ASX RELEASE

7 August 2012

ARAFURA DELIVERS NOLANS PROJECT UPDATE

- **Definitive Nolans Rare Earths Project Update released;**
- **Substantial progress achieved on one of the world's most advanced rare earth development projects;**
- **A Project Base Case has been established and Project economics are robust:**
  - **A$4.3 billion Net Present Value;**
  - **30% Internal Rate of Return;**
  - **Capital payback within four years of operation; and**
- **Arafura is on track to become one of the world's largest rare earth producers.**

Australian Rare Earths company **Arafura Resources Limited** (**ASX: ARU**) ("**Arafura**" or the "**Company**") is pleased to provide a definitive Project Update on its Nolans Rare Earths Project ("**Nolans**" or the "**Project**").

The Company has continued to progress Nolans – one of the most advanced rare earths development projects in the world – despite the current difficult global financial markets. The Project Update sets out the substantial progress achieved on Nolans to date, including:

- Extensive testwork that has provided the Company with detailed knowledge of all facets of the design chain, from demonstration of technology through to mine design and process flowsheet optimisation;
- Practical application of the results of this testwork to the Project's design, which is fundamental to the successful development of a rare earths project and significantly de-risks the Nolans Project;
- Customer qualification feedback that Rare Earth Oxide (**"**REO") products from the Nolans Bore resource meet product specifications;
- Well-advanced environmental studies with no significant issues emerging;
- Development of a Base Case for the Nolans Project that is expected to deliver excellent returns to shareholders; and
- A clear path forward to complete the development of the Nolans Project.

Arafura's Chief Executive Officer, Chris Tonkin, said, "We are very pleased to provide a detailed Project Update to the market. We are striving for ongoing transparency to ensure that all stakeholders are informed of the significant achievements that have been made on the Project and the Company's overall strategic objectives.

AN EMERGING RARE EARTHS PRODUCER FOR USERS WORLDWIDE

"Importantly, this update reinforces the strong commercial appeal of the Nolans Project with robust returns expected on the basis of assumptions that we believe to be conservative. The advanced stage of our Nolans Project is a key point of difference over other rare earths projects and significantly de-risks our path to both production and commercialisation," he added.

"We look forward to providing regular updates to the market on progress at Nolans and our funding plans as we move towards a final investment decision and look to raise finance from mid-2013 to develop and construct the Nolans Project."

Arafura is currently at an advanced stage of a feasibility study into Nolans, developed on a Base Case that includes a mine and a concentrator at Nolans Bore in the Northern Territory, and a chemical processing operation at Whyalla in South Australia.

As a result of advanced feasibility work, project risk and uncertainty have been reduced significantly while project economics remain very robust. The Project's Base Case generates a net present value of A$4.3 billion, an internal rate of return of 30% and capital payback within the fourth year of operations.

The core capital cost for the Base Case is estimated at A$1,395 million with Company-operated ancillary plants costed at an additional A$517 million. The increase in capital expenditure over earlier expectations is in line with comparable global development projects on a like-for-like basis.

The Company is progressing its Base Case towards the key milestone of raising finance for the Project. This includes finalising:

- The land acquisition in Whyalla for the processing plant;
- Production of a separated Lanthanum Oxide product to 99% purity;
- Refinement of marketing samples and offtake negotiations;
- Sulphation demonstration-scale plant operation for materials handling analysis;
- Public submissions for the Environmental Impact Statement studies;
- Mine and Plant Design engineering to levels of +/- 25% accuracy;
- Transport, logistics and raw material costings to +/- 25% accuracy; and
- Information Memoranda for potential investors and financiers.

A key final step to validate the process flowsheet and mass balance, as well as the major recycle circuits, is the successful operation of an Integrated Pilot Plant ("IPP") that will be constructed early next year. The IPP results will also be used to verify the final engineering design.

The Company is also assessing a number of options for process improvements, and work on this program is scheduled for completion by October 2012. The results may change the Base Case if they deliver a benefit to Project economics and satisfy the Company's criteria for inclusion.

Mr Tonkin said, "Arafura remains on track to become one of the world's largest rare earths producers and the only new REO supplier globally with significant volumes available for sale. The demand outlook for rare earths looks strong, with timing of first production from Nolans expected to coincide with a forecast major global rare earths supply shortage."

Separately, shareholders will shortly receive a Notice of Extraordinary General Meeting ("EGM") to vote on a previously announced capital injection of approximately A$9.9 million from ECE Nolans Investment Company ("ECE"), the Company's long-term and largest shareholder. ECE has been very supportive of Arafura over a difficult period and its capital injection will be made by way of a share placement. The EGM will be held in Perth in September 2012.

- ENDS -

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AUGUST 2012

NOLANS PROJECT
UPDATE

ARAFURA

RESOURCES LIMITED

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Key Features

- Arafura's extensive testwork program at Nolans Bore has provided a detailed understanding of the resource, mineralogy and process steps through to production of separated REO products. This knowledge has shaped the design of the Project and positions Arafura strategically among prospective producers.
- The Nolans Bore resource is low risk and has a long life based on the Project's planned rate of production, with potential for expansion at depth. In addition, the testwork program carried out by Arafura has significantly de-risked the process route.
- Arafura's Base Case currently generates a net present value ("NPV") for the Nolans Project of A$4.3 billion with a 10% discount rate and an internal rate of return ("IRR") of 30%, both calculated on an after tax basis over twenty years. On this basis, full capital payback will be achieved during the fourth year of operation.
- Arafura has a clearly defined program to progress through to execution of the Nolans Project. The Company has engaged first tier engineering consultants to develop the Project's engineering and produce capital and operating cost estimates. The core capital cost for the Project's Base Case is estimated at A$1,395 million, with ancillary plant costed at an additional A$517 million. The Project's core and ancillary capital costs include provision for indirect costs and contingencies of A$502 million.
- The Base Case price assumed for Arafura's REO product range starts at US$60/kg in 2012, growing at a real 1.4% per annum to 2025. The high-value and high-growth Didymium Oxide product is expected to generate 50-60% of total revenue from the Nolans Project.
- Operating costs average A$20.55 per kilogram of REO products in real 2012 terms, before credits for phosphate, uranium and gypsum co-products.
- Both the Nolans Bore and Whyalla Rare Earths Complex sites have access to public infrastructure, services and utilities that are suitable and adequate for the plant and infrastructure that will be located at those sites. Environmental studies at both sites are advanced and no significant issues have emerged to date.
- Arafura has executed Memoranda of Understanding for offtake and assistance with Project development and/or funding with two multinational companies and will be seeking to lock in these and other offtake agreements prior to arranging funding for development of the Project.
- The global market for rare earths is expected to have a shortfall over the medium to long term in certain REO products, particularly Didymium Oxide. Didymium Oxide is strongly represented in the Nolans Project product mix. The Nolans Project is likely to be one of very few new sources of rare earths supply this decade.
- Arafura has a continuing program examining the potential for process improvements and is engaging rare earths expertise from China to assist with the Company's analysis. This program has the potential to improve an already strong return from the Project. The larger part of this program is expected to be completed by October 2012 and may result in changes to the Base Case if they satisfy the Company's criteria for development.
- The Nolans Project has received positive community support and government support at Federal and State/Territory levels after significant engagement with key stakeholders.

Arafura is confident that it can deliver a technically and environmentally competent Nolans Project to provide excellent returns to shareholders.

Overview

Arafura Resources Limited ("Arafura" or "the Company") is a Perth-based, Australian Securities Exchange ("ASX") listed company with a strategic objective to become one of the leading rare earth producing companies in the world, initially through the development of its wholly-owned Nolans Rare Earths Project ("Nolans Project", "Nolans" or "the Project") in Australia. The Company is at an advanced stage of its feasibility study into developing the Project and is targeting an annual production of 20,000 tonnes of rare earth oxides ("REOs").

Australia is one of the world's most secure locations for major resource developments such as the Nolans Project, which is based on one of the world's largest rare earth deposits at Nolans Bore in the Northern Territory. Arafura has developed a Base Case for Nolans that includes a mine and concentrator at Nolans Bore and a Rare Earths Complex at Whyalla in South Australia where chemical processing will take place prior to distribution. The Project will initially produce five REO products and several co-products. Both sites have good access to public infrastructure, services and utilities and the regulatory framework within which the Project operates is clearly defined.

The Nolans Bore Resource

The Nolans Bore site has been comprehensively explored since 2000. Over this period, it has undergone an intensive drilling program that has defined a very large rare earths resource at surface down to 215 metres, with the full depth extent of the deposit yet to be determined. Almost 90,000 metres of drilling has been completed at an average spacing of 40 metres and the resource risk at Nolans Bore is low.

The Mineral Resource estimate for Nolans Bore is currently 47 million tonnes grading 2.6% REO, for 1.2 million tonnes of contained REO. Fifty four percent of these resources are classified as Measured and Indicated and these resources have been earmarked for conversion to Ore Reserves. Nolans Bore is highly enriched in neodymium, which is one of the most sought after and valuable rare earths.

The Nolans Bore resource is amenable to low cost open cut mining and standard beneficiation techniques, and will be mined using selective open cut methods. Open cut mining will be carried out using conventional blast, shovel and truck techniques to supply material to the Run of Mine ("ROM") pad for feeding into an on-site concentrator comprising a comminution circuit and beneficiation circuits. Interim pit optimisation studies show that more than twenty years of production is possible based on Measured and Indicated Resources alone, with an indicative mine life of more than thirty years assuming that the entire resource as currently defined can be processed.

The life of mine schedule is based on a maximum overall annual mining rate of 7 million tonnes for the first eight years of operation, increasing to 15 million tonnes per annum thereafter to produce an average of 1.5 million tonnes of plant feed each year.

The Nolans Project Flowsheet

The Nolans Project process flowsheet has taken about seven years to develop and is based on an extensive laboratory, pilot plant and demonstration plant testwork program undertaken by Arafura and its technology partners, augmented by detailed process modelling from mine to final products. Validation of the process flowsheet - from beneficiation through to REO separation - is well advanced and Arafura has also worked closely with a number of first tier engineering organisations to provide capital and operating cost estimates for financial evaluation.

In the Base Case, ROM material will be fed to a conventional crushing circuit and upgraded to a mineral concentrate using a combination of dense media separation ("DMS"), wet high-intensity magnetic separation ("WHIMS"), and flotation. The mineral concentrate will be transported to Whyalla for chemical processing. A mineral concentrate grade of 5% REO is planned to be the design feed to the Rare Earths Complex in Whyalla. Rare earths recovery in beneficiation is expected to exceed 80%.

The dried concentrate from Nolans Bore will be transported to a Pre–Leach circuit for early-stage chemical processing at the Whyalla site, which involves reacting mineral concentrate with hydrochloric acid to dissolve calcium and phosphate. Rare earths in solution will be precipitated in a Rare Earths Recovery section and filtered to produce a solid Pre-Leach Residue and Precipitate ("PLRP"). The separated liquid phase will pass to a Hydrochloric Acid Regeneration circuit to produce di-calcium phosphate and gypsum co-products, as well as hydrochloric acid for re-use in the Pre-Leach circuit.

The PLRP will pass from the Rare Earths Recovery stage into a Sulphation stage where it will be baked with concentrated sulphuric acid and leached in water to dissolve the rare earths. Aluminium, iron and thorium will be removed as a solid residue during a Purification stage and the filtrate will pass through ion exchange to recover uranium. The rare earths-rich raffinate will be neutralised using soda ash to generate a mixed rare earth carbonate.

The mixed rare earth carbonate will then be dissolved in hydrochloric acid to produce the feed solution for a Rare Earths Separation process, comprising multiple solvent extraction circuits, to progressively separate and calcine to Arafura's five REO products (Cerium Oxide, Didymium Oxide, HRE Oxide, Lanthanum Oxide and SEG Oxide), which will be packaged for shipping to market.

Arafura first produced a mixed rare earth carbonate from its test work program in 2009 and, in 2012, the Company achieved a major milestone when it generated separated REO products from Nolans Bore mineral concentrate. These products meet a target specification of 99% purity and a product evaluation program involving potential customers is in progress. Feedback to date has been positive.

Overview *continued*

Co-Products and Residues

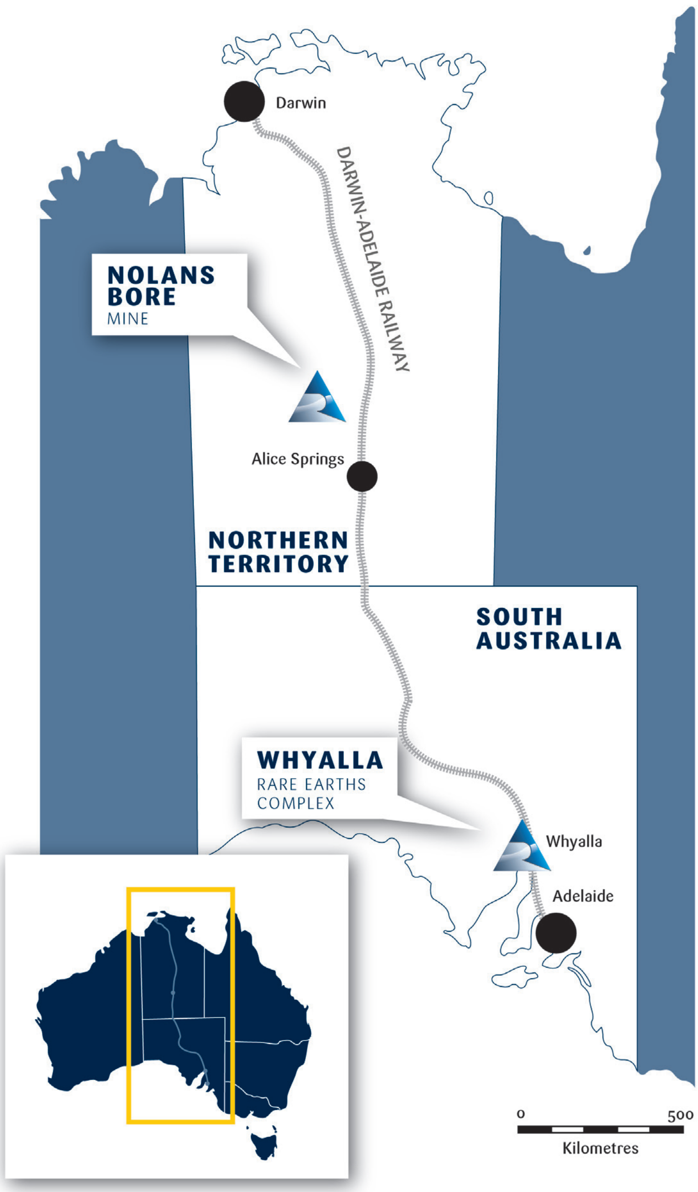
Co-products, tailings and residues will be stored at both the Nolans Bore site and the Whyalla site. Low-level radioactive residues generated at the Rare Earths Complex will be returned to Nolans Bore by rail for long term storage.

Transport and Logistics

The mineral concentrate will be hauled from Nolans Bore to a dedicated rail siding located adjacent to the Darwin-Adelaide rail line, approximately 65 kilometres to the east of the mine site. The concentrate will be transported in suitably designed and sealed containers that will be loaded and washed at the mine site. These containers will remain sealed until they are loaded into the processing facility in Whyalla.

A rail loop and sidings at the Whyalla site will receive mineral concentrate from Nolans Bore as well as receiving reagents, spares and consumables from Port Adelaide. The Whyalla site will dispatch final products for export and send residues back to the mine site.

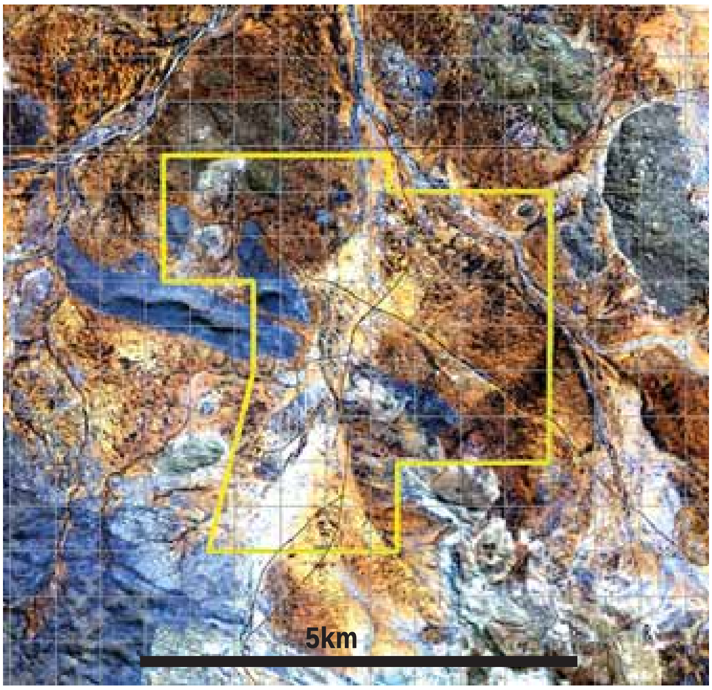
Major deliveries of reagents will be required for the processing facility in Whyalla. Most of these will be delivered to Port Adelaide and railed to Whyalla. Port access options are also being evaluated at Whyalla. Bulk products (gypsum and phosphate) are to be delivered locally by road or by rail to Port Adelaide for onward sea freight.



Nolans Project Milestones

	Date	Milestone
2012	June	Nolans Bore JORC Resource: 47 Mt @ 2.6% REO (1,222,000 tonnes REO)
	June	Production of separated Cerium Oxide product to 99% purity for customer assessment
	May	Strategic offtake MOU with Korean multinational
	January	Production of separated Didymium, HRE and SEG Oxide products to 99% purity for customer assessment
2011	August	Strategic offtake LOI with Germany's ThyssenKrupp
	June	Whyalla site EIS guidelines issued by South Australian Government
	May	First production of Gypsum
	February	Development Application for Whyalla site lodged with South Australian Government
2010	November	Whyalla site environmental studies commence
	October	Bulk samples extracted from Nolans Bore for demonstration program
	September	Whyalla confirmed as site for Rare Earths Complex
	September	First production of separated Rare Earths
2009	March	First production of Mixed Rare Earth Carbonate
	February	Strategic investment by East China Mineral Exploration and Development Bureau ("ECE")
2008	November	Nolans Bore JORC Resource: 30.3 Mt @ 2.8% REO (848,400 tonnes REO)
	November	Nolans Bore site EIS guidelines issued by Northern Territory Government
	May	Nolans Bore site environmental studies commence
	March	Notice of Intent to develop Nolans Bore lodged with Northern Territory Government
	February	Mineral Lease application over Nolans Bore site lodged with Northern Territory Government
2007	December	Bulk sample extracted from Nolans Bore for pilot program
	October	Nolans Project PFS announced
	February	Beneficiation test program initiated
2006	November	A$3.3 million AusIndustry (Australian Government) Commercial Ready Grant
2007	November	Nolans Bore JORC Resource: 18.6 Mt @ 3.1% REO (576,600 tonnes REO)
	August	Hydrometallurgical test program initiated
2003	November	Arafura lists on ASX (ASX: ARU)
2001	June	Maiden Nolans Bore JORC Resource: 3.8 Mt @ 4.0% REO (152,000 tonnes REO)
	May	Arafura acquires Nolans Bore Exploration Licence

Figure 1.1 Nolans Project Site Locations



NOLANS BORE

1/ Introduction

Arafura's core focus is development of the Nolans Project and the Company is advancing its feasibility study on the Project as its highest priority. This Project Update reflects the current status of the feasibility study and the Nolans Project.

The Nolans Project is Arafura's flagship project which, when fully established, will produce 20,000 tonnes of REO products each year, together with phosphate, uranium and gypsum co-products. Arafura also owns gold, iron-vanadium and base metal exploration interests in the Northern Territory.

Arafura has developed a Base Case for the Nolans Project which is the focus of the feasibility study. The Nolans Project encompasses a mine and concentrator based at Nolans Bore in the Northern Territory and a chemical processing operation at Whyalla in South Australia. The Nolans Project has low sovereign risk and will operate in a defined and well understood regulatory framework. Arafura has secure tenure over the Nolans Bore site and has entered into a land purchase agreement to secure the proposed site for its Rare Earths Complex at Whyalla.

Arafura has defined a substantial JORC-compliant and low risk resource capable of sustaining the Nolans Project for at least thirty years of operation. In addition, the Company has undertaken extensive testwork on the process route from resource through to REO products to further de-risk the Project. The remaining testwork will focus mainly on optimising the beneficiation process at Nolans Bore and final proving up of the processes at Whyalla.

The Base Case shows a strong financial return from the Nolans Project over a twenty year period, which matches its current Measured and Indicated resource base.

In addition, Arafura has a continuing program examining the potential for certain process improvements and is engaging rare earths expertise from China in regard to some parts of this program. This program has the potential to improve an already strong return from the Project. The larger part of this program is expected to be completed by October 2012 and may result in changes to the Base Case if they deliver a benefit to the Project's economics and satisfy the Company's criteria for inclusion in the Project.

1.1 Title and Ownership

1.1.1 Nolans Bore

Title over the Nolans Bore deposit is held under Exploration Licence ("EL") 28473. EL 28473 was granted to Arafura by the Northern Territory Government's Department of Resources ("NTDOR") in October 2011 for a period of four years.

Arafura lodged an application for a Mineral Lease ("ML") (Figure 1.1) with NTDOR over the Nolans Bore deposit and surrounding areas in February 2008 (ML 26659). The Company expects to have to accommodate an expanded mining infrastructure footprint as a result of its recent increase in Mineral Resources at Nolans Bore and is preparing additional ML applications adjacent to ML 26659.

Background land tenure to the Nolans Bore deposit is the "Aileron" Perpetual Pastoral Lease.

Arafura executed an Exploration Agreement over a predecessor tenement to EL 28473 in May 2003 with the Central Land Council ("CLC") acting on behalf of registered Native Title Claimants. EL 28473 is currently being incorporated into this agreement.

The Company is in the process of negotiating a Native Title mining agreement with the CLC acting on behalf of the Native Title Claimants.

1.1.2 Whyalla

In July 2011 Arafura executed a land purchase agreement with OneSteel Manufacturing Pty Ltd on approximately 800 hectares of land in Whyalla, South Australia, as the site for the proposed Rare Earths Complex (Figure 1.1). Settlement of the contract is subject to final approval of the change in land ownership by relevant South Australian Government agencies.

The site is currently held in freehold title, thereby extinguishing Native Title. Freehold title was granted through the provision of the land to Broken Hill Proprietary Company Limited by the South Australian Government for steelmaking operations under the *Broken Hill Proprietary Company's Indenture Act.*

Key Features

- 47 million tonne Mineral Resource defined from surface down to 215 metres
- 1.2 million tonnes of contained REO
- Low resource risk:
  - 90,000 metres of exploration, metallurgical and geotechnical drilling in 676 holes
  - Average drill spacing of 40 x 40 metres
  - Mineralisation open at depth
- Premium neodymium content

2/ Geology and Mineral Resources

2.1 Exploration History

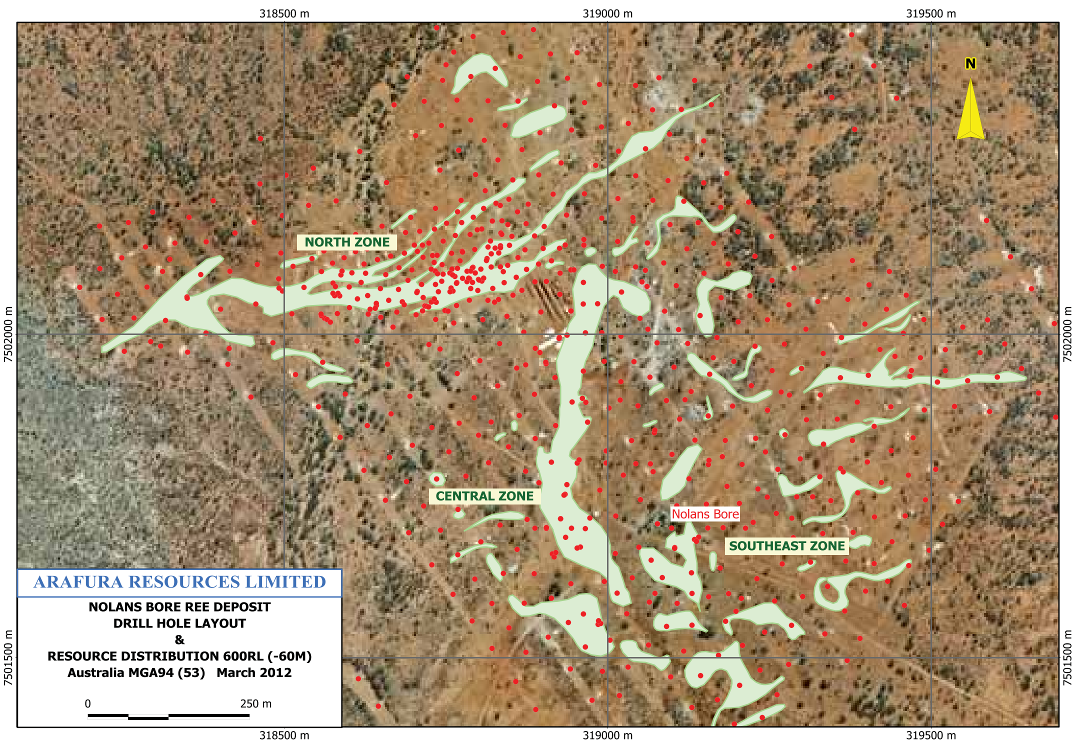
The Nolans Bore rare earth elements-phosphorus-uranium ("REE-P-U") deposit was discovered in 1995 by PNC Exploration as a result of on-ground exploration of a discrete airborne radiometric response. Systematic exploration of the Nolans Bore site has been undertaken by Arafura since 2000 after first-pass geochemical sampling of fluorapatite (herein referred to as 'apatite') occurrences returned up to 9.9% REE and 14.7% P.

Table 2.1 outlines the scope of drilling and costeaning activities completed by Arafura at Nolans Bore to date. A total of 676 holes have been drilled into Nolans Bore.

Table 2.1 Exploration Activity at Nolans Bore, 2000-2011

Year	Costeans	RC Drilling	Diamond Core Drilling	Wide Diameter Drilling	Total Metres
	metres	metres	metres	metres	
2000	890				890
2001		856			856
2004		1,525	518		2,043
2005		7,532	1,042		8,574
2006		3,462	1,322		4,784
2007	222	10,018	704		10,944
2008		7,815			7,815
2009			793		793
2010		992		1,656	2,648
2011		27,761	22,681		50,442
Total	1,112	59,961	27,060	1,656	89,789

Figure 2.1 Nolans Bore Drill Hole Layout and Distribution of Mineral Resources



As shown in Figure 2.1, nearly all of the exploration and resource definition activity has been confined to an area measuring 1.5 x 1.2 kilometres centred on 318950 mE 7501900 mN (MGA53, GDA94). Most of the deposit has been drilled on a 40 metre-spaced inclined pattern (-60° inclination) along NW-SE sections to a nominal 250 metre drilled depth (i.e. 215 metre vertical depth). One part of the deposit, the Central North Zone ("CNZ"), has been drilled on 20 metre centres.

2.2 Deposit Geology and Mineralisation

There is limited outcrop at Nolans Bore with most of the area covered by a thin veneer of soil and alluvium up to around four metres thick. Systematic drilling of the site indicates the widespread presence of Nolans Bore-type mineralisation, with steeply dipping veins up to tens of metres in thickness and hundreds of metres in length, extending below 250 metres drilled depth across large parts of the deposit. The full extent of the deposit is yet to be outlined but deeper drilling has demonstrated mineralisation and alteration at about 490 metres drilled depth in the CNZ.

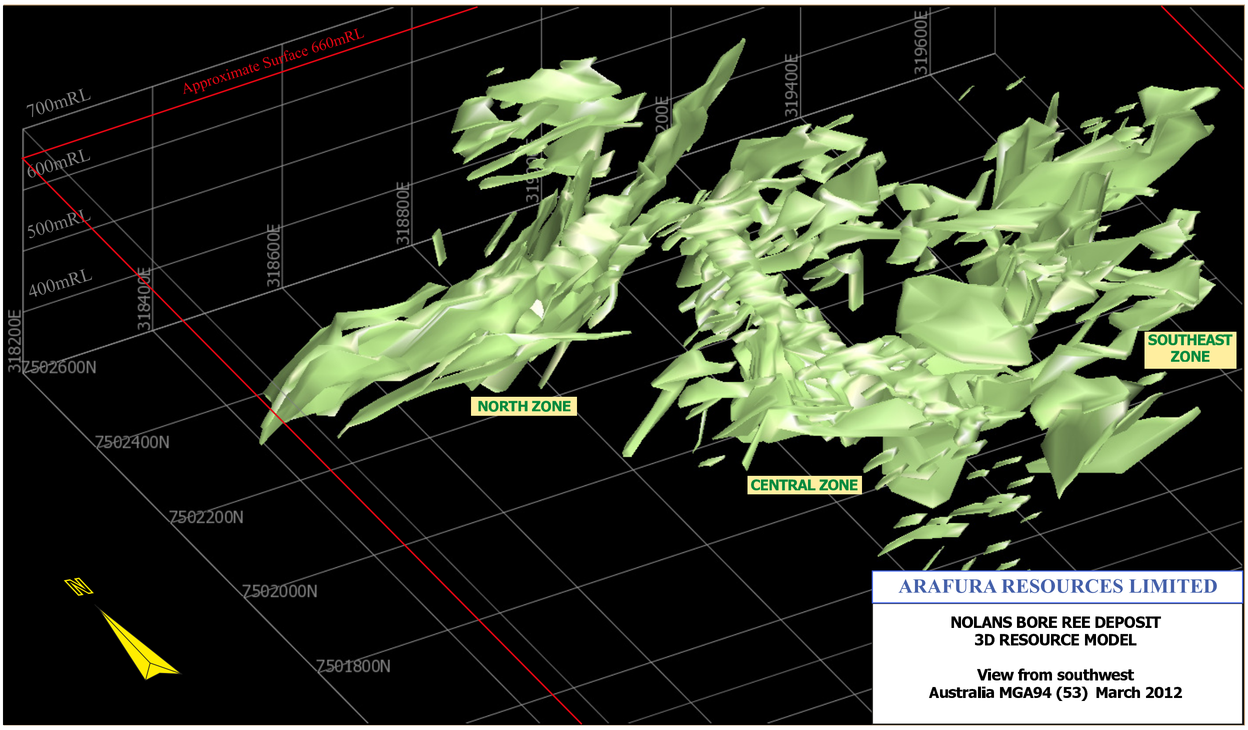
Nolans Bore is a three-dimensional, hydrothermal stockwork vein-style rare earths deposit (Figures 2.1 and 2.2). The mineralisation and associated alteration are hosted by metamorphosed Palaeoproterozoic igneous and sedimentary rocks. Large intrusive bodies of coarse-grained to pegmatitic granitoid also form a major component of the host country rocks. Their distribution and geometry is a key consideration in developing a geological model for the resource.

The mineralisation and its associated alteration are geologically and radiometrically distinct from the country rocks at Nolans Bore. The mineralisation and alteration tends to be various shades of brown, cream, green and white and markedly contrast with the relatively uniform grey, black, white and pink of the quartzofeldspathic country rocks.

Two broad styles of REE-bearing mineralisation have been identified and outlined at Nolans Bore. Apatite mineralisation ranges from discrete narrow fine-grained veins to wide intervals of massive coarse-grained breccias. The apatite-rich rocks comprise up to about 95% apatite and typically contain abundant mineral inclusions of REE-bearing minerals, such as monazite group minerals (herein referred to as 'monazite'), allanite, thorite and numerous other REE phosphates, silicates and carbonates. The apatite contains variable amounts of REE but a higher proportion of REE is hosted in the mineral inclusions.

Calcsilicate mineralisation can contain apatite and other REE-bearing minerals such as allanite and monazite but is typically dominated by epidote, pyroxene, and amphibole. After apatite, allanite is the next most abundant REE-bearing mineral species at Nolans Bore. The calcsilicate mineralisation is strongly associated with the massive apatite mineralisation but tends to be lower grade.

Figure 2.2 Isometric View of Nolans Bore Resource



Key geochemical features of the Nolans Bore deposit include elevated calcium, phosphorus, REE, thorium, uranium, strontium, yttrium and fluorine, and low high-field strength elements such as niobium. The mineralisation shows a strongly fractionated light REE ("LREE")-enriched chondrite-normalised REE pattern that, despite variations in mineralogy and the degree of weathering, is remarkably consistent throughout the deposit. The REE patterns also highlight that Nolans Bore is relatively more enriched in neodymium, samarium and europium than most other LREE-enriched deposits.

2.3 Hydrogeology

A hydrogeological investigation of the proposed Nolans Bore Mine site was completed in 2010-11 in order to estimate dewatering requirements during mine operations.

The hydraulic properties of the aquifer at Nolans Bore were estimated and consequent dewatering predictions made, resulting in a simple dewatering design involving either abstraction from wells within the mineralised zone and/or in-pit sump pumps.

Outcomes of the investigations include:

- the Nolans Bore aquifer is thought to approximately correspond to the mineralisation and surrounding rocks have a much lower permeability;
- the combination of the high permeability and limited areal extent of the aquifer are beneficial for dewatering; and
- the impact of dewatering on downstream resources such as the Woodforde River and western Ti Tree Basin is expected to be insignificant, other than for a potential increase in discharge to Kerosene Camp Creek if abstracted groundwater is not used on-site.

2.4 Mineral Resources

Mineral Resources were estimated for Nolans Bore and reported following the guidelines of the JORC Code by AMC Consultants Pty Ltd ("AMC") in 2012 (Table 2.2), incorporating the results of all drilling and costeaning activity undertaken by Arafura at the site since 2000. Measured and Indicated Resources account for 54% of the total in-situ resources of REO at Nolans Bore.

Table 2.2 Nolans Bore Mineral Resources (as at 8 June 2012)

Resources[1]	Tonnes (Million)	Rare Earths[2] REO %	Tonnes REO	Phosphate P_20_5 %	Tonnes P_20_5	Uranium U_30_8 lb/t	Tonnes U_30_8
Measured	4.3	3.3	144,000	13	572,000	0.57	1,120
Indicated	21	2.6	563,000	12	2,610,000	0.42	4,090
Inferred	22	2.4	511,000	10	2,220,000	0.37	3,610
Total[3]	47	2.6	1,217,000	11	5,410,000	0.41	8,830

This followed JORC-compliant resource statements prepared on behalf of Arafura in 2001, 2004, 2005 and 2008 by Exploremin Pty Ltd.

2.5 Rare Earths Composition

The average in-situ REO composition for Nolans Bore is shown in Table 2.3. The neodymium content at 20.58% is the highest of any rare earths resource currently being considered for development anywhere in the world.

Table 2.3 Nolans Bore Average REO Composition

Rare Earth Oxide	Average in-situ composition
Lanthanum as La_2O_3	19.13%
Cerium as CeO_2	48.72%
Praseodymium as Pr_6O_{11}	5.93%
Neodymium as Nd_2O_3	20.58%
Samarium as Sm_2O_3	2.30%
Europium as Eu_2O_3	0.39%
Gadolinium as Gd_2O_3	0.99%
Terbium as Tb_4O_7	0.08%
Dysprosium as Dy_2O_3	0.32%
Holmium as Ho_2O_3	0.04%
Erbium as Er_2O_3	0.09%
Thulium as Tm_2O_3	0.01%
Ytterbium as Yb_2O_3	0.06%
Lutetium as Lu_2O_3	0.01%
Yttrium as Y_2O_3	1.35%
Total	100.00%

[1]1% REO cut-off grade
[2]REO grade excludes yttrium
[3]Numbers may not compute exactly due to rounding.

Key Features

Interim pit optimisation studies have generated strategic production schedules which show:

- REO production in excess of twenty years based on Measured and Indicated Resources
- Indicative mine life of greater than thirty years based on Measured, Indicated and Inferred Resources

3/ Mining

3.1 General Mine Planning Criteria

3.1.1 Site Location

The Nolans Bore deposit is located 135 kilometres north-northwest of Alice Springs in the Northern Territory. The nearest areas of residential occupation are the Aileron Roadhouse and the adjacent homestead for Aileron Station, which are located together near the Stuart Highway, 13 kilometres east-southeast of the deposit. The next nearest significant population centre is Ti Tree, 59 kilometres north of Aileron.

A well maintained station track extends from the Aileron Roadhouse to the Nolans Bore site.

The Nolans Bore deposit is situated about 650 metres above sea level on a flat plain area which is dissected by Kerosene Camp Creek in the western part of the deposit. The now decommissioned pastoral water bore (Nolan Bore), after which the deposit is named, is located within the defined resource.

3.1.2 Optimisation Scenarios

In March 2012, AMC developed a block model for Nolans Bore (Table 3.1), and this has been used as the basis for the following optimisation scenarios in order to understand its impact on the Base Case project configuration:

- Measured & Indicated ("M&I") Case: This evaluates the mining inventory based only on Measured and Indicated Resources. Arafura expects that the mining inventory will be able to be converted to Ore Reserves, as defined in the JORC Code (2004), following completion of the feasibility study.
- Life of Mine ("LOM") Case: This evaluates the full potential of the Nolans Bore deposit and considers all resource classifications.

The block model has subsequently been updated in June 2012 (Table 2.2).

Table 3.1 Nolans Bore Block Model (as at 12 March 2012)

Resources	Tonnes (Million)	Rare Earths REO %	Phosphate P_2O_5 %	Uranium U_3O_8 %
Measured	4.3	3.4	12	0.03
Indicated	21	2.5	12	0.02
Inferred	21	2.3	10	0.02
Total	46	2.5	11	0.02

The results of the optimisation scenarios are shown in the following sections.

3.1.3 Mining Method, Mining Loss and Dilution

The mining method adopted for this study was selective mining utilising 90 tonne rear dump trucks and 110 tonne hydraulic excavators. These assumptions are considered appropriate for the style of mineralisation at Nolans Bore and the mining rates necessary to achieve target REO production rates.

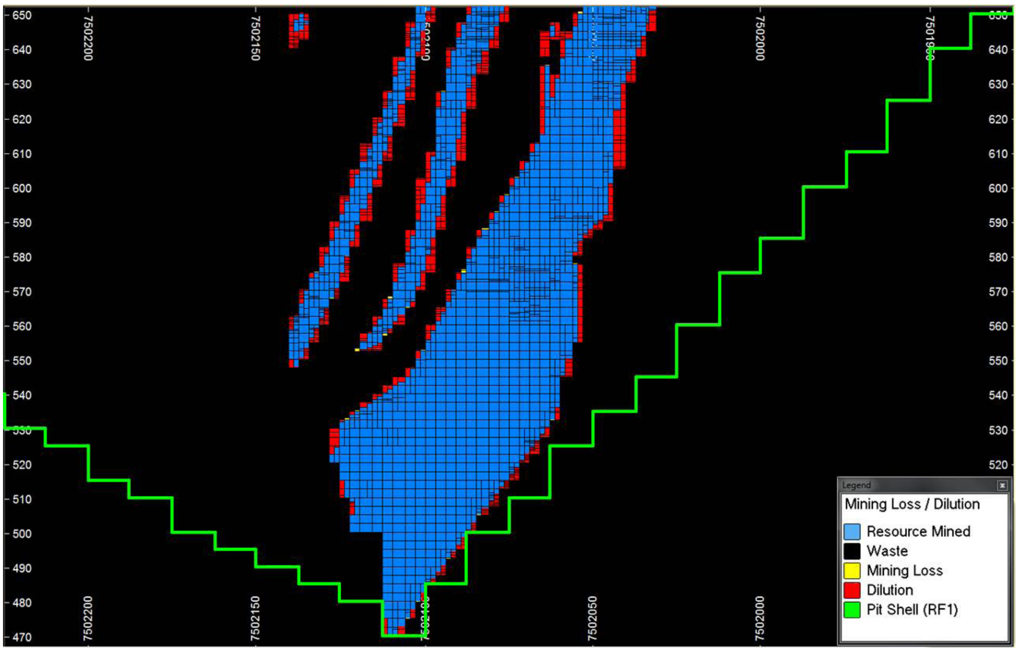
To estimate dilution and mining loss, the resource block model was re-blocked through regularisation to a block size of 3.125 mN x 3.125 mE x 2.5 mRL. Appropriate size selective mining units were then applied and dilution and mining loss computed. Overall, this resulted in 10.5% dilution and 0.2% mining loss for the M&I Case (Table 3.2 and Figure 3.1) and 13.0% dilution and 0.8% mining loss for the LOM case (Table 3.2).

In both cases, the results are satisfactory and within acceptable boundaries.

Table 3.2 Impact of Dilution and Mining Loss

	Unit	Resource	REO	U_3O_8	P_2O_5
M&I CASE					
Undiluted Resource Model	kt	25,836	693.2	5.3	3,198.8
Mining Loss	kt	50	1.0	0.1	4.5
Dilution	kt	2,805	0.0	0.0	0.0
Diluted Resource Model	kt	28,592	692.2	5.2	3,194.3
LOM CASE					
Undiluted Resource Model	kt	47,617	1,193.5	8.9	5,434.8
Mining Loss	kt	425	9.3	0.1	42.1
Dilution	kt	6,673	0.0	0.0	0.0
Diluted Resource Model	kt	53,865	1,184.2	8.8	5,392.8

Figure 3.1 Impact Of Dilution and Mining Loss – M&I Case Section View 318700 mE, North Zone Optimised Pit Shell



3.1.4 Geotechnical Analysis

The 2011 Nolans Bore drilling campaign (Table 2.1) included 2,477 metres of geotechnical drilling in fifteen dedicated diamond core holes. Geotechnical inputs, including pit slope parameters (Figure 3.2 and Table 3.3), have been developed for pit optimisations and pit design.

Figure 3.2 Geotechnical Domains (LOM Case) for Pit Slope Angles

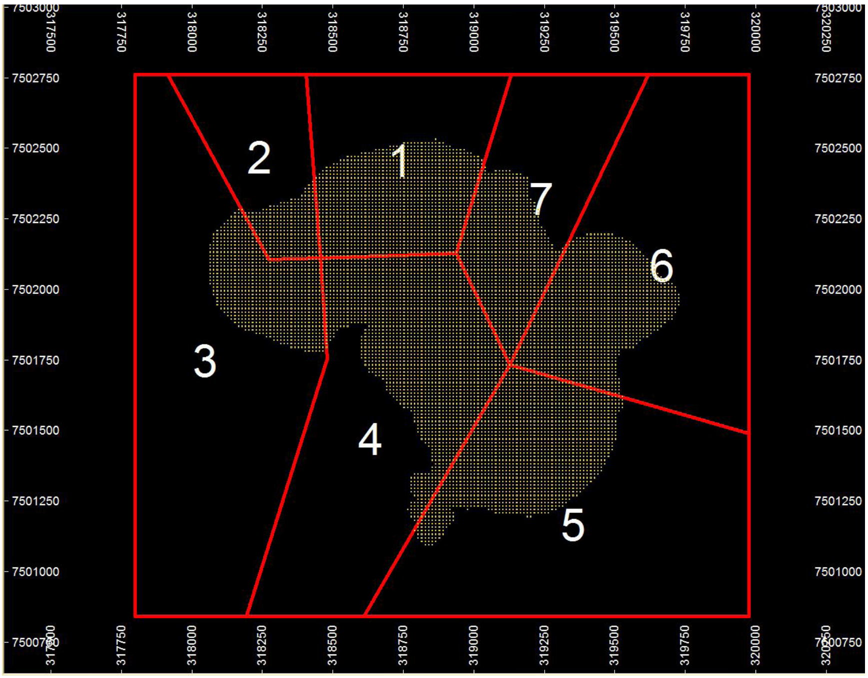


Table 3.3 Pit Slope Angles for Optimisation

Geotechnical Domain	Maximum Overall Slope Angle (º)	Pit Optimisation Slope Angle[1] (º)
1	44.9	38.6
2	48.5	42.0
3	36.1	30.8
4	51.2	45.5
5	35.9	30.9
6	50.7	44.4
7	50.7	48.7

3.1.5 Pit Optimisation Parameters

A series of pit optimisations using Whittle Four X software was completed by AMC using the key parameters summarised below:

- Target REO production rate of 20,000 tonnes per annum;
- Concentrator feed rate capped at a maximum of 1.1 Mtpa for the first 7 years of production increasing to 1.55 Mtpa for the remainder of the optimisation period;
- Variable mining costs based on current open pit mining costs as estimated by AMC:
  · A$5.30 per tonne for the M&I Case
  · A$5.50 per tonne for the LOM Case;
- Variable Concentrator metallurgical recovery based on the P_2O_5 grade in the concentrator feed; and
- Metallurgical recovery of 85.6% for REO in the Rare Earths Complex.

[1]Allowances made for access ramps and optimisation slope errors.

3.2 Mining

3.2.1 Mining Inventory

The Mining Inventory shown in Table 3.4 is contained wholly within the ultimate pit shells (revenue factor 1.0) from Lerchs Grossmann pit optimisations. To evaluate the LOM shells, all Measured, Indicated and Inferred Resource category material was considered to be plant feed.

Table 3.4 Nolans Bore Mining Inventory

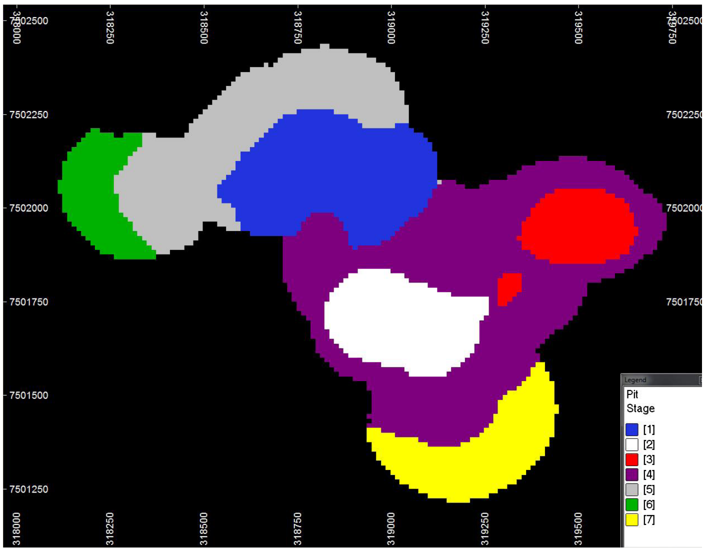
Item	Unit	M&I Case	LOM Case
Plant Feed	Mt	28	53
Waste	Mt	157	305
Total Rock	Mt	185	358
Strip Ratio		5.5	5.7
REO In Place	t	690,200	1,178,900
U_3O_8 In Place	t	5,200	8,800

3.2.2 Pit Design

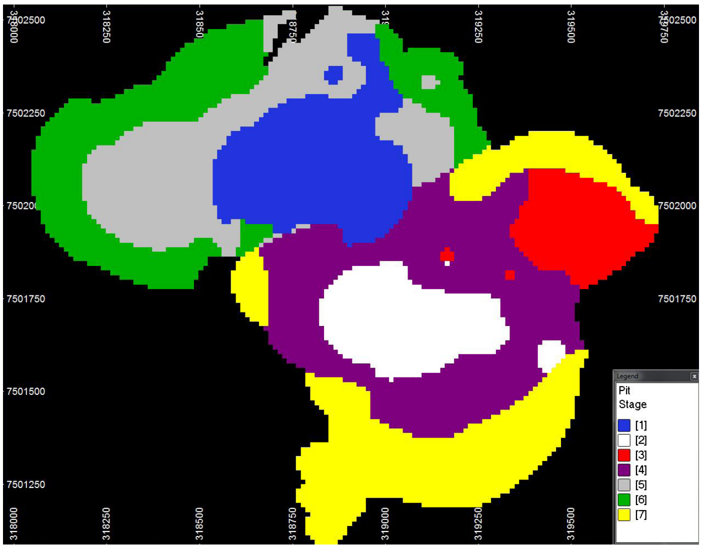
All pit inventories and mine scheduling have been based on pit optimisation shells. Seven pit stages were selected for mine scheduling for both the M&I and LOM optimisation scenarios (Figure 3.3).

Figure 3.3 Scheduling Stages

M&I Case



LOM Case

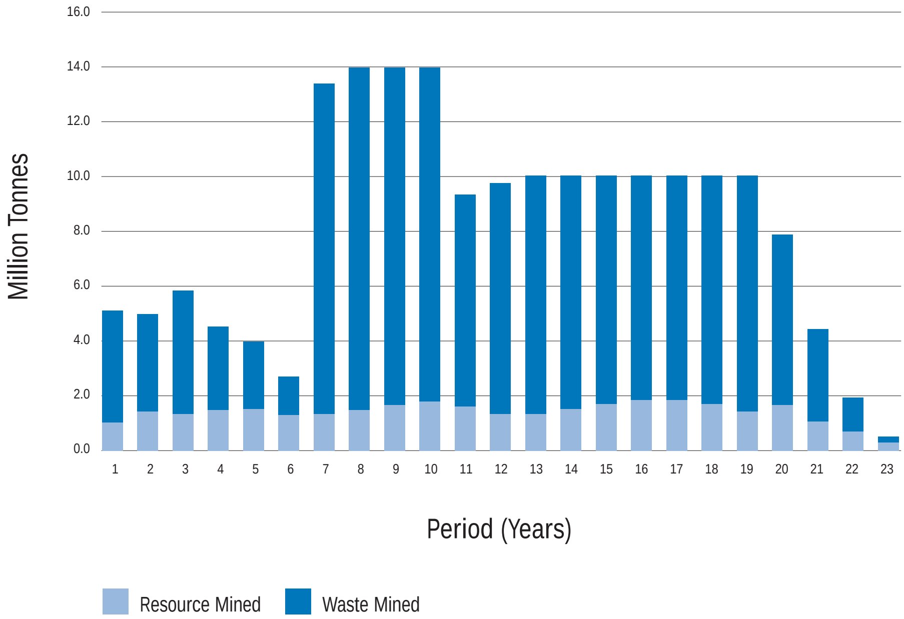


Detailed pit design work is not yet completed for the 2012 mine planning program.

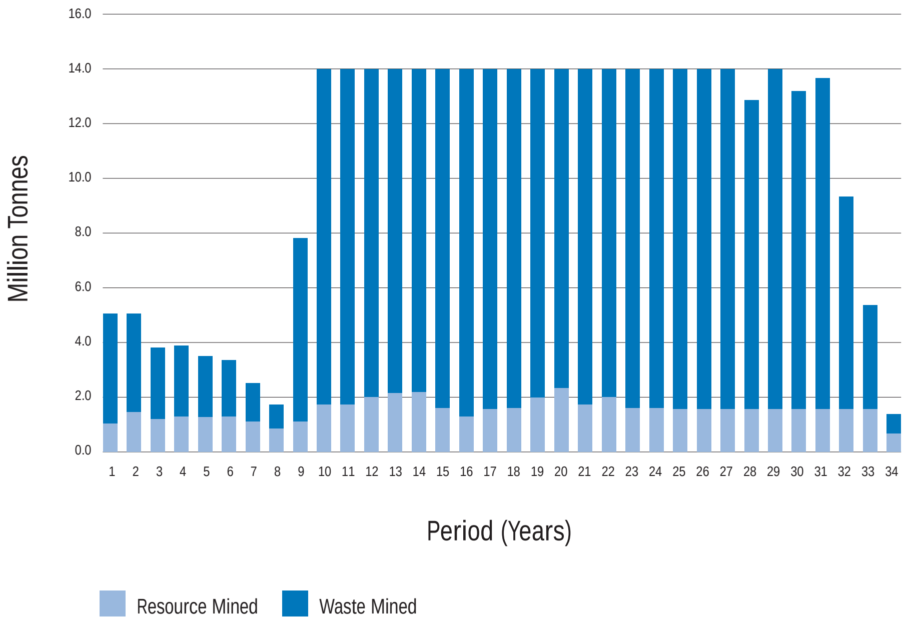
The strategic mining schedule is shown for both the M&I and LOM optimisation scenarios (Figure 3.4). For the M&I Case, the strategic mining schedule is based on a maximum overall mining rate of 7 Mtpa for the first six years of production, and 15 Mtpa thereafter to produce an average of 1.4 million tonnes of plant feed each year. The LOM Case is based on a maximum overall mining rate of 7 Mtpa for the first eight years of production, and 15 Mtpa thereafter to produce an average of 1.5 million tonnes of plant feed each year.

Figure 3.4 Strategic Mining Schedule

M&I Case



LOM Case



Key Features

- REO sample products to market specification produced from Nolans Bore mineralisation
- Extensive development testwork at laboratory, pilot and demonstration plant scale is well advanced
- Detailed process modelling from mine to final products validated by testwork
- Co-product development achieving quality targets

This Section is necessarily brief in its description of plant and processes as large parts of the process flowsheet have been developed out of Arafura's testwork program, are highly confidential and are not intended for release into the public domain.

4/ Processing

4.1 Material Types

Arafura has an advanced understanding of Nolans Bore mineralisation through the outcomes and analysis of its diamond core drilling campaign in 2011 (Table 2.1) and the completion of detailed mineralogical and beneficiation testwork programs in 2012.

Through this work, Arafura has been able to define and locate the various material types at Nolans Bore and apply different process performances to each type. This is an important milestone for the Nolans Project and has provided Arafura with the means to target the best performing material during mine optimisation through to operations.

In this regard, the presence of two broad styles of REE-bearing mineralisation at Nolans Bore has been outlined, contrasting the more massive apatite-rich zones from the geologically and mineralogically complex calcsilicate-rich parts of the deposit. These styles can be summarised as:

- A phosphate style ('apatite') that is dominated by apatite with or without kaolin and/or clay. This style also contains monazite and crandallite and is largely deficient in calcsilicate minerals
- A mixed phosphate-silicate style ('calcsilicate') that, in addition to apatite and monazite, contains variable amounts of calcsilicate minerals, predominantly as allanite, allanitic epidote or cerium silicates.

Apatite can contain REE as substitution in its matrix and is liberated at 75-106 microns. Monazite tends to be found as fine sub-30 micron particles or as micro fine inclusions in grains of apatite. Calcsilicate minerals tend to be coarser than monazite and have similar liberation characteristics to apatite.

The two broad mineralisation styles at Nolans Bore also vary in their metallurgical performance and, to progress an understanding of their spatial distribution, six material type categories based on geological, mineralogical and metallurgical characteristics have been developed (Table 4.1).

Table 4.1 Nolans Bore Material Types

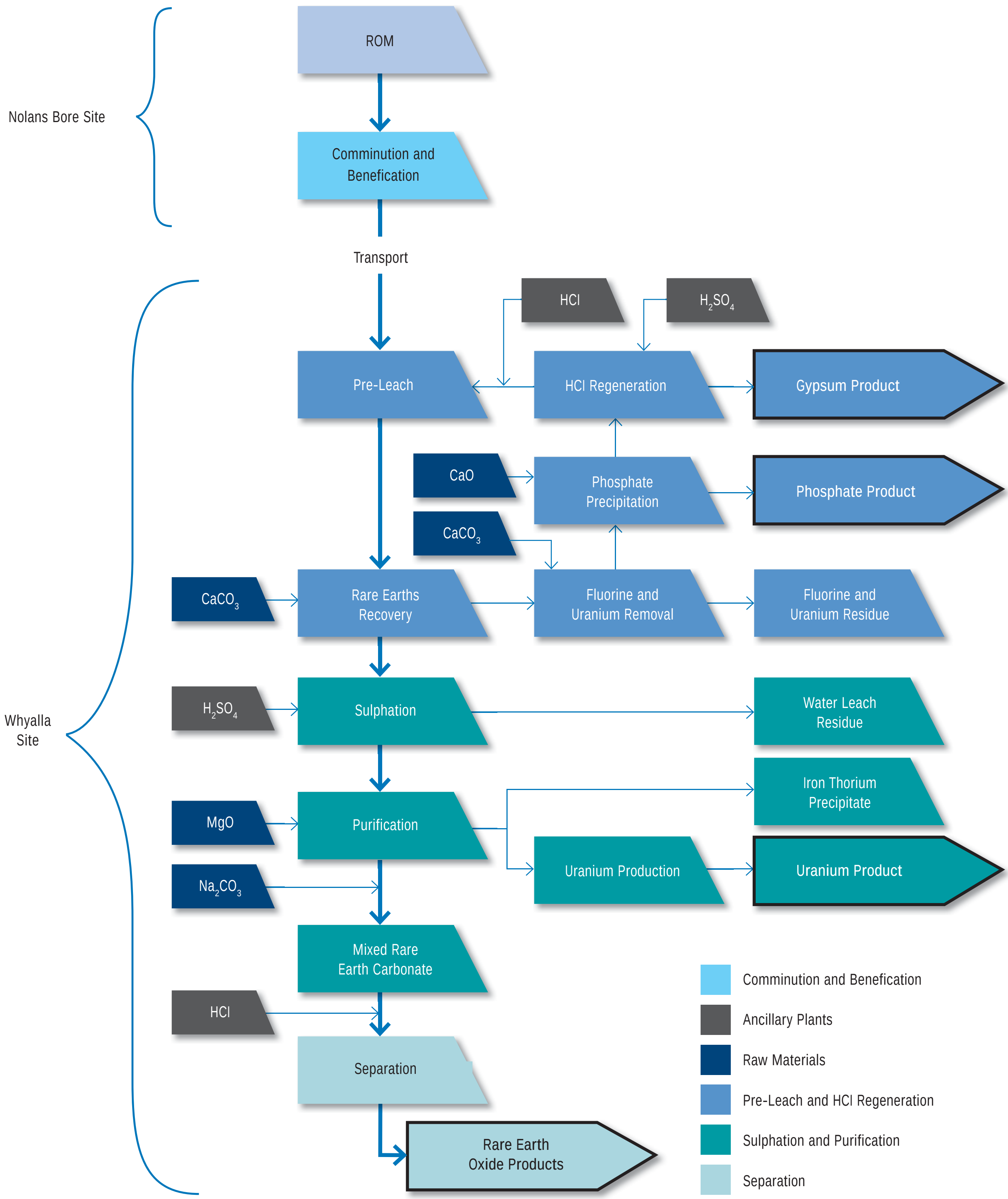
Style	Material Type	Description	Estimated Proportion
Apatite	1	Cream/green apatite	17%
Apatite	2	Brown apatite	7%
Apatite	3	Brown apatite with kaolin and/or clay	21%
Calcsilicate	4	Apatite and allanite	9%
Calcsilicate	5	Apatite, allanite and calcsilicate	44%
Calcsilicate	6	Apatite, allanite, calcsilicate and kaolin and/or clay	2%

4.2 Flowsheet

The Nolans Project Base Case process flowsheet (Figure 4.1) has been developed by Arafura over a period of approximately seven years. It is based on detailed, extensive and rigorous testing through a number of phases of laboratory, pilot plant and demonstration plant scales of testwork.

These testwork programs have used Nolans Bore mineralisation to develop and validate the flowsheet from comminution through to generating final REO products and co-products. They have also allowed Arafura to develop a detailed radionuclide balance that clearly identifies the process routing of the relevant individual species (uranium, thorium and their decay chain daughter products). Understanding this deportment is fundamental to process design and equipment selection, and forms a platform of knowledge for long-term operations management.

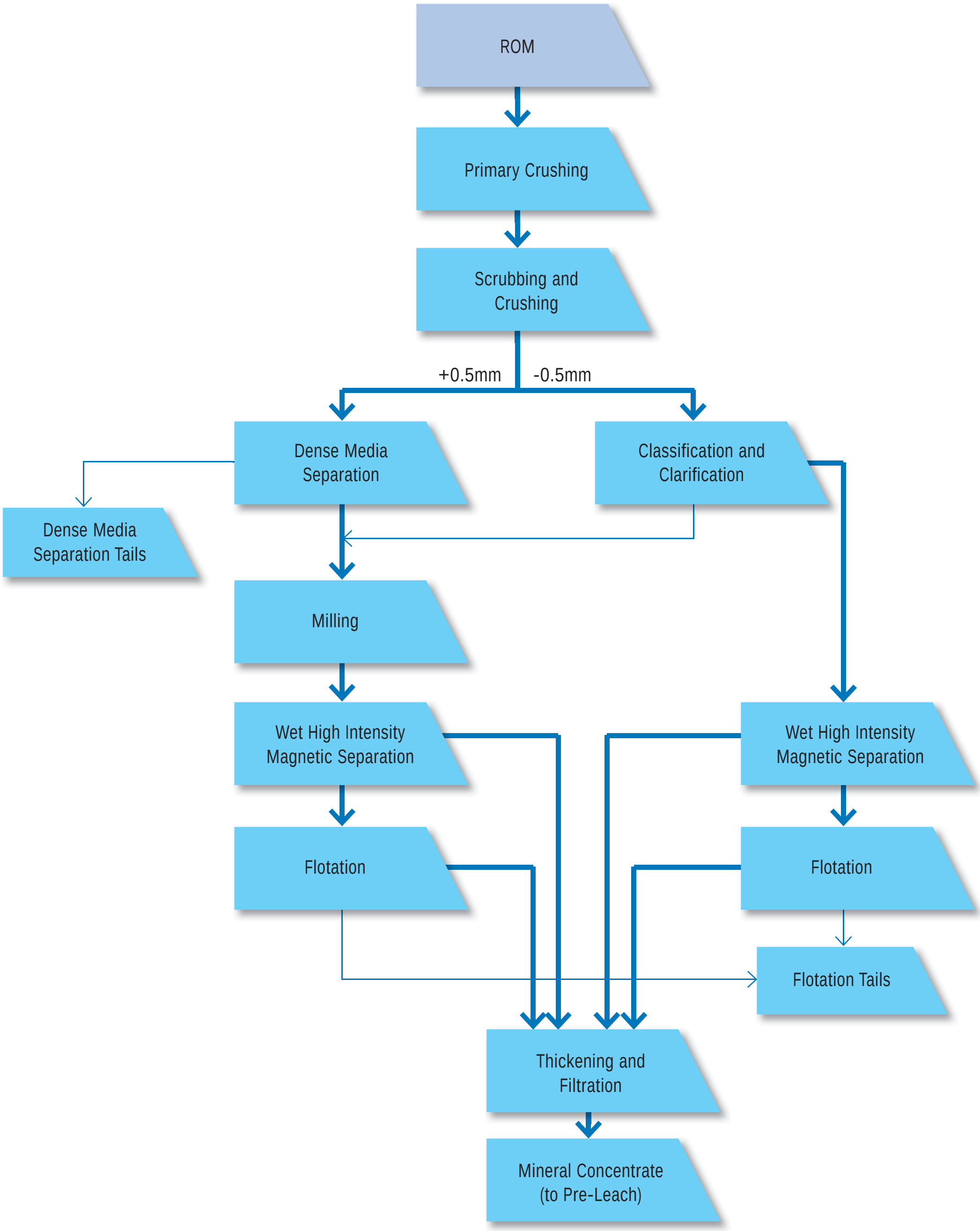
Figure 4.1 Nolans Project Flow Diagram



4.3 Nolans Bore

The development at Nolans Bore will comprise the Mine and Concentrator with ancillary support utilities, inbound and outbound materials handling facilities, tailings, overburden and residue storage, in addition to accommodation and other general facilities.

Figure 4.2 Comminution and Beneficiation Flowsheet



4.3.1 Concentrator

ROM material will be fed into a concentrator at Nolans Bore containing comminution and beneficiation circuits that consist of a scrubbing and classification, dense media separation ("DMS"), milling, wet high intensity magnetic separation ("WHIMS"), flotation, filtration and drying circuits. The beneficiation process will produce a concentrate by upgrading the valuable minerals, namely phosphate and rare earth mineralisation, whilst rejecting gangue minerals as waste.

ROM material will be crushed in a conventional 3-stage crushing circuit to a top size of 12mm and fed to a drum scrubber for washing prior to size separation. The -12mm +0.5mm fraction will be fed to a DMS circuit for removal of low specific gravity gangue material. DMS sinks will then be ground in a conventional closed circuit ball mill to a P80 of 106 microns and further concentrated through a stage of WHIMS and rougher flotation. DMS rejects ("floats") will be stacked in a separate specifically designed storage facility for potential recovery and reprocessing later in the Project life.

The -0.5mm material from the scrubbing and washing stage will be further sized to P80 of approximately 106 microns. The fine stream will be passed through a stage of WHIMS followed by rougher flotation to produce concentrate products. The coarse stream will be combined with the DMS sinks and fed to the ball mill.

The tailings streams from both flotation stages will be combined and sent to a specifically designed residue storage facility.

The concentrate streams from both the magnetic separation and flotation stages will be combined to form a single product stream for filtration and drying in preparation for transport to the Whyalla Rare Earths Complex for chemical processing.

Rare earth recoveries in beneficiation are expected to be greater than 80%, as the combination of WHIMS and flotation are effective in selectively targeting and recovering the two main styles of REE-bearing mineralisation. Arafura has, however, adopted a conservative REO recovery of approximately 70% for the concentrator stage until it completes its variability testwork to confirm the global performance of the WHIMS-flotation combination. The Base Case uses a mineral concentrate grade of 5% as the design feed to the Rare Earths Complex.

4.4 Whyalla

The Whyalla Rare Earths Complex will comprise Rare Earth Processing (Pre Leach–Rare Earths Recovery–Hydrochloric Acid Regeneration–Sulphation–Purification), Rare Earth Separation and ancillary plants (sulphuric acid, hydrochloric acid, and utilities), co-products and residue storage, inbound and outbound materials handling and other general facilities.

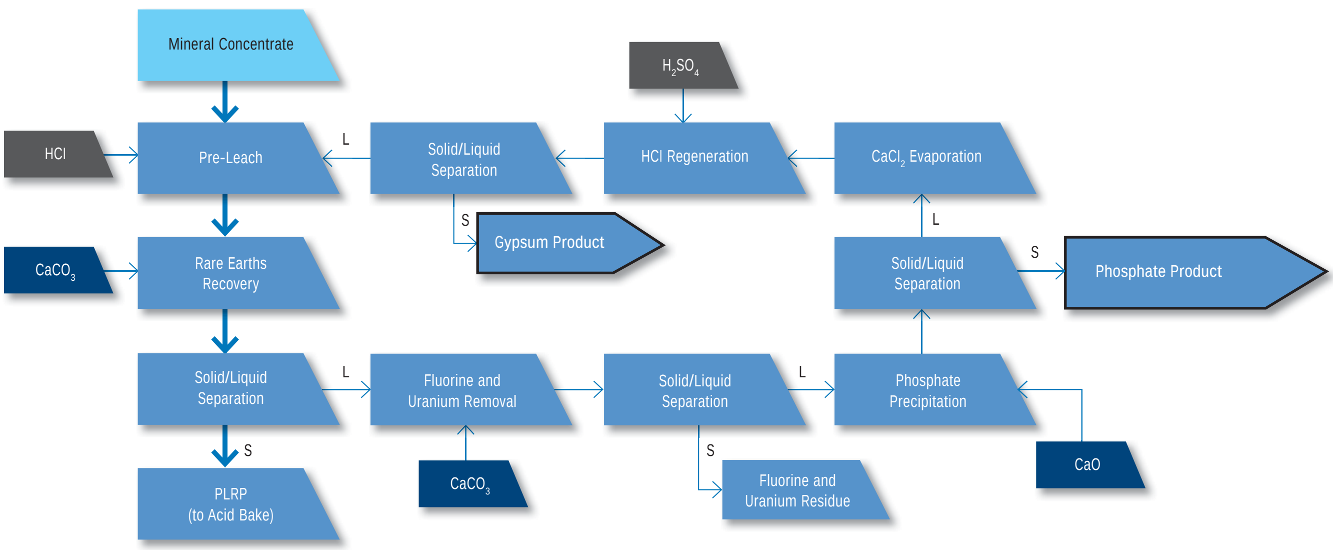
4.4.1 Pre-Leach and Hydrochloric Acid Regeneration

The mineral concentrate delivered from Nolans Bore to the Rare Earths Complex will enter a Pre-Leach circuit as the first stage of chemical processing.The Pre-Leach–Rare Earths Recovery–Hydrochloric Acid Regeneration process shown in Figure 4.3 is the result of several years of testing and development work undertaken by Arafura, consultants and service providers.

Pre-Leach involves reacting the mineral concentrate from Nolans Bore with hydrochloric acid (“HCl”) to leach a number of the minerals from the concentrate. This also solubilises a proportion of the rare earths, which are subsequently re-precipitated in a Rare Earths Recovery stage prior to filtration. The solid phase from this circuit is the REE-bearing phase, or pre-leach residue and precipitate (“PLRP”).

The liquid phase from the Rare Earths Recovery stage contains significant amounts of calcium, phosphates, fluorides, chlorides and many other elements derived from the HCl pre-leach. After precipitation of uranium and a proportion of the fluorine present in this stream, di-calcium phosphate (“DCP”) will be generated by the addition of limestone. This solid DCP co-product will be separated by filtration and the chloride-bearing filtrate will pass to an HCl Regeneration stage.

Figure 4.3 Pre-Leach – Rare Earths Recovery – Hydrochloric Acid Regeneration Flowsheet

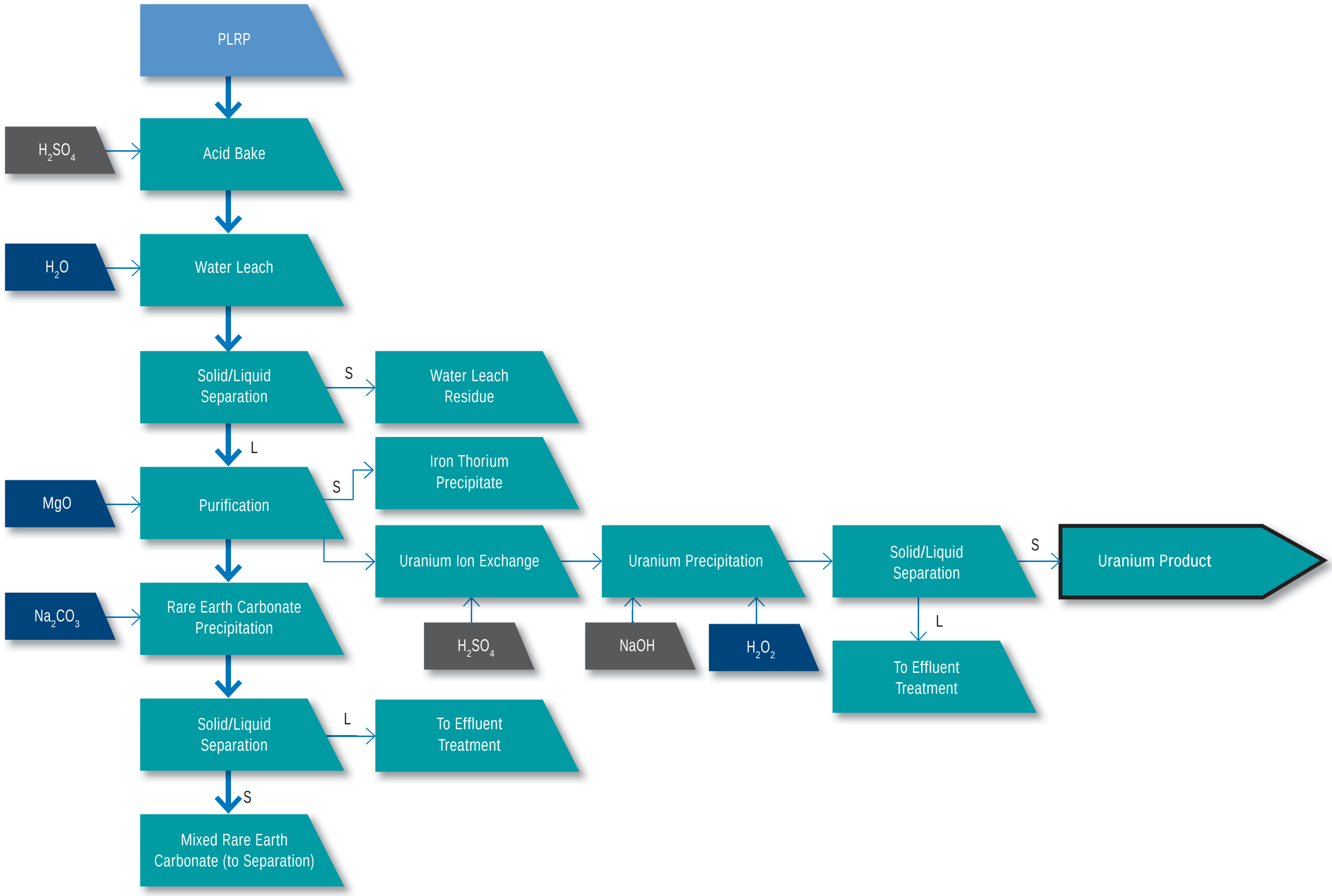


The HCl Regeneration stage uses sulphuric acid (“H_2SO_4”) to regenerate HCl from the chlorides present in the spent pre-leach liquor (calcium chloride “$CaCl_2$”) to enable recycling of the HCl to the Pre-Leach stage. This substantially reduces the demand for fresh HCl make up, and also results in a gypsum co-product with the appropriate properties for use in manufacturing plasterboard.

4.4.2 Sulphation and Purification

The PLRP will pass from the Rare Earths Recovery stage into a Sulphation stage, from where it will be further processed through a Purification stage to produce a mixed rare earth carbonate, as shown in Figure 4.4 and described below.

Figure 4.4 Sulphation and Purification Flowsheet



Sulphation and subsequent Purification of rare earth concentrates are widely used processes to facilitate the separation of rare earths from low value elements present in the concentrate. Sulphation is a baking process carried out using concentrated H_2SO_4 at approximately 250°C. While passing through the Sulphation process, the sulphated solid will be subjected to dissolution in water (or water leach).

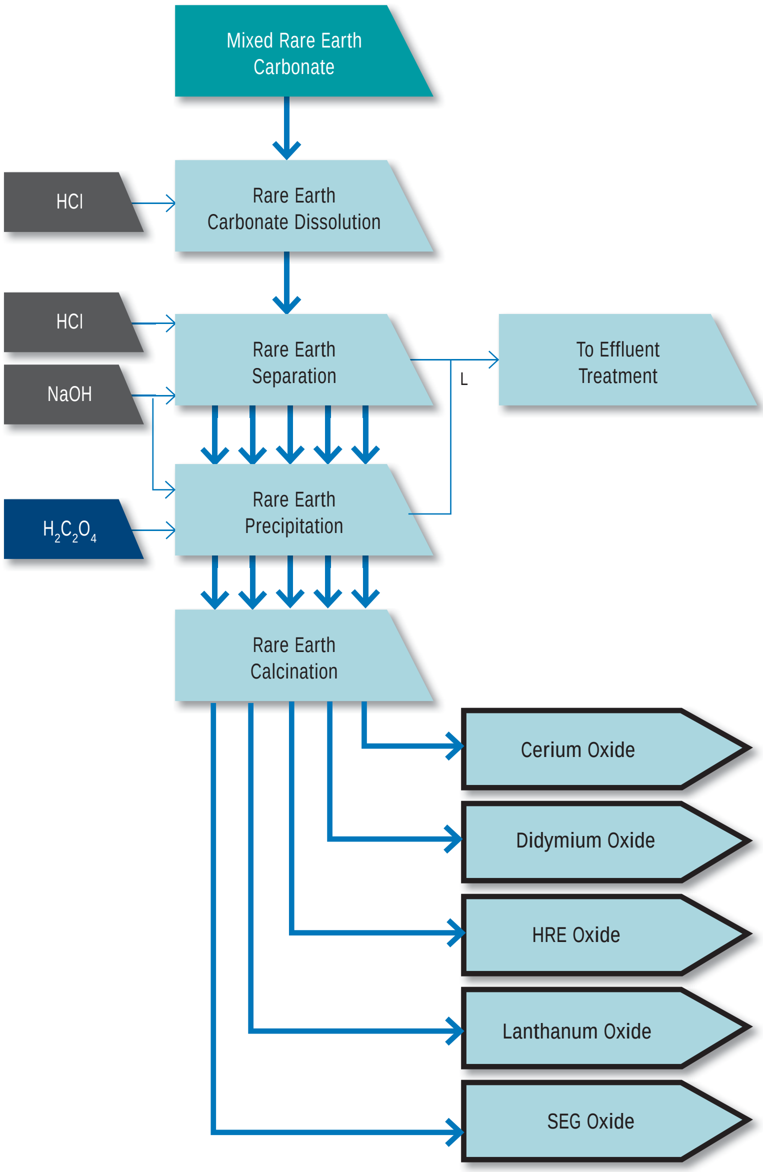
The undissolved solids from water leach will be separated by filtration and these form part of the process residues. The filtrate passes to the Purification stage where the iron content and the oxidation state will be chemically balanced prior to precipitation of an iron thorium precipitate ("ITP"). This stage of the process will remove the majority of the aluminium, iron and thorium from the process as a solid precipitate, yielding a residue which is planned to be returned to the Nolans Bore site for storage in dedicated ponds for potential future recovery and commercialisation.

Following separation of the ITP, the filtrate will pass through an ion exchange ("IX") resin to remove uranium, which will be recovered and further processed into a uranium oxide ("UO_4") product. The REE-bearing raffinate from uranium IX will be subsequently neutralised using soda ash ("Na_2CO_3") to generate a mixed rare earth carbonate. Following filtration, the carbonate forms the feedstock for the Rare Earth Separation process.

4.4.3 Rare Earth Separation

The mixed rare earth carbonate generated by the Rare Earth Processing Plant will be re-dissolved and, within the Rare Earth Separation Plant, five REO products will be produced via multiple solvent extraction ("SX") circuits and subsequent precipitation and calcination processes (Figure 4.5). These products will be packaged for shipping to market.

Figure 4.5 Rare Earth Separation Flowsheet



Arafura's research program, designed to optimise the rare earths separation process, has examined a wide range of SX processing alternatives, including a variety of possible configurations. The program has yielded definitive design information that enabled Arafura to test and define:

- The number of extraction, scrubbing and stripping stages in each of the circuits;
- The arrangement of feeds and recycles in various circuits;
- The configuration of circuits relative to one another;
- The chemical composition of the feed liquor and the composition of the acids and bases used to drive the extraction;
- The type of extractant and the continuous organic phase diluent;
- The relative flow rates of organic and aqueous phases; and
- The retention time in each stage.

Arafura first produced separated rare earths at the Australian Nuclear Science and Technology Organisation ("ANSTO") in 2010 and, since that time, has progressively defined, enhanced and refined the product specifications and robustness of the separation processes to deliver five final REO products:

- Cerium Oxide (as CeO_2)
- Didymium (Nd/Pr) Oxide (as $Nd_2O_3+Pr_6O_{11}$)
- HRE Oxide (as $Tb_4O_7+Dy_2O_3+Ho_2O_3+Er_2O_3+Tm_2O_3+Yb_2O_3+Lu_2O_3+Y_2O_3$)
- Lanthanum Oxide (as La_2O_3)
- SEG Oxide (as $Sm_2O_3+Eu_2O_3+Gd_2O_3$).

Arafura has validated its research program by successfully producing, at pilot scale, four separated REO products to date from Nolans Bore material (Figure 4.6) that meet a target specification of 99% purity. A product evaluation program with potential customers is delivering satisfactory feedback to the Company.

Figure 4.6 Arafura Separated REO Products

Arafura is working to produce samples of Lanthanum Oxide, the last of five separated REO products intended for the initial commercialisation of the Project.

4.5 Integrated Pilot Plant

The process flowsheets underlying the Base Case plant development have been developed from Arafura's extensive testwork. The mass balance for the Whyalla Rare Earths Complex has been developed from a SysCAD process model based on these flowsheets.

Arafura is designing an integrated pilot plant ("IPP") and will construct and operate this plant later this year, subject to its having raised the necessary capital. This is a final step in validating the process flowsheets and the mass balance, as well as the major recycle circuits that are an integral part of the Whyalla Rare Earths Complex.

The IPP will comprise a number of pilot plants, split at points where there are no recycle streams. This plant will be considerably smaller than those of the demonstration program but will be an adequate scale-up for its purpose.

The IPP results will be used to validate the flowsheets developed by Arafura for the Pre-Leach and HCl Regeneration, Sulphation and Purification, and Rare Earth Separation plant circuits and verify the engineering design necessary to complete feasibility.

Key Features

- Excellent existing infrastructure for rail and road close to both sites
- Detailed logistics movements modelling completed
- Rail capacity available to meet Project requirements
- Reliable raw materials supplier sourcing options well defined
- Transport regulations and compliance requirements well defined
- Significant opportunities for outsourcing transport and logistics requirements

5/ Procurement, Transport and Logistics

5.1 Mineral Concentrate and Residue Transport

The close proximity of rail facilities to both the Nolans Bore and Whyalla sites has logistical advantages for the Nolans Project. Mineral concentrate from Nolans Bore will be transported approximately 1,400 kilometres south to Whyalla and residues from the Rare Earths Complex will be back loaded to the mine site. There is sufficient latent capacity on the Darwin-Adelaide rail line to sustain the total rail transport needs of the Project.

Mineral concentrate and residue movements will utilise a dedicated fleet of sealed containers and appropriate washing facilities will be located at Nolans Bore and the Rare Earths Complex at Whyalla.

5.2 Reagent Requirements and Supply

The Base Case configuration of the Whyalla Rare Earths Complex will require on-site production of both H_2SO_4 and HCl by means of a sulphur burning acid plant and a chlor-alkali/hydrochloric acid plant. The capital and operating costs of these and other ancillary plants at Whyalla and Nolans Bore (required for power and water supply) are included in the Base Case, but the Company will pursue and evaluate opportunities to have these plants constructed on a Build, Own and Operate ("BOO") basis or as "over the fence" supply arrangements with third parties.

Sourcing of critical raw materials will include a matrix of local, regional, national and international suppliers. Engagement with these suppliers has included providing samples for testing in Arafura's laboratory, pilot and demonstration plant programs. Suppliers of a number of raw materials have sizeable production capability within the region and, where requirements exceed local capacity, products will be sourced nationally and internationally. Arafura has a high level of understanding of the supply and demand fundamentals following discussions with raw materials suppliers, and several supply options are open to the Project. Where security of supply has been identified as critical, a multiple sourcing strategy will be implemented in the most cost effective manner.

Detailed logistics modelling indicates that the Nolans Project will have annual movements of 620,000 tonnes of bulk raw materials and 1.95 million tonnes of intermodal cargo. Arafura has engaged with major port operators, stevedores and service providers to ensure access to infrastructure and to incorporate the most efficient solutions for cargo movements. Major rail and road haulage operators have been consulted and confirm that adequate capacity exists within the present transportation and materials handling infrastructure to satisfy Arafura's requirements.

5.3 Outbound Cargo

Outbound product cargos will utilise the backhaul capability of the inbound rail and road capacity and port infrastructure. A detailed logistics model has been developed to optimise cargo movements for all raw materials, products and residues to and from the Nolans Bore and Whyalla sites.

5.4 Transport Regulations

The Nolans Project will involve movement of hazardous and dangerous goods which have clearly defined transport requirements. The logistics model encompasses materials classification and the Project's transport methodologies will comply with best practice and current regulatory requirements.

5.5 Outsourcing of Infrastructure

Arafura will endeavour to outsource non-core infrastructure and services, especially where these functions are core business to specialist service providers.

From a logistics perspective, Arafura will focus on utilising existing road, rail and port infrastructure, wherever possible. Where dedicated equipment and infrastructure needs to be procured or constructed, there will be an emphasis on standardisation and the use of existing and proven technology.

Key Features

- First tier engineering consultants have been and will be engaged by Arafura to both advise on, and construct, the Project
- The Project will be constructed using a standard EPCM approach to coordinate all Project construction activities
- There is good access to public infrastructure, services and utilities appropriate to the plants at both Nolans Bore and Whyalla
- Arafura is now well into its Project development planning phase with major milestones to be achieved over the balance of 2012 and 2013

6/ Project Engineering

6.1 Engineering Development

Arafura has engaged first tier engineering consultants to develop the engineering and to produce capital and operating estimates for the Nolans Project.

- Lycopodium has been engaged to develop the engineering for the concentrator, mine, transport and logistics infrastructure for the Nolans Bore site (see layout in Figures 6.1 and 6.2). Lycopodium has used specialist consultants to assist with the development of tailings and waste storage facilities.
- AMC has been engaged to develop mine planning and optimisation for the mine development at the Nolans Bore site. This includes costs for mining equipment and infrastructure that have been incorporated into the mine and beneficiation engineering by Lycopodium.
- AMEC has been engaged to develop the engineering for the Rare Earths Complex at Whyalla (see site layout in Figure 6.3).

Engineering at Nolans Bore and Whyalla has currently been advanced to a stage where capital and operating costs have been estimated to an accuracy of ±30%. This will be reduced to ±15% at final feasibility.

6.2 Engineering and Estimating Basis

Arafura will manage construction of the Project using a standard Engineering, Procurement and Construction Management ("EPCM") approach. The EPCM engineer will provide detailed design, procurement and construction management services, including appointing appropriate fabricators and contractors for the various parts of the Project and will coordinate all Project construction activities. A cost estimate for the EPCM engineer is included in the Project's cost estimates.

A concentrator, mine site infrastructure, haul road and railway siding will be constructed by Arafura at Nolans Bore, and a specialist mining consultant will be appointed to finalise the mine design and to advise on award of a mining contract. Mining will be carried out by a mining contractor using its own equipment, including fleet maintenance facilities. Arafura personnel will operate and maintain the concentrator and tailings facilities.

In addition, Arafura will appoint a transport and logistics specialist to finalise the Company's plans for the transportation, loading and unloading, storage and distribution of concentrate, reagents, products, spares, consumables and waste products for the Project.

Other specialist contractors may also be engaged under the supervision of the EPCM engineer to provide certain other services, such as geotechnical and hydrological assessments; road design and construction; tailings dam design and construction management; surveying services; gas pipeline design and installation; rail siding design and installation; radiation safety advice; and auditing of designs.

Under the Base Case, the Rare Earths Complex, including rare earths processing, infrastructure and ancillary plants will be constructed and operated at Arafura's Whyalla site. Although not included in the Base Case, Arafura is investigating the possible delivery and/or operation of non-core ancillary plants on a BOO basis by third parties, potentially resulting in capital cost savings of up to A$500 million. These ancillary plants include hydrochloric and sulphuric acid plants, desalination plants and power generation.

6.3 Infrastructure, Services and Utilities

Both sites have good access to public infrastructure, services and utilities.

The Nolans Bore site is located ten kilometres west of the all-weather Stuart Highway, and 65 kilometres from the Darwin-Adelaide railway. The town of Alice Springs, with a population of 26,000, is 135 kilometres south-southeast of the site along the Stuart Highway. The town is well served by modern road, rail and telecommunications infrastructure, and has daily flights to most Australian capital cities.

Nolans Bore is not connected to a power grid and natural gas will be used to generate power for the site. The Amadeus Basin-Darwin natural gas pipeline passes within five kilometres of Nolans Bore.

Underground water is available from the Ti Tree Basin within 25 kilometres of the site. It ranges in quality from potable to brackish. This water can be treated to produce process water if necessary.

The Rare Earths Complex will be approximately seven kilometres north of Whyalla. Whyalla has a long history of industrial development and is South Australia's third most populous city with 24,000 residents. The city is serviced by a number of direct flights from Adelaide.

The rail line connecting Arrium's steelworks (adjacent to Arafura's site) to the Darwin-Adelaide railway, and the national highway, runs along the western boundary of the Whyalla site.

Power for the Rare Earths Complex is available from the Cultana substation which is five kilometres from the site and connected to the 275kV South Australian power grid. Water will be supplied from a desalination plant using seawater pumped from the nearby Spencer Gulf.

A natural gas pipeline, supplying Arrium's steelworks and the City of Whyalla, runs along the eastern boundary of Arafura's site. An upgrade of the supply line from Whyte-Tarcowie to Port Pirie is required to make natural gas available to the Rare Earths Complex, and Arafura has commenced discussions with the owner of this infrastructure with a view to securing its gas supply to the Project.

6.4 Next Steps

The table in the Executive Summary on page 5 shows the major milestones Arafura has achieved to date for the Nolans Project.

The Company is now well into its Project development planning phase and major milestones to be achieved over the balance of calendar 2012 and calendar 2013 are as follows:

- Completion of capital raising activities to fund the remainder of the planning phase into Project development;
- Completion of the Company's major process improvement and trade-off studies and finalisation of the ultimate configuration of the Project leading to detailed engineering;
- Completion of the beneficiation improvement program;
- Completion of Demonstration and IPP test programs to prove up process chemistry at an acceptable level of scale-up;
- Completion of the work program to negotiate and acquire appropriate sales and supply contracts for the Project;
- Conversion of Nolans Bore Mineral Resources to Ore Reserves;
- Finalisation of the mine plan at Nolans Bore;
- Finalisation of the Environmental Impact Statements ("EIS") for Nolans Bore and Whyalla
- Finalisation of the Project configuration to facilitate a formal investment decision by the Company to proceed with the development of the Project;
- The Arafura Board decision to proceed;
- Sourcing funding to develop the Project, which may include the introduction of one or more strategic partners.

Figure 6.1 Proposed Nolans Bore Site Layout – Mine and Concentrator (Inset Figure 6.2, see over)

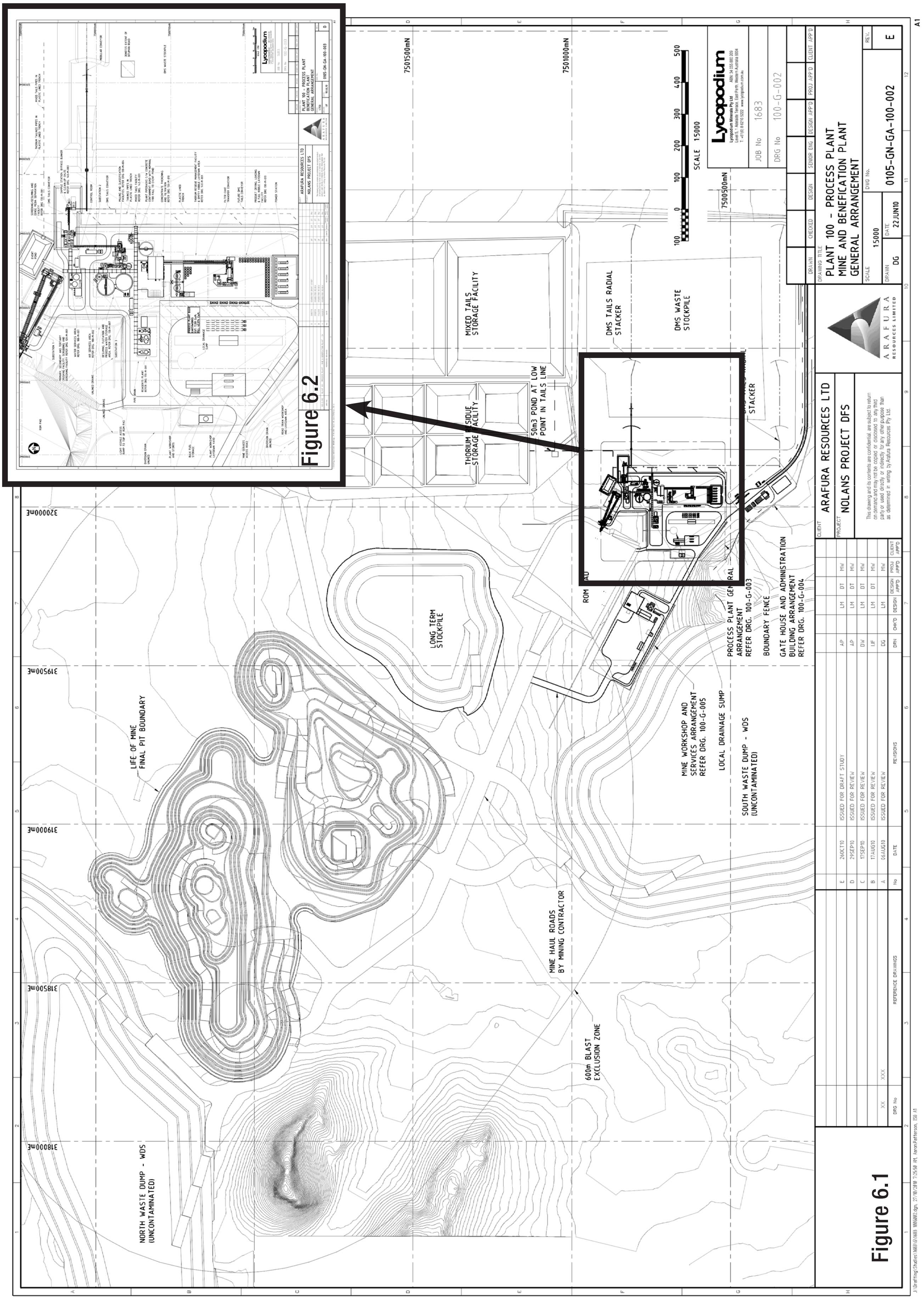


Figure 6.2 Proposed Nolans Bore Site Layout – Concentrator

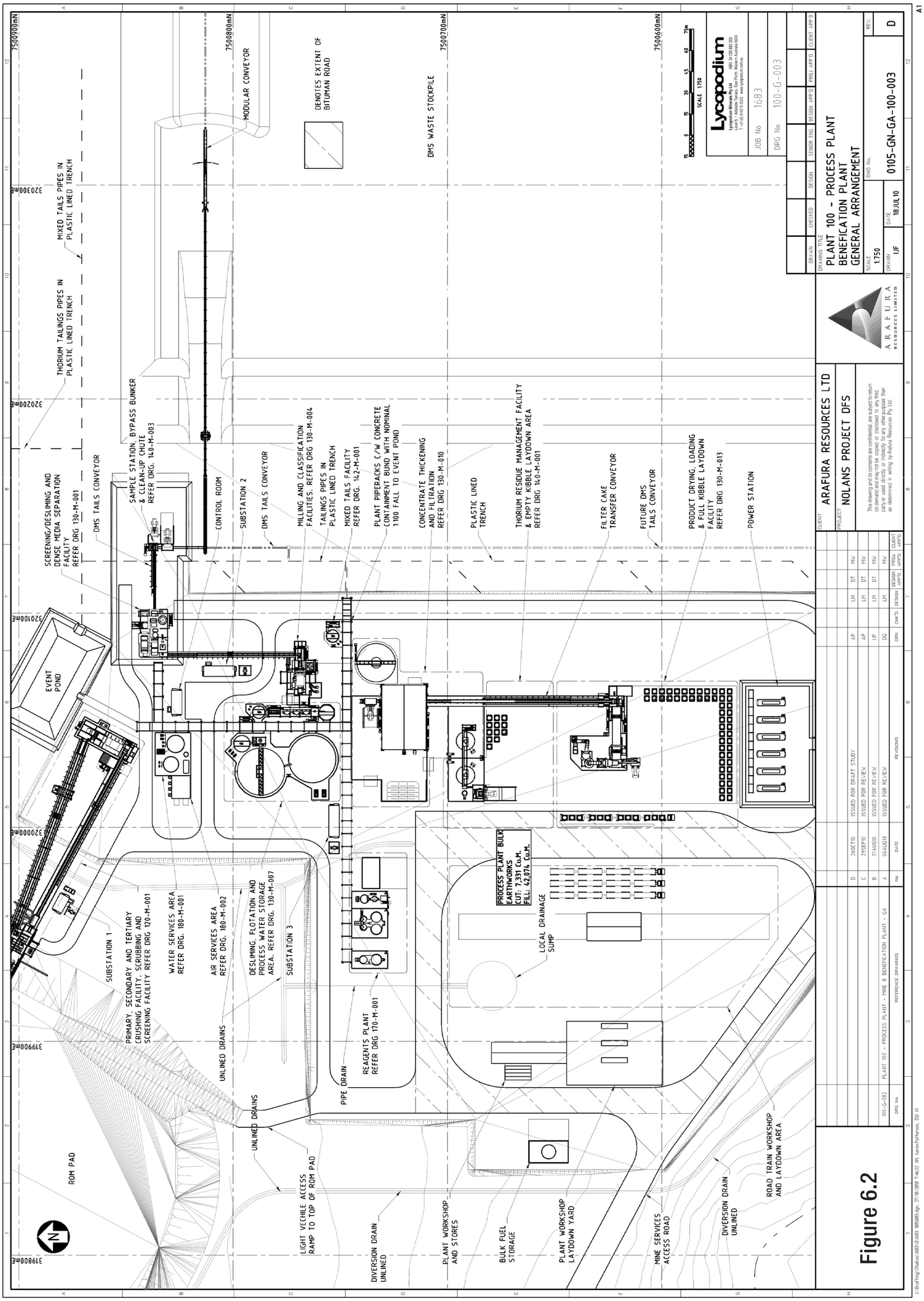
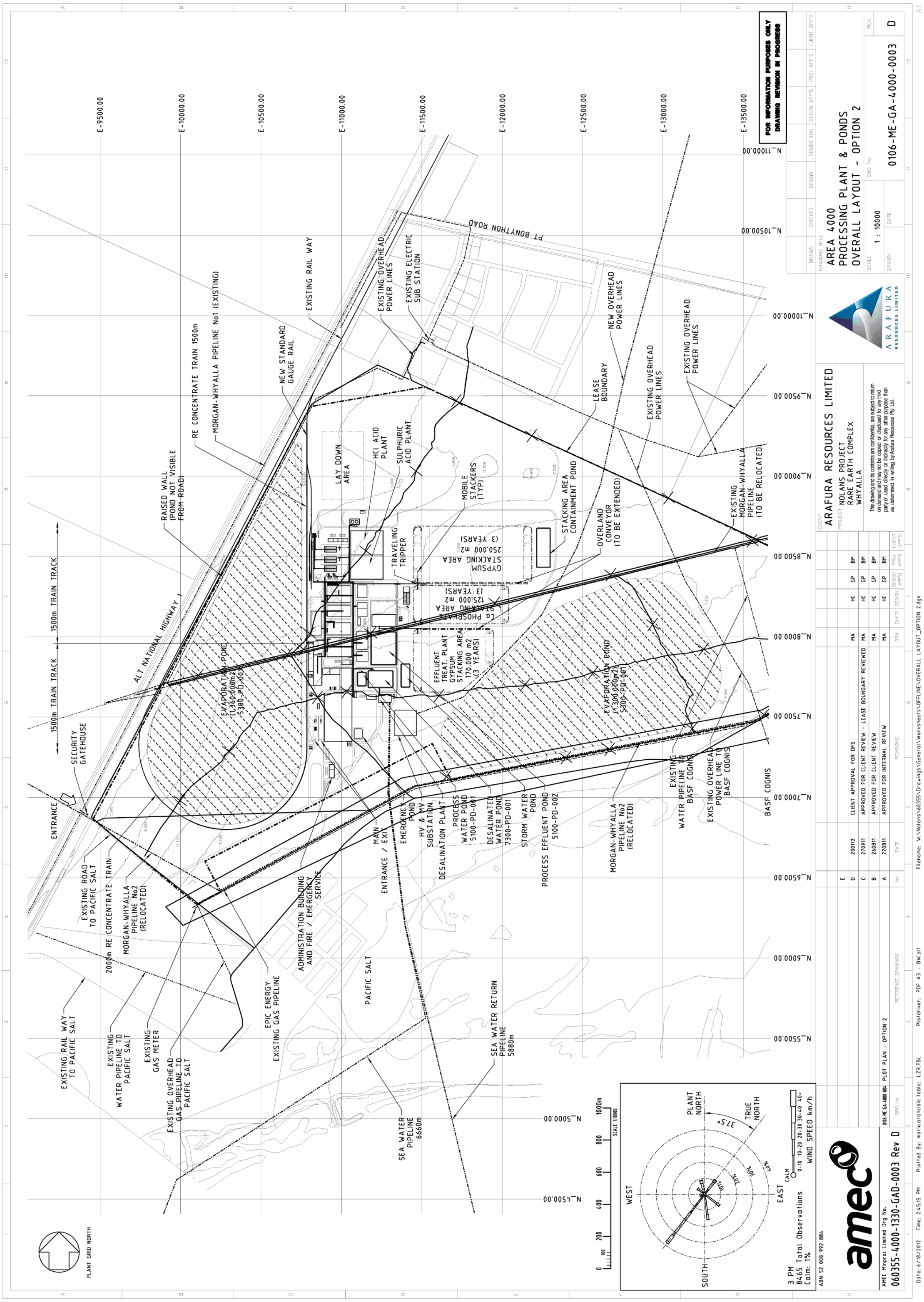


Figure 6.3 Proposed Whyalla Site Layout – Rare Earths Complex



Key Features

- The regulatory framework under which the Project will operate is well defined and Arafura has environmental studies underway and at an advanced stage
- The Company has not found any significant environmental or community matters that could have an adverse impact on the Project
- The Project is located in jurisdictions that are familiar with radiation management in mining and processing operations
- EIS guidelines for Nolans Bore and Whyalla specify requirements relating to the management of radiation and these are being addressed within respective EIS documents being prepared for the Project
- Community relations, engagement and acceptance of the Project have been very positive

7/ Environment, Health, Safety and Community

7.1 Regulatory Approvals Processes

The Nolans Project is subject to government approvals processes stipulated by the Australian, South Australian and Northern Territory governments. These governments have determined that, with regard to environmental approvals, the level of assessment at both Nolans Bore and Whyalla (Figure 7.1) will require satisfactory EISs to be completed by the Company.

The Northern Territory EIS guidelines for Nolans Bore were issued in November 2008 and subsequently renewed in December 2010.

The proposed Whyalla Rare Earths Complex was gazetted by the South Australian Government as a major development in October 2010. The Development Application covering the construction, operation and logistical activities associated with the Rare Earths Complex was submitted to the South Australian Government in February 2011. The South Australian EIS guidelines identified 177 individual guidelines that were issued in June 2011.

The Northern Territory and South Australia governments have similar, clearly defined regulatory frameworks, including those governing radiation management. Each jurisdiction requires compliance with prescribed Australian Government codes and standards, thus providing a uniform national approach to specific management processes. Both jurisdictions currently have mature mining operations that operate under these regulatory frameworks. The EIS guidelines for Nolans Bore and Whyalla specify requirements relating to the management of radiation, and this is being addressed within the respective EIS documents.

7.2 Scope of EIS Assessment Work

7.2.1 Nolans Bore

The environmental assessment of Nolans Bore broadly characterises baseline environmental information and assesses impacts on:

- The Nolans Bore site, including the Mine and Concentrator;
- The logistics corridor from the mine site to the Darwin-Adelaide rail line siding 65 kilometres east of the mine site, and then from the siding to the Northern Territory-South Australia border; and
- The general region included within scope for specific studies (such as social impact assessments), including the towns of Ti Tree and Alice Springs.

Arafura engaged environmental consultants in 2008 to scope, define and compile the Nolans Bore EIS. This encompasses fifteen technical studies, ten of which require baseline characterisation field programs or data collation.

7.2.2 Whyalla

The environmental assessment for the Whyalla Rare Earths Complex and associated activities broadly characterises baseline environmental information and assesses impacts on:

- The site of the Whyalla Rare Earths Complex;
- The land and sea based corridor for potential desalination infrastructure use;
- The logistics corridor along the Darwin-Adelaide rail line from the Northern Territory-South Australia border to Whyalla;
- The logistics corridor along the rail line from Port Adelaide to Whyalla; and
- The general region that will be included within scope for specific studies (such as social impact assessments), including the City of Whyalla.

In an analogous manner, environmental consultants were engaged in November 2010 to progress the Whyalla Rare Earths Complex EIS which includes a similar core of studies to the Nolans Bore EIS, with the addition of marine studies.

7.3 Progress and Highlights

Field work, data collection and collation for baseline characterisation studies was almost 80% complete as at June 2012. Arafura intends to complete and report most of the baseline studies by the end of 2012, with further detailed quantitative impact assessment processes scheduled to be completed in parallel with associated engineering design activities.

7.3.1 Nolans Bore Mine and Transportation – Northern Territory

Most of the field studies for the Nolans Bore EIS are complete, with the exception of a site hydrology technical assessment, comprising a surface water study and a groundwater study. The main outcomes of the baseline characterisation studies completed to date include:

Fauna:	Only two officially classified vulnerable species were identified in the Project area and these are limited to a small area of the development and are abundant throughout the local region.
Archaeology:	A number of aboriginal heritage sites were recorded during the field surveys and Arafura's planned activities will be excluded from those of greatest significance. Others will be removed or relocated following due process with local representatives.
Hydrology:	The development of the Nolans Bore Mine requires the diversion of the natural water course, Kerosene Camp Creek, otherwise there are no identified issues with mine dewatering requirements. The study indicates that the Nolans Bore site water requirements can be sourced locally on a sustainable basis.
Radiation:	The level of natural radiation over the Project area is an order of magnitude greater than the average background radiation level across Australia.

Other studies that are complete or well advanced cover flora, air quality and dust, noise and vibration, social impact assessment and stygofauna, none of which have identified significant issues.

7.3.2 Whyalla Rare Earths Complex and Transportation – South Australia

The baseline characterisation studies completed to date have assisted Arafura to understand the natural environment within which it will develop and operate the Rare Earths Complex. The main outcomes of the baseline characterisation studies completed to date include:

Geology/Site Assessment:	This confirms that there are no discernible sources of contamination on the Project site from prior uses. Fundamental groundwater characteristics have been determined and the potential acid sulphate soils exist only in a limited area.
Flora and Fauna:	Only one threatened species was recorded on the Project site and it is unlikely that the development will have any significant impact on this species, as suitable habitat is relatively abundant within the region.

Figure 7.1 Nolans Bore and Whyalla sites

Nolans Bore

Whyalla

Marine: Extensive marine field studies have been completed to provide detailed information on the current condition, quality and diversity of the water and sediment quality, and the benthic habitat of False Bay. Water and sediment quality is generally high, with some evidence of industrial development in the region. Assessment of Arafura's preferred marine infrastructure corridor indicates that the area is unlikely to provide suitable aggregation or breeding habitats for Giant Australian Cuttlefish.

Air Quality and Dust: Whyalla has a heightened community awareness of air and dust quality, originating from historical industrial activities. As a result, there is extensive monitoring of air quality parameters, with an emphasis on dust. Arafura has commenced a long-term multiple location dust sampling program.

Radiation: Soil sampling and background gamma radiation records have been collected at intervals between the Whyalla and Nolans Bore sites, and extensive sampling of soils and vegetation has been completed at the Whyalla site. Background radiation levels have been found to be within the average levels for Australia.

Social Impact: A regional demographic profile has been generated to form part of a social impact assessment and assist later stages of engagement, consultation and social assessment

Other studies covering visual amenity, noise and vibration, archaeology and heritage, site hydrology and traffic and transportation are progressing well and no significant issues have thus far been identified.

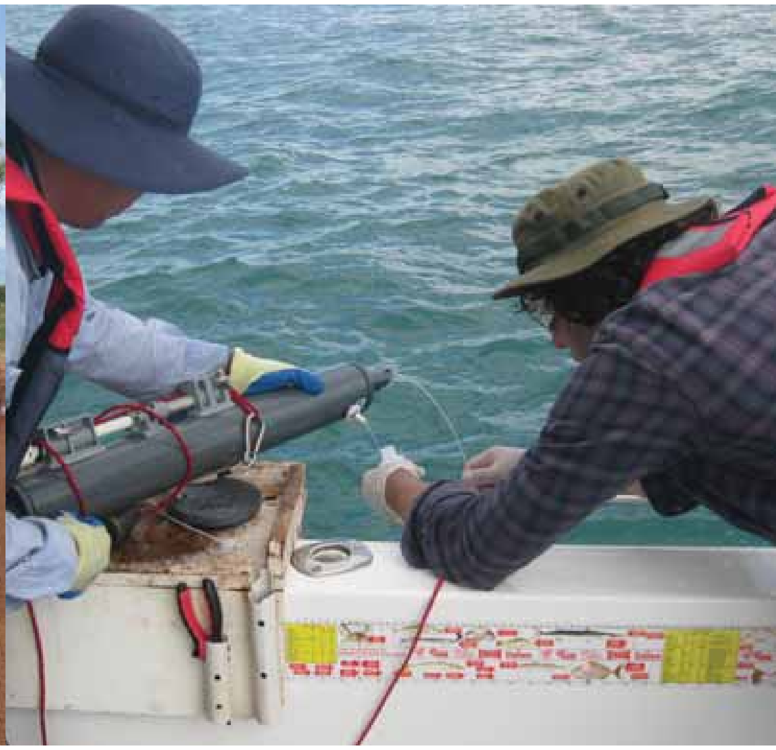
7.4 Consultation and Engagement

Arafura is committed to open and transparent engagement and consultation with the community as a core organisational value. Communication and engagement strategies have been tailored to the two key communities in which the Company operates, namely Central Australia and Whyalla. Arafura has achieved great success in engaging with interested stakeholder groups and the broader community and is often highlighted as a leading example of a proponent committed to appropriate and inclusive consultation.

Figure 7.2 Community Engagement and Environmental Studies

Community Briefing at Nolans Bore

Marine survey at Whyalla



Key Features

- Arafura intends to be a key supplier of rare earth products in high growth market segments in Japan, South Korea, Europe and the USA
- An LOI and an MOU have been signed with ThyssenKrupp and a major Korean company respectively, each for 3.000 tonnes of rare earth products
- Arafura is unique in producing and offering separated REO products to key customers for evaluation
- Global demand for rare earths will continue to be strong and supply will be tight for most rare earths
- Approximately 60% of Arafura's projected revenues are expected to come from high value, high growth Didymium Oxide product sold by the Company

8/ Sales and Marketing

8.1 Sales and Marketing Strategy

Arafura's marketing strategy is to create a reliable alternative source of separated REO products that it intends to market, as a key supplier, to high-growth segments in strategic regions. The "Green" technology sector that comprises hybrid vehicles, wind turbines and phosphors for energy efficient fluorescent lighting will drive Arafura's sales of REO.

Fostering by Arafura of long-term relationships with key end users and strategic trading partners involved in these growth industries is advanced. Japan, South Korea, Europe and the USA are being targeted, and Arafura has developed a number of significant relationships and has carried out detailed market research to identify other major rare earth customers. South Korea is expected to emerge as a significant consumer of rare earths, whilst Japan, Europe and the USA are already key established and growing markets.

Arafura will produce five REO products - Cerium Oxide, Didymium (Nd/Pr) Oxide, HRE Oxide, Lanthanum Oxide and SEG Oxide - and has developed a robust diversified sales plan to minimise the risk of any one market or country being able to significantly impact its sales and revenues.

8.2 Customers

Arafura has achieved a significant milestone with the signing of a letter of intent ("LOI") with ThyssenKrupp Metallurgical Products ("ThyssenKrupp") to develop an exclusive, long-term commercial agreement for the sale of products into Germany. This is based on sales of approximately 3,000 tonnes per annum into the German market of primarily Cerium Oxide, Lanthanum Oxide and Didymium Oxide for polishing, auto-catalysts, battery and magnet applications.

Arafura has executed a non-binding Memorandum of Understanding ("MOU") with a major Korean multinational organisation to cooperate on minimum sales of 3,000 tonnes per annum of rare earth products to the Korean market. A sale and purchase agreement is underway with the Korean organisation expecting significant consumption of Didymium Oxide and Cerium Oxide, primarily to the magnet and polishing powder markets.

Sales in Japan are expected to include larger volumes of Cerium Oxide and Lanthanum Oxide to the glass, polishing powder and catalysts markets, together with volumes of Didymium, SEG and HRE Oxide products for magnet and phosphor applications.

Sales in the rest of Europe would be primarily Cerium Oxide and Lanthanum Oxide for polishing powder and catalyst applications. Sales in the USA are expected to include Lanthanum Oxide for fluid cracking catalysts and HRE and SEG Oxide products for high technology applications.

8.3 Customer Evaluation Of Products

Four REO products have been successfully produced at pilot scale by Arafura for target customer evaluation and these four products are expected to account for over 90% of the rare earths value from the Nolans Project. Arafura is unique in producing and offering separated REO products to key customers for evaluation. Product samples (Figure 8.1) have been provided to a number of key end users in Japan, Korea, and Europe. One of these products, Didymium Oxide, has been shown considerable interest from magnet producers in Japan. A Cerium Oxide product was recently offered to polishing powder producers in Japan, the UK and Europe, and to catalyst industry participants. SEG Oxide and HRE Oxide product samples have been tested and discussions continue with key partners to realise the value of the rare earth phosphor elements europium, terbium and yttrium, and dysprosium for the permanent magnet market.

The customer evaluation program provides customers with a clear understanding of Arafura's capability and REO product quality, and supply agreements with key customers and partners are being further pursued.

Figure 8.1 Arafura Final REO Product Samples

8.4 Rare Earths Market

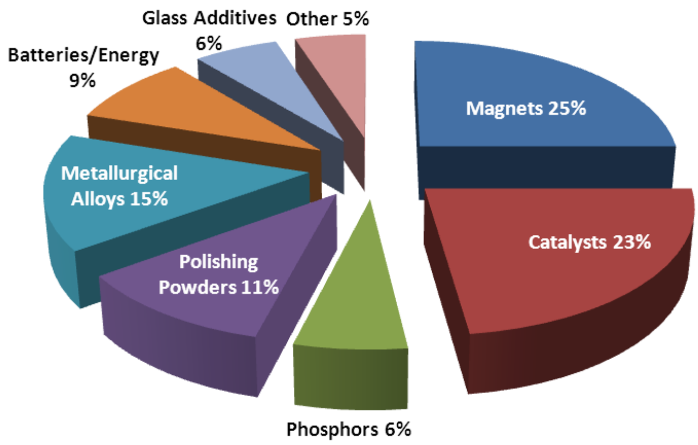
Rare earths are essential to products with significant growth potential in markets associated with the electronics and technology industries, energy efficiency and greenhouse gas reduction. They are a key component in re-chargeable batteries and the magnets in electric motors and play a fundamental role in hybrid motor vehicles, generators for wind turbines and numerous medical devices. Rare earths are also important in defence applications, such as jet fighter engines, missile guidance systems, and space-based satellites and communication systems[1]. The diverse chemical, metallurgical, catalytic, electrical, magnetic, and optical properties of rare earths have led to an ever increasing variety of applications and demands. Rare earths are critical and strategic components in many high-tech developments[2]. Rare earths are also key components in the electronics market, including mobile phones, laptop computers, tablets, and LCD television screens.

Table 8.1 is summary of the diverse nature of rare earths applications and Figure 8.2 shows market segments by application.

Table 8.1 Rare Earth Applications

Magnets	Sintered permanent magnets of Neodymium, Praseodymium and Dysprosium find widespread use in clean energy applications including hybrid electric vehicle motors and permanent magnet generators for wind turbines
Catalysts	Petroleum cracking catalysts in oil refining and autocatalyst systems for both petrol and diesel engines use Lanthanum and Cerium
Phosphors	Europium, Terbium and Yttrium are used to make rare earth oxide phosphors in colour TVs (CRT, LCD) and fluorescent-based lighting products such as compact fluorescent lamps (CFL)
Polishing Powders	Cerium-based polishing compounds are the preferred material for polishing glass for flat panel displays (LCD and OLED), precision optics, architectural glass, and semiconductors and electronics
Metallurgical Alloys	Cerium-rich mischmetal, Yttrium and Neodymium used in high-strength steels and super alloys for automobile, aerospace and military applications
Batteries/Energy	Lanthanum nickel metal hydride (NiMH) batteries for hybrid electric vehicles
Glass Additives	Cerium is used as an additive to decolourise glass and to stabilise glass against the effects of UV. Useful in optical, medical, and high energy radiation in CRT glass.
Other	Technical and engineering ceramic applications use Yttrium-stabilised Zirconia and Cerium-stabilised Zirconia for electronics and milling media

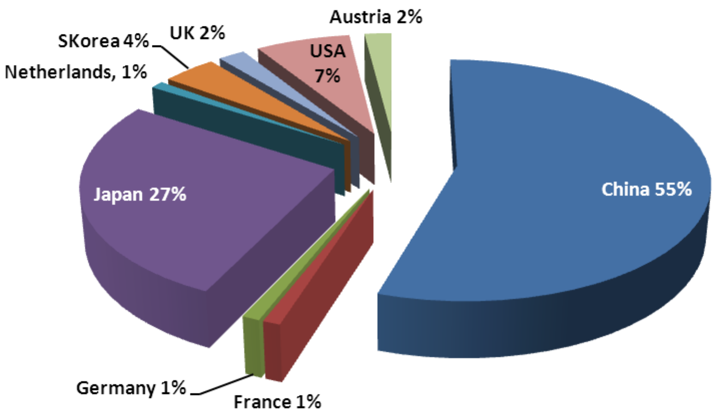
Figure 8.2 REO Market Segments by Application (2011)



[1] CRS Report for congress – Rare Earth Elements: The Global Supply chain, June 8, 2012
[2] USGS Fact sheet 087-02,2002

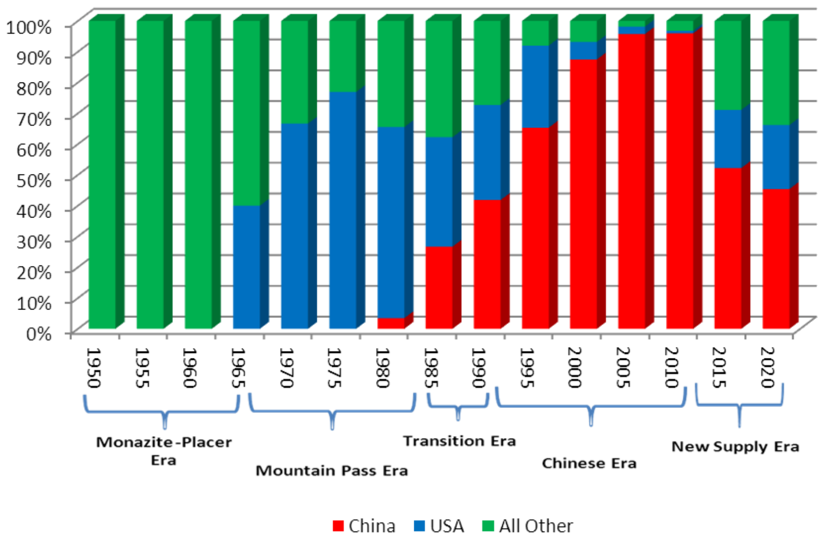
Markets can also be dissected into geographic regions (Figure 8.3). Dominant applications within these regions are fluid cracking catalysts in the USA; polishing powders, catalysts and magnets and phosphors in Europe; and electronics, phosphors and magnets in Asia.

Figure 8.3 REO Market by Region (2011)



In 2011, global consumption of rare earths was approximately 120,000 tonnes which had an approximate value in excess of US$10 billion[3]. China currently represents about 55% of demand for all rare earths[4]. Since the mid-1990s, China has dominated the global supply of rare earth products (Figure 8.4). The first significant non-Chinese sources of rare earths supply are expected to come on line in 2012.

Figure 8.4 REO Supply 1950-Present



[3]Average estimated REO demand in 2011 from Roskill 14th edition of Rare Earths & Yttrium, 2011; Dundee Capital Markets – 'The Rare Earth Race', March 2012; Centre for Research in Energy and Mineral Economics & The Industrial Minerals Company of Australia Pty Ltd - The Global Rare Earths Industry; Getting the Balance Right, Dudley Kingsnorth, Australian Uranium Conference, July 2012; BCC Research, 2012
[4]Roskill - Rare Earths & Yttrium: Market Outlook to 2015. 14th edition 2011

8.5 Demand

Global demand for rare earth products has grown at approximately 7% Compound Annual Growth Rate ("CAGR") over the last thirty years[5]. Future REO demand is expected to remain strong driven by the clean energy economy, growing at 8-11% through to 2015[6]. Table 8.2 shows a growth outlook by market sector through to 2020 of 6-7% per annum and is the average growth outlook of analyst estimates.

Strong double digit demand for permanent magnets used in hybrid electric cars and wind turbines will be the growth driver for Didymium Oxide. By 2040, hybrid electric cars and other advanced vehicles are expected to account for nearly 50% of light duty vehicles on the road, compared to only about 1% in the world today[7]. Installed wind power capacity continues to be Europe's renewable technology of choice, accounting for more than 21% of the total power installations in 2011. Europe's commitment to 20% renewable energy by 2020 and emissions reductions of 80% by 2050 is expected to drive wind power installations exponentially in coming years[8].

Table 8.2 Growth by Market Sector 2012-2020

Market	Annual Growth Rate
Magnets	10%
Catalysts	5%
Phosphors	9%
Polishing Powders	5%
Metallurgical	4%
Batteries	7%
Glass Additives	1%
Other	6%
Total	6 -7%

8.6 Supply

Supply of rare earths has been dominated by Chinese producers for the past twenty years. China currently accounts for 95% of global supply and is expected to expand to meet growing demand. Chinese Government initiatives to restrict the export of rare earths commenced in 2007 to prevent depletion of its own resource base and to expand and fully integrate the rare earths industry within China. China is ramping up for increased production of wind turbines, consumer electronics and other sectors which would require more domestic supply.

In 2007, the Chinese Government established an "export quota" system to limit rare earth exports and by 2010 had cut export quotas by 40%. China also implemented higher export taxes, removed value added taxes, and issued production quotas that have restricted global supply. Increased environmental regulations and closure of illegal mining operations has also reduced supply[9]. Access to reliable supply to meet projected demand has encouraged the development of projects outside of China. Additional capacity is expected to be developed in Australia, North America and Africa over the next decade and long development lead times will continue to constrain supply.

8.7 Supply and Demand Balance

The Arafura supply and demand forecast shown in Figure 8.5 is derived from customer demand estimates combined with data published by leading analysts[10]. The global demand for rare earths is forecast to grow at a CAGR of 6-7%, leading to a total market of 215,000 tonnes in 2020. IMCOA estimates demand will be 240,000 tonnes worldwide in 2020. Total supply through to 2020 is forecast to grow at a CAGR of 6% with dependency on China's continued production and advancement of non-Chinese projects.

New mine production will create sufficient supply of cerium and lanthanum with shortfalls for other rare earths. For example, Figure 8.6 compares the supply and demand dynamics of Neodymium Oxide showing a supply deficit. This applies equally to other rare earths, such as dysprosium, for permanent magnet applications.

[5]Demand estimated from Roskill 13th and 14th edition of Rare Earths & Yttrium 2007, 2011 and Arafura estimates. IMCOA – Meeting Rare Earths Demand in the next decade, 2011 estimated 8-11% pa growth over the past decade.
[6]Demand forecast outlook, IMCOA, 2011;BCC Research, Market report of Rare Earths, 2009; Roskill 14th edition of Rare Earths & Yttrium, 2011; Dundee Capital Markets – 'The Rare Earth Race', March 2012
[7]'The outlook for Energy: A view to 2040', http://www.exxonmobil.com/corporate/files/news_pub_eo2012.pdf
[8]The European Wind Industry Magazine, Vol 31/No2 April 2012 " Powering the Economy"
[9]IMCOA, March 2011, 'Meeting rare earths demand'; Congressional Research Service, June 2012, 'Rare Earth Elements: The Global Supply Chain
[10]IMCOA, 2011; Roskill 14th Edition, 2011; BCC Research, 2012; China Rare Earth Information, 2011 & 2012

Figure 8.5 Rare Earths Supply and Demand

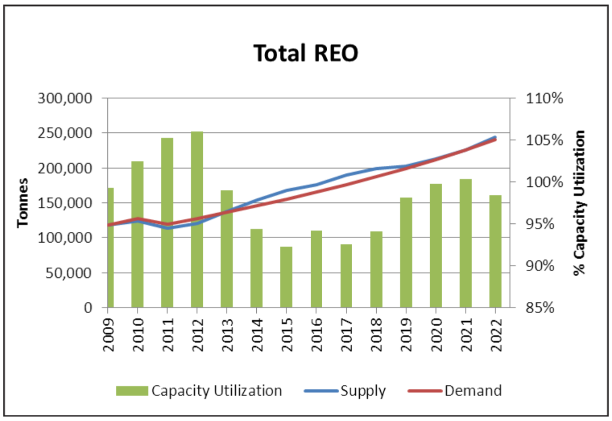
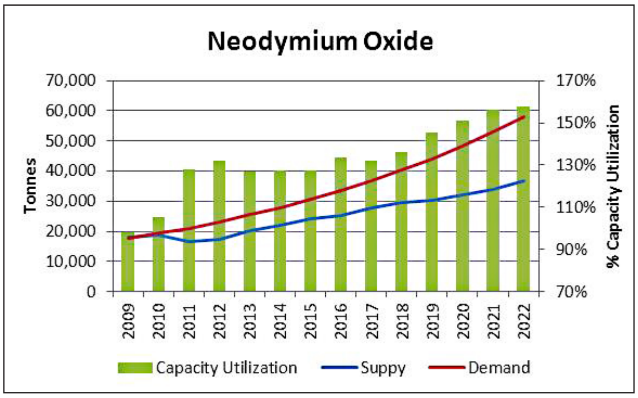


Figure 8.6 Neodymium Oxide Supply and Demand



8.8 Pricing

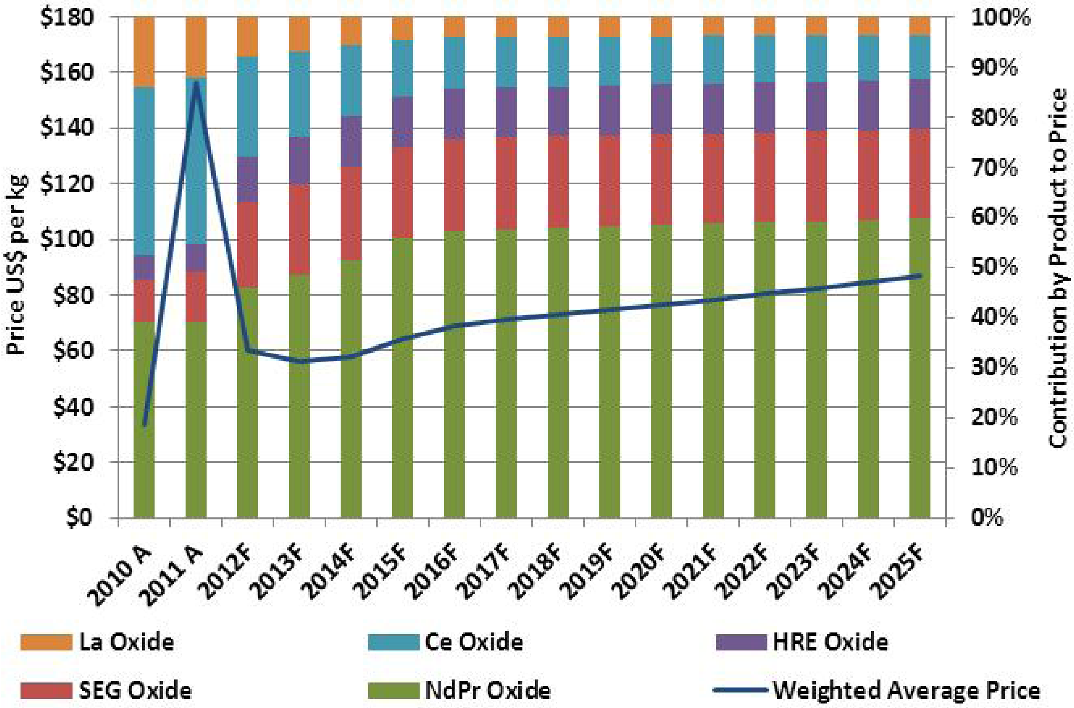
A 40% reduction in Chinese export quotas and strong global demand significantly increased REO export prices in 2010 and 2011. Average export prices in 2011 were five times 2010 prices and in 2012 export prices remain above average long-term prices. Access to reliable supply remains an issue of concern to non-Chinese end users and to government policy makers in Japan, the USA, Europe and South Korea. China's consolidation of the rare earths industry will place further long term pressure on its exports of REO[11] due to:

- Further restriction on exports through increased quotas;
- Enforcement of environmental regulation on mining and processing of rare earths;
- Inadequate mine capacity and availability of medium and heavy rare earths critical to the clean energy technology;
- Increased internal demand of its own rare earths and supply to the growing manufacturing industry;
- Preferred exportation of value-added products over separated REOs; and
- Strategic materials stockpiling of rare earths.

Arafura has developed a Base Case price forecast from 2012 to 2025 for five REO products that it intends to market (Figure 8.7). The weighted average price of Arafura's five products for 2010 and 2011 is calculated using historic individual REO prices in US$/kg FOB China from the trade website 'Metal Pages'. The pricing forecast commences at a 2012 baseline price of US$60/kg FOB China and has a conservative CAGR of 1.4% for the 2012 to 2025 period.

[11]Congressional Research Service, June 2012, 'Rare Earth Elements: The Global Supply Chain'

Figure 8.7 Forecast Price for Nolans REO Products



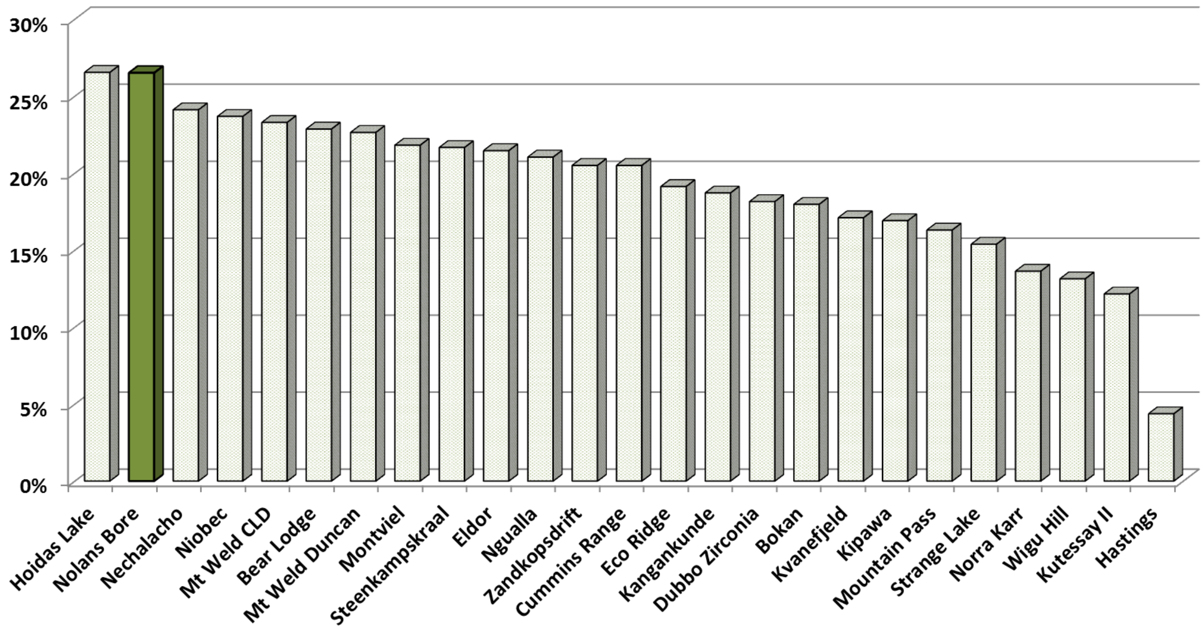
The weighted average prices for the Base Case forecast were evaluated by reviewing:

- Multiple sources of financial analyst reports and market research reports such as Roskill, BCC Research, IMCOA, Dundee Capital Markets, Seeking Alpha, Byron Capital Markets and CIBC;
- Published prices forecast by other rare earth companies; and
- CAGR for individual REOs by application, as used in the supply-demand forecast in Figure 8.5.

The favourable supply and demand dynamics for Didymium, SEG and HRE Oxide products is expected to strengthen the price structure in Arafura's Base Case. However, some of this upside will be offset by a nominal performance of Cerium Oxide and Lanthanum Oxide.

Arafura's Didymium Oxide product used for permanent magnet applications is expected to generate 50-60% of total revenue from the Nolans Project over the forecast period. Figure 8.8 indicates that Nolans is one of the most Didymium-rich projects being advanced for development anywhere in the world.

Figure 8.8 Comparison of Didymium Content (wt%)

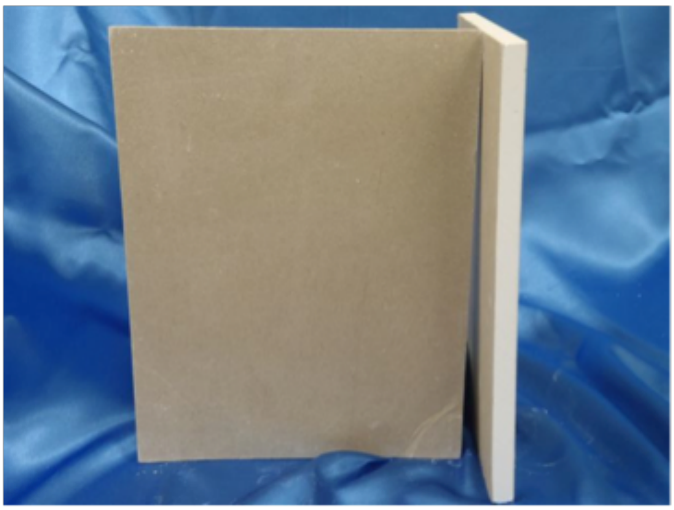


8.9 Co-Products Marketing

Arafura's main focus has been directed towards marketing its rare earths products. Arafura will also produce several co-products at the Rare Earths Complex including uranium oxide, gypsum and a phosphate product.

The Company is in discussions with an international plasterboard manufacturer to establish a long-term partnership to purchase 100% of its gypsum product. The plasterboard producer has tested samples of gypsum from Arafura's HCl Regeneration Demonstration Plant and has found it to be of very high quality and well suited to their plasterboard applications. As part of this collaboration, the manufacturer provided Arafura with plasterboard samples made from Nolans Bore gypsum (Figure 8.9)

Figure 8.9 Arafura Gypsum Plasterboard Sample



Negotiations are proceeding with one of Australia's established uranium producers over the opportunity of a long term sale and purchase agreement for the entire UO_4 product from the Nolans Project.

Arafura is evaluating opportunities to market its solid phosphate product. Meetings with key participants in the fertiliser industry have focused on the potential for use in fertilisers or as a feedstock for third parties. Developments are underway to explore the use of the phosphate product in a compound fertiliser with additional nutrients to meet specific agronomic situations with potential marketing advantages over traditional fertilisers in Australia and Asia.

Key Features

- A Nolans Project total capital cost of A$1,912 million, which includes A$1,395 million for the Project's core facilities
- Ancillary plant capital costs of A$517 million are included in the total Project cost, but may be reduced through BOO and/or alliance provision of these facilities
- Indirect costs of A$232 million are included in the total Project cost
- A contingency of A$270 million is included in the total Project cost
- Total estimated operating costs for the Nolans Project are A$411 million per annum, which equates to A$20.55/kg REO before credits for co-products

9/ Capital and Operating Costs

9.1 Capital Costs

9.1.1 Basis of Capital Cost Estimates

Base Case capital costs have been developed under three interrelated packages:

- The Nolans Bore Mine and Concentrator estimate has been generated by Lycopodium;
- The Whyalla Rare Earths Complex estimate has been generated by AMEC; and
- The Transport and Logistics estimate incorporates engineering inputs from the aforementioned two packages and has been generated by Arafura.

Base Case capital costs have been estimated to a ±30% level of accuracy at this stage of Arafura's feasibility study and are based on:

- Engineering drawings produced with sufficient detail to permit the assessment of the engineering quantities for earthworks, concrete, steelwork, mechanical and electrical equipment within the process plants and associated infrastructure
- Equipment costs based on budget quotes received from vendors for major plant items and a substantial proportion of the minor plant items, supplemented where necessary with recent historical engineering contractor cost database information
- Technology supplier current budget estimates for certain turnkey packages such as the sulphuric acid plant at the Rare Earths Complex and the desalination plants at both Nolans Bore and the Rare Earths Complex
- The completion of detailed modelling of logistics flows and a full assessment of related capital costs of ancillary equipment needs for the Project, as well as the engineering component of the logistics infrastructure.

Capital cost estimates will be refined to a ±15% level of accuracy by final feasibility.

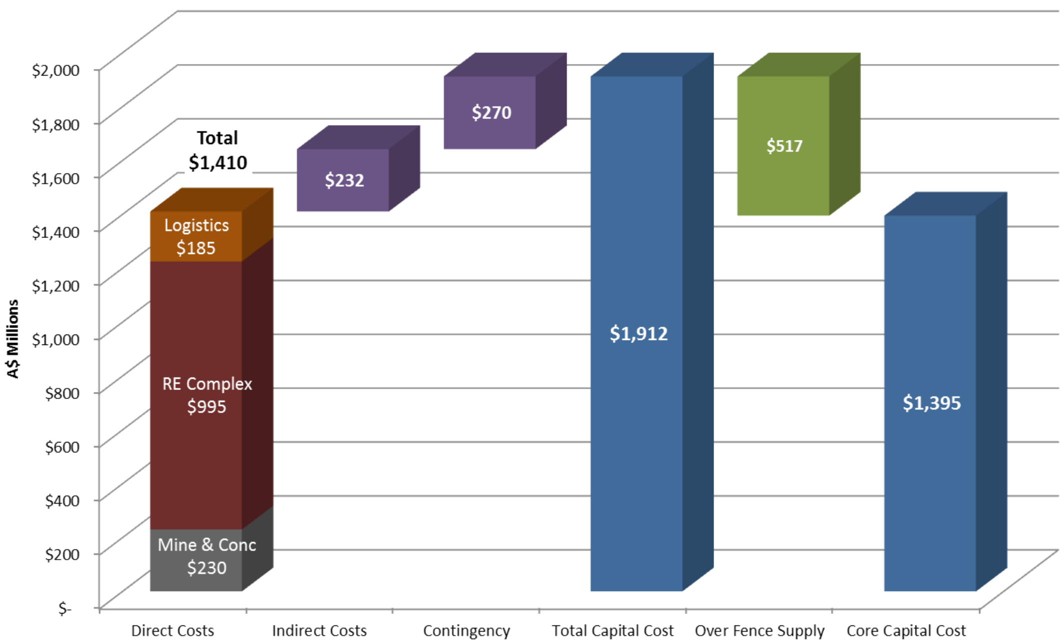
9.1.2 Capital Cost Estimates

The Nolans Project total capital cost is estimated at A$1,912 million. As shown in Figure 9.1, this estimate is made up of a core capital cost of A$1,395 million for the Project and a A$517 million "over the fence" component that is largely made up of ancillary plant that was earlier assumed would be provided by third parties on a BOO and/or alliance basis.

The main ancillary plant will provide acid, desalinated water and power to the Project. Arafura will seek bids to provide ancillary plant on a BOO basis, but these costs have now been brought in under the Base Case in order to provide greater certainty to the Project. Operating costs have been adjusted to partially offset the increase in capital costs from this source.

The capital costs include a contingency of A$270 million and A$232 million of indirect costs at the mine site and the Whyalla Rare Earths Complex. These indirect costs relate mainly to EPCM and specialist consultant costs and site costs.

Figure 9.1 Nolans Project Capital Costs (A$'000)



Capital costs for the Nolans Project are further broken down into three main categories in Table 9.1. These fall broadly between the Nolans Bore Mine and Concentrator (18% of total costs), the Whyalla Rare Earths Complex (70% of total costs) and transport and logistics (12% of total costs).

Table 9.1 Capital Cost Breakdown

Nolans Bore Mine And Concentrator	(A$'000)
Mine	$6,930
Concentrator	$104,250
Tailings	$8,470
Infrastructure	$110,370
TOTAL DIRECT COSTS	$230,020
TOTAL INDIRECT COSTS	$70,320
Contingency	$45,050
Total Nolans Bore Mine and Concentrator	$345,390
Whyalla Rare Earths Complex	
Process Plant	$477,490
Process Plant Ponds and Co-Products	$84,030
Process Plant Infrastructure	$73,050
Ancillaries	$313,570
Miscellaneous	$46,920
TOTAL DIRECT COSTS	$995,060
TOTAL INDIRECT COSTS	$145,710
Contingency	$194,830
Total Whyalla Rare Earths Complex	$1,335,600
Transport And Logistics	
Containers and Handling Equipment	$81,040
Infrastructure	$17,290
Rail Heads	$45,600
Haul Road	$41,330
TOTAL DIRECT COSTS	$185,260
TOTAL INDIRECT COSTS	$15,630
Contingency	$30,130
Total Transport And Logistics	$231,020
Total CAPEX	$1,912,010
Over The Fence Supply Opportunities	
Nolans Bore Mine and Concentrator	$371,470
Whyalla Rare Earths Complex	$45,890
Transport and Logistics	$99,750
Total Over Fence Supply	$517,110
Total Core CAPEX	$1,394,900

9.2 Operating Costs

9.2.1 Basis Of Operating Cost Estimates

Arafura has carried out a detailed review of the Nolans Project operating costs and Base Case operating costs have been estimated to a ±30% level of accuracy at this stage of Arafura's feasibility study. Operating costs are based on:

- A reagent operating cost estimate based on detailed mass balance modelling of the process flowsheet, supported by extensive testwork by Arafura, and unit prices supplied by leading suppliers with known available capacity and/or the ability to increase capacity to satisfy Arafura's requirements;
- Mining costs based on a mine plan including preliminary Whittle optimisation;
- Logistics costs based on detailed material movement modelling, information from prospective service providers and prevailing market rates; and
- Labour rates based on current relevant industry survey benchmark data.

Total operating costs include general and administration, maintenance materials and contractors, consumables and other support costs for both Project sites.

9.2.2 Operating Cost Estimates

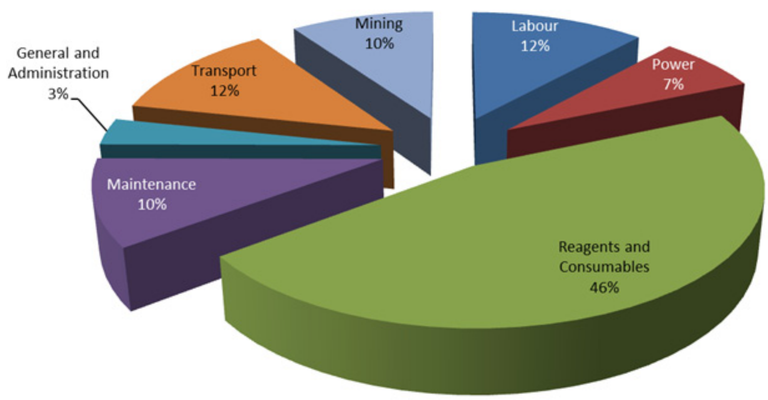
Total estimated operating costs for the Nolans Project, summarised in Table 9.2, are A$411 million per annum in 2012 real terms, which equates to A$20.55/kg REO before credits for co-products.

Table 9.2 Summary of Operating Costs (A$)

Plant	2012 Estimate
Nolans Bore Mine and Concentrator	$3.83
Transport and Logistics	$2.74
Whyalla Rare Earths Complex	$13.98
$/kg REO Product	**$20.55**
Nolans Bore Mine and Concentrator	$76,781,000
Transport and Logistics	$54,762,000
Whyalla Rare Earths Complex	$279,644,000
Annual OPEX Total	**$411,087,000**

The distribution of operating costs across the three main Project components (the Nolans Bore Mine and Concentrator, the Whyalla Rare Earths Complex, and transport and logistics) is similar to the distribution of capital costs. Figure 9.2 shows that the largest single cost contributor to operating costs is reagents for the Rare Earths Complex.

Figure 9.2 Operating Costs Breakdown



Key Features

- The Nolans Project Base Case generates an NPV of A$4,324 million on an after-tax basis with a 10% discount rate
- The Nolans Project Base Case generates an IRR of 30% and an after-tax payback of capital within four years of operation
- The life of the Nolans Project, based on the resource at Nolans Bore, should greatly exceed the twenty years used in the Base Case
- A sensitivity analysis carried out on the Base Case shows that the Base Case is financially robust and relatively insensitive to variances in capital and operating costs
- The sensitivity analysis shows that the Project's NPV break-even price for Arafura REO product mix will start at a base of US$28 per kilogram in 2012
- Rare earths and associated co-products from the Nolans Project will not be taxed under the Minerals Resource Rent Tax

10/ Financial Evaluation

10.1 Methodology and Assumptions

A financial evaluation of the Nolans Project has been undertaken using a discounted cash flow analysis in Australian dollars ("A$"). The evaluation includes cash flows from the Nolans Project and does not include potential cash flows from exploration activities or other assets held by Arafura. A Net Present Value ("NPV") and Internal Rate of Return ("IRR") for the Project have been calculated over a twenty year operational period, and represent an enterprise value for Arafura on the sole basis of the Nolans Project.

The following key Project and economic assumptions apply to the Base Case:

- Capital and operating costs as contained in this Project Update;
- A Project construction period of 36 months;
- Capital cost escalation of 3.2% per annum during the construction period;
- A production ramp-up over ten quarters to produce 20,000 tonnes of REO per annum;
- Twenty years of operation;
- A base selling price of US$60 per kilogram in 2012 real terms for the Nolans REO products;
- Consumer Price Index ("CPI") escalation of 2.5% per annum, applied to sales and costs;
- A US$/A$ exchange rate of 1.026 in 2012, gradually reducing to 0.853 by 2016 and remaining constant thereafter; and
- A discount rate of 10% used to calculate the NPV of the Project.

The financial evaluation is based on the Nolans Project being financed entirely through equity and does not take account of any uplift that may result from debt that may be raised through a project financing. Arafura intends that the Nolans Project will be at least partly funded through project finance debt facilities.

10.2 Base Case Results

Based on the above assumptions, the Base Case generates an NPV of A$4,324 million and an IRR of 30% on an after-tax basis, calculated over twenty years. The payback period to return capital is four years. A summary of results for the Base Case is contained in Table 10.1.

Table 10.1 Base Case Summary

Sales Revenue	US$m pa	A$m pa
REO 20,000 tonnes (less Royalty and Selling Expenses)	1,124	
Uranium	15	
Other	16	
Total Revenue (US$1 = A$1.026)	1,155	1,125

Operating Expenditure		
Nolans Bore Mine and Concentrator		(77)
Transport and Logistics		(54)
Whyalla Rare Earths Complex		(280)
Total Operating Expenditure		(411)
Revenue less Operating Expenditure		714
Corporate and Emission Permits		(16)
EBITDA		698
NPV @ 10% after tax and capital payback (A$ million)		4,324

IRR after tax and capital payback	30%
After tax payback period	Year 4 of operations
Operating Cost A$/kg REO (less co-products)	19.82
NPV = 0 @ US$/kg Nolans REO Products	28

10.3 Sensitivity Analysis

A sensitivity analysis of the Base Case has been carried out to determine the impact and sensitivity of the financial results to changes in the key assumptions and variables. The results of this analysis are shown in Figure 10.1 and Tables 10.2 to 10.4.

The analysis shows that the Base Case is most sensitive to CPI increases and REO prices, assuming that most of these flow through to revenue and expenditure. Arafura's CPI assumption is that it will be low for the next twenty years, reflecting the current depressed outlook for world economies. This may not be realistic and while there is little risk on the downside of this assumption, a lift in the rate of inflation to 4% per annum could add up to A$1.5 billion to the Base Case NPV over the Project life.

Other assumptions that have a less significant impact on the Base Case when varied include changes in the REO recovery at the Rare Earths Complex, and changes in the exchange rate. The analysis shows the Project is relatively insensitive to movements in operating and capital expenditure.

The Base Case is based on a selling price for its REO product mix of US$60 per kilogram and the sensitivity analysis shows that the Project's NPV break-even price for Arafura REO product mix will start at a base of US$28 per kilogram in 2012.

Figure 10.1 NPV Variation from Base Case

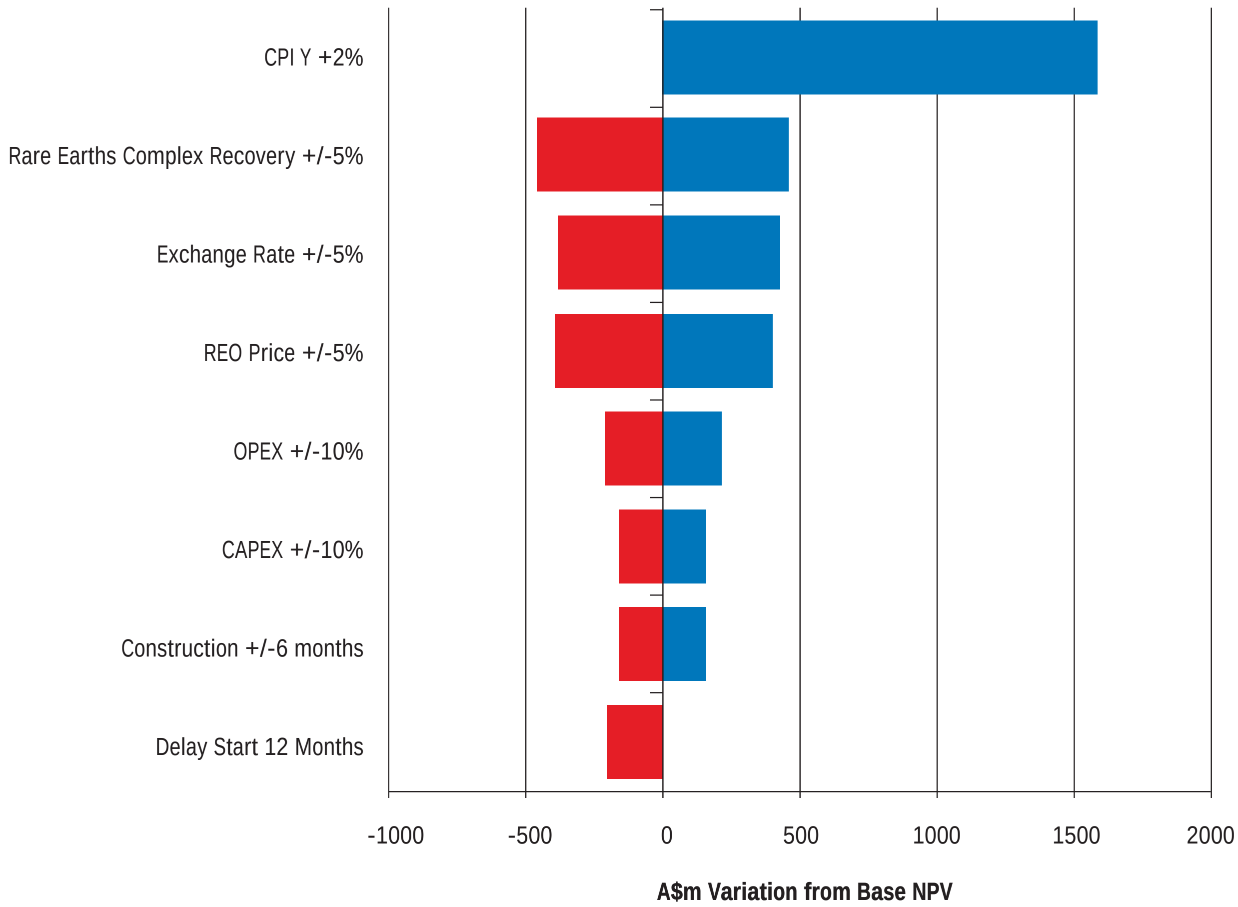


Table 10.2 Sensitivity Analysis – REO Selling Price

	NPV 20 years A$ billion	IRR 20 Years
+30%	$6.7	37%
+20%	$5.9	35%
+10%	$5.1	32%
Base	$4.3	30%
-10%	$3.5	27%
-20%	$2.7	24%
-30%	$1.9	21%

Table 10.3 Sensitivity Analysis – Capital Expenditure[1]

	NPV 20 years A$ billion	IRR 20 Years
+30%	$3.9	25%
+20%	$4.0	26%
+10%	$4.2	28%
Base	$4.3	30%
-10%	$4.4	32%
-20%	$4.6	34%
-30%	$4.8	38%

Table 10.4 Sensitivity Analysis – Operating Expenditure

	NPV 20 years A$ billion	IRR 20 Years
+30%	$3.7	27%
+20%	$3.9	28%
+10%	$4.1	29%
Base	$4.3	30%
-10%	$4.5	31%
-20%	$4.8	31%
-30%	$5.0	32%

10.4 Taxation

The Nolans Project, its operations and corporate activities are entirely based in Australia and subject to corporate tax under the *Income Tax Assessment Act* in Australia, *A New Tax System (Goods and Services Tax) Act* ("GST"), customs duties on imported equipment, royalties on mining operations in the Northern Territory under the *Mineral Royalty Act*, and the recently introduced *Clean Energy Act* ("Carbon Tax").

The recently legislated *Minerals Resource Rent Tax Act* ("MRRT") applies a tax to profits generated from the exploitation of iron ore and coal. Consequently, rare earths and associated co-products from the Nolans Project are not taxed under the MRRT.

[1]Adjustment to capital expenditure based on total expenditure which includes contingency and indirect expenditure.

Competent Persons Statement

The information in this report relating to Exploration Results and geological interpretation was compiled by Mr Kelvin Hussey who is a Member of the Australian Institute of Geoscientists. Mr Hussey is a full time employee of Arafura Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Hussey consents to the inclusion of this information in the form and context in which it appears.

The information in this report relating to Mineral Resources was compiled by Mr John Tyrrell who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Tyrrell is a full time employee of AMC Consultants Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr Tyrrell consents to the inclusion of this information in the form and context in which it appears.

Glossary

Term	Definition
AMC	AMC Consultants Pty Ltd
ANSTO	Australian Nuclear Science and Technology Organisation
Arafura or the Company	Arafura Resources Limited ABN 22 080 933 455 and its wholly owned subsidiaries
Arrium	Arrium Limited, previously OneSteel Limited
ASX	Australian Securities Exchange
BOO	Build own and operate
CAGR	Compound annual growth rate
CLC	Central Land Council
CNZ	Central North Zone of the Nolans Bore deposit
CPI	Consumer price index
DCP	Di-calcium phosphate
Didymium Oxide	Mixed Neodymium and Praseodymium Oxide
DMS	Dense media separation
EBITDA	Earnings before interest, tax, depreciation and amortisation
ECE	East China Mineral Exploration and Development Bureau
EIS	Environmental impact statement
EL	Exploration Licence
EPCM	Engineering, procurement, and construction management
FOB	Free on board
HREE	Heavy Rare Earth Element
HRE Oxide	Heavy Rare Earth Mixed Oxide and Yttrium
IPP	Integrated pilot plant
IRR	Internal rate of return
ITP	Iron thorium precipitate
IX	Ion exchange
JORC	Joint Ore Reserves Committee
LOI	Letter of intent
LOM	Life of Mine
LREE	Light Rare Earth Element
mE	Metre east
M&I	Measured and Indicated
ML	Mineral Lease
mN	Metre north
MOU	Memorandum of understanding
mRL	Metre reduced level
Nolans Bore Site	Area comprising Mineral Lease Application ML 26659 lodged with the Northern Territory Government by Arafura in February 2008
Nolans Project or the Project	Comprises the proposed Nolans Bore Mine and the proposed Whyalla Site including the Rare Earths Complex.
NPV	Net present value
NTDOR	Northern Territory Department of Resources
PFS	Prefeasibility study
P_2O_5	Phosphate
PLRP	Pre-leach residue and precipitate
RC	Reverse circulation (drilling)
REE	Rare Earth Element
REO	Rare Earth Oxide
ROM	Run of Mine
Section	A section reference within the Nolans Project Update
SEG Oxide	Samarium, Europium and Gadolinium Mixed Oxide
SG	Specific gravity
SX	Solvent extraction
U_3O_8 or UO_4	Uranium Oxide
WHIMS	Wet high intensity magnetic separation
Whyalla Site	The proposed minerals processing facility to be constructed in Whyalla, South Australia.

Units of Measure

Unit	Description
A$	Australian dollars
A$m	Million Australian dollars
kg	Kilogram
kt	Thousand tonnes
kV	Thousand volts
lb/t	Pounds per tonne
m	Metre
micron	Millionth of a metre
mm	Millimetre
Mt	Million tonnes
Mtpa	Million tonnes per annum
tpa	Tonnes per annum
t	Tonne
US$	United States dollars
US$m	Million United States dollars
wt%	Weight percent

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