

6 December 2023

Metallurgical test work from the UG2 Reef indicates potential 4E PGM recovery rates of 85%

Highlights:

- Preliminary, unoptimized testing indicates that the Bengwenyama UG2 Reef can be treated using conventional methods.
- This initial test work has shown that metallurgical recoveries of between 80 and 85% with concentrate grades of 130 to 250g/t (4E) can be obtained.
- Further test work to further enhance recoveries will be undertaken as part of the prefeasibility study.
- A new Mineral Resource update is due for release shortly.
- A scoping study for the Bengwenyama project is now underway and is scheduled for release in January 2024.

Southern Palladium (ASX:SPD and JSE:SDL), 'Southern Palladium' or 'the Company') is pleased to release the results of initial metallurgical test work results at the Bengwenyama Platinum Group Metal (PGM) project, located on the Eastern Limb of the world class Bushveld Complex, South Africa.

Managing Director Johan Odendaal, said: "Significant progress has been achieved in understanding the metallurgy of the UG2 orebody. Preliminary testing suggests that ore from the UG2 Reef can be effectively treated with recoveries ranging from 80% to 85% through conventional methods that are used across the Bushveld Complex, and therefore aligning with industry. Metallurgical recoveries from the UG2 Reef at operations on the Eastern Limb range between 81% and 88%. We believe there should be strong commercial interest in sourcing concentrate of this quality from PGM smelters in South Africa."

Metallurgical testing

The sample for test work was composited from a total mass of approximately 32kg (4E head grade obtained ~7.95g/t 4E), from various boreholes that intersected the UG2 reef of the Bengwenyama project. This sample was tested by Suntech Geomet Laboratories, an ISO/IEC compliant facility based in Johannesburg.

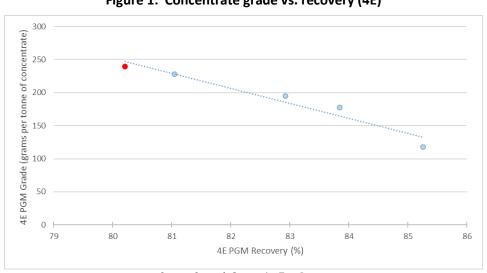


Figure 1: Concentrate grade vs. recovery (4E)

Source: Suntech Geomatics Test Report

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This test work has demonstrated that high PGM concentrate grades can be obtained at recoveries of over 80% (see Figure 1 – red dot indicates the test result, i.e., 80.5% recovery at a 4E concentrate grade of 238 g/t). The testwork was a locked cycle test over six cycles. The graphed data is the final concentrate (red dot) and the final residue PGM contained in each waste stream (other four data points).

These recoveries are in line with those reported by various UG2 operations on the Eastern Limb:

- Anglo Amerin Platinum Mototolo 84% and Modikwa 87%¹; and;
- Implats Marula 86%-88% and Two Rivers 81%².

In addition to strong PGM recoveries, a marketable chromite concentrate can also be obtained.

Initial mining at the Bengwenyama project will focus on the underground extraction of PGM's from the high grade UG2 Chromitite Reef. The current design for the planned process plant is based on a conventional MF2 flow sheet consisting or primary and secondary milling and flotation, with a processing route to obtain a flotation concentrate which contains a marketable content of 7E PGM.

The typical grind size for Bushveld operations is 106 microns for the primary processes and 75 microns for the secondary. .

A chrome concentrate will be produced using conventional spirals and sold separately.

As more representative samples of the UG2 Reef becomes available, further test work will be undertaken to increase confidence in the process flowsheet and make improvements to both recovery and grade of the 7E PGM content from the UG2 reef.

Updated Resource and Scoping Study

The updated Scoping Study for the Bengwenyama PGM project is now well underway and is scheduled for release in January 2024. This study is being conducted concurrently with the Prefeasibility study and will showcase the project's key metrics, including net present value (NPV), cost estimation, and annual production figures. A new Mineral Resource update is also close to completion and will be finalised for release to the market at the earliest opportunity.

About Southern Palladium:

Southern Palladium Limited (ASX:SPD, JSE:SDL) is a dual-listed platinum group metal (PGM) company developing the advanced Bengwenyama PGM project, particularly rich in palladium/rhodium, in South Africa. The project is located on the Eastern Limb of the Bushveld Complex, which contains more than 70% of the world's known Platinum Group Metal (PGM) Resources. The Company, holding a 70% stake in the project, will primarily concentrate on delivering a Pre-Feasibility study. Additionally, following the completion of a geophysical survey conducted in 2022 and the October 2023 approval of its Mining Right application, management will oversee the completion of the diamond drill programme initiated in August 2022, along with several other concurrent technical studies.

Bengwenyama presents a substantial opportunity in the global PGM market. Previous exploration efforts have already yielded a JORC 2012-compliant Inferred Mineral Resource of 25.12Moz1 within two ore horizons—the UG2 chromitite and Merensky Reef, achieved in 2023. Moreover, an assessment conducted by mining industry consultants CSA Global in 2021, has identified a significant exploration target beyond the currently explored area. The Company is led by a seasoned on-ground management team, including some of South Africa's most distinguished mining industry executives.

¹ Anglo American Ore Reserves and Mineral Resources report 2022

² Implats Mineral Resource and Mineral Reserve Statement

Competent Person Statement

Daan van Heerden: The scientific and technical information contained in this announcement has been reviewed, prepared, and approved by Mr Daan van Heerden (B Eng (Min.), MCom (Bus.Admin.), MMC, Pr.Eng. No. 20050318, AMMSA, FSAIMM). Mr van Heerden is a director of Minxcon (Pty) Ltd and a Registered Professional Engineer with the Engineering Council of South Africa, a Member of the Association of Mine Managers South African Council, as well as a Fellow Member of the South African Institute of Mining and Metallurgy. Mr. van Heerden has sufficient experience relevant to the styles of mineralisation and activities being undertaken to qualify as a Competent Person, as such term is defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr van Heerden has a beneficial interest in Southern Palladium through a shareholding in Nicolas Daniel Resources Proprietary Limited.

This announcement has been approved for released by the Board of Southern Palladium Limited.

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