

ASX Announcement

2020 Activity Outlook

6 April 2020



- **Limited impact on Company activities from COVID-19 restrictions to date**
- **China's magnet production rapidly recovering**
- **COVID-19 related impacts on rare earth supply ex-China highlight extreme vulnerability of NdPr supply to disruption**
- **Marketing efforts for remaining offtake from Nolans continuing**
- **Mining tenure expected to be granted once COVID-19 related travel restrictions allow for execution of Indigenous Land Use Agreement**
- **Pre-FEED activities well advanced and due for completion in June Quarter**

Arafura Resources Limited (ASX: ARU) (Arafura or the Company) is pleased to provide a business update on progress towards commercialising its 100 per cent-owned Nolans Neodymium-Praseodymium (NdPr) Project in the Northern Territory.

Environment, Health and Safety

Following an internal risk assessment, all 22 Arafura staff and contractors in its Perth office are now working from home to align with Australian Government directions related to the COVID-19 pandemic and to comply with the Company's modified work protocols. The same assessment also found that the Company's three Darwin-based staff can continue to operate from that office.

There has been limited impact on productivity brought on by this change, however the Company is reassessing all work programs for necessity as it balances Project progress with cash conservation.

Rare Earths Market and Product Offtake

Following a nationwide shutdown that commenced in late-January due to the onset of COVID-19 virus, Chinese industry restarted in March with many manufacturing facilities now operating at 50-80% capacity. Much of the rare earth industry and downstream NdFeB magnet producers are now operating, particularly in northern China, filling a backlog of offshore and domestic orders, and demand to deliver product shipments is stretching operational and logistics capability. Many automakers in China have



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restarted and the automotive industry is slowly returning to normality; for example, production of vehicles and components has resumed at 22 of 24 Volkswagen locations in China during the past month. Demand for NdPr oxide in the Chinese domestic economy is being driven by a ramp up in local demand for NdFeB magnets, and operational capacity is increasing to meet demand.

China sources NdPr and other rare earths from offshore jurisdictions like Malaysia, Africa, Myanmar, Australia and the USA to help meet domestic and global demand. Some of this supply has temporarily shut with some rare earth companies suspending operations due to COVID-19. Any extended operational shutdowns will tighten supply further and some supply chains like Japan could be affected. Supply chains in Europe and the USA are reshaping to mitigate future events and the rare earth industry is no exception. The COVID-19 pandemic is a stark reminder of the fragility of supply chains, including those relating to critical minerals like rare earths, and is a prime motivator for direct investment being considered by governments and downstream customers in the sector.

Planned marketing visits to Japan, South Korea and China in January and February were cancelled in response to COVID-19 related international travel restrictions. Nonetheless Arafura was able to conduct a marketing visit to Europe in early March and continued advancing offtake discussions with several end users and supply chain partners. Whilst the Company is currently unable to meet end users and financiers in person, it continues to engage and communicate via telephone and video conferencing with groups in Japan, Europe and China.

The Company has commenced communication with its existing Chinese magnet manufacturing partners JingCi Material Science and Baotou Tianhe Magnetics, as well as a Japanese magnet manufacturer, to deliver samples of high purity NdPr oxide product from Arafura's recently completed rare earth separation pilot plant for pre-qualification and verification. The timing of delivery is being compromised by a temporary disruption to the Company's rare earth precipitation program at ANSTO due to the COVID-19-related suspension of some of ANSTO's activities.

In March, Arafura entered into a non-binding memorandum of understanding (MOU) with a Chinese downstream rare earth metal processor in relation to the conversion of NdPr oxide from Nolans to NdPr metal at its metal conversion operations in Thailand and Vietnam. The rare earth processor already offers toll processing of non-Chinese feedstock, has vast expertise in metal processing and is a reputable toll manufacturer delivering metal product to Japanese clients. The Company is working towards negotiating and executing a formal toll conversion agreement with this supply chain partner in direct response to requests by European end users for the delivery of NdPr metal via a non-Chinese supply chain and an announcement will be made to ASX when such formal agreements have been entered into.

Arafura also has non-binding rare earth product offtake arrangements in place with a number of parties in Japan, Europe, South Korea, the USA and China, and for phosphoric acid product with parties in India. No formal agreements with these parties have been entered into and the Company at this stage has no certainty as to the timing and likelihood of concluding binding agreement terms. Arafura continues to work with the potential offtake partners and other supply chain partners and details of these arrangements will be announced to ASX when formal agreements have been entered into.

Regulatory

All Northern Territory and Commonwealth environmental approvals have been secured for the Nolans Project, including for the long-term management of all mine and process plant wastes at the Nolans site. The Company continues to progress activities that are aimed at delivering the Project's remaining regulatory approvals during the upcoming months.

Mining Tenure

The Company has reached an in-principle agreement with the three indigenous groups who hold native title rights over the Nolans Project area. This was achieved through negotiation with their Central Land Council (CLC) representatives and was ratified at a large gathering of the native title holders at Aileron in the last week of February (*refer to ASX announcement 2 March 2020*).

The agreement, which is in the form of an Indigenous Land Use Agreement (ILUA), also contains a section 31 agreement under the *Native Title Act*. This is an enabling agreement to allow the grant of the Project's mineral leases (MLs) by the Northern Territory Government prior to formal registration of the ILUA by the Native Title Registrar.

Both the ILUA and section 31 agreements were planned to be endorsed and then executed by the full council of the Central Land Council during April 2020. Unfortunately, with the onset of the COVID-19 pandemic and the associated precautionary measures introduced by the Northern Territory Government and the CLC, this planned council meeting has been postponed until such time travel restrictions designed to protect the wellbeing of the residents of remote indigenous communities in the Northern Territory are relaxed or withdrawn.

The consequence of this is that the Project's mining tenure cannot be granted until an executed section 31 agreement is received. The Company is liaising with the CLC and the Northern Territory Government on this matter and is completing related tenure grant prerequisites such as surveying to shorten the grant time frame once the agreements are executed by all parties.

Operational Licence

Preparation of a detailed Mining Management Plan (MMP) covering the construction and initial operation of the Project is ongoing. The MMP must satisfy guidelines published by the Northern Territory Government's Department of Primary Industry and Resources (DPIR) and comply with the Project's environmental approval conditions.

To date, seventeen specific management plans have been written and are under review for content and compliance with the approval conditions. The remaining aspects of the MMP are being completed in close consultation with DPIR which is responsible for the assessment and authorisation of the MMP.

Once the Project's mining tenure is secured and the MMP authorised there are no remaining regulatory barriers to commencement of construction and initial operations.

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Groundwater Licence

Arafura has invested heavily in the exploration and subsequent delineation of a very substantial groundwater resource centred 25 kilometres south-west of the Project area that comprises multiple aquifers at depths of between 80 and 220 metres below surface. To date, Arafura has drilled 27 bores into the system which has allowed the construction of a robust groundwater model that supports a feasibility study-level borefield design. Work continues assessing this major aquifer system via monitoring of groundwater flux (*i.e.* variations in groundwater levels), quality and recharge using these bores.

An application for a groundwater abstraction licence for the Nolans Project has been lodged with the Northern Territory Government's Department of Environment and Natural Resources (DENR) for an amount that meets the anticipated demand for the life of the Nolans Project. Whilst the lodgement of this application is not a legal requirement under current Northern Territory legislation, the Company is taking this step to provide additional security over the identified groundwater resource and to meet commitments made during the Environmental Impact Statement (EIS) community engagement process.

Arafura has the option to establish multiple production bores and begin producing from them in advance of securing a groundwater abstraction licence. Potential impacts on borefield sustainability are being managed and mitigated by having multiple borefield clusters spread over a large footprint that exceeds 400 km². Borefield tenure is being secured by several MLs which are subject to the same granting process as the Project's mining tenure.

Metallurgical Programs

Metallurgical test work programs using Australian testing facilities are continuing with the following either completed or in progress:

- Rare earth precipitation at ANSTO to produce high purity NdPr oxide and SEG-HRE carbonate products, with batch testing completed and continuous testing using process liquors from the recently completed solvent extraction (SX) pilot programs (*refer to ASX announcement 20 February 2020*) planned for the near future.
- An extensive corrosion testing program is underway on a variety of materials of construction across the breadth of the process flowsheet to provide critical final design information.
- Testing has been completed of nano-filtration as an alternative to ion exchange, for the purification of the Project's phosphoric acid product, with evaluation now in progress.

Execution Readiness

Progress has continued with Hatch Pty Ltd on the pre-front end engineering and design (pre-FEED) activities. These pre-FEED activities are aimed at finalising the basis of design, design specifications and philosophies along with finalising Arafura's overall project requirements in preparation for the early contractor involvement (ECI) phase of project delivery. Work on pre-FEED activities is well advanced and is anticipated to be completed in the second quarter of CY2020.

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The integrated project management team (IPMT) which includes KBR and Wave International personnel have been mobilising into Arafura's Perth office. Key personnel have been engaged in roles across the project team, however the ramp up has been slower than originally anticipated. The IPMT has been working to finalise key execution strategies, plans and processes in preparation for the ECI phase as well as continuing with preparation for tendering of key contracts, including those for the beneficiation plant, hydrometallurgical plant and sulphuric acid plant.

The hydrometallurgical plant tender stage one has also closed with a number of tenders received from joint ventures between Tier 1 engineering and construction contractors. The aim of tender stage one is to reduce the number of tenderers to two joint venture, or similar, contracting parties. The adjudication process is currently underway.

With the global investment environment compromised by the COVID-19 pandemic, the Company's indicative project implementation schedule is currently under review and will be updated once there is more certainty in market conditions to determine the indicative timing of key milestones.

Corporate

The Company is pleased to announce the appointment of Miss Catherine Huynh as Joint Company Secretary, along with continuing Company Secretary and Chief Financial Officer, Mr Peter Sherrington. Miss Huynh's appointment is effective Friday 3 April 2020.

Miss Huynh commenced with Arafura in July 2018 in the role of Financial Controller and is a member of Chartered Accountants Australia and New Zealand, and the Governance Institute of Australia.

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