

Quarterly Activities Report and Appendix 5B

For the period
ending
31 December
2010



**AN EMERGING
RARE EARTHS
PRODUCER
FOR USERS
WORLDWIDE**

Highlights

- Shareholders approve the successful capital raising of \$ 90M to institutional and sophisticated investors. The funds will be used to complete the Nolans Project bankable feasibility study in H2 2011.
- Significant progress made with the Nolans Project. All work streams are in full progress following the capital raising:
 - Successful separation of Cerium Oxide and Neodymium/Praseodymium Oxide which meet customer specifications
 - Construction of a demonstration scale facility for the recycle of the chlorine values from calcium chloride by-product almost complete
 - Demonstration scale sulphation studies designed, equipment selected and facility provider selected The Big Bertha ore sampling campaign, which will provide material for the sulphation program, was successfully completed.
 - Good progress is being made with EIS programs at Nolans and Whyalla.
- Plans for the major drill program at Nolans are well advanced. Drilling will commence in Q1 2011.
- Rare Earth prices continue to strengthen notably.
- China announces reduced export quotas for first half 2011
- Discussions with customers stepped up. Significant interest shown.
- A business update was issued. This confirmed the high value creation possible from the world class Nolans Project which is one of the very few projects which is significantly advanced to be able to come into production in the short to medium term.
- Mr Chris Tonkin joined the Board as a non-executive director on Jan 1st 2011. Chris had a long and distinguished career in senior finance roles with ANZ.

ARAFURA RESOURCES LIMITED

arafura@arafuraresources.com.au www.arafuraresources.com.au ABN 22 080 933 455

PERTH: Level 5/16 St Georges Tce, Perth WA 6000 | PO Box 3047, Adelaide Terrace, Perth WA 6832 T: +618 6210 7666 F: +618 9221 7966
DARWIN: 18 Menmuir St, Winnellie NT 0820 | PO Box 37220, Winnellie NT 0821 T: +618 8947 5588 F: +618 8947 5599

CORPORATE

Discussions continue with OneSteel limited on the acquisition of approximately 800 hectares of land at Whyalla, South Australia in line with the exclusivity deed agreement between both parties. Under the agreement, OneSteel has granted Arafura immediate access to the site, and key environmental and basic engineering studies have commenced.

The Company was delighted to announce the appointment of Mr. Chris Tonkin to the Board as a non-executive director. Mr Tonkin has most recently been executive director and head of natural resources at ANZ Banking Group's project and structured finance area. His experience strengthens the board as the Company progresses towards project finance in 2011. Mr Tonkin will also serve as member of the Audit and Risk sub-committee.

In November and December, the Company held two shareholder meetings. At the AGM, the Chairman, Mr Ian Laurance AM announced he would be stepping down in the next few months. Mr. Laurance has served on the Arafura board since February 2008.

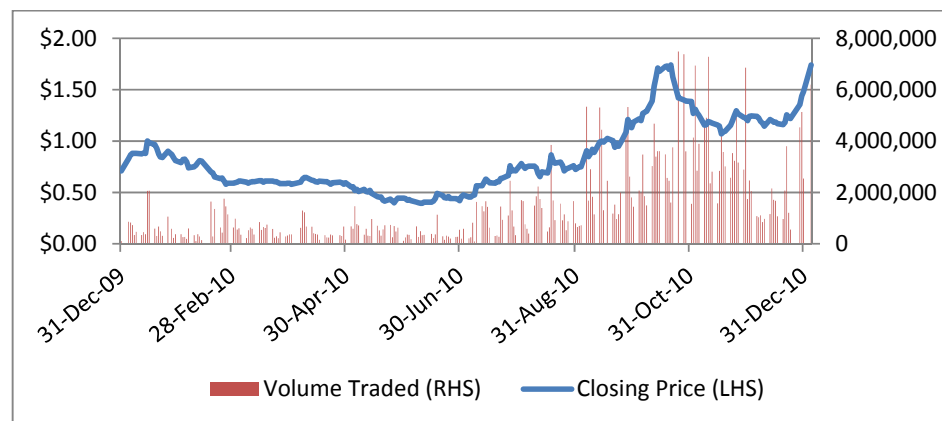
At the December shareholder meeting, shareholders voted in favour of the final execution of the A\$90m capital raising which was made to Institutional and Sophisticated investors. These funds have allowed Arafura to engage significant contractors in order to complete the Nolans Project bankable feasibility study. Announcements as major contracts are let have already been made to the market and will continue to be so.

The funds will also be used to conduct a major drilling program at Nolans Bore aimed at increasing the size and confidence of the resource. This will allow Arafura to consider potential future production increase opportunities. The drilling contract is expected to be let in early February with drilling commencing shortly thereafter.

The Company's share price rose 108% in 2010 (after accommodating two capital raisings) and daily share trading volumes have also increased steadily throughout the year.

The market capitalisation increased from \$184M to \$542M during 2010.

ARU Closing Share Price and Volume history: 2010





Rare earths continue to be very high profile internationally. Major governments are increasingly recognising their strategic importance. Arafura was invited to speak at events arranged by the European Community and Japanese government. Discussions with prospective customers were intensified following confirmation in the prior quarter of Arafura's business model to produce rare earth oxides in Australia. There is significant interest in Arafura and its products. In December, latest Chinese export quotas for Rare Earths were released. The volume of 14,446 tonnes for the first half of 2011 is higher than the previous half year but still lower than 22,283 tonnes for the corresponding period in 2010. Consequently prices for Rare Earths are continuing to grow notably. In January the average price per kilogram for the Nolans rare earths mix was US\$75.57.

Chinese Export Quota History 2004-2011 (Tonnes REO)

Year	Domestic Companies	Foreign Companies	Total	Y on Y Change	ROW Demand
2005	48,040	17,659	65,699	0%	46,000
2006	45,752	16,069	61,821	-6.00%	50,000
2007	43,574	10,069	53,643	-4.00%	50,000
2008	49,871	15,834	65,705	-5.50%	50,000
2009	33,300	16,485	49,785	-12.00%	25,000
2010	22,513	7,746	30,259	-40.00%	48,000
2011H1			14,446		

	Nolans REO Distribution	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11
Lanthanum Oxide	19.74%	\$8.40	\$14.50	\$37.00	\$41.00	\$45.00	\$58.00	\$60.00	\$62.00
Cerium Oxide	47.53%	\$6.50	\$10.00	\$36.00	\$37.00	\$43.00	\$61.00	\$61.00	\$67.00
Praseodymium Oxide	5.82%	\$30.25	\$42.75	\$55.75	\$68.50	\$72.00	\$86.50	\$86.50	\$90.50
Neodymium Oxide	21.20%	\$32.75	\$41.75	\$56.75	\$71.50	\$76.50	\$87.00	\$87.00	\$91.00
Samarium Oxide	2.37%	\$4.50	\$12.25	\$33.25	\$33.25	\$34.50	\$34.50	\$34.50	\$54.50
Europium Oxide	0.40%	\$525.00	\$550.00	\$585.00	\$605.00	\$630.00	\$630.00	\$630.00	\$630.00
Gadolinium Oxide	1.00%	\$10.35	\$19.00	\$40.00	\$40.00	\$44.50	\$45.00	\$45.00	\$54.50
Dysprosium Oxide	0.33%	\$203.00	\$288.00	\$288.00	\$295.00	\$295.00	\$295.00	\$295.00	\$330.00
Terbium Oxide	0.08%	\$510.00	\$535.00	\$595.00	\$605.00	\$605.00	\$605.00	\$605.00	\$620.00
Yttrium Oxide	1.32%	\$11.50	\$18.00	\$34.50	\$39.50	\$42.50	\$72.50	\$72.50	\$74.50
	100.00%	\$16.99	\$23.25	\$45.10	\$50.41	\$55.53	\$70.12	\$70.52	\$75.57

NOLANS PROJECT

Technology development

Development work for Rare Earths Oxide separation has progressed with the production of commercial quality Ce Oxide (glass polishing) and Nd/Pr Oxide (magnets). Pilot scale demonstration for the entire suite of oxide products is being developed and will be undertaken in conjunction with the planned Sulphation demonstration program. Large product samples for customer evaluation will be produced.

Demonstration of the Sulphation process is being designed to reinforce previously successful pilot plant phases. The plan to trial two sulphation equipment options is



still on track. All long lead equipment has been ordered and contracts for design and facility providers have been let.t.

Beneficiation optimisation work is well advanced and scale operation of the beneficiation facility utilising heavy media separation and flotation will commence shortly. This program is aimed at maximising the upgrading of ore to a mineral concentrate for subsequent processing at Whyalla.

Arafura has further enhanced the development of technology to treat calcium chloride with sulphuric acid to produce gypsum and recirculated hydrochloric acid. Construction of a demonstration facility is almost complete. Commissioning is expected early in February 2011.

Other processing optimisation opportunities have been progressed and are being assessed at ANSTO. These works form part of an on-going optimisation of all facets of the Nolans Project.

Bankable Feasibility Study (BFS)

Mine, beneficiation and site infrastructure engineering and environmental studies continued during the period. These studies remain on schedule to be completed in 2011. The Arafura owners team has been reinforced with a number of new staff from Parsons Brinkerhoff.

EXPLORATION & DEVELOPMENT

Mt Porter Gold Project

The Company announced in January 2011 that it had executed a sale of the Mt Porter and Frances Creek gold assets to Global Mineral Resources. The sale will be completed upon Global successfully listing on the ASX later this year.

Appendix 5B

MINING EXPLORATION ENTITY QUARTERLY REPORT

ARAFURA RESOURCES LTD

ABN: 22 080 933 455

Quarter ended ("current quarter")
31 December 2010

Consolidated statement of cash flows

Cash flows related to operating activities

- 1.1 Receipts from product sales and related debtors
- 1.2 Payments for: (a) exploration and evaluation
(b) development
(c) production
(d) administration
- 1.3 Dividends received
- 1.4 Interest and other items of a similar nature received
- 1.5 Interest and other costs of finance paid
- 1.6 Income taxes paid
- 1.7 Other (provide details if material)

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
- 1.9 Proceeds from sale of: (a) prospects
(b) equity investments
(c) other fixed assets
- 1.10 Loans to other entities
- 1.11 Loans repaid by other entities
- 1.12 Other (provide details if material)

Net Investing Cash Flows

- 1.13 Total operating and investing cash flows
(carried forward)

Current Qtr \$A'000	Year to Date (6 months) \$A'000
-	-
(4,396)	(7,377)
(1,981)	(2,893)
-	-
(1,488)	(2,805)
-	-
307	493
(1)	(2)
-	-
-	-
(7,559)	(12,584)
-	-
-	-
-	-
(50)	(73)
-	-
-	-
-	-
-	-
-	-
(50)	(73)
(7,609)	(12,657)

1.13 Total operating and investing cash flows (brought forward)	(7,609)	(12,657)
Cash flows related to financing activities		
1.14 Proceeds from the issue of shares, options, etc.	90,803	90,803
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	(4,961)	(4,968)
Net financing cash flows	85,842	85,835
Net increase (decrease) in cash held	78,233	73,178
1.20 Cash at beginning of quarter/year to date	18,420	23,543
1.21 Exchange rate adjustments	14	(54)
1.22 Cash at end of quarter	96,667	96,667

Payments to directors of the entity and associates of the directors

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

1.23 Aggregate amount of payments to the parties included in item 1.2

1.24 Aggregate amount of loans to the parties included in item 1.10

1.25 Explanation necessary for an understanding of the transactions

Current Qtr
\$A'000

(541)

Nil

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

3.1 Loan facilities

3.2 Credit standby arrangements

Amount available \$A'000	Amount used \$A'000
Nil	Nil
Nil	Nil



Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	4,673
4.2 Development	19,540
4.3 Production	-
4.4 Administration	2,225
Total	26,438

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.

- 5.1 Cash on hand and at bank
- 5.2 Deposits at call
- 5.3 Bank Overdraft
- 5.4 Other (provide details)

Total: cash at end of quarter (Item 1.22)

Current Quarter \$A'000	Previous Quarter \$A'000
6,568	18,370
90,099	50
-	-
-	-
96,667	18,420

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	EL 27290/1 EL 23571 SEL 23671	Lease Lease Lease	3 blocks 36 blocks 250 blocks	Nil 21 blocks 113 blocks
6.2 Interests in mining tenements acquired or increased	-	-	-	-



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 (see note 3)	Amount paid up per security (see note 3)
7.1 Preference securities (description)	-	-	-	-
7.2 Changes during quarter				
a) increases through issues	-	-	-	-
b) decreases through returns of capital, buy-backs, redemptions	-	-	-	-
7.3 Ordinary securities	366,300,342	366,300,342	-	-
7.4 Changes during quarter				
a) increases through issues	150,000	150,000	\$1.31	\$1.31
	510,000	510,000	\$1.19	\$1.19
	75,000,000	75,000,000	\$1.20	\$1.20
b) decreases through returns of capital, buy-backs	-			
7.5 Convertible debt securities (description)	-	-	-	-
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>
ARUAC	100,000	-	\$1.60	30-06-11
ARUAI	4,425,000	-	\$0.85	31-12-13
ARUAM	820,000	-	\$1.72	30-06-11
ARUAO	8,630,000	-	\$1.19	31-12-12
ARUAS	150,000	-	\$1.31	30-06-11
ARUAZ	200,000	-	\$1.70	30-06-11
ARUAK	1,200,000	-	\$0.75	20-07-13
ARUAQ	750,000	-	\$0.98	31-08-13
ARUAA	750,000	-	\$1.08	14-09-13
ARUAD	1,100,000	-	\$1.54	26-11-13
7.8 Issued during Quarter				
ARUAD	1,100,000	-	\$1.54	26-11-13
7.9 Exercised during quarter	150,000	-	\$1.31	\$1.31
	510,000	-	\$1.19	\$1.19
7.10 Expired during quarter	-	-	-	-
7.11 Debentures (totals only)	-	-		
7.12 Unsecured notes (totals only)	-	-		



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:

Gavin Lockyer
Company Secretary

Date: 31/01/11

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.