

Southern Palladium Ltd (ASX:SPD, \$0.70. Market cap A\$62.8m)

An emerging Tier 1 Platinum Group Metal resource on the Eastern Limb of the Bushveld

Southern Palladium has completed an initial public offer of shares and is now dual-listed on the Australian (ASX, the primary listing) and Johannesburg Stock Exchanges (JSE:SDL). The company raised A\$19m in new equity before costs. This will allow SPD to complete a two-phase drill programme to take the 70%-owned Bengwenyama project through to prefeasibility level and ultimately to the lodgement of a Mining Right. The deposit is already an 18.8Moz, palladium/rhodium-dominated resource (JORC Inferred status, 100% basis).

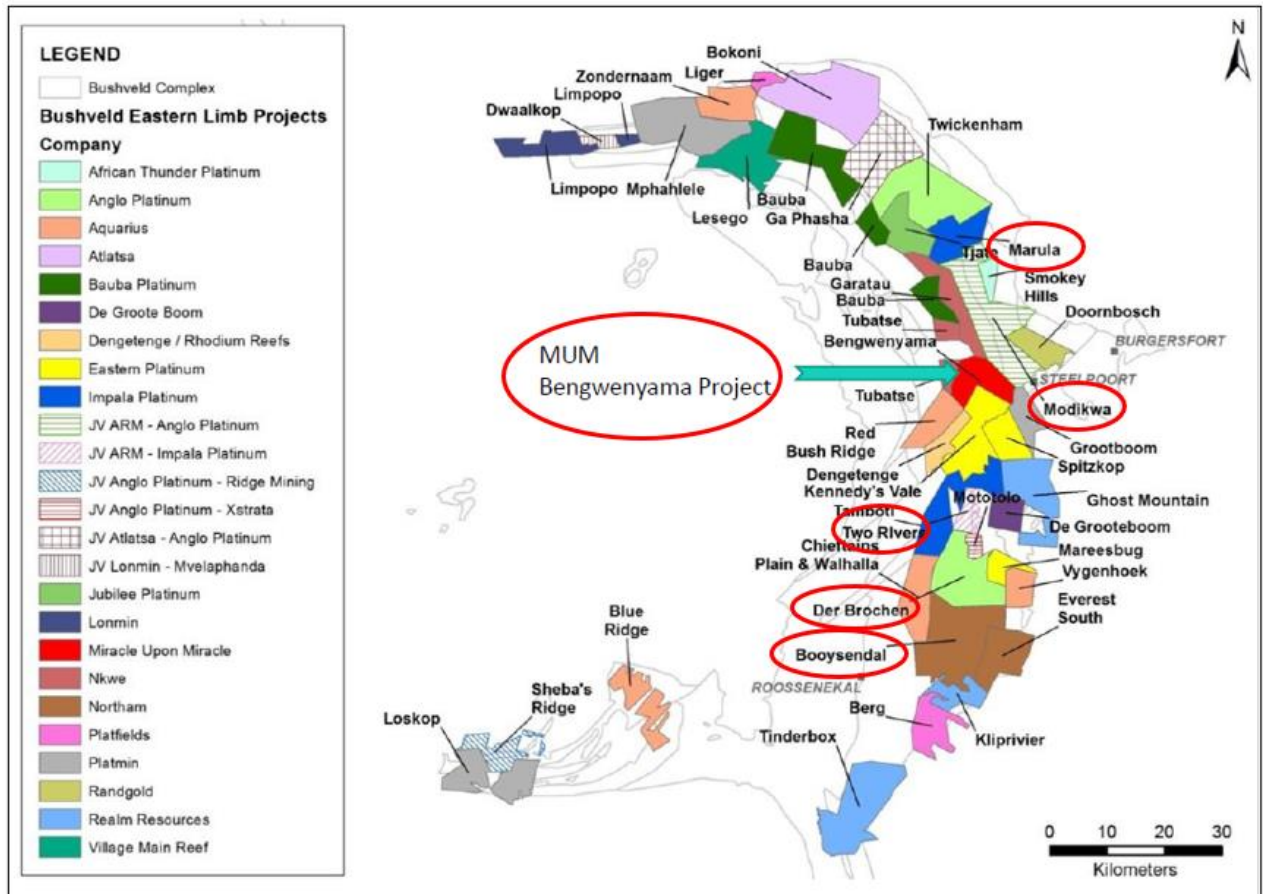
- The Bengwenyama Platinum Group Metals project is one of the last large, outcropping deposits along the Eastern Limb of South Africa's prolific Bushveld Intrusive Complex. The UG2 Reef on the Central Eastern Limb is particularly attractive with relatively high grades and over 80% of the metal content made up of high value palladium and rhodium.
- PGM mineralisation is hosted by the UG2 and Merensky reefs within well-understood Bushveld geology with Inferred Resources of 18.8Moz (4E, 100% basis). These are shallow orebodies potentially accessible by shallow underground mining operations. We believe that the deposits will offer conventional metallurgical response with the potential to sell concentrate to local smelters on established terms.
- Importantly a strongly supportive single local community has significant equity both in the project (30%) and in SPD itself (12.3%). As such, the project is already BEE compliant.
- Drilling to upgrade the UG2 Exploration Target and Inferred Resources above a depth of ca. 500m to JORC Indicated status is to commence shortly. SPD management is aiming to complete a prefeasibility study and lodge a Mining Right Application within two years of the IPO and advance the project to production. A second phase of drilling is aimed to further upgrade the current 15-34Moz Exploration Target to Inferred.
- SPD has an impressive board and management team, headed by Non-executive Chairman, Terence Goodlace (ex CEO of Implats, now NED at Gold Fields and Kumba) and CEO/MD Johan Odendaal. Directors own approximately 16% of the company following IPO.
- With relatively high mineable grades (>4g/t) and close to the surface, the project should be relatively low-cost and very competitive against its South African peers.
- At recent prices the basket for metals within the UG2 Reef is valued at a very attractive US\$2863/oz, dominated by rhodium (51%) and palladium (31%) and the balance platinum and gold. The Merensky basket price is US\$1,756/oz (platinum 33%, palladium 31%, rhodium 35%, gold 7%).
- Capital intensity could be relatively low, with underground development by decline from surface, and no requirement for on-site smelting/refining. In our view the project should sit low on the PGM cost curve.
- In this report we present a conceptual valuation (NPV₈) for the Bengwenyama project of around US\$1Bn (100% basis, unfunded, after tax), based on mid-cycle PGM price forecasts. This valuation assumes a PGM production rate of around 220Kozpa from the UG2 alone, with a 20 year mine life at first/second quartile cash costs and pre-production capital of US\$450m. These estimates have been benchmarked against other pre-production projects, however remain highly conceptual.
- Following a strong first month after listing, SPD continues to be priced at a discount to junior PGM explorers. Progressive rerating of the company appears likely as critical milestones are passed and as investors embrace the potential for the Bengwenyama PGM project to become a highly attractive top tier project. With an EV of around A\$45m and ounces in the ground capitalised at under A\$4/oz (EV basis), SPD remains remarkably inexpensive for an advanced exploration project which we think can proceed to PFS within 12-18 months.
- **Postscript:** A recent site visit has confirmed that the reasons for a delay to the start of drilling relate to logistical issues, which have now been resolved. We now believe drilling will commence during August.

MiFID II compliance statement: Bridge Street Capital Partners receive fees for services provided. See disclaimer/disclosure for more detail. By downloading this report, you acknowledge receipt of our Financial Services Guide, available on our web page www.bridgestreetcapital.com.au. Bridge Street Capital Partners acted as Lead Mangers to this IPO.

Investment summary

***Terminology.** In this report (and others) there is reference to PGMs or the platinum group metals, and the term PGE (platinum group elements). Both are interchangeable. PGM grades will be commonly referred as 3E or 3PGE plus gold (Au), which is the sum of the grades of platinum, palladium, rhodium and gold. These might also be labelled "4E". "6E" refers to the sum of the grades of Pt, Pd, Rh, Ru and Ir plus Au.

- SPD's Bengwenyama PGM Project is already a substantial resource of PGMs, dominated by palladium and rhodium, located along the well-known Eastern Limb of South Africa's prolific Bushveld Intrusive Complex (BIC).
- Total production in 2021 from the Eastern Limb mines is estimated at around 1.3Moz (3E), or around 15-16% of South Africa's total production of PGMs. What little growth is available in the Bushveld comes from the Eastern (and Northern) limbs.
- The location of currently operating PGM mines on the Eastern Limb, together with the Bengwenyama project, are shown in the chart below. The project lies along strike from a number of Tier 1 PGM projects.



Source: Southern Palladium

- Total potential endowment of SPD's tenement has been estimated by independent consultants CSA Global at ca. 34 to 53Moz (3PGE+Au, 100% basis) incorporating an Exploration Target.
- Inferred Resources (JORC 2012) total 18.8Moz (3PGE+Au) in the UG2 and Merensky Reefs at a combined grade of 4.07g/t and a UG2 grade of 7.7g/t.
- The Bengwenyama project has the potential to become a Tier 1 PGM operation and has few peers globally. Strengths include:
 - Well-understood geology with resources hosted by the UG2 and Merensky Reefs (18.8Moz of Inferred Resources, 100% basis);
 - There are many analogous orebodies currently being mined on the Eastern Limb.
 - Orebodies can be accessed from near to surface;
 - Relatively high grades from the UG2 Reef (potentially of 4-4.5g/t) should drive low cash costs;
 - Capital intensity for a shallow underground mine and concentrator should also be relatively low.
 - Conventional metallurgy with the ability to sell concentrate to local smelters on well-established commercial terms.

- A strongly supportive single local community (Bengwenyama);
- With the current community ownership the project is already BEE compliant.
- So why does the project remain undeveloped? It is a project with considerable ownership “history” which stemmed from the transition to the so-called New Order mineral rights as far back as 2004. The project fell under disputed ownership, largely due to a conflict regarding the true traditional owners of the surface rights.
- The dispute was resolved after nearly 10 years, with a decision handed down by the highest court in South Africa which found ownership in favour of the Bengwenyama community. We see little risk that a Mining Right will be granted to SPD, should a viable project be identified.
- For us, this opportunity appears technically and commercially less risky than several of the emerging PGM plays in the new platinum provinces of Australia.
- The path to production and monetising PGMs has been well defined in the Bushveld for over 100 years.

Valuation and potential for rerating of SPD

- We can see the opportunity for ongoing rerating of SPD contained ounces as key milestones are achieved. These will likely include the following events:
 - Commencement of drilling (August 2022).
 - Progressive receipt of drill and assay results to allow confirmation of the resource geometry and grade.
 - Delineation of a minimum of 2Moz PGM Ore Reserve (Proven/Probable, JORC 2012 compliant) (early 2023).
 - Completion of mining and metallurgical studies targeting a straightforward underground project focussed on the UG2 Reef with relatively low capital intensity and attractive investment metrics (late 2022).
 - Completion of a scoping study perhaps by 1Q-2Q23 and a prefeasibility study by late 2023.
 - Lodgement of a mining right application (2024 or perhaps earlier).
- A yardstick valuation of EV/ounce in the ground does serve to highlight pricing anomalies. On this basis, we argue that SPD at its present EV of around A\$45m remains particularly inexpensive against its peers. In the following section, we conclude as follows:
 - SPD and its Bengwenyama Project have few peers globally and with an EV of approximately around A\$3.4 per 3E+Au ounce appears to be inexpensive against those peers.
 - The following section provides a detailed comparison of SPD’s peer group and their market values. As an example, the South African-based/TSX-listed Platinum Group Metals (TSX:PTM) has a more advanced project than Bengwenyama, but it remains unfinanced and appears to be ambitious, to say the least. PTM’s ounces are capitalised at 3.6x those of SPD.
 - Two of WA’s PGM explorers, Future Metals (ASX:FME) and Podium Minerals (ASX:POD) boast modest PGM resources. Podium’s 2.5Moz PGE (3E) resources are capitalised at over 7 times that of SPD and the Bengwenyama Project and FME’s 3Moz PGE (3E) resources (Panton Reef) 4 times.
 - Despite the strong sell-off in global equities – and the small end of the exploration sector in particular – the recent price move by PGM explorer Galileo (ASX:GAL), has demonstrated there is still plenty of interest in the sector. GAL’s market cap of around A\$200m is based on assays from just a handful of drill holes. It is still some distance from declaring a resource.
 - Chalice Mining (ASX:CHN) with its recent and impressive palladium-rich discovery at Julimar in WA is comparable. Here palladium equivalent ounces are capitalised at over A\$160/oz (nearly 50x that of SPD), and this is for a relatively low-grade project for which there does not yet seem to be a full metallurgical/marketing solution.
- Using benchmarked capex and opex estimates and reasonably conservative commodity price assumptions, we are able to generate a project NPV₈ of over US\$1bn from the mining of the high grade UG2 Reef alone. This is an unfunded valuation, but it does highlight the potential value opportunity should the planets align.
- We also stress that appropriate BEE status is already in place for the project.
- Our imputed post-tax IRR of just under 30% suggests that this could ultimately be an excellent candidate for debt as well as equity finance.

- This conceptual valuation accounts for the mining of the UG2 only. Drawing an analogy from a neighbouring operation (Two Rivers) we see the possibility of also mining the Merensky Reef.

South African risk

- South Africa remains the dominant supplier of PGMs to global industries. Its mines supply around 72% of the world's platinum and 82% of the world's rhodium demand respectively. South African mines produce some 47% of global palladium, with much of the balance derived from Russia's Nor Nickel operations.
- However, the investment environment in South Africa seems to be slowly improving. Underground mine safety still has a way to go, but current fatalities (69 in 2021 for the mining industry as a whole) are still too high, but are much lower than those from twenty years ago.
- Given the inherent risks in Southern Africa, including political, labour and social unrest, and infrastructure issues there is good reason to provide a risk discount to equity exposures in the region. However, South Africa has withstood social unrest, and unpredictable and corrupt previous governments. Its legal system functions, and the country appears to be starting to deal with energy supply issues from State power provider Eskom.
- South Africa's President Ramaphosa at Mining Indaba 2022 singled out the PGM industry (with green hydrogen) as an important growth element for the important mining sector in the country. He also focussed on the country's current power crisis and has proposed the breakup of Eskom into its component parts and the unrestricted licensing of small (<100MW) independent power producers. This we consider to be a significant positive, but these initiatives need to be implemented by industry.
- The Bengwenyama Project could emerge as quite a simple, shallow underground development delivering ore (initially from the UG2 but potentially also from the Merensky Reef) to an integrated concentrator. PGM concentrate can then be sold to one of the many local smelters under well-understood commercial terms. There are few other regions globally which can offer such a straightforward and well established vertically integrated structure such as that available in South Africa. It is an important differentiator, in our view, and is appears to be unique amongst all the commodity producers we cover.

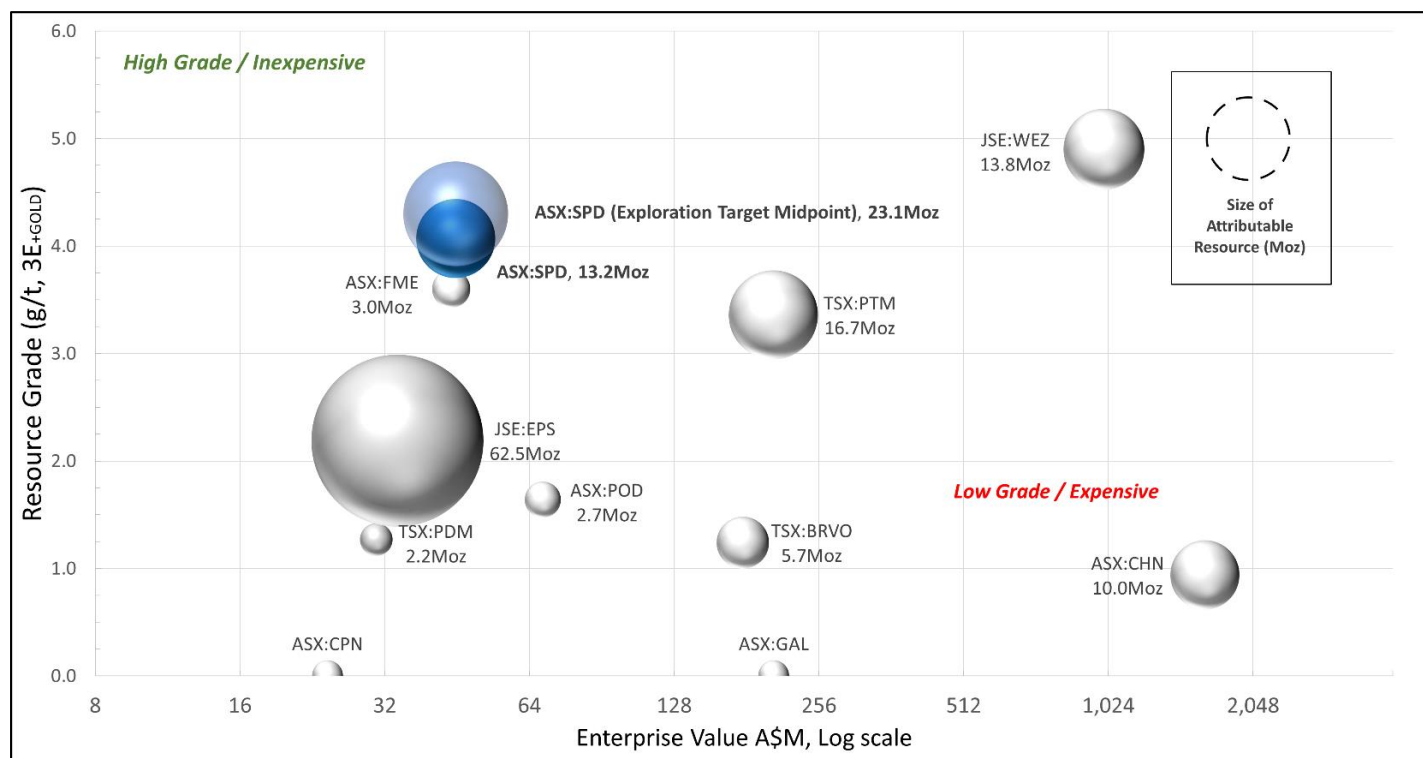
Capital structure and ownership

Number of shares	Millions	
Pre-IPO shares	6.25	6.96%
MUM acquisition shares	45.50	50.70%
IPO shares	38.00	42.34%
Total	89.75	100.00%
Unquoted Securites	Millions	Notes
Founder deferred shares (Performance Rights)	1.20	
Series A Options	3.00	Ex \$0.875, Expiry 4 years
Series B Options	0.70	Ex \$0.875, Expiry 4 years
Other Options	3.64	Ex \$0.875, Expiry 4 years
Company Value	Australian Dollars	
Total Quoted Securites	89.75	
Share Price	\$0.70	
Market Capitalisation	\$62.83	
Cash Balance	\$17.87	As of June 22 Qtr Announcement
Total Debt	\$0.00	
Enterprise Value	\$44.96	
Escrowed Shares (Included in above figures)	Number	Restriction Period
Shares	46,671,673	24 months
Options	3,700,000	24 months
Performance Rights	1,200,000	24 months
Major Shareholders @ IPO	Shares	% of Units
Nicholas Daniel Resources Pty Ltd	12,656,992	14.10%
Nurinox Investments Pty Ltd	8,327,394	9.28%
Citicorp Nominees Pty Ltd	6,600,000	7.35%
Legacy Platinum Corp	5,108,194	5.69%

Southern Palladium: comparative analysis

Despite a strong debut on the ASX (up around 40% since listing) SPD continues appears to be priced very much as an early-stage PGM exploration company. We are of the view that SPD's Bengwenyama project offers significant advantages over several of the new WA discoveries, and we see a less risky path to production. This will, in our view, translate to an ongoing outperformance by SPD as the forthcoming drill programme continues to demonstrate the economic potential of what looks to us to be an emerging Tier 1 PGM project.

The following chart plots EV (A\$m) against resource grade and attributable resource size.



Source: company data

The market's attention has been galvanised by PGM exploration success in Western Australia. Historically, Australia has not been regarded as prospective for PGMs, but that ended with a remarkable discovery, the Julimar palladium-rich deposit which was discovered in early 2019. Excellent exploration work undertaken by Chalice (ASX:CHN) geologists has identified a very large palladium-dominant sulphide deposit, containing some 11Moz of 4E PGMs. This drove the 100% owner, Chalice, from pennies to a market capitalisation that peaked at around A\$4bn.

This discovery has triggered a mini-PGM exploration boom on the ASX. When encouraging PGM results are reported, the market responds in a 'shoot now and ask questions later' manner. No one wants to miss the next Chalice. Galileo's (ASX:GAL) remarkable recent performance following its Calisto discovery provides an example. Recently listed TSX Bravo Minerals (TSX:BRVO) is PGM explorer in Brazil, with several quite encouraging intercepts and a 5.7Moz non-JORC resource. While both discoveries appear promising, they are early stage and with EV's of over A\$150m appear to us to be fully priced

The following table summarises data displayed on the chart above. The junior explorers show an EV in the range A\$20 to \$220m. The advanced explorers/pre-development companies show EVs ranging from ca. A\$200m (for TSX listed PTM) to around A\$1.6Bn for Chalice. SPD's EV is currently around the A\$45m level, with the company now fully funded to execute a drill out of an existing 18.8Moz resource which should lead to scoping and prefeasibility studies.

Finally, we urge investors to be cautious comparing to South African members of the peer group. Two South African pre-development juniors, Platinum Group Metals (TSX:PTM) and Eastern Platinum (JSE:EPS) have strongly underperformed their peers due to company-specific issues. These are companies which have not delivered. Further details of these companies are presented in Appendix 1.

Name	Exchange/Ticker	Mkt Cap (A\$,M)	Cash (A\$,M)	Total Debt (A\$,M)	Enterprise Value (A\$,M)	Attributable Resource (4E,Moz)	Grade (4E,g/t)	Enterprise Value (A\$) /Resource	Share Price Performance Since 1 Sep 2020*
CHALICE MINING LTD	ASX:CHN	\$1,761.1	\$135.0	\$0.0	\$1,626.1	10.0	0.9	\$162.6	174.3%
WESIZWE PLATINUM LTD	JSE:WEZ	\$171.4	\$32.3	\$863.5	\$1,002.6	13.8	4.9	\$72.7	196.4%
PLATINUM GROUP METALS LTD	TSX:PTM	\$224.7	\$19.0	\$0.1	\$205.8	16.7	3.4	\$12.3	-42.3%
GALILEO MINING LTD	ASX:GAL	\$215.2	\$9.0	\$0.0	\$206.2	-	-	-	240.0%
BRAVO MINING CORP	TSX:BRVO	\$184.6	\$6.8	\$0.0	\$177.8	5.7	1.2	\$31.4	-5.7%
PODIUM MINERALS LTD	ASX:POD	\$76.2	\$7.9	\$0.0	\$68.3	2.7	1.6	\$25.0	273.2%
FUTURE METALS NL	ASX:FME	\$49.5	\$5.6	\$0.1	\$44.0	3.0	3.6	\$14.7	78.2%
CASPIN RESOURCES LTD	ASX:CPN	\$36.3	\$12.2	\$0.2	\$24.3	-	-	-	142.5%
PALLADIUM ONE MINING INC	TSX:PDM	\$45.7	\$14.9	\$0.0	\$30.8	2.2	1.3	\$14.0	24.1%
EASTERN PLATINUM LTD	JSE:EPS	\$35.1	\$6.0	\$4.9	\$34.0	62.5	2.2	\$0.5	-39.7%
SOUTHERN PALLADIUM LTD	ASX:SPD	\$62.8	\$17.9	\$0.0	\$45.0	13.2	4.1	\$3.4	40%
SOUTHERN PALLADIUM LTD (EXPLORATION TARGET)	ASX:SPD	\$62.8	\$17.9	\$0.0	\$45.0	23.1	4.3	\$1.9	40%
<i>Data as at close of market 2 August 2022</i>									
<i>* Caspin Resources IPO 25 November 2020 @ A20c</i>									
<i>* Southern Palladium IPO 8 June 2022 @ A50c</i>									
<i>* Bravo Mining Corp IPO 25 July 2022 @ CAD 1.75, Resource is Non-JORC</i>									

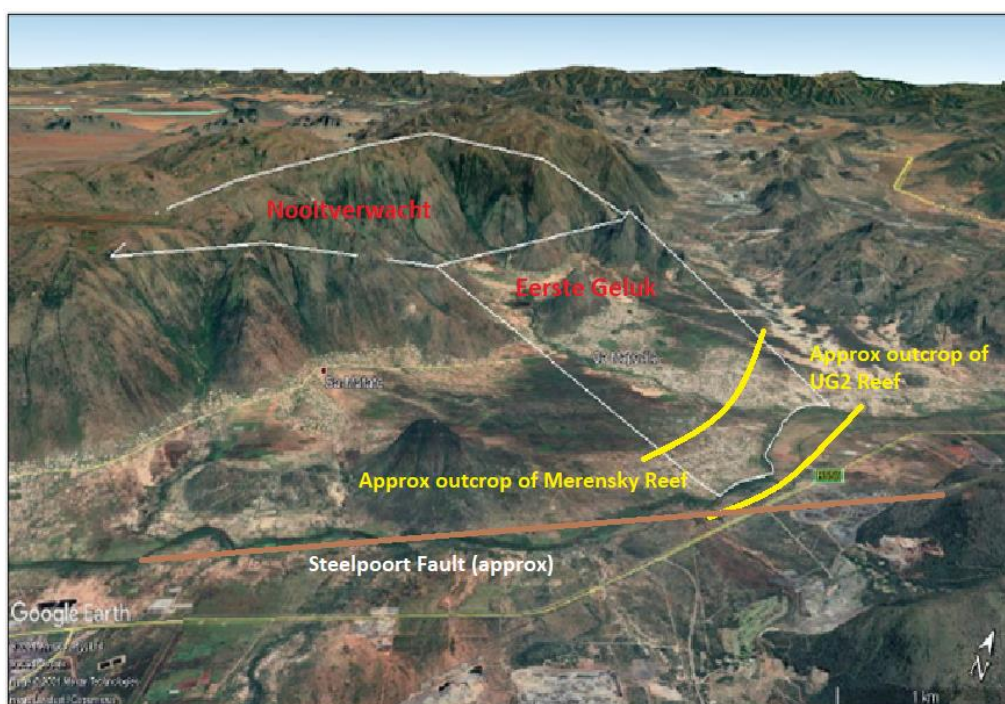
Source: company releases. Note: FME resource ounces for reef only. Share prices as at 2 August 2022.

- Valuing ‘ounces in the ground’ is always a difficult proposition, we agree. However, at this early stage of exploration it is difficult to use any other yardstick. Using a ‘cocktail’ of Podium (ASX:POD), Future Metals (ASX:FME) and Platinum Group Metals (TSX:PTM) we wind up with an in situ value of around A\$17/PGM oz (EV/PGM resource ounce). This could imply the market paying 5 times the current SPD value on inferred resources alone as confidence grows in the quality of the Bengwenyama resource.
- Include the Exploration Target, and the multiple could be as much as 9x.
- Clearly this is a highly speculative approach to valuation, but one we think is defensible, especially for a project which may offer such strengths as Bengwenyama.

Southern Palladium's Bengwenyama project: an overview

Location and infrastructure

- SPD's Bengwenyama project is located on the Eastern Limb of the Bushveld complex and is one of the very last outcropping extensions of the Merensky and UG2 reefs. The project comprises two farms, Eerste Geluk and Nootverwacht. The local Bengwenyama community, partners in the proposed development, are the traditional owners of the two farms.
- The project appears to be a southern extension of the Modikwa mine (located some 15km to the north) now one of the larger mines on the Eastern Limb (owned by African Rainbow and Angloplats, and a local community). Early in the project's history it was actually part of the Modikwa leases. The Modikwa mine in 2021 produced just over 290,000 6E ounces at a cash cost of US\$986/6Eoz.
- Further to the south is the ARM/Impala Two Rivers mine, a very large underground operation mining based on the UG2 Reef and producing (in 2020/21) around 300,000 6E ounces at cash costs of around US\$690/oz. Construction of a major expansion at Two Rivers to access the Merensky Reef has commenced.
- The Bengwenyama project is well located with regard to infrastructure and is in close proximity to the Lebalelo water pipeline which is likely to source water from the nearby De Hoop Dam (currently sourced from the Oliphants River). The project area is crossed by roads and grid power is available. There is a railway siding at the main town of Steelpoort.
- The reefs outcrop to the east of the Eerste Geluk farm as shown in the following diagram:



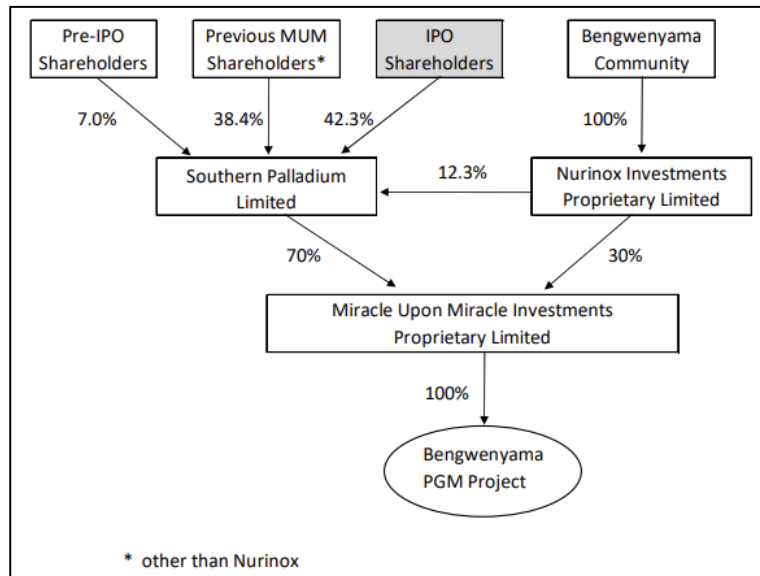
Source: Modified using information from CSA Global Independent Expert Report, SPD prospectus, 2022

- Immediately to the south of the Bengwenyama project are Eastplats' Kennedy's Vale/Spitzkop projects, which lie to the south of a major structural feature, the Steelpoort Fault. Here the Kennedy's Vale deposit appears to be downthrown to depths of around 1000m. The neighbouring Spitzkop resource appears to be heavily faulted near surface. Both appear unlikely to be economic propositions in their own right.

Tenure and ownership

- The deposits are held under a Preferent Prospecting Right (PPR) which was issued to the Bengwenyama community in 2015. This has since been renewed with a 3 year extension from February 2021. Following the IPO, the Bengwenyama community holds 30% of the project directly and 12.3% via its stake in SPD.
- It is important to understand that there is only one community which has ownership of the project, and this has been tested in the courts. Ownership of the project has been quite contentious and was eventually secured following many years in court. We have undertaken a detailed review of the ownership of the Bengwenyama project and see little risk that this will be contested.

- There are two important conditions precedent for the MUM shareholders to retain their full holding in SPD:
 - A 2Moz (3E + gold) reserve is to be identified within the \$19m budget allocated.
 - A formal application for a Mining Right must be lodged over the project ideally within a 2 year timeframe (although a 4 year period has been allowed to deal with any unforeseen issues).
- Should these conditions not be met the directors of SPD can claw back a proportion of shares issued to MUM shareholders. This we judge provides strong encouragement for the rapid advancement of the project towards the application of a Mining Right. The likelihood of these shares being taken back by the company is very small, we think.
- The following chart summarises the project’s post-IPO ownership, with SPD now owning 70% in the project:



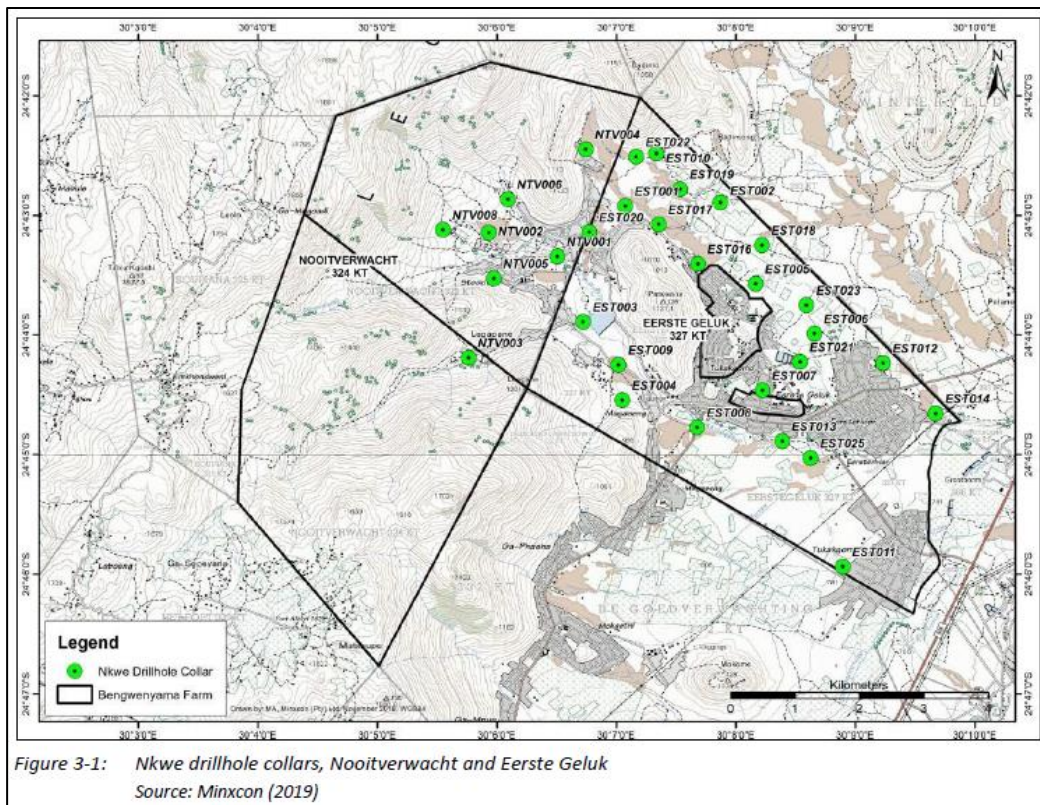
Source: SPD prospectus, 2022

Black Economic Empowerment

- Assuming the successful outcome of the forthcoming exploration programme and subsequent feasibility studies it is expected that SPD will seek a Mining Right covering the Bengwenyama deposit.
- Under the South African Mineral and Petroleum Resources Development Act 2002 (MPRDA) the holder of a Mining Right granted after 27 September 2018 must achieve a minimum shareholding by historically disadvantage South Africans (HDSA) of 26 to 30 per cent. The MPRDA specifies 26%; 30% is mentioned as being the preferred outcome in the 2018 Mining Charter. It is important to understand that the 26% BEE interest is empowered by law; the 30% is not.
- It is also important to note here is no ‘free carry’ attributed to any party.
- Regardless, with 30% of the project still owned by the Bengwenyama community and a further 12.3% ownership at the corporate level, the project can now be considered to be classified as having achieved its BEE goals.

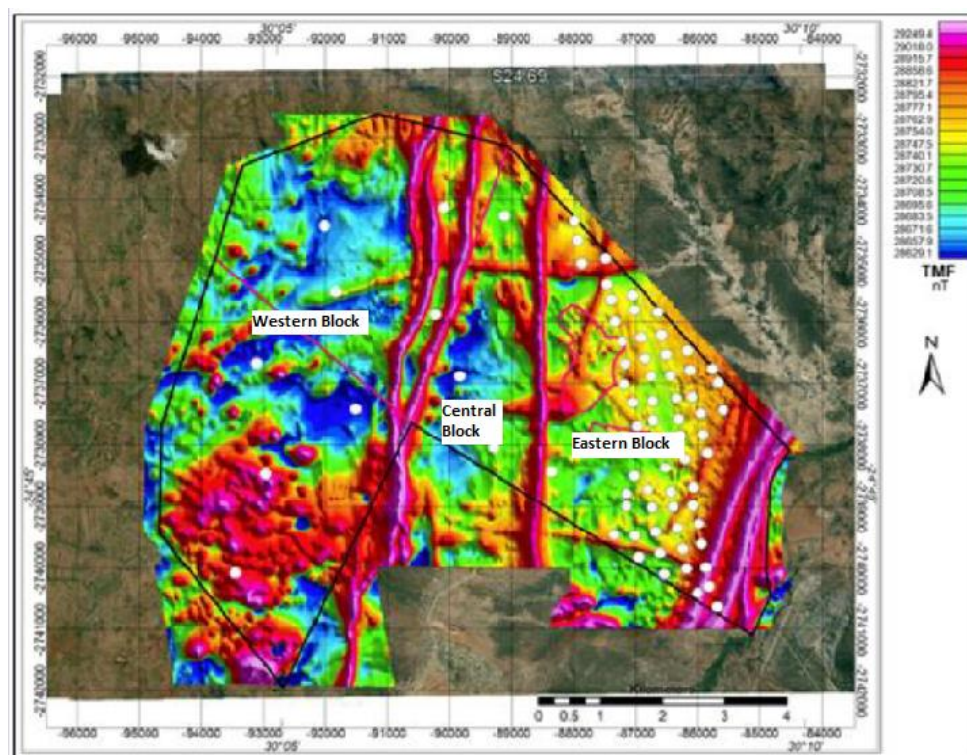
Historic exploration and local geology

- As one of the last remaining outcropping sections of any size, the importance of the Bengwenyama PGM deposit cannot be understated. The deposit was explored some 15 years ago (by Nkwe Platinum, now 100%-owned by Zijin, a Chinese gold mining group) and both the Merensky and UG2 Reefs have been intersected in some 30 drillholes. As shown in the following plan the distribution of the two reefs is quite well understood with fairly widely spaced drilling. Assay results are available for Merensky and UG2 intercepts in many drill holes, which has allowed the preparation of an independent resource estimate to JORC (2012) status.



Source: CSA Global Independent Export Report, Southern Palladium draft prospectus, 2022

- It is important to note that this deposit is shallow and outcrops toward the east. There appears to be several crosscutting faults which actually serve to elevate the reefs closer to surface. A recently completed detailed aeromagnetic survey has given geologists further comfort regarding the structural interpretation.



Source: Modified from SPD release 14 June 2022

- As shown in the following section, there appears to be several large, kilometre scale, unfaulted blocks containing the UG2 and Merensky Reefs which should allow underground development. These are highlighted by the red ellipses, with the “Eastern Block” (our terminology) the prime target.

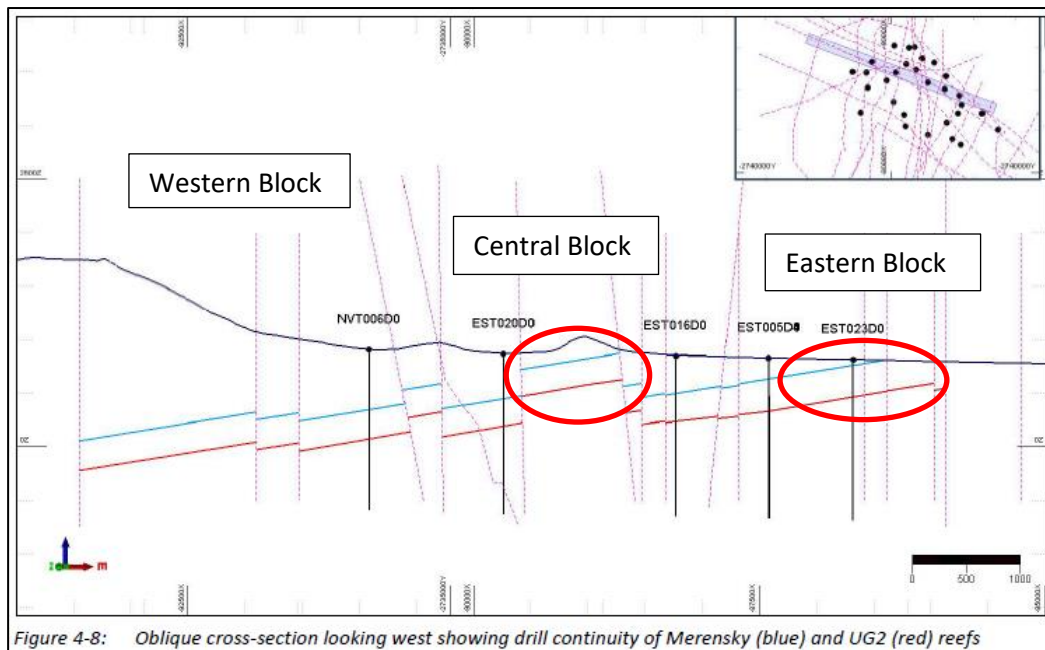


Figure 4-8: Oblique cross-section looking west showing drill continuity of Merensky (blue) and UG2 (red) reefs

Source: CSA Global Independent Export Report, Southern Palladium draft prospectus, 2022

- CSA Global has validated an Inferred resource at Bengwenyama and has classified it to be of JORC 2012 status, largely contained within the Eastern and Central fault blocks. (See plan within the following section for the location of Inferred Resources and Exploration Targets).
- The focus is on two areas, those at potential mining depths of under 500m. (Beyond 500m there is the likelihood that substantial vertical shafts and refrigerated ventilation air will be required, adding significantly to mining costs). We have designated these the “Eastern” and “Central” blocks.
- As well, the consultants have estimated a substantial Exploration Target, mainly within the less well drilled southern sections of the Eastern and Central fault blocks. The Western Block, while highly prospective, is only lightly drilled and contains very few resource/target ounces.
- CSA’s resources and resource targets for the Bengwenyama project are as follows:

Resource classification	Reef	Tonnes	3PGE+Au		Reef width (cm)
		(Mt)	g/t	Moz	
Inferred	UG2	33.87	7.7	8.38	71
Inferred	Merensky	110.02	2.96	10.42	191
Total		143.89	4.07	18.80	
Notes:					
•3PGE+Au refers to platinum + palladium + rhodium + gold					
• Mineral Resource cut-off is 2.2 g/t 3PGE+Au for UG2 and 1.2 g/t 3PGE+Au for Merensky					
• Basket price used for the cut-off calculation is US\$1,126/oz for UG2 and US\$1,270/oz for Merensky					
• Geological losses of 17% for the UG2 and 10% for the Merensky have been applied					

Exploration target	Minimum tonnes (Mt)	Maximum tonnes (Mt)	Minimum grade (g/t)	Maximum grade (g/t)	Minimum ounces (Moz)	Maximum ounces (Moz)
UG2	45	68	5.9	8.9	8.5	19.5
Merensky	88	133	2.2	3.4	6.2	14.5
Total	134	201	3.5	5.2	15.1	33.6

Note: Geological losses applied to the Exploration Target is 40% and 35% for the UG2 and Merensky, respectively.

Source: CSA Global Independent Export Report, Southern Palladium prospectus, 2022

- The total resource potential for the Bengwenyama project is therefore between 33.9Moz and 52.4Moz. This is a remarkable deposit, especially considering the deposit effectively daylights to the east of the project area.
- Importantly the bulk of the Inferred Resource is within 700-800 metres depth from surface, suggesting the mining costs should be relatively low.

The proposed exploration program

SPD has planned a drill program targeting resources in the UG2 reef at depths of less than 500m. In a recent release (29 June 2022) SPD state that the maximum planned drillhole depth is 550m, with an average depth of 288m. The drilling will be based on an initial 350m grid spacing.

SPD is targeting the following milestones with approximately 38,000m of largely diamond drilling:

- Phase 1: Infill drilling of the shallowest portion of the deposit (described above as the Eastern and Central Blocks) with the aim of upgrading the Mineral Resource confidence in this area to Indicated, to provide sufficient confidence to support downstream mining and economic studies. The aim is to identify at least 2Moz of reserves in the UG2 reef and advance the project to a scoping, then feasibility study. These reserves will be defined at a vertical depth of less than ca. 500m, and will include both geological and mining losses.
- Phase 2: Widely spaced drilling within the Exploration Target area to upgrade to Inferred Mineral Resource status.

Note that the overlying Merensky Reef is likely to be intercepted in many of the proposed drillholes. As we discuss below, the higher basket price for the UG2, with its elevated palladium and rhodium concentrations, makes it the prime target for development. However a scoping study might demonstrate the viability of Merensky ounces as well. This is discussed in more detail below.

Plans for the Phase 1 and Phase 2 drill programs are shown below.

Drilling contractors GeoMech Africa have been appointed to complete the programme and it is understood that rigs will be mobilised to site in early July, with drilling scheduled to commence in August. (See further commentary following our recent site visit regarding the timing of drilling, in Appendix 3).

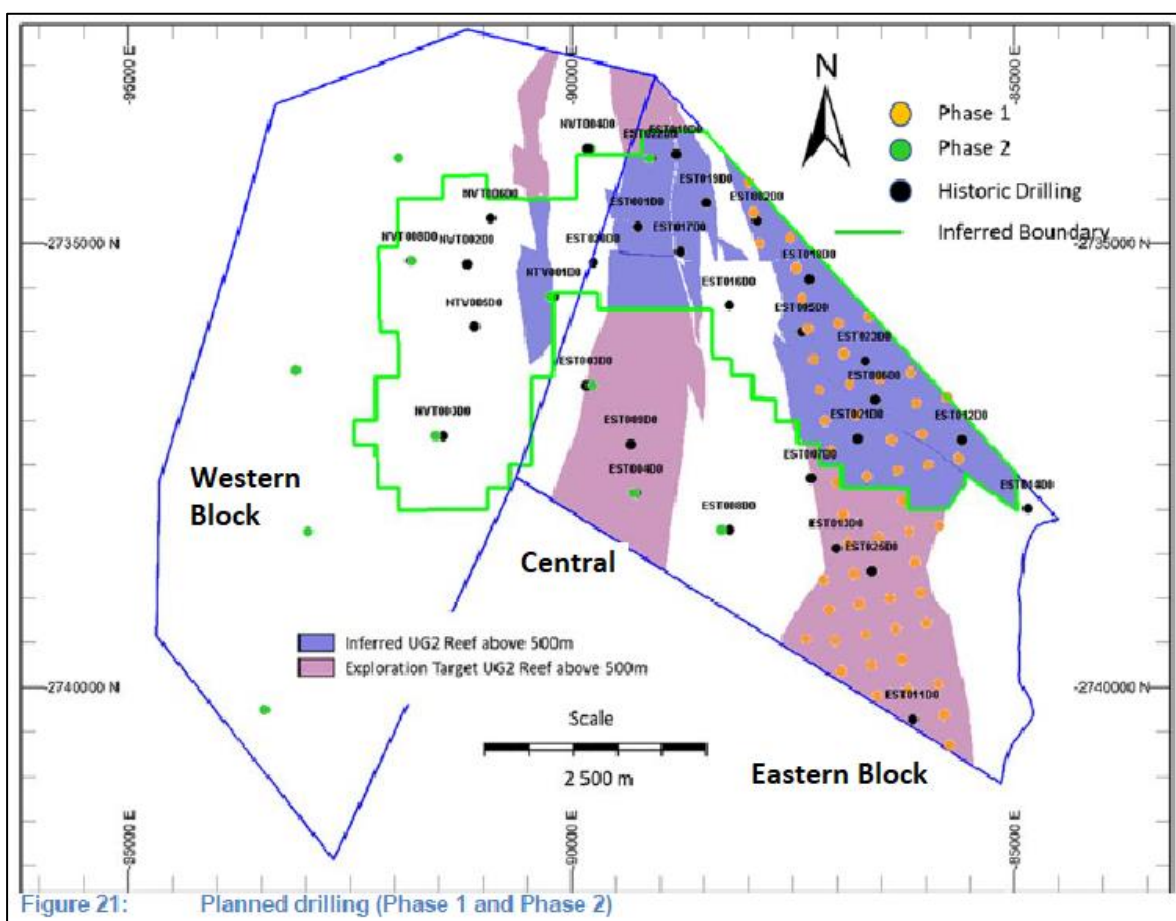


Figure 21: Planned drilling (Phase 1 and Phase 2)

Source: Modified from CSA Global Independent Expert Report, Southern Palladium prospectus, 2022

The following A\$ budget was proposed to complete a geophysical survey and the drill-out. With slight delays it seems likely that some of the FY22 expenditure will be incurred in FY23. Importantly the A\$19m raised in the IPO should be sufficient to completed the proposed exploration program.

Activity	Post IPO to 30 June 22	FY23	FY24	TOTAL
Geophysics (note 1)				111
Phase 1 Drilling	1,486	6,230	-	7,717
Phase 2 Drilling	-	3,750	56	3,805
Met testing, studies, etc.	105	930	532	1,566
Total Cash Flow	1,591	10,910	588	13,199

Source: CSA Global Independent Export Report, Southern Palladium prospectus, 2022

Note 1: The geophysical survey was completed at a cost of around A\$94,000.

What development options could be expected from the Bengwenyama deposit and what could it be worth?

- The impressive resource base at Bengwenyama has been verified by consultants CSA Global. An A\$13-14m exploration budget has been proposed to increase the resource confidence to Indicated status, to allow the completion of a pre-feasibility study and convert resources to reserves.
- Recall that one of the important conditions of acquisition is that a reserve of at least 2 million ounce (4E) is to be identified within the UG2 Reef. And, as part of the transaction, the company is required to lodge a formal application for a Mining Right over the project. This is expected to be achieved within a two-year timeframe.
- Based on the prill splits of the UG2 and Merensky, it is quite clear that the UG2 is likely to be the initial target for an initial operation at Bengwenyama. With much higher proportions of Pd and Rh the UG2 is the real prize for mines of the central section Eastern Limb. As shown below, the UG2 prill split generates a basket price of over US\$2,800/oz at recent metal prices, over 60% higher than that from the Merensky.

UG2 Reef				
Metal	Split	US\$ price	Basket price US\$/oz	%
Pt	44	910	400	14%
Pd	44	2196	966	34%
Rh	10	14600	1460	51%
Au	2	1807	36	1%
	100		2863	100%

Metal prices at 2/08/2022

Merensky Reef				
Metal	Split	US\$ price	Basket price US\$/oz	%
Pt	61	910	555	32%
Pd	29	2196	637	36%
Rh	3	14600	438	25%
Au	7	1807	126	7%
	100		1756	100%

Metal prices at 2/08/2022

Source: Data from CSA Global Independent Export Report, Southern Palladium prospectus, 2022

PGM prices as at 2 August 2022

- At recent PGM prices, the basket price for the Merensky reef is around US\$1756/oz which suggests this could become an important co-product from a future mine (as it is at the Impala/ARM Two Rivers mine to the south).
- In order to understand what might be possible for the Bengwenyama Project, we have undertaken a brief review of the existing projects on the Eastern Limb. The following table summarises the resource and reserve position for the existing operations (excluding Angloplats' Twickenham mine which is now on care

and maintenance).

Resources						
Company	Mine/project	Reef	Resources			
			Mt	4E grade (g/t)	4E Moz	Width (cm)**
IMP	Marula	Merensky	47	4.21	6.4	100
		UG2	74.2	6.33	15.2	99
ARM/AMS	Modikwa	Merensky	213.9	2.89	19.9	180
		UG2	216	6.01	41.9	103
SPD	Bengwenyama	Merensky	110.0	2.96	10.5	191
		UG2	33.9	7.70	8.4	71
SPD	Bengwenyama*	<i>Merensky</i>	<i>220.5</i>	<i>2.93</i>	<i>20.9</i>	<i>n/a</i>
		<i>UG2</i>	<i>90.4</i>	<i>7.70</i>	<i>22.5</i>	<i>n/a</i>
IMP/ARM	Two Rivers	Merensky	137.1	3.51	15.5	181
		UG2	184.1	4.57	27.1	133
AMS	Mototolo/Der Brochen	Merensky	172.9	4.58	25.5	90
		UG2	402.6	3.99	51.8	180
NHM	Booysendal	Merensky	258.94	3.66	30.6	n/a
		UG2	569.81	3.83	70.4	n/a
Reserves						
Company	Mine/project	Reef	Reserves			
			Mt	4E grade (g/t)	4E Moz	Width (cm)**
AMS	Marula	Merensky	-	-	-	-
		UG2	18	4.1	2.4	126
ARM/AMS	Modikwa	Merensky	-	-	-	-
		UG2	45.1	4.21	6.1	119
IMP/ARM	Two Rivers	Merensky	49.6	2.65	4.2	305
		UG2	71.1	2.85	6.5	241
AMP	Mototolo/Der Brochen	Merensky	-	-	-	-
		UG2	25.7	3.47	2.9	206
NHM	Booysendal	Merensky	28.03	2.29	2.1	n/a
		UG2	104.55	2.79	9.4	n/a

Note: Resources and Reserves are those most recently published
Key to companies: AMS = Amplats, ARM = African Rainbow, IMP = Implats, NHM = Northam, SPD = Southern Palladium
*Includes midpoint of CSA Global's resource target
** Average width for IMP and SPD; minimum width quoted by AMS. See text.

Source: company data

- The following table summarises the approximate production capacity of the five operating mines located on the Eastern Limb. Note that the production and cost parameters are indicative only as the past 18 months has been impacted by COVID issues.

Mine/project	Approx. concentrator throughput (Mtpa)	Typical grade (g/t, 4E)	Typical production (4E) in con (koz)	Typical total cost (US\$/oz 4E)
Marula	1.8	4.4	230	810
Modikwa	2.2	4.0	300	850
Two Rivers	3.3	3.4	300	690
Mototolo	2.0	3.3	220	730
Booysendal	4.5	2.8	350	810

Source: company data

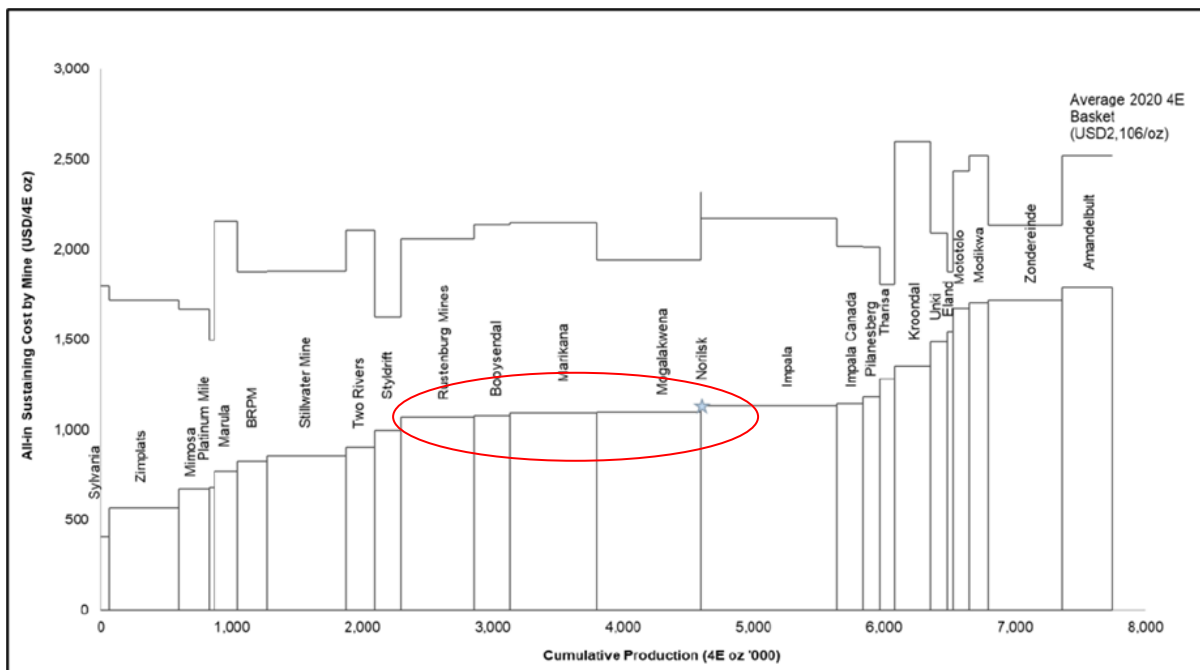
- Subject to a successful forthcoming drilling campaign, we can see the following as a possible development strategy.
 - Access: twin declines from surface, likely into the footwall of the UG2.
 - Mining method: conventional narrow seam stope mining with tracked and trackless equipment.
 - Mining/processing rate: in the range 130-170kt/month (1.6-2.0mtpa) from the UG2 and possibly from the Merensky Reef.
 - Production grade from the UG2: around 4.5g/t (3E+gold), driven by dilution of the resource grade to a mining width of 1.2m.

- Metallurgical recovery: 85%.
- Potential PGM production: 200 to 250,000 3E+gold ounces per year.
- Assuming good reef consistency, we would suggest that there is a good possibility that the Bengwenyama mine costs will be relatively low, advantaged by:
 - Attractive grades.
 - Moderate mining widths.
 - Shallow level of extraction, reducing haulage costs.
 - Attractive metallurgical characteristics, likely to be comparable to the nearby Modikwa mine.
 - Availability of a trained local workforce.
- We would also infer that the capital intensity of the project to be relatively low, assisted by:
 - Shallow levels of initial extraction requiring declines rather than deep vertical shafts.
 - Proximity to water (the Lebalelo water pipeline lies adjacent to the project which is likely to source water from the nearby De Hoop dam) and power.
 - The ability to sell PGM-rich concentrate to local smelters using well established commercial terms.

Based on the above assumptions we have put together a 'what if' valuation for SPD's Bengwenyama PGM project, just to illustrate what could emerge from the success case. Note that we have modelled the project in USD terms, which takes no account of the USD/Rand exchange rate. Furthermore, the model is prepared in real terms, and does not take into account South African cost inflation.

The following assumptions have been made:

- Mining/milling rate of 150,000t/month = ca.1.8mtpa
- Production grade of 4.5g/t from the UG2 reef only.
- Steady state production of around 220kozpa PGM's, ramping up over 2 years.
- Metallurgical recoveries of 85% (Modikwa reports 87%).
- Production of ca. 110kozpa Pt, 110kozpa Pd, 25kozpa Rh and 5kozpa Au.
- C1 production costs of US\$1100/oz, which would put the mine mid-curve on the 2020 cost curve (the latest we have available). Given relatively high grades and access from near surface we think this is easily defensible and likely to be quite conservative.



- Capex: we have assumed pre-production capex US\$450m with sustaining capex of US\$30m/year. See below for commentary.

	US\$m
Mining, pre-production	150
Concentrator	120
Tailing storage facility	40
Infrastructure	50
Management costs	25
Other costs	25
SUB-TOTAL	410
Contingency (10%)	41
TOTAL	451
Sustaining capex (per year)	30

Source: BSCP estimates

- A mine life of 20 years has been assumed which will require a reserve of around 5.5Moz (current UG2 resource is 8.4Moz). Clearly this is contingent on the success of the current drilling programme.
- Third party smelting assumed, with payabilities of 82%.
- Fiscal terms: 5% state royalty and a 27% tax rate.
- No credit has been attributed for chrome or minor PGM by-products (eg ruthenium or iridium) which we believe could add 5 to 10% to revenues.

Capital cost estimates

Capital costs represent one of the greatest uncertainties in this evaluation. There have been few recent developments in the PGM industry for mines of this scale. The following comparatives have been used in deriving our capex estimate:

- **Mototolo/Der Brochen** brownfields development. In late 2021, Amplats gave the go-ahead for the Der Brochen development to extend the mine life of the Mototolo complex for a further 30 years. Capex is estimated at US\$245m for a 2.9Mtpa underground production rate, roughly twice our assumed production rate from Bengwenyama. Amplats provides no detail here, but we guess the bulk of the capex will be directed at the new Der Brochen underground with some capital applied to updating the Mototolo concentrator. On this basis we would expect the Bengwenyama underground pre-production capex to perhaps be around the US\$140-150m mark.
- **Platinum Group Metal's Waterberg project.** PTM's Waterberg project has been controversial, to say the least. With proposed production rates ramping up to around 400,000t/month (4.8Mtpa) from a multiple mine complex on the Northern Limb's Platreef, pre-production capex was estimated to be over US\$1bn. Of this some \$400m was attributed to mine development, and given the need for multiple mine entries, it's not surprising capital intensity is higher than that for Der Brochen. Again, our US\$140-150m capex for the Bengwenyama mine seems to be of the right order of magnitude. PTM estimated capital cost for a 4.8Mtpa concentrator was US\$172m. We feel fairly comfortable with a number around the US\$120m mark for a plant one third the size and hold some reservations that PTM can build a concentrator of that size for under US\$200m.
- **Ivanhoe Mines/Platreef development.** In early 2022 Ivanhoe Mines (IVN:TSX) released its final feasibility study. The Platreef 2022 feasibility is a phased development based on continued development and earlier production from Shaft 1 which starts with a fairly modest 770ktpa production (2024–2027) and then two 2.2 Mtpa concentrator streams will be added in 2028 and 2030, increasing the production rate to 5.2 Mtpa. During Phase 1 the main access to the mine will be via a 996 m deep, 7.25 m diameter ventilation shaft (Shaft 1). Development will be commenced around Shaft 1 via the principal access/ haulage levels (the 750 m, 850 m, and 950 m) and a series of interconnecting ramps. Shaft 1 was completed mid 2020 and development towards the so-called Flatreef orebodies has commenced. Capital cost estimates for the first phase development are instructive:
 - Mine development cost, including a ca. 1km deep shaft. Capex estimate US\$195m. This makes our \$140-150m estimate for Bengwenyama look quite conservative.
 - Concentrator cost. Capex estimate for a 770ktpa concentrator plus tailings facility is US\$73m. Scaling this to 1.6Mtpa, we again feel quite comfortable with our estimate of US\$160m.
 - Total capital cost for Stage 1: The 2022 estimates capex for Stage 1 at US\$488m for a modest 770ktpa mine/mill throughput. We believe that the Bengwenyama project could offer significant savings in mining and infrastructure costs (Platreef is quite remote). In this context we are quite comfortable with a US\$450m capex estimate.

It is worth noting that the total capex bill for the total Platreef development is estimated in the 2022 DFS at US\$2.9Bn.

Conceptual valuation

We have run NPV evaluations at an 8% discount rate at two sets of commodity price assumption: our internal estimates (BSCP) and recent spot prices. Note, the model has been prepared in after tax real terms and does not inflate costs nor commodity prices and is based on a 100% basis. It is an unfunded valuation.

Prices (US\$/oz)	BSCP assumptions	Spot
Platinum	800	910
Palladium	1500	2196
Rhodium	14000	14600
Gold	1750	1807
NPV(8), US\$m, post tax	\$1,035	\$1,550
NPV(8), A\$m at 75c	\$1,479	\$2,214
IRR (%), post tax	29%	37%

Source: BSCP estimates

It must be stressed that these numbers are indicative only, and a lot can change as drilling progresses and as SPD engineers complete scoping, pre-feasibility and feasibility studies. Nonetheless it demonstrates how attractive a project this could become should the planets align for Bengwenyama.

Some detail of our model is included in Appendix 2. Note The model is prepared in real terms, and does not take into account South African cost inflation. Given South Africa is such a large producer of PGMs, we believe that over the long term industry cost pressures will ultimately filter through to pricing, so we have modelled flat margins going forward.

Opportunity for additional value-add

Having spent some time understanding the Bengwenyama project itself and reviewing the neighbouring mines and projects we see a number of opportunities from the project

- **Co-mining of the Merensky Reef.** The Merensky typically lies 240 to 400m stratigraphically above the UG2. While the basket price of contained metal is significantly lower than the UG2, we see good reason why the Merensky might become a co-product with the UG2. We note that the Two Rivers Mine of Implats and ARM is currently developing the Merensky Reef to supplement production from the UG2. Feasibility studies during 2021 focused on the Merensky Reef concluding that the operation would be feasible with an initial capital outlay of R5.7bn and steady-state production of 245koz 6E. (Source: Implats 2021 Reserves and Resources Report).
- **Pool and share opportunity to the north with the Modikwa project.** The southern extension of the Modikwa mining leases extend right to the boundary with the Bengwenyama project. It is possible in the future that the Modikwa owners could consider a 'pool and share' arrangement with SPD in exchange for guaranteed concentrate offtake.
- **Consolidation of uneconomic PGM resources around SPD.** We are aware of a number of smaller PGM projects north and south of Bengwenyama which could integrate into a larger scale project.

As the project currently stands, resource/reserve tonnes seem to be the least risky aspect of the project. Of the three 'value add' options above, not doubt the co-mining of the Merensky looks to us to be the most obvious. However, given the lower grades and lower basket price (at current spot) this will require a detailed study to establish its viability.

Proposed timetable

SPD has presented the accompanying timetable in its recent Prospectus.

ITEM	ACTIVITY	PLAN START	PLAN DURATION MONTH	PERIODS																							
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Geophysics	1	2	█	█																						
2	Ph 1 Shallow Inferred Indicated Conversion	3	10		█	█	█	█	█	█	█	█	█	█	█												
3	JORC 2012 Resource Report	12	4										█	█	█	█											
4	Concept Study	6	6																								
5	Ph 2 Drilling Programmes Upgrade of the total Area	12	6																								
6	Updated JORC 2012 of total Area	17	4																								
7	Metallurgical testing	8	4																								
8	Pre-Feasibility Study and Reserve	10	12																								
9	JORC 2012 Reserve Report	22	3																								
10	Environmental Studies (Scoping Study)	14	6																								
11	Social and Labour Plan (Including Community Studies)	14	6																								
12	Mining Work Programme	20	3																								
13	Lodgement of Mining Right Application	23	2																								

Source: Southern Palladium draft Prospectus, 2022

Key points from this timetable include the following:

- High-resolution airborne geophysical survey is now completed and is discussed above.
- Drilling is scheduled to commence in August 2022. Drilling contractors have been appointed.
- A concept/scoping study is due for completion within 12 months.
- A prefeasibility study is scheduled to commence in 1Q 2023.
- A minimum 2Moz Probable Reserve (JORC 2012) is expected by 4Q 2023, or perhaps earlier.
- A Mining Right Application is to be lodged within 2 years of the IPO, subject to a satisfactory outcome from the PFS.
- This will trigger the start of a Bankable Feasibility Study.

We consider this timetable to be quite conservative. Already, SPD has announced (22 June 2022) that the 12 month forecast timeframe for the drill-out could be reduced to 8-9 months. Drilling is now scheduled to start in August.

Postscript: We undertook a site visit to the Bengwenyama project with management of 22 July 2022. The outcomes from this visit is summarised in Appendix 3.

Moving Bengwenyama towards a Mining Right Application

Following completion of the exploration programme and a PFS which demonstrates Bengwenyama as an economic proposition, an application for a Mining Right and an Environmental Authorisation will be completed. This will be undertaken over two major phases, namely an initial 44-day Scoping Phase followed by a comprehensive 106-day Environmental Impact Assessment (“EIA”) Phase. The total regulated timeframe for the Environmental Authorisation process, including review and decision-making by the competent authorities, is 300 days. Application will be made simultaneously for a Water Use Licence.

Board and Management

SPD has put together a very experienced board and management team to ensure the objectives of the new company can be met.

The Managing Director for the company is **Johan Odendaal**, previously CEO of the holding company MUM, which owns title to the Bengwenyama project. Johan has a background in geology and mineral economics and has worked for many years as a financial analyst before establishing Minxcon, a South African mining consultancy. He is based in Johannesburg.

Terence Goodlace is Non-executive Chairman. Mr Goodlace has an extensive background in African mining operations. A mining engineer by background, he has been COO of Gold Fields and CEO of Metorex. He was CEO of platinum major Implats and was on the Implats board for over 6 years. Mr Goodlace is also a non-executive director at Gold Fields Limited, Kumba Iron Ore Limited and AfriTin Limited. We believe Mr Goodlace's interest in taking on this role speaks volumes for the quality of the project. He is based in Johannesburg.

Mike Storzaker has been appointed non-executive director and was responsible for coordinating the listing of SPD on the ASX and JSE. He is an executive with over 40 years of international commercial experience in mining finance and investment. He is currently a non-executive director on four other mining company boards, three of which operate in Africa. Mr Storzaker is based in Sydney.

Other non-executive directors are:

- **Daan van Heerden**, has significant experience in managing underground and open pit operations and heads the Mining Engineering group at consultants Minxcon. He is Johannesburg based.
- **Rob Thomson**, an experienced mining engineer and board director. Rob is based in Sydney.
- **Geoff Hiller**, a mining/civil engineer with 25 years of mining industry experience, currently CEO of Pacific Nickel Mines Limited. He is Sydney based.

Directors will own around 16.4% of SPD at IPO.

Geologist, **Uwe Engelmann**, will take on the role of Exploration Manager (under contact from consultants Minxcon) and will coordinate the drill-out and resource estimate of the Bengwenyama project. Mr Engelmann has over 23 years' experience in mining and exploration in South Africa and heads up the Exploration and Resource group at Minxcon.

SPD's company secretary is **Andrew Cooke**, who is based in Sydney.

Appendix 1. Summary of three South African mid scale pre-development and production companies

There is an obvious need to compare SPD with other South African PGM mid-scale pre- and post-development companies. In this section we look at the history of one of the more successful of the mid cap producers in the early part of this decade, Aquarius Platinum, and two other PGM 'hopefuls', both TSX listed: Platinum Group Metals and Eastern Platinum.

Platinum Group Metals (TSX: PTM)

Waterberg Project (50%)

EV ca. A\$206m

- PTM has had a long, but not always successful history in the PGM sector in South Africa. Its first project, the Maseve Mine, located in the troublesome Pilansberg area of the Western Limb, failed to deliver the expected production levels and the project was eventually sold to RBPlats for a modest US\$74m. PTM took a US\$571m write-down as a result.
- The company has since advanced a second project, Waterberg, located on the Platreef (Northern Limb). PTM has a direct and indirect total holding of 50.02% of the project. Other partners in the JV are Impala, JOGMEC, Japanese trading group Hanwa and a BEE partner.
- A DFS was completed in 2019, identifying a substantial project producing 420kozpa (4E) at steady state from a milling rate of 4.8mtpa at very low cash costs (4E basis) of US\$640/oz. The total resource base is 33.4Moz (of which 78% is measured and indicated). Reserves total 5.1Moz with a 45 year mine plan proposed. Typical of the Platreef, the prill split is very rich in palladium (at 63%).
- Projected capital costs are high at US\$1.1bn (including capitalised operating costs) reflecting the need for multiple declines to access the orebody which starts at 140m depth.
- The project IRR at US\$980/oz platinum and US\$1,546/oz palladium from the 2019 DFS was 20.7%.
- A mining right was granted in April 2021, but there has been little advancement since then. Clearly this is a challenging project to finance and we would guess that it needs to be 'right-sized'.
- There have been several appeals from local community groups which don't yet appear to have been resolved.
- PTM has attempted to raise equity over the course of 2021. It is understood that 15% shareholder Impala Platinum did not participate in a recent funding round.
- In July, the long-standing CEO, Mike Jones resigned as CEO.
- We note that PTM's new CEO has obtained support from 13% shareholder in the project, JOGMEC, to advance Waterberg. We have a feeling that this will involve a 'back to basics' review of the feasibility study to right-size the project. At +US\$1bn in capex, it was simply too onerous for a small company within a complex ownership structure.
- We note as well that PTM has recently issued a shelf prospectus to all the company to raise up to US\$250m in debt and equity.

Eastern Platinum (JSE:EPS, TSX:ELR)

Crocodile River and Eastern Limb (Kennedy's Vale and others).

EV ca. A\$34m

- Eastplats has had a long and complex history in the South African platinum industry. Its ownership is now far from clear but it does appear to be controlled by Chinese interests. Recent statements by the company draw into question whether key assets held by the company are BEE compliant.
- ELR's main asset is the Crocodile River PGM mine (held through its 87.5% ownership of Barplats) is located on the eastern section of the Western Limb. Mining operations started in 2005 and the mine was put on care and maintenance in 2013. Crocodile River had a well-earned reputation as being a difficult mine. According to the company's latest presentation (December 2022) the Zandfontein underground operations may be reopened in late 2022. The total resource at the Crocodile River Complex is 7.8Moz (4E).
- On the Eastern Limb, ELR owns some 74.5% of the Kennedy's Vale project and resources within adjacent farms. Together with a modest resource at a potentially open-pittable deposit, Mareesburg (87%), equity ounces held by ELR total around 56Moz (4E). The history of Kennedy's Vale is one of disappointment with the sinking of twin shafts to depths of 900-1000m by owner Barplats in the 1990's. Poor project economics resulted in the abandonment of the project which seems to remain on the backburner. ELR does talk about finalising a

feasibility study on the small Mareesburg project, but there is little information provided by the company.

- ELR is now a small producer of chromite and small amounts of by-product PGMs from the retreatment of tailings.
- Collectively, these issues translate to an exceptionally low EV per resource ounce for ELR. This implies to us that the market is substantially discounting the ounces held on the Eastern Limb (Kennedy's Vale, etc) which make up some 89% of the company's total resource base.

Appendix 2. Conceptual Development model for the Bengwenyama project

It must be stressed that the following assumptions and forecasts are conceptual in nature, and as discussed in the text, are based around benchmarking capex against comparable projects and opex against the existing cost curve.

The model is prepared in real terms, and does not take into account South African cost inflation. Given South Africa is such a large producer of PGMs, we believe that over the long term cost pressures will ultimately filter through to pricing.

Production year (20 years assumed)		-1	0	1	2	3	4	5
		2024	2025	2026	2027	2028	2029	2030
Prices (US\$/oz)								
Platinum				800	800	800	800	800
Palladium				1500	1500	1500	1500	1500
Rhodium				14000	14000	14000	14000	14000
Gold				1750	1750	1750	1750	1750
Production								
Production rate (monthly)	Kt			100	150	150	150	150
Production rate (annual)	Kt			1200	1800	1800	1800	1800
Mined grade	g/t			3.0	4.0	4.5	4.5	4.5
Processed tonnes	kt			1200	1800	1800	1800	1800
Milled grade	g/t			3.00	4.00	4.5	4.5	4.5
<i>Prill split</i>								
Platinum				44%	44%	44%	44%	44%
Palladium				44%	44%	44%	44%	44%
Rhodium				10%	10%	10%	10%	10%
Gold				2%	2%	2%	2%	2%
Met recoveries	%			80%	85%	85%	85%	85%
Metal production								
Platinum	Koz			40.7	86.6	97.4	97.4	97.4
Palladium	Koz			40.7	86.6	97.4	97.4	97.4
Rhodium	Koz			9.3	19.7	22.1	22.1	22.1
Gold	Koz			1.9	3.9	4.4	4.4	4.4
Total	Koz (4E)			92.6	196.8	221.4	221.4	221.4
Payability	%			82%	82%	82%	82%	82%
Revenue								
Platinum	US\$m			32.6	69.3	77.9	77.9	77.9
Palladium				61.1	129.9	146.1	146.1	146.1
Rhodium				129.6	275.5	309.9	309.9	309.9
Gold				3.2	6.9	7.7	7.7	7.7
Total				226.6	481.5	541.7	541.7	541.7
Royalty				3%	4%	5%	5%	5%
Revenue net of royalty				219.8	462.3	514.6	514.6	514.6
Revenue	US\$/oz (4E)			2374	2349	2325	2325	2325
Cash costs								
Margin	US\$/oz (4E)			1174	1199	1225	1225	1225
EBITDA	US\$m			108.7	236.0	271.1	271.1	271.1
D&A	US\$m			30.0	30.0	30.0	30.0	30.0
EBIT	US\$m			78.7	206.0	241.1	241.1	241.1
Interest	US\$m			22.5	22.5	15.0	15.0	15.0
EBT	US\$m			56.2	183.5	226.1	226.1	226.1
Tax rate	%			27%	27%	27%	27%	27%
Tax	US\$m			15.2	49.5	61.1	61.1	61.1
NPAT	US\$m			41.0	133.9	165.1	165.1	165.1
Cashflow, after tax								
Capital		-225.0	-225.0					
Sustaining capital				-30.0	-30.0	-30.0	-30.0	-30.0
Net cashflow		-225.0	-225.0	63.5	156.4	180.1	180.1	180.1
NPV (8%)								
FX	US\$m	\$1,035						
NPV (8%)	A\$m	0.70						
IRR		\$1,479						
		29%						

Source: BSCP estimates

Appendix 3. An update following a site visit to Bengwenyama in July 2022

Amended from our research note released on 25 July 2022

On Friday 22 July, we joined with SPD management on a site visit to the Bengwenyama PGM project. The purpose of the visit was to understand the geographic setting of the project, the existing infrastructure, the relationship with the Bengwenyama community and possibly to see the start of drilling.

As was announced on 20 July 2022 the start of drilling has been delayed by 2-3 weeks as SPD and the drilling company establish appropriate infrastructure and engage local workers to assist with the programme. We were disappointed with this outcome, of course, but agree that appropriate recruitment processes need to be put in place on day one of the project to avert any future uncertainty. As we were reminded on more than one occasion, unemployment South Africa-wide is estimated at around 50%, and much higher in rural areas. Jobs are eagerly sought, and competition for employment is high. Importantly support from the Bengwenyama community is still very strong.

In this note we will focus on the forthcoming exploration programme and infrastructure put in place to manage the work. SPD management is targeting the commencement of drilling on or around the week starting 8 August. We see this as readily achievable. The company has already negotiated access to around 40 drill sites, exploration infrastructure is now largely in place, and a local recruitment programme is now underway. These issues are discussed in detail below.

Permitting of drill sites and negotiations with local landowners.

We met with the team involved in gaining access to individual drill sites. The approach has been very thorough and is based around signatures obtained on a multipage agreement with landholders. This document specifies the location of the work, likely disturbance, rehabilitation obligations and compensation payable (on a sliding scale based around the degree of disturbance). The company has worked hard on community engagement, as reported in our note in May. SPD has already engaged in many community liaison / education meetings which included the setting up a of mock drill pad.

The permitting team has been on site twice now and has roughly 60% of the 63 sites Phase 1 sites already signed up. To us there appears to be little risk in the drillers accessing sites. This is a very positive outcome.



Uwe Engelmann, Exploration Manager, explaining the drilling footprint (from our May report

Exploration infrastructure and plans for the start of drilling in the week starting 8 August.

- The company has secured the use of an old community centre to be used as its exploration base. These comprise 2 buildings, one for offices/logging/core cutting/storage, one for a mess and ablutions with the site rented from the community.
- The drillers (GeoMech Africa) have been on site will be back on site this week to get ready for mobilisation of diamond drill rigs and to interview support personnel.
- Mobilisation of rigs is scheduled to start in mid August with the commencement of drilling before the end of the month.
- The geological exploration team is in place and we discussed logistics with the Exploration Manager and Senior Geologist on site. The team is in the process of setting up logging facilities and will relocate a diamond saw for core cutting shortly.
- An assay laboratory has been identified with the suggestion of 3-4 weeks turnaround for results.



Exploration camp, new fence and manned security gate.



Drillers GeoMech have already set out their laydown area within the security fence.

Preparation for the forthcoming exploration programme

Some disquiet emerged during the early stages of local recruitment. This has led to changes in the way the company approaches the community for employment. The recruitment process is now well defined and several contracts have already been let:

- SPD* now has a noticeboard at the front gate of the site office which highlights which jobs and contracts are available. This then requires interested parties to submit a tender (if a contract) or their CVs for individual appointments.
- The tender box is opened and reviewed in association with a local Bengwenyama monitoring committee.

- Contracts have already been awarded for the construction of a fence around the site office and a front gate security contract (both of which are now in place). The process is now well accepted by the community.
- The company is in the process of awarding contracts/jobs in the following areas:
 - Maintenance/upgrade for the site office (especially power and water)
 - Drillers' offsideers
 - Geological assistants
 - Night watchmen to watch over rigs
- These tenders and CVs were collected by management while we were on site. These are being evaluated and interviews will take place this week.
- This was the main reason for the delay to the start of drilling. The site needed to be secure (it is now) and the drillers had committed to recruit local support personnel.
- Access to a reliable and secure water source for drilling has been obtained, at modest cost.

Drilling timetable.

- Phase 1A will drill out the existing resource at <500m depth to 750x750m drill spacing and aims to be completed by the end of the year. This will establish a new (and probably enlarged) inferred resource for the UG2 reef, and is likely to be released in early 2023.
- Phase 1B drilling is an infill programme (350x350m) designed to outline sufficient resources to establish the minimum 2Moz 4E reserve. This is estimated to take another 4 months (from mid January) with a final resource definition by mid 2023. This is in line with prospectus forecasts (or perhaps a little quicker).
- Discussions on site with the geologists suggests that this is an achievable schedule.
- The risk is always that the rocks themselves perform as the geologists currently believe!

Following our site visit, we can see SPD achieving its revised timetable for the start of drilling during the week starting 8 August, but we have to remember that (1) this is the first exploration drilling programme to occur here in over 15 years and (2) drill rigs can break down, even on day 1!

We met with members of the local community who remain very supportive of the project. In this regard, nothing has changed. We therefore urge investors in SPD to be patient. If the delay to the programme's start is only 2-3 weeks, this will be a great result. And, as we noted above, there is no shortage of approved drill sites.

The recent site visit, while disappointing that we didn't see first core from Bengwenyama, did highlight the very real potential of this project. A number of other issues which emerged from this visit will be discussed in our forthcoming SPD initiation report.

(*Note that the Preferent Prospecting Right for the Bengwenyama project is held by Miracle Upon Miracle Pty Ltd, in which SPD is a 70% shareholder)



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