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Tumas Project *U-pgrade*TM Metallurgical Testwork: Interim Results

KEY POINTS

- The metallurgical testwork program being conducted at CSIRO and Nagrom Laboratories in Perth testing the amenability of the Marenica *U-pgrade*TM beneficiation process to Tumas Project ore, remains on target for completion by the end of June 2016.
- The initial results have provided confidence that a high recovery of uranium into a low mass, high grade concentrate can be achieved using the *U-pgrade*TM process.
- In the first step of the *U-pgrade*TM process, scrubbing of the Tumas ore produced good liberation of carnotite.
- Gravity processing of the mid-size scrub product from the *U-pgrade*TM process produced a concentrate with grade exceeding 13,000ppm U₃O₈.
- Significant progress has been made on the crucial de-slime and carbonate removal step of the *U-pgrade*TM process and results to date are exceeding expectations.
- A project incorporating Marenica's *U-pgrade*TM beneficiation process as an integral part of the overall flowsheet has the potential to have comparatively low capital and operating costs and an accelerated development timeline.

Advanced stage uranium explorer **Deep Yellow Limited (ASX: DYL)** is pleased to announce successful interim results from the metallurgical testwork program currently underway on bulk samples from the Company's Tumas Project located in Namibia. The tests, which are being conducted at the CSIRO and Nagrom Laboratories in Perth under the supervision of Marenica Energy Ltd (ASX: MEY), commenced late in January and are on track to be completed by the end of June.

In summary, the tests conducted to date have demonstrated that by using the *U-pgrade*TM beneficiation process, a high uranium recovery, low mass, high grade concentrate can be produced from the Tumas resource for leaching and refining.

"It is most encouraging that already, just over half way through the testwork program, we have been able to obtain such good results. Our confidence in embarking down this path is being rewarded and we are eagerly awaiting the outcome of the final stages of the testwork," DYL's Managing Director Greg Cochran said. "Given that so much research has already been conducted on the Marenica deposit, which has similar mineralogical characteristics to DYL's palaeochannels but less than one third of the grade, Tumas is possibly one of the best opportunities to commercialise the *U-pgrade*TM



process. Given Namibia’s supportive legislative environment and the presence of three potential off-takers for a high grade uranium concentrate product (as an alternative to producing yellowcake on site) makes it even more attractive.”

ENDS

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For further information on the Company and its projects

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Detailed Information

Introduction

DYL engaged Marenica Energy Ltd (ASX: MEY) to supervise a metallurgical testwork program on two bulk samples from DYL’s Tumas Project in Namibia. The objective of the program is to assess the amenability of MEY’s *U-pgrade™* beneficiation process (See Figure 1) to Tumas ore.

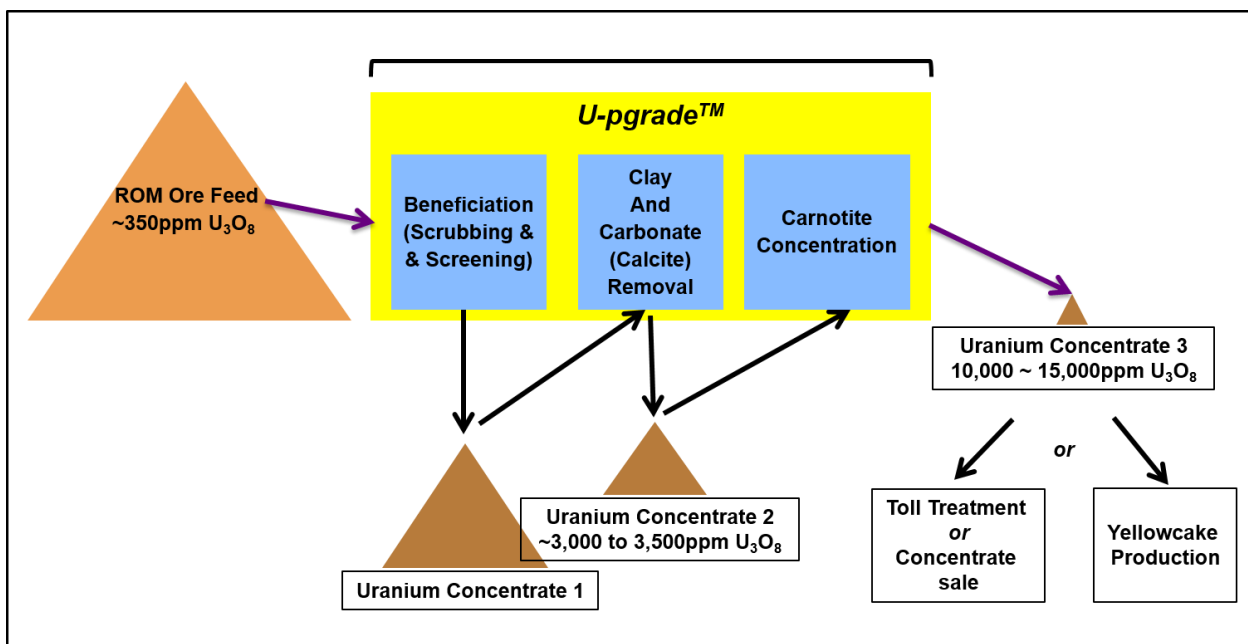


Figure 1: Marenica *U-pgrade™* Flowsheet - Schematic Representation.

The Tumas project in Namibia is located within an extensive calcrete palaeochannel system with the current focus on the Tumas Deposit (Zones 1 and 2) which are some 14 kilometres in extent (See Figure 2).

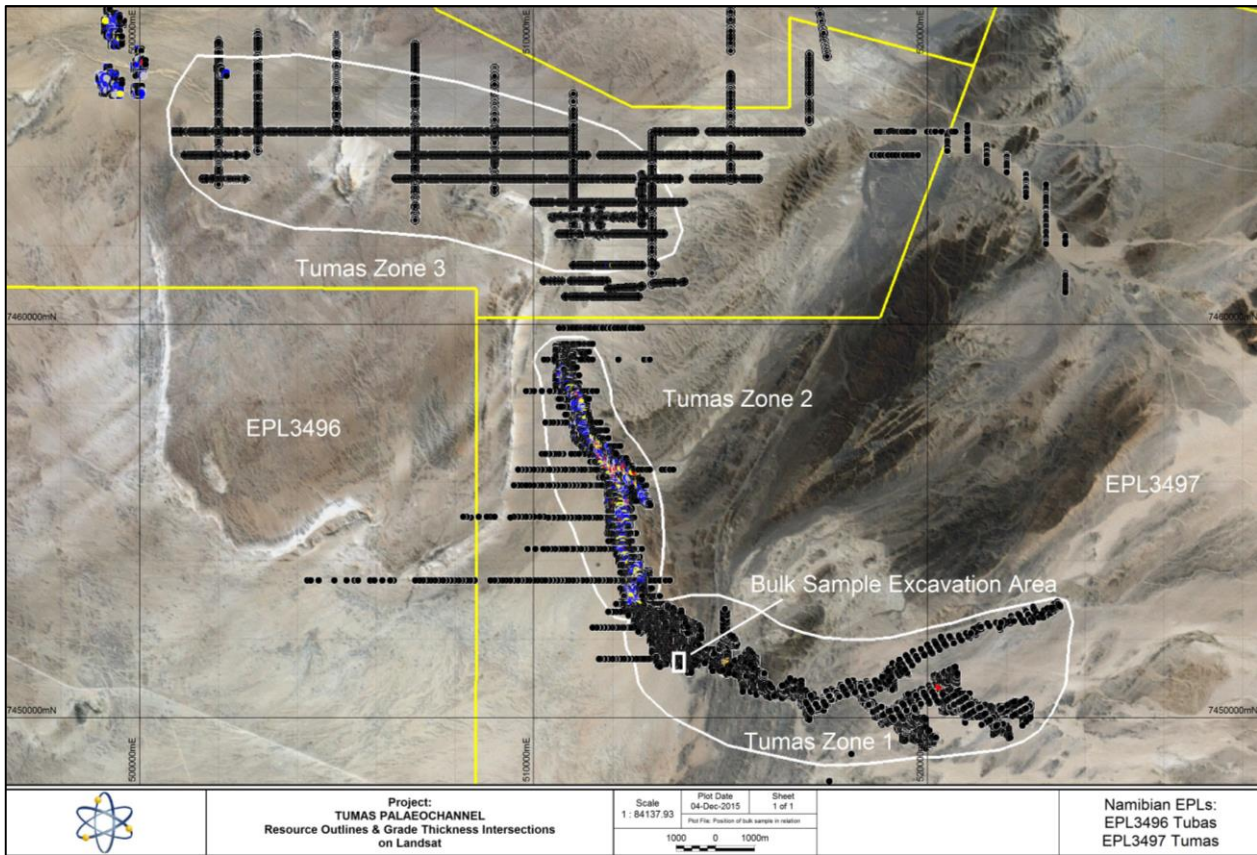


Figure 2: Map showing location of Tumas Zones 1 and 2.

The two samples, which were excavated towards the end of last year and the beginning of this year, consist of a higher grade medium sulphate composite (“MSC”) sample and a slightly lower grade low sulphate composite (“LSC”) sample (See Table 1).

Sample	Ca (%)	Fe (%)	Mg (%)	SO ₄ (%)	Si (%)	U (ppm)	V (ppm)
MSC	8.9	1.4	0.79	1.4	29.2	568	200
LSC	9.7	1.1	0.67	0.03	28.5	254	100

Table 1: Nagrom Assay Results of the MSC and LSC Bulk Samples

The program, which is being conducted at the CSIRO and Nagrom Laboratories in Perth, commenced late in January and remains on track to be completed by the end of June with reporting expected by the end of July 2016.

Mineralogy

In the initial phase of the testwork program, mineralogical characterisation showed that the primary uranium bearing mineral, carnotite, is likely to be highly liberated in the process. The balance of the carnotite mineralisation is mostly associated with carbonate minerals which is similar to the situation at Marenica on which **U-pgrade™** was developed. This provided confidence the **U-pgrade™** process would achieve a high recovery of uranium into a low mass, high grade concentrate suitable for



leaching in an onsite facility, or a satellite plant. The work also found that the carnotite grain size was relatively coarse when compared to earlier samples from Tumas Zones 1 and 2 which were generated by RC drilling. This will aid separation of the carnotite from gangue material with minimal losses.

The degree of carnotite liberation and grain size will be evaluated further by planned variability testing across the deposit in the next phase.

Scrubbing

The scrubbing program included tests with and without the addition of scrubbing media. In some tests, the coarse fractions were crushed and re-scrubbed. This process broke down the conglomerates into the natural particle or grain size. The re-scrub results may be summarised as follows:

LSC

- The uranium grade of the +1 mm fractions averaged 15 ppm.
- The re-scrub broke down the conglomerates and provided an indication of the natural particle size.
 - 52% of the weight is between 125 µm and 1 mm
 - 7% of the weight is >1 mm
- The finest fraction from sizing did not contain a high proportion of uranium, indicating that carnotite slimes are not being generated by this process.

MSC

- The uranium grade of the +1 mm fractions averaged 35 ppm.
- The +125 µm – 1 mm fractions contained 47% of the mass
- The finest fraction had a very low uranium grade compared to the primary scrub.

Importantly, high energy scrubbing did not result in the generation of carnotite slimes. This is important as slimes could potentially be lost in subsequent process stages, thus impacting the high recovery potential of the process.

On the coarse size fractions produced from scrubbing, it has been demonstrated that uranium recovery by gravity concentration is possible. In fact the tests demonstrated that gravity concentration of the coarse fractions may produce a high grade concentrate in excess of 13,000 ppm U₃O₈ (Wilfley Table Test, See Figure 3 overleaf) which would report to the final uranium concentrate in the flowsheet.

De-sliming and Carbonate Removal

Significant progress has been made on the crucial de-slime and carbonate removal stages of the *U-ppgrade™* process and results to date are exceeding expectations. Importantly, the carnotite particles from the Tumas resource are coarser than initially expected which is a positive outcome and scrubbing has been shown not to produce carnotite slimes as noted above. This means that the scrub circuit configuration is simplified in that it does not have to be designed to protect against slimes formation.

Preliminary testwork has shown that 93% of the uranium feeding the de-slime circuit reports to the product and that 72% of the mass feeding the de-slime circuit reports to the product stream for carbonate removal. In the carbonate removal step, 98% of the uranium in the feed reports to the product in approximately 55% of the mass feeding the carbonate removal circuit. This product stream is further processed to generate the final uranium concentrate which may then be processed in a



conventional acid leach/concentration process to produce the final uranium product. The testwork on the final uranium concentrate step is currently ongoing.

The results achieved to date in the de-sliming and carbonate removal process are highly encouraging.



Figure 3: Wilfley Table Test

Conclusions

DYL has received successful interim results from the metallurgical testwork program currently underway on bulk samples from the Company's Tumas Project located in Namibia. The tests, which are being supervised by Marenica Energy Ltd (ASX: MEY), are on track to be completed by mid-year.

The tests have clearly demonstrated that by using the Marenica *U-pgrade*TM process as part of the overall flowsheet, a high uranium recovery, low mass, high grade uranium concentrate can be produced from the Tumas resource. Importantly, the Marenica *U-pgrade*TM beneficiation process uses well tried and tested standard equipment which reduces technical risk on scale-up. Also, a plant incorporating the *U-pgrade*TM beneficiation process has the potential to have comparatively low costs and an accelerated development timeline.

With further processing using conventional leaching and refining technology, a final high quality uranium product can be produced. As an option, the concentrate produced from the *U-pgrade*TM part of the overall process may be safely and cost-effectively transported to third parties for final processing.



About Deep Yellow Limited

Deep Yellow Limited is an ASX-listed, Namibian-focussed advanced stage uranium exploration company. It also has a listing on the Namibian Stock Exchange. Deep Yellow's operations in Namibia are conducted by its 100% owned subsidiary Reptile Uranium Namibia (Pty) Ltd.

The Company is currently conducting metallurgical testwork and evaluating fast track development options for its Tumas/Tubas surficial calcrete palaeochannel deposits which are amenable to various physical beneficiation and upgrading techniques that have been successfully tested over the last four years.

Deep Yellow also holds the Omahola Open Pit Alaskite Heap Leach Project on which value engineering studies are being conducted to supplement the recently completed preliminary economic analysis.

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