical work streams. These measures included the reduction in the size of the Board; cuts to management, consultant and overhead costs; and a slowing or deferral of several project activities. The Company also divested its interest in NuPower Resources Limited.

Arafura's development work to date has identified some issues for which it must take more time to develop solutions. This is not unexpected and the Company is actively and logically working on these issues and is confident of resolving them within a reasonable time-frame. In addition, Arafura has identified several areas where it may be possible to develop and implement significant improvements to the project.

Arafura's focus in the second quarter is to progress its essential work streams, at the same time bringing together work completed to date into a logical development plan that can be used to assist the Company with its funding discussions. The Company is currently in discussions with a number of prospective investors and other funding sources; and in an environment where it is difficult to raise capital for resource developments in newly emerging products such as rare earth's, is also investigating the potential to introduce a strategic partner to assist it to develop the project.

The Company intends to appoint an expert party to undertake an independent technical review of the Nolans Project in order to assist with external due diligence and with certain aspects of the work program. This has been scoped and is scheduled to be undertaken in the second quarter. Despite the impact of the global financial crisis and its aftermath, which have severely impacted Arafura's access to funds and its development schedule, the company remains confident about the future of the Nolans project. The Company has made significant progress in recent months and, subject to the further availability of funding and absent further market disruption, considers that it is well placed to bring the project to its development phase within a reasonable time. The company is currently working on a more informative project update, which it intends to release in the near future. In the meantime, Arafura thanks its shareholders for their support patience over the intervening period.

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NOLANS PROJECT

Nolans Bore Resource

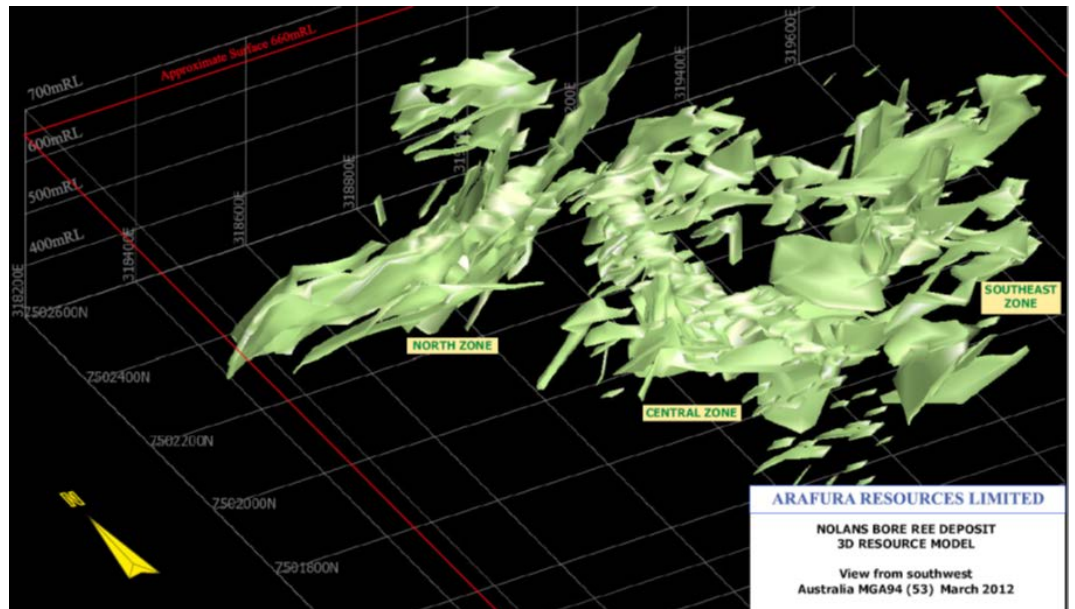
The Company released a major upgrade in JORC-compliant mineral resources for the Nolans Bore deposit during the quarter (see table below). This followed the most extensive resource definition and expansion drilling campaign undertaken by the Company since the prospect was first drilled in 2000.

Nolans Bore now contains 1.15 million tonnes of in-situ Rare Earth Oxides, an increase of 36% on the previous resource estimate of November 2008.

RESOURCES	TONNES (million)	RARE EARTHS REO %	TONNES REO	PHOSPHATE P ₂ O ₅ %	TONNES P ₂ O ₅	URANIUM U ₃ O ₈ lb/t	TONNES U ₃ O ₈
Measured	4.3	3.4	146,200	12	516,000	0.61	1,200
Indicated	21	2.5	525,000	12	2,520,000	0.41	3,950
Inferred	21	2.3	483,000	10	2,100,000	0.37	3,490
TOTAL	46	2.5	1,150,000	11	5,060,000	0.41	8,640

1% REO cut-off grade

Mineralisation remains open at depth across most of the resource and the 2011 program was noteworthy in delineating a large, steeply dipping, north-south trending zone of mineralisation in the central part of the deposit (Central Zone) that extends down to at least 220 metres below surface. This new zone has the potential to substantially impact resource optimisation and mine planning outcomes.



Nolans Bore Resource Model. View from south-west highlights the newly-defined Central Zone.

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The Company considers that conversion of a sizeable proportion of the Mineral Resources into Ore Reserves would be easily achievable. Additional drilling in support of resource definition or expansion activities is not planned at this time.

Nolans Project Feasibility Study

Major plant design engineering activities have been slowed to conserve cash, however work continues on resource optimisation studies as inputs to a revised mine plan and wider engineering studies.

Engineering

In tandem with work on the mine plan, the project team is investigating a number of bench-scale and desktop optimisation activities around the current flow sheet process. Early indications are positive and indicate potential for:

- A decrease in acid consumption for pre-leach;
- A simplified hydrochloric acid regeneration process;
- Using lower cost reagents for Rare Earth recoveries;
- Reducing residence time and potentially plant size for pre-leach and Rare Earth recovery;
- Reducing acid bake (sulphation) temperatures and duration, hence energy consumption; and
- Improvements in Rare Earth carbonate purity, feeding the Rare Earths separation plant, which can potentially reduce SX plant size and reagent consumption.

Arafura is currently assessing these study results, which will be costed and incorporated into an updated development plan and financial model if found to be suitable for inclusion.

Technology

The following summarises the Demonstration Plant program to date:

- The demonstration plant at ALS-Ammtec in Perth that was used for the processing of mineral concentrate through the Hydrochloric Acid pre-leach circuit has served its purpose and was decommissioned during the quarter. The materials are now ready for further processing at ANSTO when the downstream plant below is re-started;
- As indicated earlier, construction of the Rare Earth sulphation and purification demonstration plant at ANSTO was completed during the quarter, but the plant is currently on care and maintenance due to funding constraints.

A number of interested parties took the opportunity to visit ANSTO during February-March and inspected first-hand the scale of the operation. Many indicated their willingness to re-visit the facility when it is operating. Several strategic customers indicated that an operating demonstration plant would assist their lengthy internal due diligence processes.

Three REO samples were produced for customer evaluation. These products were developed following advice from target customers and product quality is expected to be aligned with their requirements. Feedback from customers is expected during the second quarter.

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A program to separate a Cerium Oxide product continued throughout the quarter. Bench-scale test work showed positive results and a pilot-scale operation is planned, following which the end product will be available for customer evaluation. Work on separating Lanthanum Oxide is yet to commence, however both the Cerium and Lanthanum test programs are scheduled to be concluded during the second quarter.

Gypsum produced from the Hydrochloric acid regeneration circuit is still under customer assessment with no feedback received to date.

Environmental and Community

Extended archaeological, flora and fauna surveys over additional lease areas at Nolans were completed during the quarter and did not identify any significant findings. Regional water monitoring of the Ti-Tree basin aquifer continues and is due for completion later this year.

In Whyalla, final marine water quality, sediment and benthic habit sampling was completed and additional flora and fauna surveys covering an extended survey area were also finalised. Ongoing radiation and dust monitoring samples were collected and analysed with no adverse findings reported.

The social impact assessment implementation methodology for both Nolans and Whyalla were refined in anticipation for deployment and stakeholder engagement.

The Company continues to focus on critical, fundamental surveying and sampling studies whilst non-time critical work is suspended to conserve funds.

EXPLORATION

Modest cost reconnaissance exploration on a number of the Company's tenements will commence during the second quarter. The programs will focus on Rare Earths and are designed to meet 2012 expenditure covenants mandated by the Northern Territory Department of Resources.

CORPORATE

STRATEGY

Arafura has an exploration and development program to grow its position in Rare Earth projects that is consistent with additional growth beyond the Nolans Project. The Company will focus on the identification and development of Rare Earth projects and will specialise in Rare Earths products and their markets. Arafura aims to be the recognised leading producer of Rare Earths for users worldwide.

GROWTH – DEVELOPMENT

Arafura's primary focus is the development of its 100% owned Nolans Rare Earths-phosphate-uranium project. The deposit has a resource to sustain a mine life of over 30 years and Arafura has developed a processing flowsheet that optimises the extraction of rare earths, phosphates and uranium.

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GROWTH – EXPLORATION

Long term sustainable development and the creation of shareholder wealth can also be realised through exploration success. Arafura has exploration projects in Rare Earths, gold, base metals and iron-vanadium, and will assess other exploration opportunities that are consistent with additional growth beyond the Nolans Project.

Competent Person's Statement

The information in this release that relates to exploration results and geological interpretation has been compiled by Mr Kelvin Hussey BSc (Hons) MAIG.

Mr Hussey is a Member of the Australian Institute of Geoscientists and he has sufficient experience with the style of mineralisation being reported to qualify as a Competent Person as defined in the *Australasian Code for Reporting of Mineral Resources and Ore Reserves* (JORC Code) for reporting these exploration results. Mr Hussey is a full-time employee of Arafura Resources Limited. He consents to the inclusion in this report of the contained technical information in the form and context in which it appears.



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Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity

ARAFURA RESOURCES LIMITED

ABN

22 080 933 455

Quarter ended ("current quarter")

31 March 2012

Consolidated statement of cash flows

		Current Quarter \$A'000	Year to date (9 months) \$A'000
Cash flows related to operating activities			
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for (a) exploration & evaluation	(4,566)	(25,619)
	(b) development	(9,651)	(22,472)
	(c) production	-	-
	(d) administration	(2,686)	(6,085)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	532	2,911
1.5	Interest and other costs of finance paid	(1)	(2)
1.6	Income taxes paid	-	-
1.7	Other (provide details if material)	-	-
		(16,372)	(51,267)
Net Operating Cash Flows			
Cash flows related to investing activities			
1.8	Payment for purchases of: (a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	(4)	(67)
1.9	Proceeds from sale of: (a) prospects	-	-
	(b) equity investments	850	850
	(c) other fixed assets	-	-
1.10	Loans to other entities	-	-
1.11	Loans repaid by other entities	-	-
1.12	Other (provide details if material)	-	-
		846	783
Net investing cash flows			
1.13	Total operating and investing cash flows (carried forward)	(15,526)	(50,484)



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1.13	Total operating and investing cash flows (brought forward)	(15,526)	(50,484)
Cash flows related to financing activities			
1.14	Proceeds from issues of shares, options, etc.	8,239	8,239
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other – Capital Raising Expenses	(39)	(39)
Net financing cash flows		8,200	8,200
Net increase (decrease) in cash held		(7,326)	(42,284)
1.20	Cash at beginning of quarter/year to date	35,305	70,224
1.21	Exchange rate adjustments to item 1.20	(17)	22
1.22	Cash at end of quarter	27,962	27,962

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 Quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	(938)
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 and contract payout.

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

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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	Nil	Nil

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	4,540
4.2 Development	2,780
4.3 Production	-
4.4 Administration	1,860
Total	9,180

Reconciliation of cash

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

	Current Quarter \$A'000	Previous Quarter \$A'000
5.1 Cash on hand and at bank	9,962	15,114
5.2 Deposits at call	18,000	20,191
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
Total: cash at end of quarter (item 1.22)	27,962	35,305

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1		Interests in mining tenements relinquished, reduced or lapsed		
6.2		Interests in mining tenements acquired or increased		

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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.

	Total number	Number quoted	Issue price per security (see note 3)	Amount paid up per security (see note 3)
7.1 Preference securities <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	396,004,144	396,004,144		
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	28,023,802	28,023,802	\$0.294	\$0.294
7.5 +Convertible debt securities <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 Options			<i>Exercise price</i>	<i>Expiry date</i>
ARUAI	2,700,000	-	\$0.85	31-12-13
ARUAO	1,100,000	-	\$1.19	31-12-12
ARUAK	850,000	-	\$0.75	20-07-13
ARUAQ	750,000	-	\$0.98	31-08-13
ARUAY	750,000	-	\$1.08	14-09-13
ARUAD	1,100,000	-	\$1.54	26-11-13
ARUAU	1,400,000	-	\$0.96	16-07-14
ARUAM	700,000	-	\$0.81	31-12-14
ARUAW	2,150,000	-	\$0.70	24-11-14
7.8 Issued during quarter				
7.9 Exercised during quarter				

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7.10	Expired during quarter	265,000	-	\$0.85	31-12-13
		200,000	-	\$0.81	31-12-14
		6,350,000	-	\$1.19	31-12-12
		5,000,000	-	\$0.70	24-11-14
<hr/>					
7.11	Debentures <i>(totals only)</i>				
7.12	Unsecured notes <i>(totals only)</i>				

Compliance 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:

Date: 26 April 2012.

Print name: Gavin Lockyer
(Company secretary)

Notes

1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An 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 the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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