Musgrave Minerals Ltd: Mining Lease Grant and Strong Metallurgical Test Results

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Perth, Australia - Musgrave Minerals Ltd. (ASX:MGV) (FRA:6MU) (OTCMKTS:MGVMF) is pleased to announce that it has received initial metallurgical test work results from master composite samples for the White HeatMosaic and Big Sky deposits, on the Company's wholly owned ground at the Cue Gold Project in the Murchison region of Western Australia (Figure 1*).

The testwork has highlighted combined gravity and cyanide leach recoveries averaging 93-99% across the different domains (oxide and fresh) and importantly shows consistent amenability to conventional gravity and leaching techniques using standard reagents across all the individual deposits at Musgrave's Cue Gold Project.

Musgrave Managing Director Rob Waugh said, "This is another set of strong, consistent metallurgical results which show there is a general uniformity and consistency with the recoveries across all our gold deposits at Cue. The very high total gold recovery and high gravity-only component recovery ensures that conventional processing options can be applied in any development scenario moving forward and will strongly inform the Stage 1 PFS, which is due for completion late in the first quarter CY2023. The metallurgical recoveries are consistent with those previously observed from the Break of Day and Lena deposits."

"In addition, two new Mining Leases have been granted and now include full coverage of the Big Sky and White Heat-Mosaic deposits. Our granted Mining Leases now fully encapsulate all our gold resources in this area, and cover the broader development envelope. This is another significant positive step forward for the project."

White Heat-Mosaic and Big Sky Metallurgical Testwork Summary

Metallurgical recovery tests were completed on master composites from White Heat-Mosaic (fresh) and Big Sky (oxide) at various grind sizes across the strike and depth extent of the optimized open pit portions of the deposits. Sample recovery test results from individual domains are still pending.

The gravity recoverable component was initially concentrated using a conventional laboratory scale bench-top Knelson concentrator, followed by amalgamation and intensive cyanide leaching of the concentrate. A conventional 48hr cyanide leach was then carried out on reground (P80 75um) residual material from the Knelson concentrator with readings taken periodically to determine leach kinetics of the samples.

The test work demonstrated rapid leaching kinetics for both master composite samples and overall recovery of between 94% (Big Sky) and 98% (White Heat-Mosaic) over short leach times (Figure 1*).

1kg bottle roll leach extraction test work utilising a site water proxy confirmed rapid leaching kinetics post gravity recovery and terminal leach extractions exceeding 93-99% at low to moderate cyanide consumptions for both deposits at a grind P80 of 75um. Results from the testing are provided in Tables 1 and 2* below with a leach kinetics curve provided in Figure 1*.

In addition, high amalgamated gravity-only recoveries of >36% (Big Sky) and >76% (White HeatMosaic) at a P80 of 106um initial grind were achieved from a single pass through the Knelson concentrator. These gravity recoveries are very positive.

The test work was undertaken by ALS Metallurgical Laboratories (ALS) in Balcatta, Western Australia and managed and reviewed by Ivan Hunter at Minelogix Pty Ltd. ALS is responsible for sample preparation, mineralogy, comminution, gravity, cyanide leaching, including grind size and reagent optimisation, oxygen uptake, viscosity, carbon loading kinetics and variability testwork. Other specialist companies will complete the test work on aspects including tailings geochemistry, tailings geotechnical studies and tailings thickening.

Metallurgical Sample Selection

A master sample was collected from 3 representative drill holes (Figure 3* and Table 4*) from the White Heat-Mosaic deposit and from eight representative drill holes at Big Sky. The White Heat-Mosaic samples

consisted of two primary (fresh) composites (WH1 and WH3). The Big Sky samples consisted of eight oxide (BS1-8) (Table 4*). All samples are from representative mineralised zones within the preliminary optimised pit shells. All composites were diluted with at least 1m of footwall and hanging wall material with overall dilution being typically 40%.

Gold Head Assays, Methods and Mineralogy

All samples were analysed via the following methods, 500g Screen Fire Assay ("SFA") and 50g Fire Assay ("FA") with gold grades in the master composites noted as moderate to high. Additionally, full multi-elemental analysis was conducted on both composites. The head assays from the metallurgical composites are summarised in Table 1 below. Assays from individual domains are still pending.

Gravity and Cyanide Leach Testwork

Small scale tests were carried out on the two master composites to determine the amenability of gold mineralisation to recovery by gravity and subsequent cyanidation. The tests were conducted using a laboratory size 3-inch Knelson centrifugal concentrator, on 5kg batches at a feed size of 80% passing 150um. The gravity concentrate produced was then amalgamated with mercury in a bottle roll for two hours to recover free liberated gold with the amalgam tail then intensively leached. The gravity residue was then re-combined with the Knelson gravity tail for the downstream cyanide leach testwork using a bottle roll technique. All tests were performed using site synthetic water and the results are provided in Tables 1* and 2* below.

Both master composites (~40kg) from White Heat-Mosaic and Big Sky displayed strong gravity recoverable gold (GRG). The White Heat-Mosaic (fresh) sample recovered ~77% of the feed gold and the Big Sky (oxide) sample recovered ~37% of the feed gold to the gravity-only concentrate stream.

The inclusion of a gravity circuit when processing will reduce the spikes in feed grade and slow leaching of coarse gold entering the downstream carbon-in-leach ("CIL") circuit.

Cyanidation Testwork Observations

All the mineralised samples are classified as free milling with extractions typically between 94-99% at a grind size of 80% passing 75um. Final gold extraction rates need to be confirmed from individual weathering and fresh zones within the deposits. These results are pending.

Cyanide leach kinetics are fast, with the majority of gold leached within the first eight hours for both deposits (Figure 1*).

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/75H8YNE1

About Musgrave Minerals Ltd:

Musgrave Minerals Ltd. (ASX:MGV) is an active Australian gold and base metals explorer. The Cue Project in the Murchison region of Western Australia is an advanced gold and copper project. Musgrave has had significant exploration success at Cue with the ongoing focus on increasing the gold and copper resources through discovery and extensional drilling to underpin studies that will demonstrate a viable path to development in the near term. Musgrave also holds a large exploration tenement package in the Ni-Cu-Co prospective Musgrave Province in South Australia.

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