



## Quarterly Activities Report

For the Period Ended 31 March 2013

### HIGHLIGHTS

- Uranium upgrade testwork results point to a significant improvement in the potential Marenica project economics.
- Beneficiation testwork has produced a concentrate with a grade of >60 times that of the ore at a recovery of >65%.
- The plant feed grade of 94ppm  $U_3O_8$  (resource grade estimate) was upgraded to over 5,500ppm  $U_3O_8$  during the testwork.
- The beneficiation circuit, at a feed rate of 20Mtpa of ore is estimated to produce a concentrate of only 200,000tpa, which could then be fed to an acid tank leach circuit.
- Internal financial estimation has determined that the operating costs are expected to be below the current spot uranium price (US\$41/lb).

### Marenica Uranium Project – 75% owned

The main activity in this quarter continued to be detailed metallurgical testwork on bulk samples, to upgrade the carnotite ahead of leaching, from the Company's 75% owned **Marenica Uranium ("Project")**, located in Namibia, Southern Africa.

A testwork programme commenced in February 2012 to determine if ore from the Project could be economically upgraded prior to leaching. The goal was to reduce the tonnage to be processed by the leach circuit, being a significant cost for any uranium project.

The testwork programme was split into two phases:

- **Phase 1 - Characterisation of the Marenica uranium mineralization.** The mineralogical testwork concluded that the uranium mineralisation has distinctive characteristics. It occurs as a

single mineral, in a distinct size band, is well liberated and is heavier than the surrounding rock. These characteristics present an opportunity to apply well-established physical processes to upgrade the uranium. The results of Phase 1 were the basis of moving to Phase 2.

- **Phase 2 – Upgrade of the Marenica Uranium ore.** This work was done in Namibia and Australia on representative bulk samples of Marenica ore. The upgrade testwork programme used well-established and comparatively low cost processes that are scalable to large tonnage operations. Phase 2 was completed on schedule in the March 2013 quarter.

The upgrade occurs in two stages, a primary and

secondary upgrade. Primary upgrade testwork has produced upgrade ratios of between 3 and 4 and the secondary upgrade produced a grade increase of 15 to 25 times. A plant feed grade of 94ppm  $U_3O_8$  was upgraded to over 5,500ppm  $U_3O_8$  in the testwork.

The total upgrade ratio of the primary and secondary upgrade stages is >60 times at a recovery >65%, which is above Marenica's expectations.

The upgrade process potentially reduces the leach feed to about 1% of the beneficiation plant feed by rejecting the major gangue mineral calcite. This calcite rejection enables the proposed leach circuit to be changed from an alkali leach (with higher operating temperatures and slower kinetics) to an acid leach (at ambient temperature and rapid kinetics), reducing expected capital and operating costs. At a mining rate of 20Mtpa the leach feed tonnes are expected to be only 200,000tpa at an expected grade of over 5,500ppm  $U_3O_8$ .

The metallurgical testwork programme has been monitored and reviewed by a committee of independent industry experts and Company personnel. This includes senior CSIRO (Australian Commonwealth Scientific and Industrial Research Organisation) scientists, and consultants with extensive experience in upgrading minerals using similar unit operations tested on the Marenica

ore. Committee members have extensive southern African experience in uranium and other commodities and in the development of new technologies.

The unit processes used in the upgrade testwork are well established and commonly used in the wider mining industry (but not in the Uranium industry) and at scales of operation suitable for the Project.

By rejecting up to 99% of the original mass prior to the leaching circuit, the estimated capital and operating costs are significantly lower than those which would typically be expected to process the ore, thereby significantly enhancing the potential Project's economics.

An internal financial model has been developed which shows that the operating costs are expected to be below the current spot  $U_3O_8$  price of US\$41.25/lb (as at 10 April 2013).

The Company continues to work on optimising the concentrate upgrade ratio and on maximizing the uranium recovery.

In the next six months work on optimizing the process flowsheet is planned to be completed and a prefeasibility study is expected to commence in the December 2013 Quarter.

## CORPORATE

The Company has filed a provisional patent application over the Uranium upgrade process.

The Company has lodged a claim under the R&D Tax Incentive scheme and expects to receive a tax refund of over \$200k in the June 2013 quarter.

With the successful completion of the Phase 2 testwork programme, the Company expects to announce a funding round during the June 2013 quarter to fund the next phase of development of the Project and the Company's operations.

## ENDS

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