

# GENERATION MINING

## GENERATION MINING ANNOUNCES COMPLETION OF PILOT PLANT AND FEASIBILITY STUDY UPDATE

**Toronto, Ontario – January 27, 2021** – Generation Mining Limited (TSX: GENM) (OTCQB: GENMF) (“Gen Mining” or the “Company”) is pleased to provide a progress update for the Marathon Palladium-Copper Project in Northwestern Ontario (the “Marathon Project”) including the completion of Phase 2 metallurgical testing, pilot plant trials, and continued advancement on the Feasibility Study.

The Company previously reported on Phase 1 bench-scale metallurgical testing (news release dated August 20, 2020) that established improved PGM and Cu recoveries for use in the Feasibility Study and the Project going forward.

The Company initiated Phase 2 testing program that included locked cycle flotation testing and pilot plant trials. Work started in September 2020 at SGS Canada Inc. (SGS) in Lakefield, with completion of the lab-work in December 2020. The Phase 2 program reaffirmed expectations for metal recovery (as established in the Phase 1 testing) and demonstrated the expected range of Cu-PGM concentrate grade. The evaluation of Woodgrove Direct Flotation Reactors (DFR) technology for cleaner circuit flotation was also completed supporting feasibility study design concepts.

Jamie Levy, CEO commented, *“We are extremely pleased with the work completed in both the Phase 1 and Phase 2 metallurgical testing programs. We have advanced on a Feasibility design that includes an annual production rate of 9.2 million tonnes per year and believe the plant flowsheet and design is an improvement on prior concepts with key elements greatly de-risked. The Feasibility Study is advancing very efficiently, and we expect to have the Study ready for communication later in Q1, 2021.”*

The Cu-PGM concentrate from the Phase 2 testing was produced from three bulk sample composites. Two bulk sample composites were collected during 2020 from the location of the north pit footprint (“Main deposit”), and the south pit footprint (“W-Horizon”), with evaluation of a historical Composite 3 from past test work completed during 2010-2013. The Phase 2 test program outlines the expected range in PGM-Cu concentrate grade for the Feasibility Study and design process flowsheet. Phase 2 test results are noted in Tables 1a and 1b below.

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**Table 1a:** Marathon Project Phase 1 & 2 Metallurgical Test Results

Metal Recovery	2020 Phase 2 Pilot Plant Test Program <sup>1</sup>	2020 Phase 1 Benchscale Test Program <sup>2</sup>	2020 PEA Technical Report <sup>3</sup>	Variance from 2020 PEA to 2020 FS
%Rec Copper (Cu)	92.5 - 94.7	93.0	90.0 <sup>4</sup>	+3.0
%Rec Palladium (Pd)	86.9 - 90.2	86.9	82.9	+4.0
%Rec Platinum (Pt)	63.5 - 69.7 <sup>5</sup>	84.2	74.5	+9.7
%Rec Gold (Au)	67.7 - 86.9	72.4	73.2	-0.8

**Table 1b:** Concentrate Grades from Phase 2 Pilot Plant Testing

Cu-PGM Conc Grade	Main Zone Composite Cu-PGM Conc Grade <sup>1</sup>	W-Horizon Composite Cu-PGM Conc Grade <sup>1</sup>	2012 Composite 3 Cu-PGM Conc Grade <sup>1</sup>	2020 PEA Technical Report <sup>3</sup>
Cu %	19.7	18.7	18.7	17 - 19
Pd g/t	38.9	171.0	18.6	40 - 60
Pt g/t	7.6	43.5	4.0	10 - 17
Au g/t	3.3	17.6	2.7	4 - 8
Ag g/t	68.0	50.0	42.2	40 - 200
Fe %	24.7	20.3	28.4	29
S %	23.6	17.2	25.9	24
Mg %	2.2	6.3	1.9	2.2

Notes:

<sup>1</sup> Metal recoveries and Cu-PGM concentrate grades listed were established during Q4 2020 Phase 2 pilot plant testing.

<sup>2</sup> Metal recoveries listed were determined during Q2-Q3 2020 Phase 1 benchscale metallurgical testing.

<sup>3</sup> Preliminary Economic Assessment ("PEA") titled "Amended Technical Report, Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Marathon Deposit, Thunder Bay Mining District Northwestern Ontario Canada", July 6, 2020.

<sup>4</sup> The estimated recovery of Cu is noted per the PEA for production years 6 to 14.

<sup>5</sup> Lower platinum recovery in the Phase 2 pilot plant program was a function of lower bulk composite head grade and is not considered a material impact to the established recovery equation to be used in the Feasibility Study.

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Figure 1: PGM-Cu Conc produced during Q4 2020 pilot plant testing of the Main Zone Composite



sample at SGS-Lakefield

The process flowsheet considered for the project includes conventional primary crushing, SAG and Ball mill grinding with a pebble crusher, followed by rougher flotation, concentrate regrinding, and three stages of cleaning to produce a Cu-PGM concentrate. A PGM scavenger flotation circuit on rougher tailings provides an incremental gain in overall metal recovery. As part of the Feasibility Study and financial analysis, the economics and timing of the PGM Scavenger circuit is being studied.

During Phase 1 testwork, the effectiveness of Woodgrove direct flotation reactors (DFR cells) on rougher flotation with a flotation feed size of 80% passing 106 microns were evaluated. DFR cells were similarly evaluated for cleaner circuit flotation during Phase 2 pilot plant testing. DFR cell technology is being considered in the Feasibility Study throughout the flotation circuit offering the potential for improved final concentrate grade, at maintained metal recovery, with reductions in operating cost and initial constructed capital cost when compared to a conventional flotation circuit design.

Completion of Phase 1 and Phase 2 metallurgical testing program at SGS Canada Inc. in Lakefield, Ontario was overseen by Steve Haggarty, P.Eng., of Haggarty Technical Services (“HTS”) with participation of Ausenco Engineering Canada Inc. (“Ausenco”) (Robert Raponi, P.Eng of Ausenco will be acting as the Qualified Person for the upcoming metallurgical and processing sections of the Feasibility Study Technical Report). The test program was completed in December 2020 and provides design criteria required along with a viable process flowsheet for continued advance of the Feasibility Study and potential next steps involving detailed engineering.

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The 2021 Feasibility Study, which will be completed during Q1 2021, includes value-adding-concepts from all disciplines with a focus on streamlining the project to optimize financials within the framework associated with the Environmental Impact Assessment (EIA) and previous commitments for the site.

## **About the Company**

Gen Mining's focus is the development of the Marathon Project, the largest undeveloped platinum group metal Mineral Resource in North America. The Marathon property covers a land package of approximately 22,000 hectares, or 220 square kilometres. Gen Mining owns an 80% interest in the Marathon Project, with the remaining interest owned by Sibanye Stillwater. Sibanye Stillwater has certain back-in rights that allow it to increase its interest in the Marathon Project back up to 51% in certain circumstances and subject to certain conditions after such time as Gen Mining has earned its 80% interest (see the Company's news release of July 11, 2019 for more details).

## **Qualified Person**

The scientific and technical content of this news release was reviewed, verified, and approved by Drew Anwyll, P.Eng., M.Eng, Chief Operating Officer of the Company, and a Qualified Person as defined by Canadian Securities Administrators National Instrument 43-101 "Standards of Disclosure for Mineral Projects."

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## **Forward-Looking Information**

*This news release includes certain information that may be deemed "forward-looking information" under applicable securities laws. All statements in this release, other than statements of historical facts, that address the ability of the Company and Sibanye Stillwater to vary their respective participating interests in the Marathon Project, Mineral Resource and Reserve potential, exploration activities and events or developments that the Company expects are forward-looking information. Although the Company believes that the expectations expressed in such statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the statements. There are certain factors that could cause actual results to differ materially from those in the forward-looking information. These include, among other factors, market prices, exploration and development successes, continued availability of capital and financing, and general economic, market or business conditions.*

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