# **ASX Announcement**

# Monthly NdPr and Rare Earth Price Update

15 November 2017

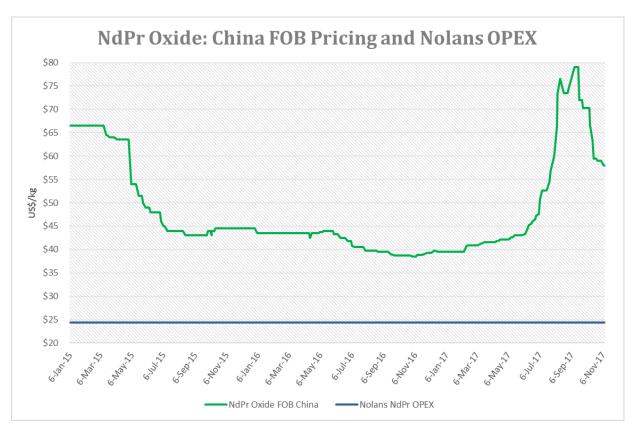


Arafura Resources Limited (ASX: ARU) (Arafura) is pleased to provide an update on rare earth prices.

The latest pricing information has neodymium-praseodymium (NdPr) oxide FOB China at US\$58/kg, a decline of 13% over the past month. Price softening has occurred in recent weeks with traders selling NdPr on the spot market after NdFeB magnet manufacturers had restocked their NdPr inventories in the lead up to the month-long mandated shutdown of rare earth processing operations during October across China.

NdPr is the main product Arafura anticipates producing from its 100%-owned Nolans project and the NdPr price is the key driver of Nolans project economics.

Figure 1: NdPr Oxide - China FOB Pricing and Nolans OPEX 1, 2





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#### About NdPr

NdPr is in short supply globally and is the critical raw material in the manufacture of ultra-strong, high-performance NdFeB permanent magnets, which are used extensively in the automotive industry for electric components such as seats, mirrors, wipers, steering and braking.

Importantly, the compound has also emerged as a key enabler of hybrid and electric vehicles as high-performance magnets play a key role in electric traction motors. While traditional petrol or diesel combustion engine motor vehicles each use approximately 0.7 kg of NdPr oxide, electric or hybrid vehicles require an additional 1 kg.

The increasing shift towards hybrid and electric drivetrain technologies among the world's leading automotive manufacturers is expected to continue to positively influence market fundamentals for NdPr.

The demand for NdPr oxide is expected to grow at 8% per annum to 2025 from current global consumption of 33,340 tonnes.

## About Arafura's Nolans NdPr Project

Arafura's Nolans NdPr project, located 135 kilometres north-north-west of Alice Springs in Australia's Northern Territory, is supported by Mineral Resources of 56 million tonnes grading 2.6% total rare earth oxide (TREO) that contain approximately 382,000 tonnes of NdPr oxide. The project is forecast to produce 14,000 tonnes of TREO per annum, including 3,600 tonnes of NdPr oxide per annum, over a 30+ year mine life.

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 $<sup>^{1}</sup>$  Market price information sourced from independent price reporting agency.

<sup>&</sup>lt;sup>2</sup> Refer Arafura Resources ASX release 7 June 2017 for additional and qualifying information on the Mineral Resources that underpin the production target and provides the material assumptions on which the production target is based. Arafura confirms that all material assumptions underpinning the forecast financial information derived from its 14,000 tpa TREO production target and the production target itself, continue to apply and have not materially changed since the 7 June 2017 release.



Table 1: Mineral Resources for the Nolans Bore deposit as at 7 June 2017 using a 1% TREO Cut-Off Grade.

Resources	Tonnes (Millions)	Rare Earths TREO %	Phosphate P <sub>2</sub> O <sub>5</sub> %	NdPr Enrichment %
Measured	4.9	3.2	13	26.1
Indicated	30	2.7	12	26.4
Inferred	21	2.3	10	26.5
Total	56	2.6	11	26.4

Note: Numbers may not compute due to rounding. "NdPr Enrichment" is the proportion of TREO comprising  $Nd_2O_3$  and  $Pr_6O_{11}$ .

### **Competent Persons Statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Kelvin Hussey, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Hussey is a full-time employee of Arafura Resources Limited. Mr Hussey has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves. Mr Hussey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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