

Quarterly Activities Report and Appendix 5B

For the period
end 30
September 2010



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

Highlights

- Successful separation of Medium and Heavy Rare earth oxides.
- Whyalla selected as site for Rare Earths Complex.
- South Australian Government declares major project status for Rare Earths Complex.
- Business model updated including financials
- Strong Interest from Investment community raises \$90m in October.
- Key senior appointments.
- Demonstration scale facility for the recycle of the chlorine values (as hydrochloric acid) from the calcium chloride by-product under construction.
- Demonstration scale sulphation studies completed
- “Big Bertha” bulk ore sample complete (October).
- On track for production of Rare Earth Oxides in 2013.

On 12th October the company released to the market a comprehensive business update which outlines in detail the company’s strategy and achievements to date. This can be found at the company’s website www.arafuraresources.com.au

ARAFURA RESOURCES LIMITED

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CORPORATE

Following an extensive review of possible locations on which to construct the Rare Earths Processing Complex (the Complex), Arafura was pleased to announce it had signed an Exclusivity Deed with Onesteel limited to purchase approximately 800 hectares of land at Whyalla, South Australia. This facility which has been granted major project status by the South Australian Government will cement Arafura as the preeminent supplier of Rare Earth oxides to the world.

The agreement allows Arafura immediate access to site so that essential engineering and environmental studies can commence. The declaration of Major Project by the government will mean these studies will be guided through the regulatory framework by a dedicated case officer.

The ultimate purchase of the land is now being progressed

The company was delighted to announce two key appointments to the senior management team; Mr. Neil Graham was appointed General Manager Operations and Mr. John Ganser was appointed General Manager Projects. Both Neil and John have a wealth of knowledge and experience in their respective fields and are key appointments to ensure Arafura meets its target production timetable in 2013.

In October, the company executed a \$90 million transaction with accredited domestic and international institutions. The funds will be utilised to progress the Nolans project to the project financing stage including completion of the bankable feasibility study. The company also intends to conduct a major drilling program with the aim to significantly increase the size and confidence of the Nolans resource. This will allow Arafura to gauge potential future production increase opportunities.

ECE will be offered the opportunity to return to their 22.17% shareholding which will be subject to Australian and Chinese regulatory and shareholder approval.

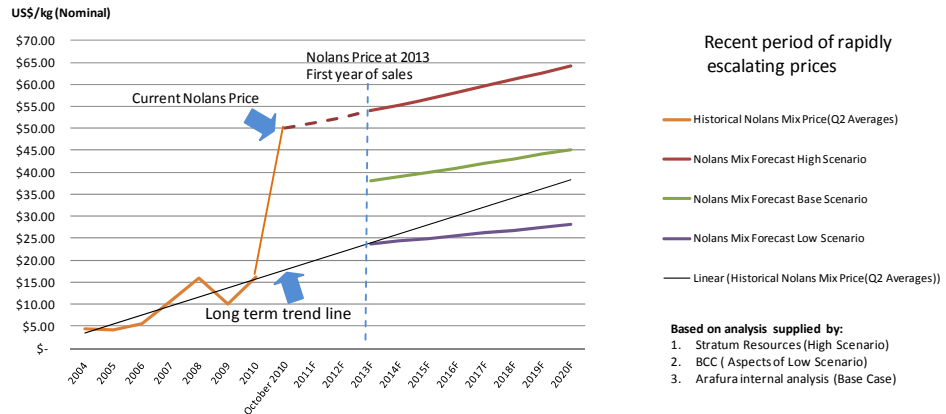
The Company released a business update (ASX: release 12 October) confirming its strategy to produce rare earths oxides and to refresh the project financials since the pre-feasibility study released in 2007. The project continues to demonstrate very positive valuations.

The prices for the Nolan's mix of Rare Earth Oxides, on which the project valuation and sensitivities were calculated, are a combination of long term trend and those current at the time the business update was issued and are represented graphically below. (prices have subsequently risen again) They are for financial modelling purposes only to demonstrate the excellent project

financials across a range of pricing regimes and do not represent Arafura's view on forecast prices.

Prices for the Nolan's mix of rare earth oxides today is around US\$61/kg.

Historical and Forecast Prices - The Nolans Mix



Notes

1. Historical Nolans price based on Q2 average historical China rare earth oxide FOB export prices supplied by Metal Pages – pre-export quota tightening.
2. 3 scenarios based on Nolans price expressed in nominal terms, each indexed at an annual growth rate of 2.5% from 2013.
3. High scenario starting value of US\$54/kg. In 2013
4. Base scenario starting value of US\$38/kg. In 2013.
5. Low scenario starting value of US\$22/kg. In 2013
6. 2004-2010 trend line indicates consistency with low scenario starting point.

October 2010 Project Economics			
Capital Costs @ 0.95		A\$950 million	
Sales Revenue		US\$	
	Low	Mid	High
Rare earth oxides US\$/kg	\$22.00	\$38.00	\$54.00
Rare earth oxides 20,000t US\$	\$440	\$760	\$1,080
Phosphoric Acid 80,000t US\$1,250/t	\$100		
Gypsum 500,000t US\$25/t	\$12		
Uranium 150t US\$40/lb	\$13		
Total Revenue p.a. US\$M	\$565	\$885	\$1,205
		A\$M	
Total Revenue p.a @ 0.95	\$595	\$932	\$1,268
Annual Operating Expenses @ 0.95	(\$376)		
EBITDA p.a	\$219	\$556	\$892
NPV @ 10% after tax and capital payback	\$1,420	\$4,050	\$6,549
Capital Payback - years	5	4	3

The above table highlights that even at conservative pricing levels below the long term trend line; the Nolans project returns a significant positive net present value of A\$1.4 billion.



NOLANS PROJECT

Bankable Feasibility Study (BFS)

Following the announcement of Whyalla, in South Australia, as the preferred location for the Rare Earths Complex, extensive site specific engineering will now commence. The final stages of the BFS are planned to be completed in Q4 2011.

Mine, Beneficiation and site infrastructure engineering and environmental studies have commenced. These studies are on schedule to be completed in 2011.

Consultation continued with traditional indigenous owners and the Central Land Council on the terms of the proposed mining agreement.

Project development

Following encouraging laboratory separation of product oxides, pilot scale test work has now commenced under continuous operations. Commercial quality mid and heavy rare earth oxides have been produced during three days of continuous solvent extraction operations. Further development work is ongoing and is still on schedule for completion during 2010.

Studies for Demonstration testing of the Sulphation Process have been progressed and are on plan. This demonstration phase will optimize equipment performance and provide larger volumes of separated rare earth oxide samples for customer analysis.

The “Big Bertha” bulk sampling campaign at Nolans Bore is complete (October). Plans for beneficiation of the ore are now well advanced. The following sample bags weigh approximately 1 tonne each which at 2.8% REO grade at \$61/kg equates to US\$1,708 per bag.



Pictures of “Big Bertha” completing bulk sample program at Nolans proposed mine site NT Australia.



Arafura has progressed the development of the technology to treat calcium chloride with sulphuric acid to produce gypsum and recirculated hydrochloric acid. Quality results on both streams indicate commercial parameters are being achieved. Plans for a demonstration facility are well advanced with testing to commence later this year.

Further optimisation opportunities have been identified in the Process Plant and are being assessed at ANSTO. These works form part of an on-going optimisation of all facets of the Nolans Project.

Program Timeline

Activity	OCT 10
Mine design and site plan	Q4 2010
HCl Recovery Program (Calcium Chloride recycle)	Q1 2011
Mine Approvals	Q2 2011
Mine EIS	Q2 2011
Whyalla EIS	Q3 2011



Rare Earths Complex plant approvals	Q4 2011
BFS	Q4 2011
Project Financing	Q4 2011
Procurement and construction	2012/13
FIRST PRODUCTION	2013

Appendix 5B

MINING EXPLORATION ENTITY QUARTERLY REPORT

ARAFURA RESOURCES LTD

ABN: 22 080 933 455

Quarter ended ("current quarter")
30 September 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)

Current Qtr \$A'000	Year to Date (3 months) \$A'000
-	-
(2,981)	(2,981)
(912)	(912)
-	-
(1,317)	(1,317)
-	-
186	186
(1)	(1)
-	-
-	-
(5,025)	(5,025)

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)

-	-
-	-
(23)	(23)
-	-
-	-
-	-
-	-
-	-
-	-
-	-



Net Investing Cash Flows	(23)	(23)
1.13 Total operating and investing cash flows (carried forward)	(5,048)	(5,048)

1.13 Total operating and investing cash flows (brought forward)	(5,048)	(5,048)
Cash flows related to financing activities		
1.14 Proceeds from the issue of shares, options, etc.	-	-
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	(7)	(7)
Net financing cash flows	(7)	(7)
Net increase (decrease) in cash held	(5,055)	(5,055)
1.20 Cash at beginning of quarter/year to date	23,543	23,543
1.21 Exchange rate adjustments	(68)	(68)
1.22 Cash at end of quarter	18,420	18,420

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	(339)
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
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3.1 Loan facilities

Nil	Nil
Nil	Nil

3.2 Credit standby arrangements

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	(5,295)
4.2 Development	(5,920)
4.3 Production	-
4.4 Administration	(2,253)
Total	(13,468)

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
18,370	23,493
50	50
-	-
-	-
18,420	23,543

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 26250	Lease	2 Blocks	Nil
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) (cents)	Amount paid up per security (see note 3)(cents)
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	290,640,342	290,640,342	-	-
7.4 Changes during quarter				
a) increases through issues	-	-	-	-
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	9,140,000	-	\$1.19	31-12-12
ARUAS	300,000	-	\$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



7.8 Issued during Quarter

ARUAK
ARUAQ
ARUAA

1,200,000	-	\$0.75	20-07-13
750,000	-	\$0.98	31-08-13
750,000	-	\$1.08	14-09-13
-	-	-	-
-	-	-	-
-	-		
-	-		

7.9 Exercised during quarter

7.10 Expired during quarter

7.11 Debentures (totals only)

7.12 Unsecured notes (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: 29/10/2010

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.