# Arafura Resource Limited

# Investor Presentation

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# Arafura Resources

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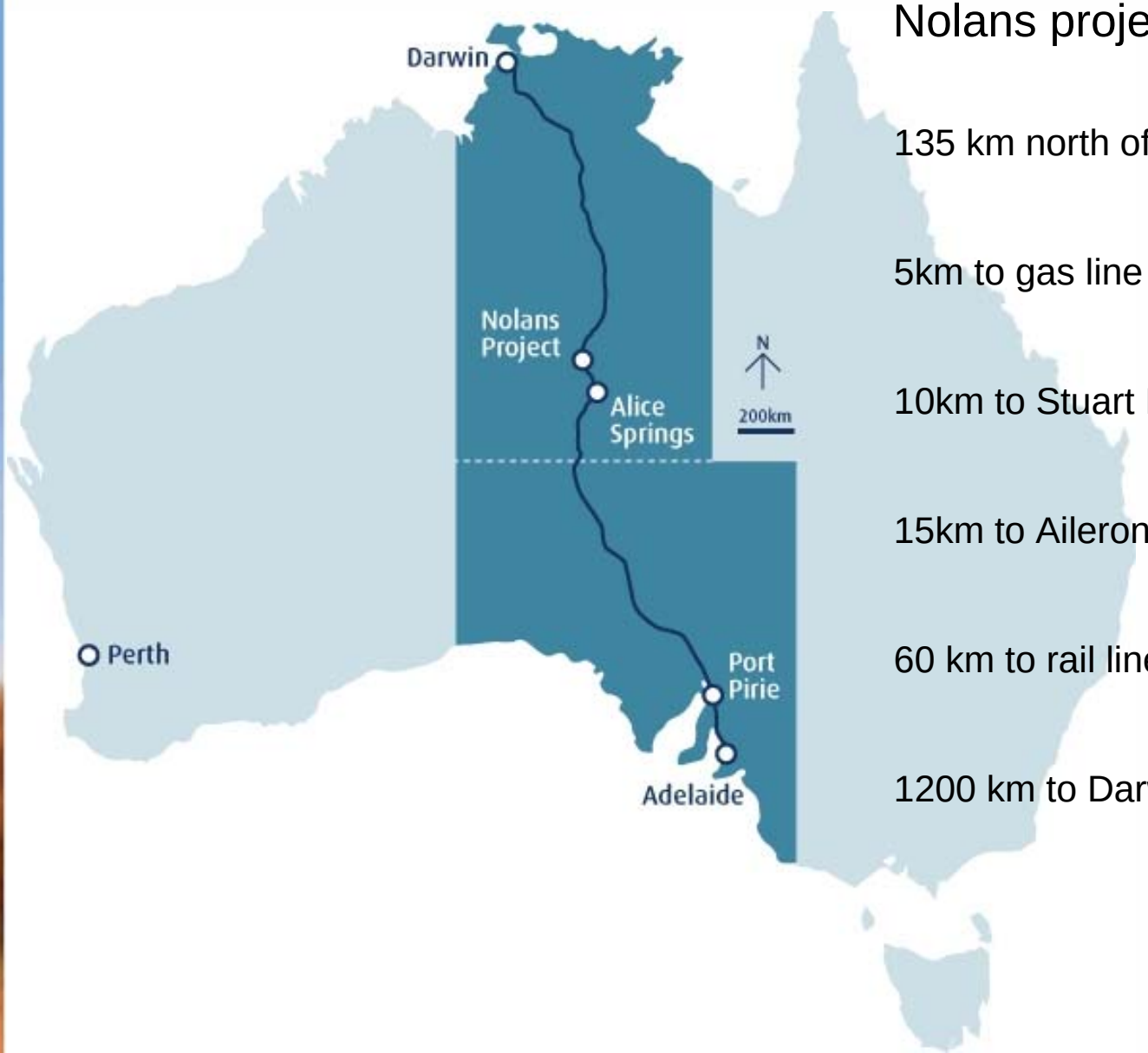
# Nolans project location




Nolans project

135 km north of Alice Springs

5km to gas line

10km to Stuart Highway

15km to Aileron Roadhouse

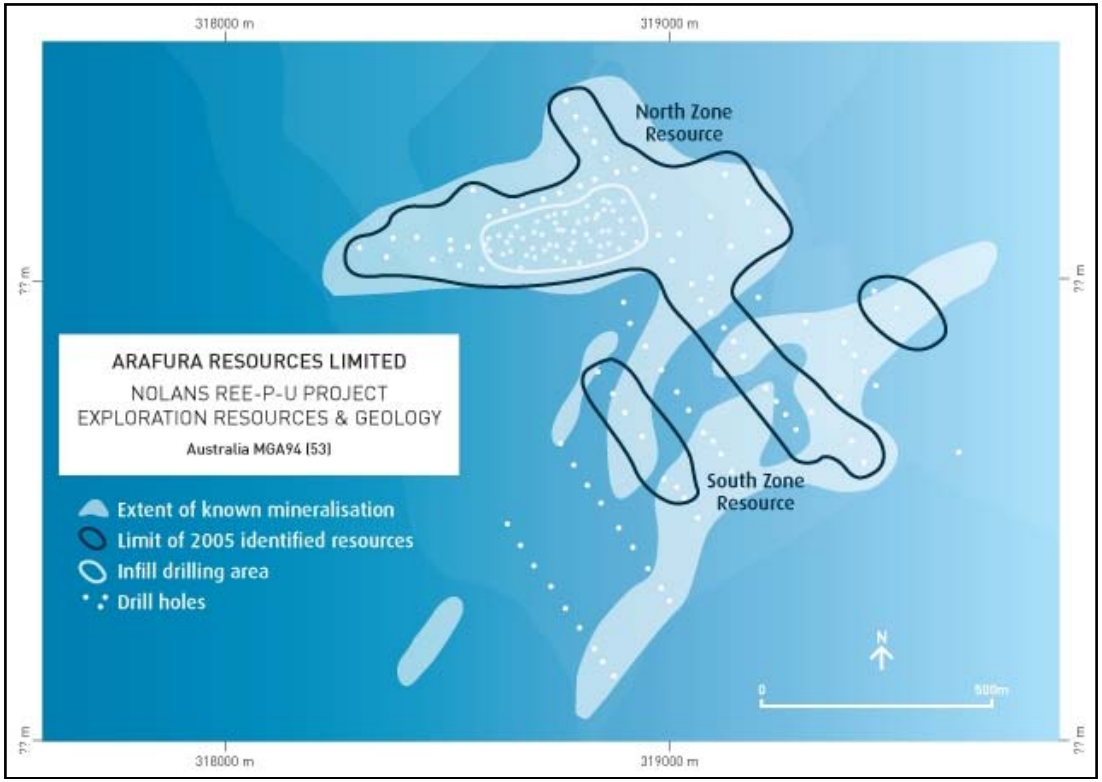
60 km to rail line

1200 km to Darwin

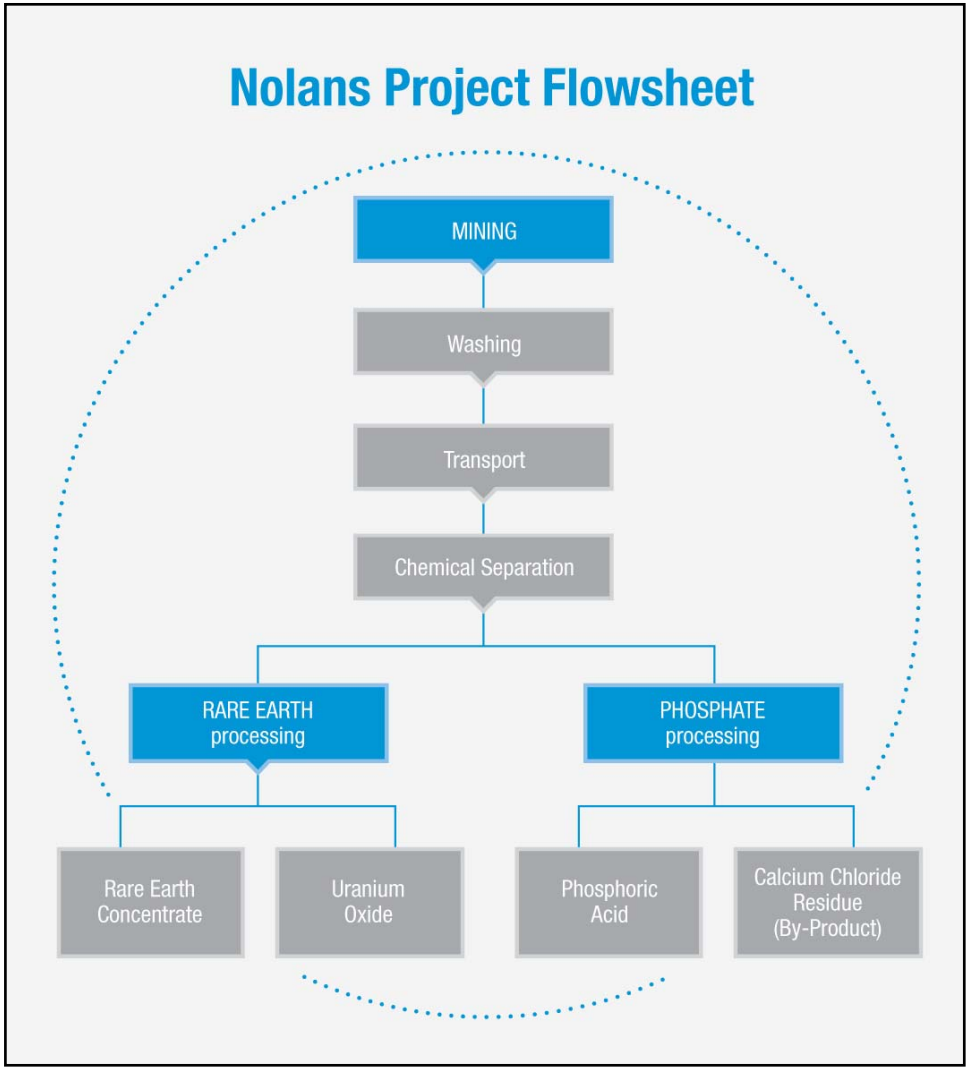
# Nolans Resource

18.6 mt of indicated & Inferred resources - JORC standard

- 577,000 tonnes REO (3.1%) and 2.1mt $P_2O_5$ (14%)
- Only drilled to 100m below surface – open at depth
- Current drilling looking for the lateral closure – still open along strike
- Is exposed at surface – no expensive pre-stripping



# Nolans project flowsheet



# Heavy media separation (HMS)


2007 test work returned positive results

- 30% rejection of waste and 95% recovery of REO and Phosphate
- Upgrades the resource from 3.1% REO to a process feed grade of 4.2%

Pilot plant trials currently 50% complete

- Initial results are replicating 2007 test work
- Material currently in transit to ANSTO for chemical processing
- Additional trials underway to improve waste rejection – looks promising
- An efficient method to reject waste and increase feed grade very cheaply

# Nolans capital costs

| **PFS Capital costs accurate to ±30%** | | |
|---|---|---|
| Equipment costs ±30% | | AUD$ million |
| | Mine site capital costs | |
| | - mine, HMS and site offices | 75 |
| | Processing plant* | 215 |
| | *Total* | *290* |
| Direct costs ±30% | | |
| | Civil, concrete, pipes, electrical etc | 160 |
| Indirect costs ±30% | | |
| | EPCM | 90 |
| | First fill and working capital | 90 |
| **Sub total plant costs ±30%** | | **630** |
| Project contingency | | 120 |
| **TOTAL CAPITAL ESTIMATE ±30%** | | **750** |

***includes all grinding, leaching, phosphoric acid, rare earths (to 99% separated product) calcium chloride and uranium plant – based on Australian built & manufactured plant**

# Nolans operating costs

| **PFS Operating costs accurate to ±30%** | |
|---|---|
| | AUD$ million per annum |
| Administration, mining and transport, and labour | 50 |
| Chemicals | 150 |
| Power and maintenance | 50 |
| **Sub-total operating costs** | **250** |
| | |
| Transport of imported chemicals | 100 |

Excludes royalties or corporate costs

Several chemical manufacturers have expressed strong interest in building and operating chlor-alkali and sulphuric acid plants on site that will eliminate transportation costs of imported chemicals

# Nolans revenues – at March 2008

| | Production per annum (tonnes) | Current price ($US) | Total revenue US$ million |
|---|---|---|---|
| Rare earths | 20,000 | *15,000/tonne | 300 |
| Phosphoric acid | 150,000 | 1,000/tonne | 150 |
| Calcium chloride | 400,000 | 100/tonne | 40 |
| Uranium | 150 | 75/lb | 25 |
| Total revenue | | | US$515 |
| **Total Revenue at USD:AUD 0.90** | | | **AUD$570** |
| Less operating expenses (excluding transport costs) | | | AUD$250 |
| Gross Margin | | | AUD$320 |
| | | | |
| Revenue over 20 years undiscounted AUD$11.5 billion | | | |

*based on Nolans mix of rare earths

# Project timeline

**Project Schedule**

| Activity | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|
| Submit NOI Mine | | | | | | |
| Studies for Mine approval | | | | | | |
| Mine approval | | | | | | |
| Pilot Plant Studies | | | | | | |
| Definitive Feasibility Study | | | | | | |
| Process Plant Approval | | | | | | |
| Pre-ordering & Construction | | | | | | |
| Production 50% | | | | | | |
| Production 75% | | | | | | |
| Production 100% | | | | | | |

# Nolans opportunities

**Increase in resources**

Drilling has identified more mineralisation yet to be classified as resources

**Strategy** = resources available for future production expansion to meet market growth

**Heavy media separation optimisation**

Improve waste rejection, optimise feed grade, & has cheap operating costs

**Strategy** = to reduce downstream operating and capital costs

**Pilot plant**

To optimise the process in continuous conditions

**Capital costs**

Seek overseas manufacture of some components to reduce capital costs

BFS will refine capital estimates to ±10%

**Operating costs**

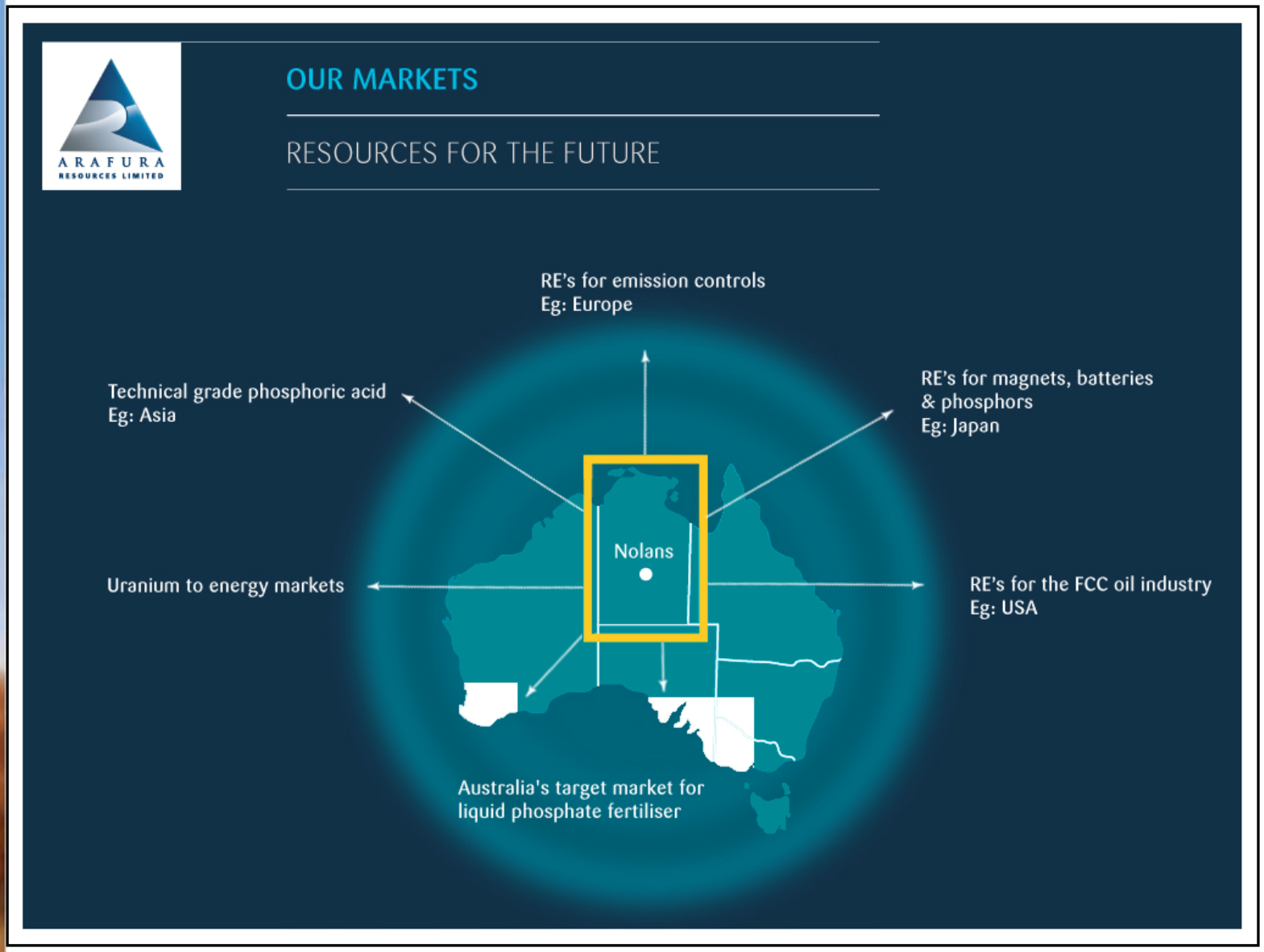
Onsite chemical manufacture will reduce transport costs by $100m

Engagement started with sulphuric acid and chlor-alkali plant operators

**Revenues**

The rare earth and phosphoric acid markets continue to grow strongly

# Nolans markets



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# ENERGY PRODUCTION

## Petroleum Refining

Lanthanum oxide is used in petroleum cracking catalysts in the oil refining industry.

## High-powered Electric Motors

Neodymium, Dysprosium and Terbium are used in the strongest permanent magnets known. Electric motors use these magnets to achieve superior output in power generation from wind.

## New Generation Vehicles

Lanthanum is also used as a catalyst in hydrogen fuel cell technology.

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# ENERGY REDUCTION

## UV Filters in Glass

Cerium added to glass is a filter of ultra-violet radiation used in many vehicles.

## Reducing Fuel Consumption

Neodymium is used in the electric motors in hybrid cars, which reduces fuel consumption.

## Lighter - Faster

Rare earths used in vehicles improve performance and lowers car weight resulting in reduced fuel consumption.

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# ENERGY EFFICIENCY

## New Generation Vehicles

Neodymium and Samarium are used in the strongest permanent magnets known. Electric motors in hybrid cars use these magnets to achieve superior output and torque.

## Rechargeable Batteries

Lanthanum is a key component in the rechargeable NiMH batteries used in hybrid cars.

## Energy Efficient Lighting

Praseodymium and Europium are key elements in rare earths used in energy efficient lighting.

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# LIFESTYLE

## Colour Screen LCDs/PDPs

Europium, Terbium and Yttrium are used as phosphors in electronic screens.

## Components to Hardware

Neodymium permanent magnets and other rare earths are used in computer hard disk drives.

## Medical Services

Rare earths are essential components in MRIs.

## Autocatalysts

Mixed rare earth oxides are used in environmental catalysts including exhaust converters, chemical scrubbers and other gaseous products and waste streams.

# Nolans market opportunities

## Rare earths are in demand

1. Chemical catalysts

   Market outlook moderately strong at 5% to 10% per annum

2. Magnets

   Strong growth in the hybrid car market – wind power is the sleeper

   Current production of NdFeB = 50,000t to double to 100,000t by 2010

   Market growth currently 15% to 20% per year

3. Phosphorescence

   Strong outlook in the plasma panel market

   Demand growing at 40% per annum

## Phosphoric acid

Agricultural productivity - the World's need for more protein

Biofuel market - growing rapidly in volume, strength and reputation

## Calcium chloride

Australia's need to reduce water wastage in mining & industry

# Nolans project flow-on benefits

## Regional

- A stronger resources sector in the Northern Territory
- Indigenous benefits and regional business opportunities

## National

- Synergies with chemical production – growing on gas
- Helping Australia to climate ready the world

## Global

- Fostering products for sustainable energy
  - fostering efficient energy use - lights
  - fostering energy innovation – hybrid cars, wind farms
  - fostering innovating change in our lifestyle – smaller, faster, cleaner

# Nolans funding strategy - options

## Arafura key stone investor(s)

1. Strategic equity holders to assist in attracting further investment

## Nolans Joint Venture

1. A partner to support the Bankable Feasibility Study
2. Looking for a significant contribution to capital in return for a guaranteed off-take

## Debt financing

1. Structuring finance (eg:up to 30% debt)
2. Several approaches to Arafura indicate that some overseas banking facilities will finance nationally strategic projects at favourable rates – Rare Earths & Nolans fits this criteria.

## Forward sales

1. Can we forward sell $100m or more of uranium by-product?
2. Strong demand and several informal approaches have already been made

## Equity

1. To minimise shareholder dilution for strong returns
2. Looking to keep the register below 300m shares

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