



1 March 2018

***U-pgrade*TM Beneficiation Process**

Increases Potential for Optimisation at Langer Heinrich

KEY POINTS

- ***U-pgrade*TM could increase production at Langer Heinrich by 40%.**
- **An initial study and testwork is considering a 3 million tonne per annum *U-pgrade*TM plant to co-process low grade ore (average grade of 325 ppm U₃O₈)**
- **Previous testwork indicates *U-pgrade*TM could reduce one tonne of mined ore to only 25 kilograms for presentation to the leach plant, whilst increasing the grade by approximately 35 times.**

Paladin Energy Limited (ASX "PDN") has confirmed in its presentation titled "BMO Conference Presentation" released to ASX on 26 February 2018, that it is evaluating the potential of Marenica's ***U-pgrade*TM** process on beneficiating low-grade ore at Langer Heinrich. This work is being undertaken in conjunction with Marenica Energy Limited ("Marenica").

The presentation discloses that initial studies indicate that Marenica's ***U-pgrade*TM** process could add 1.5 to 1.8 million pounds per annum of production to Langer Heinrich (an approximate 40% increase) and reduce overall site average costs by US\$1-2 per pound. It can therefore be inferred that ***U-pgrade*TM** operates at much lower cost than the current processing plant, as it reduces overall site costs.

On 8 February 2018, Marenica announced the results of testwork on Langer Heinrich ore, the results were very positive and indicated that the Langer Heinrich ore outperformed all other ores previously tested using ***U-pgrade*TM**.

The testwork results indicated that the ***U-pgrade*TM** process plant recovery is expected to exceed 85%, producing a concentrate for leaching of less than 2.5% of the mined mass. This means that for every one tonne of ore mined, only 25 kilograms of ***U-pgrade*TM** processed ore would be sent to the leach plant. By comparison, currently 600 kilograms of ore is presented to the Langer Heinrich leach plant for every tonne mined.

"We are excited that Paladin, in conjunction with Marenica, continues to consider the potential of ***U-pgrade*TM** at Langer Heinrich. We look forward to the benefits of ***U-pgrade*TM** to both Paladin and Marenica in assisting Paladin to reduce overall operating costs at Langer Heinrich", said Murray Hill Managing Director.

The focus of the testwork, referred to above, was on detailed mineralogical ore characterisation and laboratory scale testing of critical unit operations in the **U-pgrade™** flowsheet. Marenica has tested many ores through this same procedure and has a thorough understanding of the critical characteristics to determine the expected performance of particular ore through the **U-pgrade™** process. The testwork on Langer Heinrich ore was completed on a single composite prepared from four individual samples taken from the Langer Heinrich low grade stockpiles.

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