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BASE METALS

AUSTRALIAN RARE EARTHS PROJECT

High recovery to counter low grades at Nolans

Bench scale tests on the rare earths and phosphate at Arafura Resources' Nolans project in the Northern Territory have produced what was described as the world's best known recovery for these minerals.

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PERTH -

The managing director of Arafura Resources, Alistair Stephens, told Friday's annual meeting in Perth that the Nolans project, 130 kilometres north west of Alice Springs, is now considered to have a net present value of \$A1.1 billion (\$US959 million).

The company was on course, he said, to commission in 2010 and ramp up the following year to 50% annualised capacity that may be 10,000 tonnes of rare earths, doubling within two years.

The bench tests had been highly positive and would be further refined in the definitive feasibility study (DFS) to be undertaken next year. A pilot plant was being built in 2008 to test a continuous process at a large scale and also to refine design flow-sheets and chemical consumptions.

Stephens said bench tests had shown recoveries of 83% – "the highest known for any rare earths deposit" - while recovery for a high purity, high quality phosphate product was 80%. This was good news given that Nolans was not a high-grade rare earths deposit. He said a comparison in recovery terms were some big rare earth mines in northern China where only 10% recovery was being achieved on high grade ore. Metallurgical recovery was far greater on rare earth mines elsewhere in China.

In response to questions to Stephens and chairman Mick Muir, Stephens commented that, at this stage, there were no set plans for a joint venture but there may be some partnership or partnerships undertaken once the DFS was established, involving off take relationships, financing or some other relationship.

The capital requirement may turn out to be less if the DFS indicates the annualised production target could be less. Capital cost at this are estimated at \$A750 million (US\$654 M), including a base of \$A450 million (US\$392.4 M) for all plant. Operating costs could be \$A350 million (US\$305.2 M), assuming that chemicals for processing are all imported. Stephens said chemicals would represent about 70% of operating costs.

The revenue from Nolans over a 20-year mine life could total on "conservative commodity prices" a total of \$A8.25 billion (US\$7.19 B) with production of 20,000 tpa of rare earths (priced at US\$11,600/t), 150,000 tpa phosphoric acid (US\$400/t), 400,000 tpa calcium chloride (US\$100/t) and 150,000 tpa uranium oxide (\$US100/lb).

Stephens told *Mineweb* that the uranium component would be purely by product from Nolans production, not from any future production by the demerged NuPower Resources Ltd which now holds some of Arafura's uranium leases (in which Arafura retains a 10% stake).

Stephens said that currently China produces about 95% of world demand (108,000t) for rare earths, domestically consumes 55%, and has a current export quota for the balance in line with other Chinese Government moves, Stephens expects the export quota will be cut back and that eventually China will have to import rare earths for its burgeoning industrial demand.

Global demand was expected to grow at 11.5% per annum (based on Chinese Chamber of Commerce Mining & Chemicals' figures) and this should see global supply reach 185,000t by 2012.

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