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7 September 2022

Bengwenyama PGM Drilling Programme Intersects UG2 Reef

Southern Palladium (ASX:SPD, 'Southern Palladium' or 'the Company') refers to its announcement titled "Bengwenyama PGM Drilling Programme Intersects UG2 Reef" released to the market on 5 September 2022 (the Announcement).

The Announcement makes references to visual exploration results and accordingly the Company now releases the Announcement with JORC Table 1 Sections 1 & 2 attached.

Authorised by the Managing Director

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5 September 2022

Bengwenyama PGM Drilling Programme Intersects UG2 Reef

Key highlights:

- **UG2 reef intersection confirmed as part of the Phase 1a drilling programme**
- **The UG2 intersection width of 87cm is in line with expectations**
- **Project geological stratigraphy will develop with the new drilling information**
- **Three drill rigs now in operation**

Southern Palladium (ASX:SPD, 'Southern Palladium' or 'the Company') provides the following update on its recently commenced Phase 1 drilling programme at the Bengwenyama PGM project located on the Eastern Limb of the world class Bushveld Complex, South Africa

The Company confirms that drillhole E062 has intersected the first UG2 reef at 31.2m below surface as part of the drilling programme. The mother-hole was completed on 1 September 2022 with an end-of-hole depth of 119.8m and matches stratigraphic models.

Marking, logging and scanning of the drillhole is in progress. A Down-hole acoustic televiewer survey will be completed next and this will be followed by drilling two short non directional deflections on the UG2 reef. Assaying of the reef will commence once all deflections, logging and core scanning is complete. Samples will be sent to ALS Chemex South Africa (PTY) Ltd, located in Johannesburg, which is part of the ALS group. The South African laboratory is ISO 17025 accredited by SANAS (South African National Accreditation System).

The massive UG2 chromitite reef intersection (NQ core size) in drillhole E062 has a downhole length (not true width) of 87cm (figure 1), with a pegmatoidal pyroxenite as footwall underlain by a poikilitic pyroxenite. These characteristics also assist in the identification of the UG2 reef. The intersected UG2 width is in line with expectations, and consistent with the average reef width of 71 cm estimated in the JORC-2012 compliant Inferred UG2 Mineral Resource. These reef widths lend themselves to the conventional mining methods utilised in South Africa for narrow tabular orebodies.

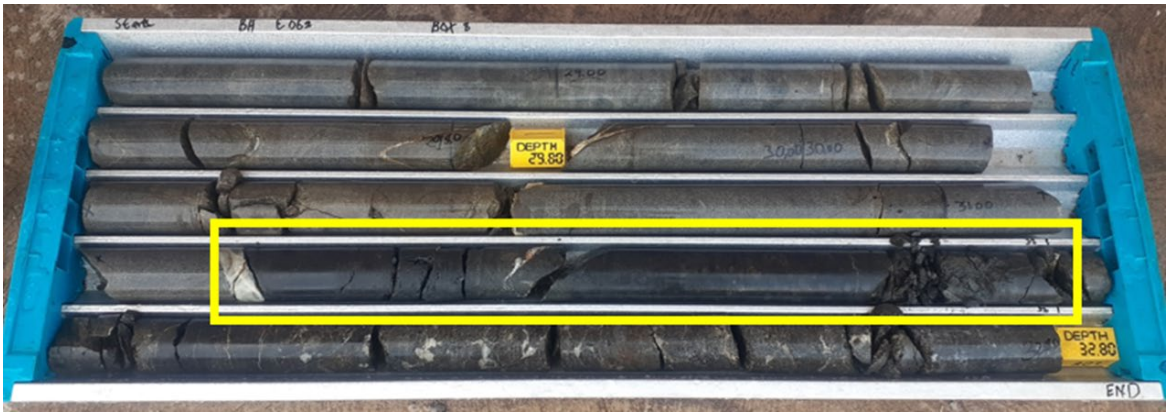

Figure 1: UG2 Intersection (yellow box) in Drillhole E062

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Figure 2 shows the UG1 reef, which was used as a marker to confirm the position of the UG2 reef. The UG1 layer appears to have three chromitite seams in the anorthosite host, from depths of approximately 90.30m to 99.30m (yellow brackets):

Figure 2: UG1 Marker Reef

Three drill rigs have now been mobilised and are conducting drilling operations as indicated in figure 3 below.

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Figure 3 shows the location of the three drillholes currently being drilled (green stars).

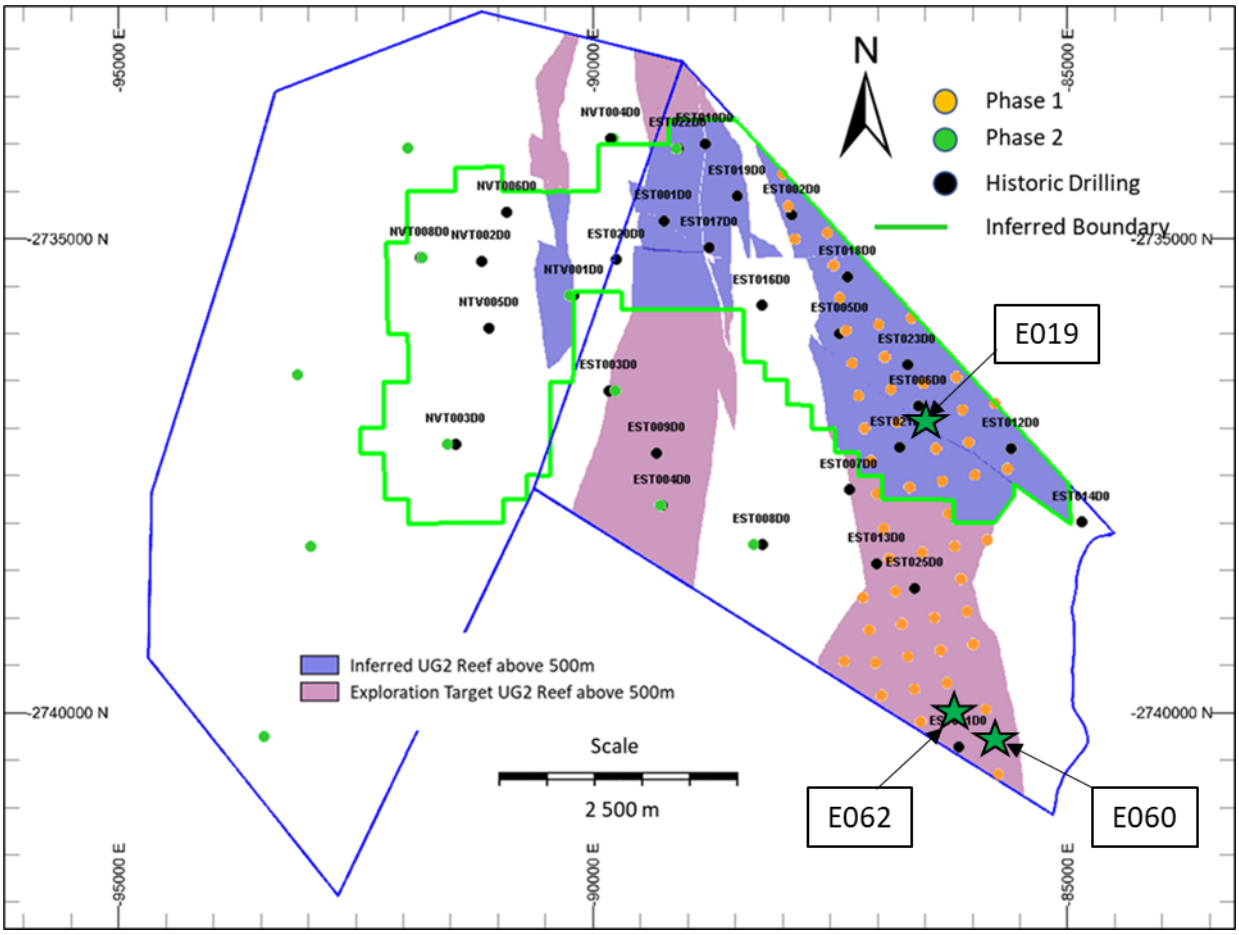

Figure 3: Drilling Locations

Upgrades of the community centre for the driller's laydown area, the geological office and the core yard are continuing, and are making good progress. Figure 4A is a photograph showing a section of the core logging area, and Figure 4B is a photo of the construction development for the drillers camp.

Figure 4A/B: Core Logging Area and Drillers Camp

Plans are progressing for the pending mobilisation of the two additional drill rigs on-site as part of phase 1a.

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Commenting on the UG2 intersection, Managing Director Johan Odendaal, said:

"Confirmation of the UG2 Reef intersection is an important early barometer for the Company as it advances the Phase 1a drill programme. The initial results provide further evidence that the position of the UG2 Reef is in line with the geological model developed from historical information, and which forms the basis of the JORC-2012 compliant Inferred UG2 Mineral Resource. Pleasingly, the broader project infrastructure is also progressing well as the Company continues to execute on its near-term operational targets. The management team looks forward to providing additional updates once assaying gets underway, following the completion of the down-hole acoustic televiewer survey."

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

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.

With its 70% stake in the project, the Company's focus will be on the delivery of a Pre-Feasibility study and Mining Right application. A geophysical survey has been completed and a two-phase diamond drill programme commenced in August 2022.

A major development opportunity in the global PGM market, previous exploration at Bengwenyama has already delivered a JORC 2012-compliant Inferred Mineral Resource of 18.8Moz within two ore horizons – the UG2 chromitite Reef and the Merensky Reef.

In addition to the Inferred Resource, an assessment by mining industry consultants CSA Global assessed the total Exploration Target potential of Bengwenyama at between 134–201Mt at a grade of 3.5–5.2 g/t (3 PGE + Au). The Company is led by an experienced on-ground management team including some of South Africa's most high-profile mining industry executives.

JORC Statement

The information in this report that relates to Mineral Resources at the Bengwenyama Project is based on details originally reported in the Independent Technical Assessment Report (ITAR) No. R246.2021 prepared by CSA Global dated 19 April 2022 contained in the Company's Prospectus and Pre-Listing Statement dated 22 April 2022. The information in the ITAR that relates to Technical Assessment of the Mineral Assets, Exploration Targets, or Exploration Results is based on information compiled and conclusions derived by Dr Brendan Clarke, a Partner and an employee of CSA Global. The information in the ITAR that relates to Mineral Resources is based on work undertaken by Anton Geldenhuys, a Principal Consultant and employee of CSA Global. The Prospectus containing the ITAR can be found on the Company's website at: https://www.southernpalladium.com/site/investor-centre/prospectus

The Company confirms that it is not aware of any new information or data that materially affects the information included in the ITAR. The Company also confirms that all material assumptions and technical parameters underpinning the estimates in the ITAR continue to apply and have not materially changed. In addition, the Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

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Competent Person Statement

The scientific and technical information contained in this announcement has been reviewed, prepared, and approved by Mr Uwe Engelmann (BSc (Zoo. & Bot.), BSc Hons (Geol.), Pr.Sci.Nat. No. 400058/08, MGSSA). Mr Engelmann is a director of Minxcon (Pty) Ltd and a member of the South African Council for Natural Scientific Professions and has sufficient experience relevant to the styles of mineralisation and activities being undertaken to qualify as a Competent Person, as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Engelmann has a beneficial interest in Southern Palladium through a shareholding in Nicolas Daniel Resources Proprietary Limited.

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JORC Checklist – Table 1 Assessment and Reporting Criteria

SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	No sampling has been completed on drillhole E062 to date
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	No sampling has been completed on drillhole E062 to date
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	No sampling has been completed on drillhole E062 to date
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	The drillhole was drilled with a Delta 520 drill rig starting with HQ core size for the first 10m and then changing to NQ size
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No sampling has been completed on drillhole E062 to date
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	No sampling has been completed on drillhole E062 to date
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No sampling has been completed on drillhole E062 to date
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	No detailed logging has been completed at this stage. Only high-level stratigraphic logging for reef identification has been completed to date
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	No detailed logging has been completed at this stage. Only high-level stratigraphic logging for reef identification has been completed to date
	The total length and percentage of the relevant intersections logged.	No detailed logging has been completed at this stage. Only high-level stratigraphic logging for reef identification has been completed to date. Initial intersection measurements have logged the UG2 reef as 87 cm in length
Sub-sampling	If core, whether cut or sawn and whether quarter, half or all core taken.	No sampling has been completed on drillhole E062 to date

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SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
techniques and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No sampling has been completed on drillhole E062 to date
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No sampling has been completed on drillhole E062 to date
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No sampling has been completed on drillhole E062 to date
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	No sampling has been completed on drillhole E062 to date
	Whether sample sizes are appropriate to the grain size of the material being sampled.	No sampling has been completed on drillhole E062 to date
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No sampling has been completed on drillhole E062 to date
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No sampling has been completed on drillhole E062 to date
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	No sampling has been completed on drillhole E062 to date
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	No sampling has been completed on drillhole E062 to date
	Discuss any adjustment to assay data.	No sampling has been completed on drillhole E062 to date
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No sampling has been completed on drillhole E062 to date
	The use of twinned holes.	No twinning has been undertaken
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drillhole collar positions are handheld Garmin GPS positions. The drillholes will still be surveyed in at a later stage
	Specification of the grid system used.	The coordinate system used is LO31
	Quality and adequacy of topographic control.	Regional three-dimensional (3D) topography was constructed from regional surface contours and Shuttle Radar Topography Mission (SRTM) data. The surface was trimmed 300–500 m beyond the Project perimeter
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Only E062 position is relevant for this release
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Geological continuity is based on the knowledge of the surrounding area and 3D model constructed from historical data. This intersection confirms the position of the UG2 reef

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SECTION 1: SAMPLING TECHNIQUES AND DATA		
Criteria	**Explanation**	**Detail**
	Whether sample compositing has been applied.	No sampling has been completed on drillhole E062 to date
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	No sampling has been completed on drillhole E062 to date
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No sampling has been completed on drillhole E062 to date
Sample security	The measures taken to ensure sample security.	No sampling has been completed on drillhole E062 to date
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken on the drilling to date

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	A Preferent Prospecting Right was granted to the Bengwenyama Tribe's investment vehicle, Miracle upon Miracle Investments (Pty) Ltd in 2015. This was renewed in early 2021 and is valid until February 2024. The Right covers all elements of potential economic interest
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The right is valed until February 2024
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Drilling was undertaken by Rustenburg Platinum Mines from 1966 to 1985. Trojan exploration completed drilling on Eerste Geluk between 1990 and 1993. Drilling prior to 1994 was not used as part of this Mineral Resource estimate (MRE) due to the incomplete nature or availability of the drillhole data. Nkwe completed drillholes in 2007–2008. This drilling supports the MRE. Reconnaissance mapping has been completed by previous operators.
Geology	Deposit type, geological setting and style of mineralisation.	The target UG2 and Merensky reefs occur within the Upper Critical Zone of the Rustenburg Layered Suite of the Bushveld

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SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
		Complex. These reefs are laterally continuous for tens to hundreds of kilometres. The UG2 comprises mineralised chromitite, whereas the Merensky Reef is defined as the mineralised pyroxenitic zone between upper and lower chromitite stringers. The Bushveld Complex is the world's largest igneous intrusion and also the largest global repository of PGEs and chromitite. Both reefs are stratiform with relatively minor disruptive structural features and replacement deposits.
Drillhole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: * easting and northing of the drillhole collar * elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar * dip and azimuth of the hole * down hole length and interception depth * hole length.	X: 86189 Y: 2740009 Z: 777 Vertical drillhole EOH: 119.8m Intersection: 31.20m – 32.07m
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	NA
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No sampling has been completed on drillhole E062 to date
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No sampling has been completed on drillhole E062 to date
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No sampling has been completed on drillhole E062 to date
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The intersection length stated is the downhole length. The drillhole was drilled at 90 degrees and the reef dip is expected to be approximately 12 degrees. Therefore, the difference should be minimal.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	A map of the drillhole positions is included in the press release. A section has not ben included as the stratigraphy is still a work in progress
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting	Reef intersection depth for drillhole E062 has been reported. It has been related to

SECTION 2: REPORTING OF EXPLORATION RESULTS		
Criteria	**Explanation**	**Detail**
	of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	the position of the UG3 reef above the UG2 and to the UG1 reef below it, to confirm the UG2 reef
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	NA
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	This is the start of the drilling programme and the extent of the drilling programme is shown in the figure in the press release. The total planned drilling meters for phase 1 is approximately 25 000m
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Diagram included in the press release

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