

ASX ANNOUNCEMENT

QUARTERLY ACTIVITIES REPORT AND APPENDIX 5B

27 October 2022



HIGHLIGHTS

- **Strong offtake progress continues through negotiations with cornerstone offtake parties- GE Renewable Energy and Hyundai Motor Company.**
- **Increasing Australian and global strategic awareness of need for investment in NdPr projects and importance of linking Australian critical minerals supply with key international trading partners, such as the Republic of Korea, the United States, the European Union and Japan.**
- **Hydrometallurgical plant FEED nearing completion and moving to detailed design on pathway to achieve scope lock.**
- **Advancement of construction tendering as the Company progresses toward FID. Award expected in the next Quarter to commence an ECI process with a view to commence construction in 2023.**
- **Strong cash position of \$49m following completion of \$41.5m placement to fund the completion of front-end engineering, commencement of detailed design, commencement of tendering activities and offtake and financing activities.**
- **Shareholders pass resolution to change the Company's name from Arafura Resources Limited to Arafura Rare Earths Limited.**

Arafura Rare Earths Limited | ABN: 22 080 933 455

Level 6, 432 Murray St, Perth WA 6000
PO Box 5773, St Georges Terrace, Perth WA 6831
T: +61 8 6370 2800 | W: www.arultd.com | E: arafura@arultd.com

NdPr

NOLANS NdPr PROJECT

Front-End Engineering and Design

Front-end engineering and design works (**FEED**) for the Nolans Project, continued during the quarter as the Company prepares to commence project delivery. Activities across the following areas are outlined below:

- Hydrometallurgical plant
- Beneficiation plant
- Sulphuric acid plant
- Power station
- Process control system
- Non-process infrastructure

Hydrometallurgical Plant

Progress on the hydrometallurgical plant FEED with Hatch is moving through design finalisation to an Approved for Detailed Design status and achieving "scope lock". During the quarter the following activities were undertaken or completed:

- Finalisation of the key process design documents including metallurgical design criteria, process flow diagrams (**PFDs**), piping and instrumentation diagrams (**P&IDs**) and mass and energy balance.
- Finalisation of the site plot plan and area layouts.
- Technical and commercial conformance of supply contracts for long-lead and critical mechanical equipment ready to place orders following FID.
- Placement of orders for detailed design and delivery of certified vendor data for the majority of the long-lead or critical mechanical equipment.
- Updating of the material take-offs for the bulk materials (concrete, structural steel, piping and electrical bulks) to feed into the tendering process for the construction contract.
- Value engineering on the hydrometallurgical plant, including:
 - Updating the design concept for the sulphation building to improve constructability and also maintainability of the sulphation equipment.
 - Finalisation of the design of the high efficiency vibratory shear enhanced process (VSEP) for purification of the phosphoric acid product.
 - Decentralisation of the steam generation and cooling towers throughout site to reduce piping requirements.
 - Optimisation of the site water balance to reduce overall water usage.
 - Updating of the selection of materials of construction for various items of mechanical equipment in cooperation with the selected vendors to balance serviceability with cost.
 - Finalisation of the design of the solvent extraction circuit in preparation for final competitive tendering.

Beneficiation Plant

Following delivery of the updated engineering study from GR Engineering Services, the detailed scope of work has been prepared for tendering the EPC contract for delivery of the beneficiation plant.

The estimated cost established in the updated engineering study has been incorporated into the overall project cost estimate.

Sulphuric Acid Plant

Following on from the receipt of tenders for the sulphuric acid plant, the Company has selected the Chemetics' CORE-SO₂ technology for the acid plant at the Nolans Project. This technology has several advantages, including:

- Very high turn-down capacity allowing greater flexibility in operations, including the ability to "idle" the plant without damage to the catalyst.
- Extremely low sulphur dioxide losses reducing emissions and sulphur consumption.
- High steam production.
- Low internal gas flows reducing the size and quantity of the ducting and vessels allowing a high degree of modularisation and greatly reducing installation effort required, and cost.

The CORE-SO₂ technology requires the installation of an oxygen plant on-site. This addition slightly increases power consumption, however the savings in capital cost, including the cost of the oxygen plant will offset this disadvantage.

The commercial and technical contract is in the process of being conformed with Chemetics and, following successful execution, detailed design of the acid plant will commence.

Hatch will also continue the balance of plant engineering in parallel with the detailed design of the sulphuric acid plant by Chemetics.

Power Station

The company has commenced tendering of the power station, which includes steam generation from the project, including a staged reduction in greenhouse gas emissions from both power and steam generation over the life of the build-own-operate (BOO) contract. Options being considered will include:

- Solar PV power generation
- Wind power generation
- Concentrated thermal solar heat capture
- Batter power storage.
- Thermal energy storage.

To facilitate this decarbonisation, the Company installed a sonic detection and ranging (**SODAR**) unit at site during August. The SODAR uses doppler technology to measure wind speed at a range of heights above ground between 50m and 200m. This information will allow a detailed evaluation of the effectiveness of wind power for the Project.

Project Consultancy Services continued evaluating the gas supply situation in the Northern Territory, however recent uncertainty around the production of gas from the Blacktip field has caused significant volatility in the gas market. A decision has been taken to delay agreement of a gas supply term-sheet while the uncertainty and volatility is resolved.



Figure 1: SODAR Unit Deployed at Site

Non-Process Infrastructure

Non-process infrastructure (**NPI**) design progressed in several areas during the quarter, including:

- Bulk earthworks design for the process plant has been rotated to reduce fill requirements by alignment with the natural ground contour, with earthworks design to be completed in November.
- Completion of detailed bore designs for the southern basin bore and tendering of the bore drilling, including the large number of monitoring bores for the borefield.
- Finalisation of the borefield headworks and pumping systems designs.
- Development of the permanent accommodation village design.
- Peer review of the residue storage facility preliminary design to provide confidence in the design developed during the DFS and to meet the environmental approval conditions of the Project.
- Continuation of the communications system design, including temporary communications for early works, considering both microwave and fibre optic options.
- Completion of detailed risk assessments with APA Group in line with AS2885 requirements for facilities located close to an underground gas pipeline.
- Updating of the site water balance and finalisation of the concepts for the water management systems for site.

Construction Tendering

Construction tendering gathered pace during the quarter, with the aim of being ready for FID and commencement of construction in 2023. The key activity has been in relation to the hydrometallurgical plant; however tendering has proceeded across a number of areas.

Hydrometallurgical Plant

For the hydrometallurgical plant the Company adopted an alliance contracting model instead of a fully competitive tendering situation. An alliance model allows for clearer understanding of the scope, negotiation of the optimal risk sharing between the contractor and the Company, as well as allowing time for the contractor to influence the design with the goal of reducing the cost and schedule for the construction.

Two tier one contractors have been working with the Company in a hybrid tendering process. This has resulted in the Company receiving two high quality submissions, which are being normalised and adjudicated. It is anticipated that the Company will select one of the contractors as the preferred constructor of the hydrometallurgical plant in November and engage them in a collaborative ECI process.

Beneficiation Plant

The tender package for the beneficiation plant has been compiled and a shortlist of tenderers prepared. This contract will be issued for tender on a fixed price EPC basis during the 4th quarter of 2022.

Power Station

The power station, which includes steam generation, has been issued to a shortlist of independent power providers (IPPs) under a **BOO** model. The tender closes in December 2022 and will be adjudicated thereafter on technical, commercial and ESG factors.

Non-Process Infrastructure

Non-process infrastructure (**NPI**) tendering progressed in several areas during the quarter, including:

- Bulk earthworks tender preparation, following finalisation of the approved for tender designs, is ready to be issued for tender once FID is achieved. The bulk earthworks package includes:
 - Site access road including the intersection with the Stuart Highway,
 - Plant site bulk earthworks,
 - Mine access road,
 - Mine and plant areas surface water management.
- Award of the minor earthworks package, including the supply of a 48 person fly-camp, to an Indigenous owned contractor with long involvement in Central Australia, including a local office in Alice Springs.
- A holding contract entered into with NT Link for the rental of the construction village, with commencement of relocation of buildings to Alice Springs.
- Adjudication is underway for the bore drilling contracts, including the large number of monitoring bores, for the borefield.
- Tenders have been received for the borefield headworks, main pipeline installation and pipeline supply contracts.
- Tendering of modular and steel framed plant site buildings.
- Completion of detailed risk assessments in line with AS2885 requirements with APA Group for facilities located close to an underground gas pipeline.
- Updating of the site water balance and finalisation of the concepts for the water management systems for site.

Other

Other construction or operational contracts underway include:

- Receipt of tenders for the operational logistics contract for the transport of reagents and other supplies to site and the transport of rare earth and phosphoric acid products to Darwin Port.
- Finalisation of the tender adjudication for the construction logistics contract with updated route surveys from Darwin, Adelaide and other import locations to better understand the potential transport window for modularised and large equipment.

Capital and Operating Cost Estimates

As part of continuing the FEED, procurement of equipment and tendering of construction contracts, the Company is monitoring pricing, quantities and market conditions and their potential impact on the capital and operating costs for the Project. As previously reported, cost pressures are evident on the capital cost in the following areas:

- Construction labour rates.
- Raw material costs and fabrication rates.
- Equipment costs.
- Professional engineering and project management costs and availability of suitably experienced personnel.
- Construction consumables, such as fuel, messing, general consumables and other goods.

As well as monitoring potential increases in capital costs, Arafura is reviewing operating cost inputs and their potential impacts on operating cost estimates. Operating costs will continue to be monitored and updates provided.

The Company continues to prepare an update on the Project that encompasses all of the information available including:

- Tendered costs for equipment supply.
- Submissions from contractors for supply, fabrication and construction contracts.
- Updated project delivery schedule.
- Updated reagent and energy consumption and pricing for the operations based on the latest design and enquiries to suppliers.
- Updated labour and other operating costs.
- Latest forecasts on NdPr, phosphoric acid and other product pricing.

This information will be used in the Project Update which is forecast for release on the ASX in November once an overall assessment of the impact has been made, including details of any material financial impact on the Project

Technology Development

During the quarter, bench scale phosphoric acid purification testing was conducted by New Logic Research (NLR) using their vibratory shear enhanced processing (VSEP) technology, which offers significant cost benefits over traditional nano-filtration. The key advantage relates to its capacity to operate in the presence of solids and with the formation of solids within the system which allows for removal of ultra-filtration and operation with calcium sulphate saturation greatly reducing the need for dilution and later evaporation.

QUARTERLY ACTIVITIES REPORT AND APPENDIX 5B

Results from this bench scale testing are being incorporated into the design of the phosphoric acid purification vendor package as well as preparations for pilot testing of the phosphoric acid purification flowsheet which is scheduled to take place late 2022.

A minor program of vendor filtration testing of rare earth sulphate precipitate was completed during the quarter. Results have been incorporated into the design of filters, materials handling, and dryer in the rare earth sulphate precipitation area.

Project Schedule

The Project delivery schedule provided in the June 2022 quarterly report was predicated on commencing long lead equipment procurement in September. Commencement of long lead procurement was to be based on completion of the planned Project Update, progress with debt financing term sheets and product offtake. While good progress has been made in many of these areas, the Project Update has been delayed by the hydrometallurgical plant tendering whilst the negotiation of debt financing term sheets has been delayed by technical due diligence completion, which was completed in mid-October.

As a result, the schedule has moved marginally as presented in Figure 2: Project Schedule. The schedule will be reviewed in line with the Project Update once an overall assessment has been made on the project. Key aspects of the updated schedule include:

- Commencement of long-lead procurement in January 2022.
- Commencement of early works construction in March 2023.
- Six-month early works program to build the construction water supply and first stage of the construction camp, before commencing bulk earthworks for the process plant site and site access road.
- Twenty-eight-month construction schedule from the commencement of early works through to commencement of ore commissioning.
- Parallel construction and commissioning of the various parts of the plant as outlined in the recently developed commissioning strategy.
- Six months for pre-production mining mobilisation, pre-strip, and ore mining prior to commencement of ore commissioning.

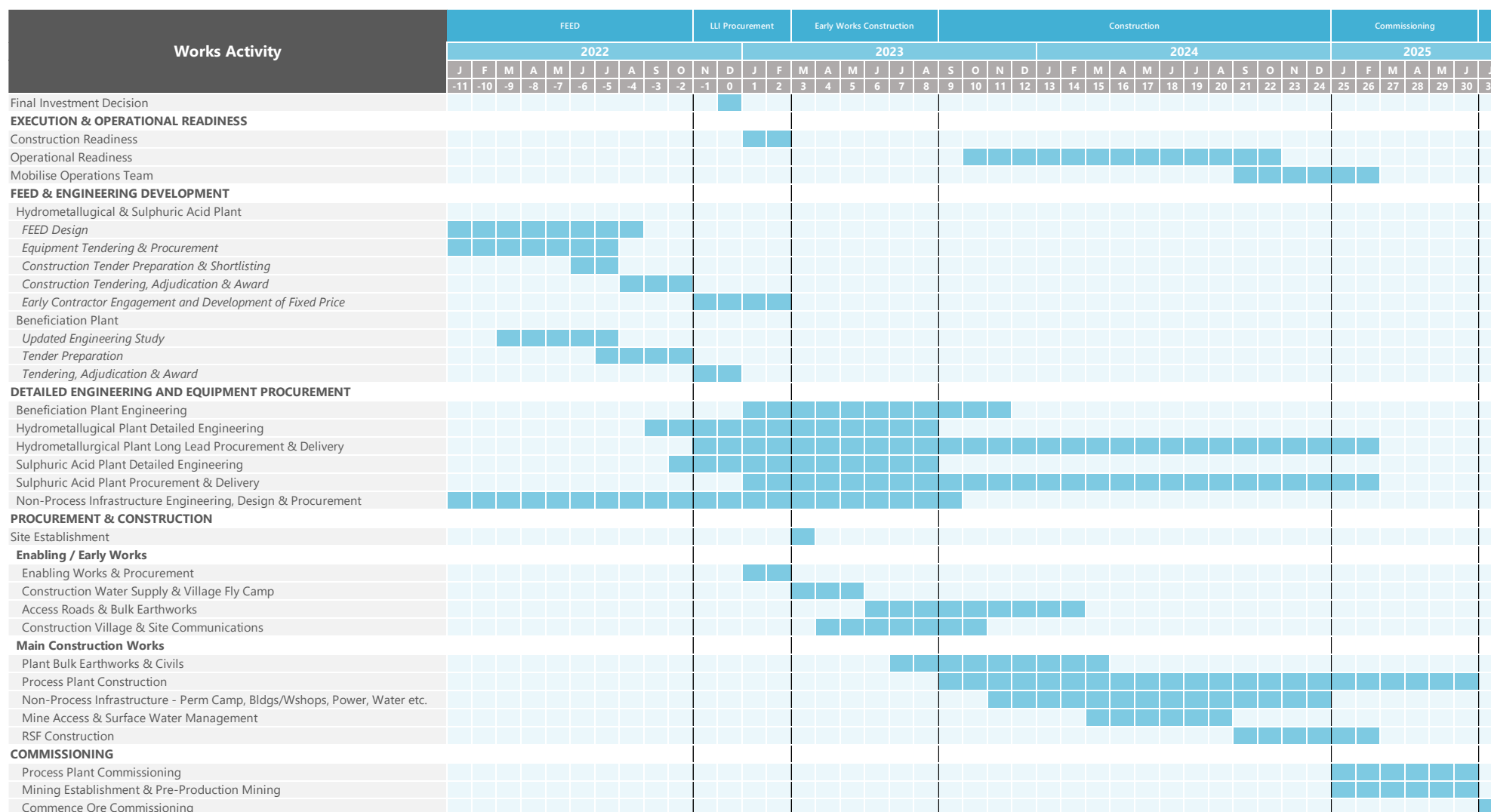


Figure 2: Project Schedule

Operational Licencing

As part of the Northern Territory mining authorisation process, a mining management plan (**MMP**) and associated environmental management plans (**EMPs**) for the Nolans Project were submitted to the Northern Territory Department of Industry, Tourism and Trade (**DITT**) in Q4 2021. These draft documents were finalised in Q3 2022 incorporating any comments and queries from DITT, and then accepted by DITT as final. They will be submitted to the Northern Territory Parliament for approval and receipt of a mining authorisation in Q4 2022. There was a slight delay in DITT finalising its comments which resulted in the documents not being completed earlier. In addition, four of the EMPs have been submitted to the federal Department of Climate Change and Energy Efficiency (DCCEE) under the Nolans federal EPBC approval and will be assessed under the EPBC legislation. Approval of these documents is expected during Q4 2022.

The groundwater extraction licence (GWEL) application for the Project's production, borefield and water supply continues to move through the regulatory process in line with published approval timeframe expectations. Approval was not received in Q3 2022, when anticipated, and is now expected to be received in Q4 2022. The GWEL for the dewatering of the Nolans orebody, which is separate from the production borefield, was approved by the Northern Territory government water regulator during the quarter.

ESG

During the quarter, Arafura continued to develop renewable power options for the Nolans Project power station. Renewable energy generation technology is evolving rapidly, and Arafura will transition away from fossil fuels as soon as possible for the Project.

The company has commenced tendering of the power station, which includes a requirement for a staged reduction in the greenhouse gas emissions from power and steam generation. To meet the company's net zero 2050 carbon emissions commitments, this reduction must be achieved over the life of the power plant. Options being considered will include solar, wind, concentrated solar thermal, battery storage and hydrogen solutions.

DOMESTIC STAKEHOLDER ENGAGEMENT

Working with the Northern Territory government, the Company is reviewing and updating its local and indigenous employment strategies. These strategies are beginning well in advance of construction to ensure these long lead time approaches are well established through construction and into site operations.

Arafura met with the Central Land Council and a local indigenous Anmatyerr Rangers group to discuss the Project, its employment opportunities, plans for environmental management, and how the local ranger teams can work with Arafura through the mine development and operations. It was agreed to meet on country to continue these discussions over the next two quarters.

EXPLORATION

Nolans

Refinements to the Company's exploration database and re-modelling of the central part of the Nolans orebody continued. This work forms part of readiness for detailed auditing and due diligence, as well as developing a block model that is more mine planning friendly to allow better short-term production planning once mining commences.

The detailed gravity survey of the orebody and surrounding area was completed during the quarter with processing of the data gathered currently underway. Once complete, the gravity survey will be used to confirm the geological interpretation of aspects of the geological model.

MACROECONOMIC DEVELOPMENTS

Domestic Markets

At the Minerals Week, in early September, Prime Minister Anthony Albanese called for a doubling of rare earth element output by 2030, with annual global investment in clean energy needing to triple to reach net zero by the 2050 target. With the National Reconstruction Fund dedicating A\$1 billion in minerals processing and mining technology to “move Australia further up mineral value chains” – this should further bring media attention and more investment to NdPr projects in Australia. Minister for Resources and for Northern Australia, Madeleine King stated the importance of linking Australian critical minerals supply with key international trading partners, such as the Republic of Korea, the United States, the European Union and Japan, in order to encourage investment in the Australian critical minerals sector.

Global Markets

The quarter saw inflation affecting economic growth worldwide, with Central Banks focused on reducing inflation and minimising the risk of recession.

July saw tensions in the Asia Pacific region escalate with US House Speaker Nancy Pelosi’s visit to Taiwan and global markets, already impacted by concerns on slowing economies, fell even further. However, the escalating tensions and China’s subsequent economic sanctions on Taiwan strongly highlighted the importance of a non-China supplier of sustainably mined and processed NdPr oxide. At the Sydney Energy Forum in mid-July, US Energy Secretary Jennifer Granholm raised concerns that supplies of critical minerals could be “weaponised” as oil and gas supplies have been amid the Ukraine conflict and is a matter of national security for supply chains are diversified.

In August, the US Congress passed the ‘Inflation Reduction Act of 2022’ which will see US\$369 billion invested in tackling energy security and climate change; the bill aims to develop the US domestic supply chains of wind turbines and EVs, with tax rebates for the purchase of EVs being expanded but, importantly, US manufacturers can apply for a tax credit if at least 40% of critical minerals in US-made vehicles comes from US miners, recycling plants or mines in countries with free trade deals with the US; this will increase to 80% by 2027 - which will benefit the Australian critical minerals sector.

OFFTAKE AND PROJECT FUNDING

Offtake

Since the signing of non-binding MoU’s for NdPr offtake with Hyundai Motor Company (refer to ASX announcement 19 May 2022) and GE Renewable Energy (refer to ASX announcement dated 12 July 2022) the parties have been working constructively to ensure the agreements are comprehensive and satisfy the expected requirements from project lenders. These two parties are anticipated to form the cornerstone of the offtake commitment representing more than 50% of Arafura production volume allocated to long term forward sale agreements.

Additional offtake parties that Arafura is advancing negotiations with are progressing well, several groups being selectively prioritised are very much aligned with European ECA project financing mandates for critical minerals procurement. Arafura is targeting binding agreements for offtake to be concluded in the final quarter of 2022 to align with FID.

Project Funding

The Independent Technical Expert (ITE), SRK Consulting (Australia) Pty Ltd (SRK) is completing a staged independent technical review of the Nolans project to support the financiers in the completion of their due diligence and assessment of the Project. A Preliminary Report has been completed, with SRK preparing a Final Stage 1 report, a draft of which was received in October.



Appointed Mandated Lead Arrangers (MLAs) National Australia Bank and Societe Generale, alongside Northern Australia Infrastructure Facility (NAIF) and Export Finance Australia (EFA) continue to conduct their due diligence on the Project, through engagement with SRK, as well as the appointed Independent Market Consultant, Wood Mackenzie. All financing is conditional on completion of a successful due diligence process, agreement of terms and conditions, entry into binding facility agreements and credit approval. It is expected that due diligence activities and negotiation of the debt terms sheets will accelerate pending the completion of the updated capital and operating cost estimate forecast for release in November.

Positive offtake engagement has continued to enable the Company to engage with export credit agencies (ECAs) domestically and in the home markets of potential offtake partners. Arafura continues to execute its offtake and project funding strategy, aligning with parties who seek to create an alternative rare earths value chain with direct links from the oxide producer to the end user.

Discussions with offtake partners also incorporates the potential for strategic equity investment in the upstream value chain, which is viewed positively by the ECAs and lenders and if secured, will provide a useful cornerstone for Project equity.

Figure 3: Nolans Project Funding sets out the proposed funding structure and shows the interrelationship between debt sources, ECAs and offtake including strategic equity. Central to the funding strategy is leveraging the link between NdPr and critical materials for energy transition in EVs and renewables.

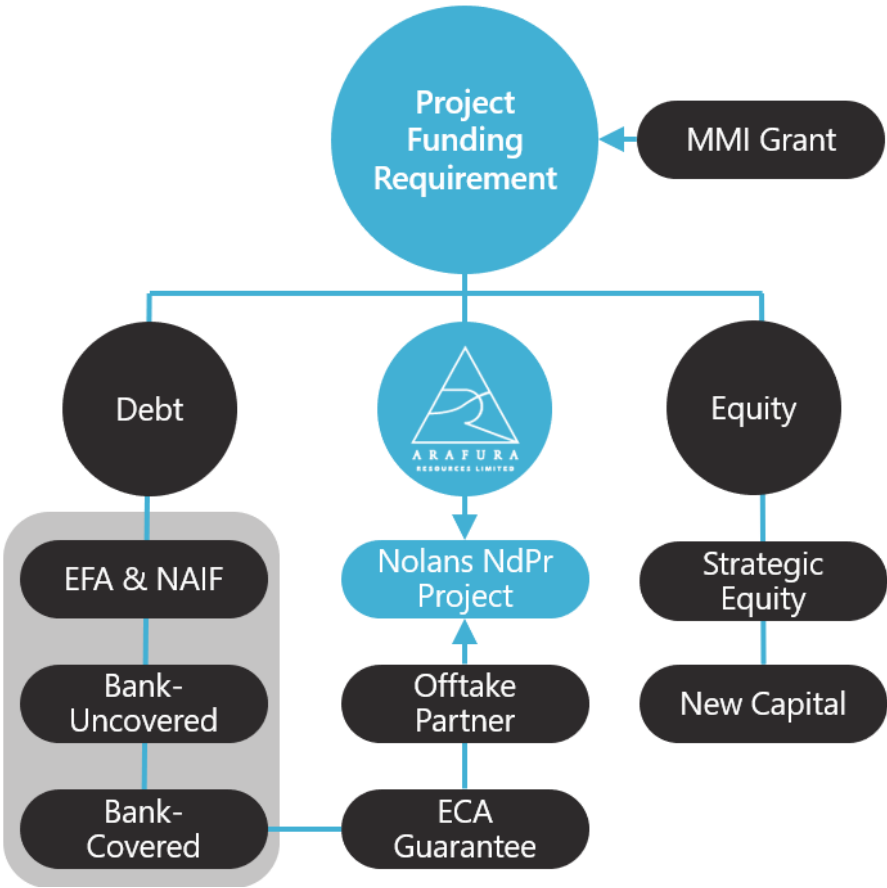


Figure 3: Nolans Project Funding

Arafura has a number of key funding activities running concurrently including offtake, debt funding, strategic equity investment and ECA engagement in several regions. No formal or binding agreements with these parties have been entered into and negotiations with all groups are incomplete. The Company, at this stage, has no certainty as to the

timing and likelihood of successfully concluding binding agreements. Details of these arrangements will be announced to ASX if (and when) formal agreements have been executed.

NdPr Market

The price of NdPr oxide decreased 32% per cent from US\$139 per kg to end at US\$94 per kg with the spot price trending lower during the quarter from reduced demand driven by a faltering Chinese economy. Softer Chinese domestic demand for NdPr and permanent magnets persisted longer from extended lockdowns via a zero Covid policy affecting economic and industrial activity, and slower transport and logistic services throughout the country. Weaker magnet demand from manufacturers extended during the quarter as end-use consumption was reduced via sharp cutbacks in production resulting from restricted power rationing in the Sichuan province and lockdowns in Hitech industrial cities like Chengdu. Despite reduced demand across multiple segments of the market, the sale of EVs in the domestic market continue to grow rapidly, reaching 500,000 EVs in the month of August.

By the middle of August, end users in the domestic market commenced purchasing and actively stockpiled supply, thereby increasing overall demand and prices. The demand for NdFeB magnets is expected to improve over the coming quarter with resumption of downstream production and increased output of NdFeB. Analysts expect the market to slowly improve and anticipate that magnet output will reach 300,000 tonnes in 2023, much higher than in 2022. The strategic reorganization of China's rare earth assets, and the formation of China Rare Earth Group, has further centralized the resources of China's rare earth industry with tight management and control of the rare earth market set to reduce supply and stabilize prices.

Exports of magnets to Germany, South Korea and the US from China remained strong driven by multisector end use applications. Year to date exports reached almost 40,000 tonnes. The renewable energy and e-mobility market will underpin future growth and demand for magnets outstripping supply creating shortfalls and higher prices for NdPr.

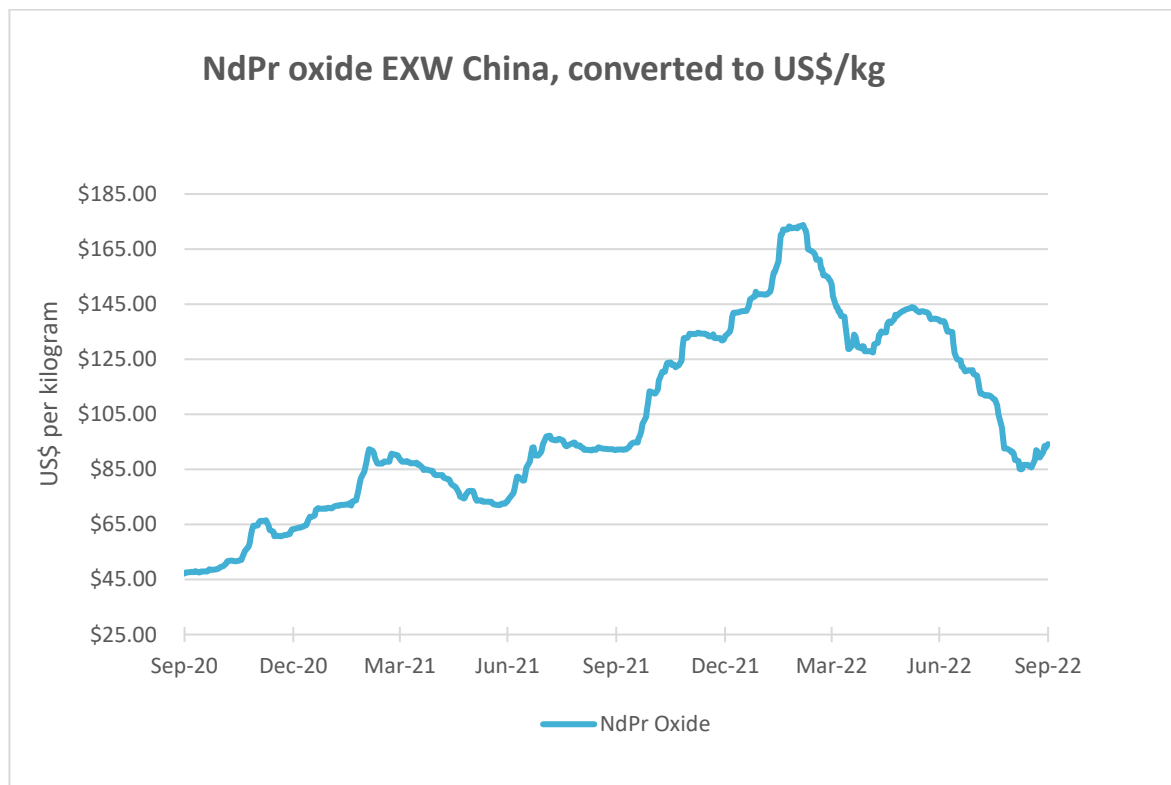


Figure 4: NdPr Oxide Price EXW China inclusive VAT converted to US\$

CORPORATE

Cash Position

On 30 September 2022, Arafura had \$49 million in cash reserves, following the completion of a \$41.5 million (before costs) placement in August. A total of 156.7 million shares were issued at a price of \$0.265 per new share with an additional 1 free attaching option for every 2 new shares subscribed that will be exercisable at \$0.34 and expire on 29 February 2024. Funds from the placement are being used to accelerate the development of the Nolans Project by:

- Completing FEED and commencement of detailed design; and
- Commencing tendering activities for main construction contracts.

Funds raised will also be used for general working capital purposes, including ongoing marketing and sales negotiations in the US, Asia and Europe and financing activities.

During the quarter, the Company spent ~\$1.0 million on exploration and evaluation activities, ~\$1.5 million on corporate, administration and business development costs and ~\$11.9 million on project development activities which relate to FEED. Further details are available in the attached Appendix 5B.

Average monthly cash expenditure for the quarter ended 30 September 2022 was ~\$5.1m (excluding the capital raise), increasing from the previous quarter as a result of ongoing FEED activities as the Company progresses to detailed design.

Payments of \$246,000 reported in Item 6.1 of the attached Appendix 5B relate to salaries, fees and superannuation paid to Directors.

Annual General Meeting

The Company's annual general meeting was held at BDO's offices at Level 9, Mia Yellagonga Tower 2, 5 Spring Street, Perth WA 6000 at 10.00am WST on 20 October 2022. The notice of meeting was despatched on 19 September 2022 and shareholders were encouraged to vote using the Proxy Form or online. All resolutions were passed by way of a poll.

Change of Company Name

The Company's shareholders passed a resolution to change the Company's name from Arafura Resources Limited to Arafura Rare Earths Limited, which has now been officially changed with the Australian Securities and Investments Commission (ASIC).

COVID-19

Arafura continues to monitor changes to the status of COVID-19 and all State, Territory and Federal Government advice around social distancing, travel restrictions, contact tracing and vaccination. Staff and contractors are advised of any updates to policies and procedures to ensure alignment with recommendations as international and domestic travel resumes. Despite the lifting of isolation requirements, Arafura will continue to enforce a requirement that staff and contractors work from home until a negative test has been received.

Tenements

In accordance with ASX Listing Rule 5.3, please refer to Appendix 1 for a listing of all tenement holdings.

Forward Looking Statements

This report includes forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "will", "progress", "anticipate", "intend", "expect", "may", "seek", "towards", "enable" and similar words or expressions containing same.

The forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this announcement and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Neither the Company nor any other person gives any representation, warranty, assurance, nor will guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. To the maximum extent permitted by law, the Company and each of its advisors, affiliates, related bodies corporate, directors, officers, partners, employees and agents disclaim any responsibility for the accuracy or completeness of any forward-looking statements whether as a result of new information, future events or results or otherwise.

Production Targets and Forecast Financial Information

The information in this report that relates to production targets and forecast financial information is extracted from the Company's ASX announcement dated 11 May 2021 (Nolans Project Update). The production target is based on 12% Proved Reserves, 62% Probable Reserves and 26% inferred resources as reported in the Company's ASX announcement dated 11 May 2021. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. Arafura confirms that all material assumptions underpinning the production target and forecast financial information derived from the production target set out in the Company's ASX announcement dated 11 May 2021 (including any assumptions referred to in the Company's ASX announcement dated 11 May 2021 that were sourced from the DFS as set out in the Company's ASX announcement dated 7 February 2019 (Nolans Project Definitive Feasibility Study) or from the Updated Mining Study as set out in the Company's ASX announcement dated 16 March 2020 (Major Increase in Mine Life for the Nolans Project)), continue to apply and have not materially changed.

APPENDIX 5B

Mining exploration entity and oil and gas exploration entity quarterly report

| | |
|-------------------------|--|
| Name of entity | |
| Arafura Rare Earths Ltd | |
| ABN | Quarter ended ("current quarter") |
| 22 080 933 455 | 30 September 2022 |

| Consolidated statement of cash flows | | Current quarter \$A'000 | Year to date (12 months) \$A'000 |
|--------------------------------------|---|----------------------------|--|
| 1. | Cash flows from operating activities | - | - |
| 1.1 | Receipts from customers | | |
| 1.2 | Payments for | - | - |
| | (a) exploration & evaluation | | |
| | (b) development | (11,887) | (11,887) |
| | (c) production | - | - |
| | (d) staff costs | (890) | (890) |
| | (e) administration and corporate costs | (1,531) | (1,531) |
| 1.3 | Dividends received (see note 3) | - | - |
| 1.4 | Interest received | 147 | 147 |
| 1.5 | Interest and other costs of finance paid | (10) | (10) |
| 1.6 | Income taxes paid | - | - |
| 1.7 | Government grants and tax incentives | - | - |
| 1.8 | Other (provide details if material) | - | - |
| 1.9 | Net cash from / (used in) operating activities | (14,171) | (14,171) |

| | | | |
|------------|---|----------------|----------------|
| 2. | Cash flows from investing activities | - | - |
| 2.1 | Payments to acquire: | | |
| | (a) entities | | |
| | (b) tenements and bonds | - | - |
| | (c) property, plant and equipment | (88) | (88) |
| | (d) exploration and evaluation | (972) | (972) |
| | (e) investments | - | - |
| | (f) other non-current assets | - | - |
| 2.2 | Proceeds from the disposal of: | - | - |
| | (a) entities | | |
| | (b) tenements | - | - |
| | (c) property, plant and equipment | - | - |
| | (d) investments | - | - |
| | (e) other non-current assets | - | - |
| 2.3 | Cash flows from loans to other entities | - | - |
| 2.4 | Dividends received (see note 3) | - | - |
| 2.5 | Other (security deposits) | - | - |
| 2.6 | Net cash from / (used in) investing activities | (1,060) | (1,060) |

| | | | |
|-------------|---|---------------|---------------|
| 3. | Cash flows from financing activities | | |
| 3.1 | Proceeds from issues of equity securities (excluding convertible debt securities) | 41,546 | 41,546 |
| 3.2 | Proceeds from issue of convertible debt securities | - | - |
| 3.3 | Proceeds from exercise of options | - | - |
| 3.4 | Transaction costs related to issues of equity securities or convertible debt securities | (1,916) | (1,916) |
| 3.5 | Proceeds from borrowings | - | - |
| 3.6 | Repayment of borrowings | - | - |
| 3.7 | Transaction costs related to loans and borrowings | - | - |
| 3.8 | Dividends paid | - | - |
| 3.9 | Other (repayment of lease liabilities) | (71) | (71) |
| 3.10 | Net cash from / (used in) financing activities | 39,559 | 39,559 |

| | | | |
|------------|--|---------------|---------------|
| 4. | Net increase / (decrease) in cash and cash equivalents for the period | | |
| 4.1 | Cash and cash equivalents at beginning of period | 24,681 | 24,681 |
| 4.2 | Net cash from / (used in) operating activities (item 1.9 above) | (14,171) | (14,171) |
| 4.3 | Net cash from / (used in) investing activities (item 2.6 above) | (1,060) | (1,060) |
| 4.4 | Net cash from / (used in) financing activities (item 3.10 above) | 39,559 | 39,559 |
| 4.5 | Effect of movement in exchange rates on cash held | - | - |
| 4.6 | Cash and cash equivalents at end of period | 49,009 | 49,009 |

| | | | |
|------------|---|------------------------------------|-------------------------------------|
| 5. | Reconciliation of cash and cash equivalents | Current quarter \$A'000 | Previous quarter \$A'000 |
| | at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts | | |
| 5.1 | Bank balances | 10,256 | 5,618 |
| 5.2 | Call deposits | 38,753 | 19,063 |
| 5.3 | Bank overdrafts | - | - |
| 5.4 | Other (provide details) | - | - |
| 5.5 | Cash and cash equivalents at end of quarter (should equal item 4.6 above) | 49,009 | 24,681 |

| | | |
|-----------|---|------------------------------------|
| 6. | Payments to related parties of the entity and their associates | Current quarter \$A'000 |
| 6.1 | Aggregate number of payments to related parties and their associates included in item 1 | (246) |
| 6.2 | Aggregate number of payments to related parties and their associates included in item 2 | - |

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

Salaries, fees and superannuation of Directors of the Company.

| 7. | Financing facilities <i>Note: the term “facility” includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i> | Total facility amount at quarter end \$A’000 | Amount drawn at quarter end \$A’000 |
|-----------------|---|---|--|
| 7.1 | Loan facilities | - | - |
| 7.2 | Credit standby arrangements | - | - |
| 7.3 | Other (please specify) | - | - |
| 7.4 | Total financing facilities | - | - |
| | | | |
| 7.5 | Unused financing facilities available at quarter end | | - |
| 7.6 | Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well. | | |
| Not applicable. | | | |

| 8. | Estimated cash available for future operating activities | \$A'000 |
|-----|---|----------------|
| 8.1 | Net cash from / (used in) operating activities (item 1.9) | (14,171) |
| 8.2 | (Payments for exploration & evaluation classified as investing activities) (item 2.1(d)) | (972) |
| 8.3 | Total relevant outgoings (item 8.1 + item 8.2) | (15,143) |
| 8.4 | Cash and cash equivalents at quarter end (item 4.6) | 49,009 |
| 8.5 | Unused finance facilities available at quarter end (item 7.5) | - |
| 8.6 | Total available funding (item 8.4 + item 8.5) | 49,009 |
| 8.7 | Estimated quarters of funding available (item 8.6 divided by item 8.3) | 3.2 |
| | <i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i> | |
| 8.8 | If item 8.7 is less than 2 quarters, please provide answers to the following questions: | |
| | 8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not? | |
| | Answer: Not applicable. | |
| | 8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful? | |
| | Answer: Not applicable. | |
| | 8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis? | |
| | Answer: Not applicable. | |
| | <i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i> | |

COMPLIANCE STATEMENT

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- This statement gives a true and fair view of the matters disclosed.

Date: 27/10/2022

Authorised by: The Audit Committee

(Name of body or officer authorising release – see note 4)

Notes

- (1) This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- (2) If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- (3) Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- (4) If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – e.g., Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- (5) If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

APPENDIX A – MINING TENEMENTS HELD AS AT 30 SEPTEMBER 2022

| Tenement reference | Project | Holder | Nature of interest | Interest at beginning of quarter | Interest at end of quarter | Notes |
|--|----------------------|--------------------------------|--|--|--|--|
| ML 26659 ML 30702 ML 30703 ML 30704 ML 32411 ML 32412 ML 32413 ML 32414 ML 32415 ML 32416 | Nolans, NT | Arafura Nolans Project Pty Ltd | Mineral Lease | 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% | 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% | |
| EL 28473 EL 28498 EL 29509 EL 31224 EL 31284 EL 31957 | Aileron–Reynolds, NT | Arafura Rare Earths Ltd | Exploration Licence | 100% 100% 100% 100% 100% 100% | 100% 100% 100% 100% 100% 100% | |
| EL 29701 | Bonya JV, NT | Arafura Rare Earths Ltd | Exploration Licence | 60% | 60% | Thor Mining Plc 40%, Arafura Resources Limited 60% |
| EL 32167 | Jervois Vanadium, NT | Arafura Rare Earths Ltd | Exploration Licence | 60% | 60% | Thor Mining Plc 40%, Arafura Resources Limited 60% |
| ML32722 | Nolans, NT | Arafura Nolans Project Pty Ltd | Mineral Lease | 100% | 100% | Application lodged. |
| ML33107 | Nolans, NT | Arafura Nolans Project Pty Ltd | Mineral Lease | 100% | 100% | Application lodged. |
| EMEL 32672 EMEL 32673 EMEL 32674 EMEL 32675 EMEL 32676 | Nolans, NT | Arafura Nolans Project Pty Ltd | Extractive Mineral Exploration License | 100% | 100% | |
| EMP33078 EMP33079 EMP33080 EMP33081 EMP33082 EMP33083 EMP33084 EMP33085 | Nolans, NT | Arafura Nolans Project Pty Ltd | Extractive Exploration Licence | 100% | 100% | Application lodged. |