



## Quarterly Activities Report

For the Period Ended 31 March 2012

### HIGHLIGHTS

- Detailed mineralogical testwork concludes that the uranium mineralisation at Marenica has distinctive characteristics including that the uranium occurs as a single mineral, in a distinct size band, is well liberated and is heavier than the host rock.
- This mineralogical testwork indicates that the Marenica uranium deposit should be amenable to lower capital and operating cost metallurgical processes than those previously considered.
- The Board believes that these characteristics present an opportunity to significantly concentrate the uranium, targeting levels in excess of 30 times at high recovery.
- If screening and de-sliming, gravity separation, magnetic separation and/or flotation, all processes which are widely used in other industries, are successfully implemented, they would reduce the amount of material to be treated and lower the capital and operating costs compared to conventional uranium concentration process – resulting in enhanced project economics.
- Board approves program of further metallurgical testwork to prove these concepts.
- Subject to the success of this work, the Board has committed in principle to a Project Scoping Study based on the new processing route.
- Eligible shareholders have been offered the opportunity to participate in a fully underwritten pro rata non-renounceable entitlement issue to raise up to approximately A\$3.24m at 1.3 cents per share, to fund activities.

### Marenica Uranium Project – 75% owned

During the Quarter, Marenica's exploration and management team continued to progress development plans for the Company's 75%-owned **Marenica Uranium ("Project")**, located in Namibia, Southern Africa.

As commented on in the half-yearly report, studies using established uranium metallurgical process routes (heap-leach, tank-leach, in-situ leaching) have led the Board to conclude that the Project was unlikely to be economically viable, under current and projected future uranium prices, unless an alternative processing route could be identified

Accordingly, the Board decided that continued spending on resource development and conventional metallurgy could not be justified and, in late 2011, initiated a Strategic Technical Review ("Review"). The Review was conducted by a Technical Steering Committee comprising Marenica personnel and recognised independent industry experts.

#### Technical Review Outcomes

Following completion of detailed mineralogical testwork, it was concluded that the Marenica deposit uranium mineralisation has a number of distinctive characteristics:

It occurs as a single mineral, in a distinct size band, is well liberated and also heavier than the host rock.

These characteristics may make the deposit

amenable to the use of low capital and operating cost processes to recover the uranium, specifically extracting and concentrating the uranium using techniques such as screening and de-sliming, gravity separation, magnetic separation and flotation, all processes which are not usually used in the uranium industry. They are, however, well established, conventional metallurgical processes used extensively in other industries.

Successful application of these techniques to the Marenica ore will significantly upgrade the uranium concentration. In turn, this would reduce the amount of material to be treated and lower the capital and operating costs for

processing, potentially resulting in significantly enhanced project economics. The Board of Marenica views the results of the Review as a significant technical and strategic breakthrough for the Marenica Project, paving the way for an updated Project Scoping Study to unlock the value of this significant asset.

After reviewing these findings, Marenica commissioned the Australian Government owned Commonwealth Scientific and Industrial Research Organisation (CSIRO) to further investigate the mineralogy.

The CSIRO's findings and the opportunities for further assessment are summarised in Table 1:

**Table 1: Mineralogical characteristics of Marenica ore**

Mineralogical Characteristic	Comments	Opportunities
Single uranium mineral	Carnotite, SG of 4.2	1 mineral, simplifies process
Carnotite extremely well liberated	Virtually no composites of carnotite and gangue	Good opportunities for success with physical separation techniques and potential for high-grade concentrates
Carnotite is paramagnetic	Vanadium component of carnotite	Magnetic separation techniques
Distinct size department	Vast majority of carnotite confined to the -125+5 micron size range	Upgrade by size separation of both coarse and ultrafine fractions
		Ideal size range for flotation - carnotite flotation collectors identified in literature search
Significant density contrast from gangue	Carnotite SG of 4.2, gangue SG of 2.5-2.7	Amenable to gravity separation

### **Next Steps**

The Board has approved a program of further metallurgical testwork to be undertaken on a bulk-sample of Marenica ore. This work is to include gravity and magnetic separation, flotation, screening and de-sliming and is expected to take approximately 6 months. It will be undertaken in two phases:

- Phase 1 – scoping level bench top testwork on small samples masses available in Perth to assess the unit processes of flotation, magnetic separation and gravity separation. A literature search will be completed on the flotation process with reagents sourced. A second channel sample will be tested at CSIRO to compare the uranium mineralogy. This phase will provide an indication of the suitability of each of these unit operations ahead of Phase 2.

- Phase 2 – a representative bulk sample will be obtained from a costean through the ore zone. This will provide a greater sample mass to feed extensive testwork programmes to further develop each of the proposed unit operations.

If this work is successful, the Board has agreed in principle to a Project Scoping Study to confirm the viability of the Project.

The Board believes that, with substantial upgrades outlined above, the Project economics would be materially improved.

## TEXAS AND OKLAHOMA COAL COMPANY

- Concluded technical reviews on exploration projects – Texas, Oklahoma, Colorado and British Columbia.
- Commenced application for State and Federal land in Colorado & Oklahoma.
- Commenced land and minerals acquisition Colorado.
- Started land title due diligence in Oklahoma
- Commenced Coal Exploration lease acquisition in British Colombia.
- Developed joint venture exploration agreement with established mining company in Oklahoma.
- Appointed a Chief Executive Officer and an experienced industry Board member.
- Formed Taimen Resources in Mongolia and invested in seed capital to develop some coking coal and iron ore opportunities that were brought to TOCC. A coal project and an iron ore project have been significantly progressed.

## CORPORATE

On 2 April 2012, the Company announced a Marenica Energy Limited (the “Company”) wishes to advise that the Directors have resolved to make an offer to eligible shareholders to participate in a pro rata non-renounceable entitlement issue to raise up to approximately A\$3.24m.

Under the entitlement issue, the Company will issue up to 249,314,844 new fully paid shares at 1.3 cents per share. The shares will be offered on the basis of one new share for every two existing shares held at the record date (the “Entitlement Issue”).

Hanlong Energy Ltd (“Hanlong”), an existing substantial shareholder of the Company and holder of a convertible note with a face value of A\$2 million, has agreed to underwrite the Entitlement Issue.

The Directors of the Company have agreed to sub-underwrite the Entitlement Issue to the amount of \$120,250.

The Entitlement Issue offer opened on 20 April 2012, closes on 7 May 2012 and new shares scheduled to be issued on or about 14 May 2012.

The proceeds from this issue will be used to fund the Company’s activities, including further metallurgical testwork on bulk-samples to assess whether screening, de-sliming, gravity separation, magnetic separation and/or flotation can be applied to upgrade the yield from the Company’s Marenica uranium deposit.

The Company also agreed with Hanlong to redeem the existing convertible note held by Hanlong and issue a new convertible note to Hanlong with the same face value, interest rate and maturity date and a conversion price of 2.674 cents per share.

**ENDS**

For further information contact Marenica Energy Limited:

**Robert Pearce, Chairman, Ph: (+61 8) 9321-7355**