

## NORTHERN TERRITORY MINERAL INVESTMENT SEMINAR

### NOTES TO THE PRESENTATION

12<sup>TH</sup> OCTOBER 2011

#### SLIDE 1

- Thank you for the kind introduction and opportunity to speak today
- Director of Planning Division of JOGMEC, Mr. Takeshi Sakata
- Australia's Ambassador to Japan, Mr. Bruce Miller
- Northern Territory Chief Minister, Mr. Paul Henderson
- Fellow Presenters
- Distinguished guests
- My other Arafura colleagues present today – Mr. Richard Brescianini and Mr. Gary Cianfichi,
- Ladies & Gentlemen
- Good Morning
- My name is Steve Ward and I am the Managing Director and Chief Executive Officer of Arafura Resources Ltd, an Australian Public Company which is an emerging Rare Earths producer with a world class Rare Earths resource in the Northern Territory of Australia
- Today, I would like to introduce you to the exciting and high technology world of Rare Earths
- I shall then introduce you to Arafura Resources and describe to you how we are setting about delivering our vision 'To be the recognized leading producer of Rare Earths to users worldwide'
- We plan to do this via our world class Nolans Rare Earths Project which will involve Arafura's long term presence in the Northern Territory

#### SLIDE 2

- Firstly, the customary disclaimer statement.

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- Please spend a moment to study this.
- There is a lot of information on the slides in my presentation
- Today, I shall point to the highlights
- The full presentation will be available on Arafura's website and the Australian Stock Exchange website for your future reference

### SLIDE 3

- Here is today's agenda
- I'll begin with a summary of the high technology Rare Earths industry
- Then I'll introduce our company Arafura
- I'll then describe our Nolans Rare Earths Project and our progress towards becoming a major supplier within the global Rare Earths industry
- Arafura is proud to have been associated with the Northern Territory for 15 years. I'll describe the development of our activities in the Northern Territory
- Arafura is an emerging company with requirements for investment. I'll cover these opportunities.
- Finally, I'll summarize the key points of the presentation to finish.

### SLIDE 4

- Let's begin with Rare Earths
- For the Chemists, they are the Lanthanide series in the periodic table + Yttrium
- Their unique properties make them critical ingredients in high technology applications; new consumer goods e.g. Ipods, flat screen tv's; clean and green energy applications, such as wind turbines and hybrid cars; and energy efficient products such as new-generation light globes and rechargeable batteries
- These high technology applications don't work without the Rare Earths in them!
- Demand for Rare Earths is forecast to grow by multiples of GDP as use of these high technology products increases rapidly
- Rare Earths represent a small component of final product
- Recycling opportunities for rare Earths are very small, there are no real substitutes which are as effective and leap frogging technology is unlikely

- They are Specialty Chemicals produced to 'Pharmaceutical Grade' quality
- Rare Earth oxides which Arafura will produce exist as powders
- They currently sell for \$150,000/tonne compared to say iron ore at \$200/tonne

#### SLIDE 5

- Rare Earths are not rare! They are quite common in the earth's crust, but very scarce in deposits which can be exploited technically and commercially.
- The industry challenge is very much for the suppliers to keep up with the very positive demand growth
- The geochemistry of each deposit is different. This means unique separation technology is required each time. This is high tech and expensive compared to many other industries and can be of the order of US\$50,000 per installed tonne/year of capacity.
- Despite Rare Earths being present in many regions of the world, China emerged in 1985 as a Rare Earths producer and has moved to dominate global supplies over the past 25 years.
- Some low cost Chinese production capacity has proven to be unsustainable due to it being polluting and/or illegal. Consequently, Chinese production capacity has reduced and 'maxed out' at a time when demand is soaring.
- China has a "use at home first" approach which means that amounts available for export have diminished progressively since 2006 via an export quota system
- The global market is already short and forecast to stay that way for many years to come, The lack of products is then accentuated in countries outside China
- Rare Earth users outside China are actively seeking new Western suppliers. In reality, there are very few possible in the next decade due to the long project development timeline required. Arafura is one which will happen.
- Rare Earth prices have moved upwards markedly in the last two years as shortages are experienced outside China. Interestingly, prices in 2010 returned in real terms to more typical levels seen in 1980, the period prior to China becoming a major supplier.
- The governments of countries around the world in which Rare Earths are used to make vital products are increasingly recognizing the Strategic nature of Rare Earths
- You may recall that Rare Earths were discussed by the Japanese Ambassador and Australia's Foreign Minister, Mr. Kevin Rudd, during recent trade talks.
- Arafura has also been invited to present and attend events organised by USA and EU governments.

- Here lies a wonderful opportunity for Arafura via its world class Nolans Rare Earths Project

#### SLIDE 6

- Arafura was listed on the Australian Stock Exchange (ASX) in 2003. It is in the ASX top 300 list.
- The current market capitalization is around \$200 million
- Arafura is an emerging company on a rapid journey to become a significant company with substantial mining and chemical plant operations
- The Nolans Project is very much an “All Australian” venture
- Rare Earth oxides will be produced from a strategic resource in Australia utilizing world-class technology which has been developed in Australia
- The Business Model is liked by target customers because Australia has a good sovereign risk and the highest world class regulatory regime and environmental standards
- The Nolans Rare Earths resource is located in the Northern Territory. It is at Nolans Bore which is 130 kms. north of Alice Springs and 10 kms. due west of the main North/South Highway
- At the proposed Nolans Bore Mine, ore will be mined and processed through a significant beneficiation plant which will produce a mineral concentrate
- The concentrate will be transported by rail to Whyalla in South Australia where final Rare Earth oxides for users worldwide will be produced in a Rare Earths complex by unique & proprietary chemical treatment processes.

#### SLIDE 7

- I'll now describe some more details of the Nolans Project
- It is a world scale project with long life.
- We already have a JORC compliant resource which will sustain just over 20 years production of Rare Earth oxides at 20 ktpa. This production rate will be just over 10% of global supplies when Arafura begins production
- The Nolans resources is “open” and we have undertaken a major expansion drilling program in 2011 to investigate how large it is. Results will be available at the end of 2011. We have already announced some good new drill intercepts of the mineralization at depth and along strike

- The unique geochemistry of the Nolans Resource will enable Arafura to have a multi-product portfolio which includes Rare Earth oxides, a phosphate product, uranium oxide and gypsum
- The Nolans resource contains the full range of Rare Earths. Each Rare Earth resource has a different Rare Earth assembly. In Arafura's case, the Nolans resource has a relatively high percentage of "magnet feed" Rare Earths (Neodymium + Dysprosium) compared to most other non-Chinese projects
- The Nolans Project was modeled extensively in October 2010
- The Capital Cost for Arafura was estimated at approximately \$1 billion
- The project gives excellent financial returns when modeled with Rare Earth prices in the range of US\$22 to US\$54/kg.
- Returns ranged from good to outstanding.
- It is worth noting that prices are currently at \$149/kg – almost 3 times the highest case we modeled.

#### SLIDE 8

- I would now like to explain the significant progress Arafura has made with the Nolans Project
- It is widely recognized that it takes about 15 years to advance a Rare Earths project from initial exploration find right through to production of Rare Earth oxide products
- Arafura has made excellent progress since its first exploration in 1999 and is now well advanced through its Bankable Feasibility Study which is due to be completed in the second half of 2012
- Arafura is one of the very few World Scale projects this far advanced. There will be very few new suppliers this decade and Arafura will be one of them.
- It is worth noting the significant work and commitments required to develop a Rare Earth's project. At BFS completion, which is planned by the end of 2012 with Project financing also in place by then, Arafura will have completed 100km of drilling and spent \$250M
- Arafura is the only 'near term' Rare Earth project with significant volumes of product available for sale
- We are currently in discussions with target customers worldwide including in Japan
- We recently announced our first Letter of Intent with large German company Thyssen Krupp covering commercial arrangement for sales of our products in Germany

SLIDE 9

- Given the scale of Rare Earth projects, the large capital expenditure required and the necessity to develop unique processing technology, Arafura is methodically and carefully advancing through each phase of the project to ensure we “get it right” first time and the operations are sustainable on an ongoing basis at design capacity
- We believe our “All Australian” model is particularly robust
- We are now going the “extra mile” in terms of Nolans Project “front-end loading” to de-risk, optimize design, achieve quick start-up and secure ongoing operational performance.

SLIDE 10

- Arafura has developed its own unique processing technology in Australia using Australian experts including ANSTO, CSIRO, ALS Ammtec etc.
- This work started at laboratory bench scale and progressed through small pilot to full pilot scale where the current flow sheet was tested and proven
- The Australian Federal Government provided a development grant of approximately \$3.3M in the early days of testing
- The established technology is now being taken a step further beyond perhaps more typical practice and into larger demonstration scale as part of our “going the extra mile” in terms of Nolans Project front end loading
- In the pictures you can see the substantial scale and contemporary nature of the Demonstration equipment

SLIDE 11

- I would now like to focus on Arafura’s presence in the Northern Territory

SLIDE 12

- Arafura has been active in the Northern Territory for almost 15 years
- We are very proud of our long association with the Northern Territory
- We have an office base and exploration sample store in Darwin which is the home to 4 full time employees

- We also have an Exploration Office at Aileron near Nolans Bore
- Our company approach is one of very much being part of the community in which we are present
- We have developed excellent relationships with government, regulators, administrators and communities and received strong support from everyone
- We have sought to engage local people and contractors to assist in our activities wherever possible and practical
- Our style is to be open, communicate and transparent
- We are living these values as we progress through the regulatory approval process which includes our Environmental Impact Statement for the Nolan Bore Mine
- In summary, our experiences in the Northern Territory to date have been very positive and we commend it to everyone as a great place to consider for your developments and investments

#### SLIDE 13

- Arafura has undertaken a major drilling program in 2011 at Nolans to upgrade resource confidence and investigate expansion potential
- Approximately 52km of drilling has been completed which is more than previously in total. We have now completed almost 100km of drilling.
- Results from the drilling program are due at the end of 2011
- In the picture you can see the Nolans Resource which is flat land and a grazing land pastoral lease
- There are 5 drill rigs in operation and a sample preparation facility
- At peak drilling periods, which were carried out on a 24 hours x 7 day basis, we had just over 50 staff involved – a major program by any standard.
- The Program has cost approximately \$15M which we understand to represent between 5 to 10% of the total exploration spend in the Northern Territory this year

#### SLIDE 14

- From this slide, you can see that we have now drilled the resources to a minimum of 40 x 40 metres spacing
- In some areas the drill spacing is already 20 x 20 metres

SLIDE 15

- The Nolans Bore Mine will be a substantial investment of around \$200M by Arafura and others
- It will be a significant long term operation
- It will be an open cut mine and large scale beneficiation plant
- It has a good location, is accessible and is close to most infrastructure
- It will generate sizeable numbers of jobs during construction and operations
- Importantly, the Nolans Bore mine will create much value within the local community and the wider Northern Territory at large
- It will be a significant regional development which is aligned with the Northern Territory Government objectives to create these type of facilities

SLIDE 16

- Arafura can also create economic benefits in the Northern Territory beyond Rare Earths
- The Nolans Bore Mine can provide “critical mass” and act as a “hub” for other local regional developments
- Arafura can act as a conduit for investment by others in the Northern Territory. Our largest shareholder, ECE, is an example of this, following its investment in Arafura. ECE, having become familiar with the Northern Territory, is now making other investments and has opened its own office in Darwin
- Finally Arafura continues to seek investment partners for its non-Rare Earth exploration in the Northern Territory

SLIDE 17

- As an emerging company, investment opportunities exist within Arafura
- Arafura will be seeking funds to complete its Bankable Feasibility Study during the next 12 months. Approximately A\$60M will be required.
- Arafura will require approximately A\$1 Billion Project Financing by the end of 2012 when the Bankable Feasibility Study is complete to proceed with Construction
- Arafura is currently pursuing all types of financing and is involved in many discussions with different potential providers



- Our objective is to deliver a financing outcome which gives the best results for our shareholders

#### SLIDE 18

- Finally, it is time to summarize
- Rare Earths is an exciting industry with a very positive outlook
- Arafura has a wonderful world class Nolans Rare Earths Project which is based on a strategic resource in the Northern Territory
- Arafura will be one of the few new suppliers outside China this decade
- The Nolans Project is well advanced in the Bankable Feasibility stage
- The Nolans Bore Mine will be a significant investment in the Northern Territory
- It will be a substantial operation which will create much value in the Northern Territory
- Investment opportunities exist in the Nolans Project.
- Arafura has developed great relationships in the Northern Territory.
- Arafura is proud of it's long association with the Northern Territory and commends it to others to consider for their future developments and investments.

#### SLIDE 19

- Ladies and Gentlemen thank you for your attention