Deep Yellow Limited: Positive Results from Mulga Rock Metallurgical Testwork

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Perth, Australia - Deep Yellow Ltd. (ASX:DYL) (FRA:JMI) (OTCMKTS:DYLLF) is pleased to provide an update on the ongoing metallurgical testwork program at the Mulga Rock Project (MRP or Project), located in the Great Victoria Desert in Western Australia, 290km by road ENE of Kalgoorlie.

Overview

After acquisition of the MRP through the Vimy merger in 2022, Deep Yellow identified a significant potential value uplift for the MRP.

Upon this acquisition, a thorough review of the available data, information and assumptions used by Vimy for the numerous MRP studies was undertaken. The key result from this work was a reconsideration of the contribution of the full suite of critical minerals available in the deposit, in addition to the expanded uranium resource that would become available from this new approach.

The value uplift utilising the critical minerals is contained within the constraints of the development footprint approved under Ministerial Statement 1046 on 16 December 2016 and the re-endorsement of this approval on 16 December 2021 by the Director General of the WA Department of Water and Environmental Regulation. This confirmed substantial commencement had taken place within 5 years of approval, as required under the Ministerial Statement, allowing for the continued development of the MRP.

To allow this Project reappraisal to occur, focused on the Ambassador and Princess deposits (see Figure 1*), extensive drilling was undertaken across two major drilling campaigns commencing in October 2022 and completed in August 2023.

A key objective of the drill program was to collect fresh samples and provide more detailed data required for necessary metallurgical testwork, revision of the resource base involving the full suite of minerals, and to gain essential ore variability information (see previous ASX announcements dated 25 November 2022, 20 January 2023, 10 July 2023 and 14 August 2023).

Deep Yellow is pleased to be able to provide an update on the 10-month metallurgical testwork program which is still ongoing and from which some highly positive results are being returned.

Results from this program will underpin a revised DFS for the Project, expected to commence early in 2024.

Review Outcomes

The detailed review, completed on the significant body of geological data, metallurgical testwork and technical information that was available, concluded that while the base data was sound, several material issues had changed since the Project assessment criteria and assumptions were originally applied.

The most notable change and opportunity identified from the review was the potential value uplift from the possible inclusion of contained base metals (copper, nickel, cobalt and zinc) and rare earth elements (particularly neodymium, praseodymium, terbium and dysprosium), considered and referred to in this document collectively as critical minerals. While some assessment of the potential commercial value of the critical minerals had been undertaken by Vimy, it was incomplete and not to DFS standards. Additionally, elements had been considered in isolation in terms of their value, and not as a polymetallic whole-of-project operation.

Metallurgical Testwork Program

In addition to the 63 aircore holes drilled late in 2022 to initiate metallurgical testwork, on 10 July 2023 the Company reported the completion of the first phase, comprising 233 aircore holes for 14,794m, of a two-phase drilling program. See Appendix 1 Table 1*.

This first phase of drilling provided essential samples for the current metallurgical program, designed to test the variability of the Ambassador and Princess deposits, as well as the potential value to the Project of the

contained critical minerals.

The current testwork program has focused on the leaching characteristics of the uranium and critical minerals contained within the available resource, including the extraction of these leached values from leach solution for final product recovery. The expected (and tested) extraction technique is Resin-inLeach (RIL) for uranium, followed by Resin-in-Pulp (RIP) for critical minerals, using commercially available resins and known methodologies already permitted for the MRP. With the depth of design and operating experience within the Deep Yellow mineral processing and hydrometallurgy team, the Company is confident that materially all metals extracted to resin will be able to be directed to a saleable product stream in a commercially viable process.

Whilst the testwork program is not yet complete, sufficient results are available to provide an interim update with work sufficiently advanced to draw conclusions concerning the overall recovery that may be expected for the various value elements.

The work conducted to date indicates the following key findings:

- an overall uranium recovery above 90% (2018 DFS: 85.9% to 89.6%) is likely to be achieved and the rapid leach kinetics (uranium dissolution within 1 hour) observed in earlier work is confirmed;

and

- overall recoveries for critical minerals above 70% are also indicated by the work undertaken to date (2018 DFS: no recovery assumed, but approximately 20% for base metals only indicated in available data).

Key Takeaways

The metallurgical testwork results to date are very encouraging and indicate significant potential to exploit a suite of valuable critical minerals for processing and recovery, in addition to uranium. For the samples tested, the substantial improvement in overall recovery performance of the critical minerals and the improvement in overall uranium recovery performance, compared to that indicated by the 2018 Vimy DFS, provides a strong expectation that the revised DFS will result in an improved economic outcome.

The metallurgical testwork program will continue to further define and optimise process conditions, costs and recoveries. This data, combined with the MRE update, expected later in 2023 and which will include the estimation of the critical mineral suite in addition to uranium, will provide the resource base of the revised Ore Reserve statement and consequent revised DFS.

The Company is on track to commence work on the revised DFS and reserve statement for MRP during the first half of 2024 once this testwork is completed and the new resource base is estimated for the Ambassador and Princess deposits.

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/V71J7Y34

About Deep Yellow Limited:

Deep Yellow Ltd. (ASX:DYL) (OTCMKTS:DYLLF) is successfully progressing a dual-pillar growth strategy to establish a globally diversified, Tier-1 uranium company to produce 10+Mlb p.a.

The Company's portfolio contains the largest uranium resource base of any ASX-listed company and its projects provide geographic and development diversity. Deep Yellow is the only ASX company with two advanced projects - flagship Tumas, Namibia (Final Investment Decision expected in 1H/CY24) and MRP, Western Australia (advancing through revised DFS), both located in Tier-1 uranium jurisdictions.

Deep Yellow is well-positioned for further growth through development of its highly prospective exploration portfolio - ARP, Northern Territory and Omahola, Namibia with ongoing M&A focused on high-quality assets should opportunities arise that best fit the Company's strategy.

Led by a best-in-class team, who are proven uranium mine builders and operators, the Company is advancing its growth strategy at a time when the need for nuclear energy is becoming the only viable option in the mid-to-long term to provide baseload power supply and achieve zero emission targets.

Importantly, Deep Yellow is on track to becoming a reliable and long-term uranium producer, able to provide

production optionality, security of supply and geographic diversity.

Source:
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