11 July 2023



# Highlights

- Expected PGM<sub>3E</sub><sup>1</sup> metallurgical recoveries improved from 78% to 86% through successful tailings leaching test work
- Improved robustness of entire flowsheet by minimising metal loss through flotation
- Flotation reagent optimisation test work reduces reagent consumption whilst maintaining PGM<sub>3E</sub> recoveries with a concentrate grade of >280g/t PGM<sub>3E</sub><sup>1</sup>
- Recoveries and concentrate grades in line and exceed analogous South African PGM operations
- Chromite concentrate from flotation tails represents a potentially high value by-product with prices increasing by 50% over the past 12 months
- Flow sheet improvements to be incorporated into the Scoping Study targeted for completion in Q4 2023

Future Metals NL ("**Future Metals**" or the "**Company**", ASX | AIM: FME), is pleased to announce enhanced metallurgical recoveries from the leaching of flotation tailings, reagent optimisation test work and the chromite concentrate potential for its wholly owned Panton Project ("**Panton**" or the "**Project**").

The results de-risk the process flowsheet for Panton and improve the project economics. The Company is in the process of finalising a Scoping Study on the Project's 6.9Moz PdEq<sup>1</sup> JORC Resource to demonstrate a credible path towards developing a low capital, high grade PGM-Ni operation.

#### Mr Jardee Kininmonth, Managing Director of Future Metals, commented:

"We have achieved another metallurgical breakthrough for the Panton project, potentially creating a step-change in PGM recoveries, de-risking the flowsheet and improving project economics through leaching of flotation tails.

We can now expect to recover approximately 86% of PGM metals from Panton ore feed and importantly over 93% of palladium. Combined with our ability to consistently achieve >280g/t PGM<sub>3E</sub><sup>1</sup> concentrate grades, Panton compares very favourably to analogous South African PGM operations.

We're also enthused by the potential to create a significant quantity of chromite concentrate from our tailings. This is another critical mineral, irreplaceable in the steel-making process, and with very limited supply from Western jurisdictions."

<sup>1</sup> PGM<sub>3E</sub> = Palladium (Pd) + Platinum (Pt) + Gold (Au)

**BOARD & MANAGEMENT** Mr Allan Mulligan Ms Elizabeth Henson Ms Barbara Duggan Mr Justin Tremain Dr Jon Hronsky Mr Tom O'Rourke Mr Jardee Kininmonth Mr Robert Mosig Mr Andrew Shepherd **CAPITAL STRUCTURE** Market Cap Share Price Enterprise Value Cash \$21.1m 5c 10 July 2023 \$17.2m \$3.9m 31 Mar 2023

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# **Processing and Project Delivery Strategy**

Further to the announcement *'Mining and Processing Breakthrough at Panton'* on 13 February 2023, the Company has continued to methodically de-risk the development of Panton and enhance project economics through ongoing metallurgical test work and optimisation.

These de-risking factors include:

- Ore sorting test work demonstrating the ability to separate high-grade PGM reef with a 97% recovery from the surrounding low grade bulk mineralisation and waste. This enables the use of more conventional mining methods to extract the high-grade ore and ensure a high-grade feed for the mill, thereby reducing capital and operating costs.
- Flotation test work demonstrating the ability to consistently achieve flotation PGM<sub>3E</sub><sup>1</sup> recoveries averaging 78% at a very high average concentrate grade of >280g/t PGM<sub>3E</sub><sup>1</sup> utilising conventional crushing, grinding and flotation techniques on high-grade PGM reef ore.
- Leaching test work on flotation tails improving overall PGM<sub>3E</sub><sup>1</sup> recoveries to 93.1% Pd, 76.8% Pt and 94.2% Au (~86% PGM<sub>3E</sub><sup>1</sup>), requiring no additional grinding, at atmospheric pressure and ambient temperature.
- Test work demonstrating the ability to produce a saleable chromite concentrate from flotation tailings using magnetic separation.

Future Metals is incorporating this series of improvements into a Scoping Study to demonstrate the viability of the Panton project as a low capital, high-grade and high recovery operation producing PGMs, nickel and chromite concentrate.

The Scoping Study is evaluating multiple pathways for progressing Panton, assessing both concentrate production for sale into the smelting market, and downstream integration to produce high payability, low emission upgraded metal products for direct sale to end users.

# Improved PGM Recoveries Through Leaching of Flotation Tails

Future Metal's has successfully demonstrated that cyanide leaching at ambient temperature and atmospheric pressure can achieve recoveries of 83.5% Pd and 92% Au as shown in Table 1.

The positive leaching results not only potentially improve project economics, but also substantially derisk the flow sheet by providing an additional method of metal recovery following flotation, thereby providing protection from any periods of fluctuating flotation performance.

#### **Table 1: Flotation Tailings Leaching Recoveries**

	Pt (g/t)	Pd (g/t)	Au (g/t)
Head Grade	0.94	1.25	0.16
Recovery (%)	0.3	83.5	91.6

A standard cyanide bottle roll test was performed on the tailings from prior flotation test work on highgrade chromitite reef samples. This sample's grind size is  $P_{80}$  of  $30\mu$ m.

These results are supported by historical test work which showed high recoveries of Pd and Au while testing multiple variables including grind size, temperature and reagent concentration. This test work also demonstrated the ability to produce a very high grade PGM product suitable for direct sale to refineries via a pilot scale leach circuit.

The Company is now commencing investigations to enhance the economics of tailings leaching through targeting increased Pt recoveries.



Applying previously reported concentrate flotation recoveries in combination with this successful flotation tailings leaching test work provides an **overall net recovery of 86% PGM\_{3E}^{1}** as show in Table 2.

#### **Table 2: Panton Net Recovery**

		Pt	Pd	Au	Pt, Pd & Au
Head grade <sup>1</sup>	g/t	4.35	5.20	0.44	9.99
Ore sorting mass recovery <sup>2</sup>	%	87.3	87.3	87.3	87.3
Ore sorting metal recovery <sup>2</sup>	%	96.7	96.7	96.7	96.7
Head grade post ore sorting	g/t	4.82	5.76	0.49	11.07
Flotation recovery <sup>3</sup>	%	79.4	77.2	69.3	77.8
Flotation recovered grade	g/t	3.83	4.45	0.34	8.61
Tails grade	g/t	0.99	1.31	0.15	2.46
Tails recovery <sup>₄</sup>	%	0.26	83.5	91.6	50.3
Tails recovered grade	g/t	0.00	1.10	0.14	1.24
Net recovery	%	76.8	93.1	94.2	86.0

1: As set out under Table 2: Optimisation and Variability Flotation Test Programme – Concentrate Grades, Future Metals Announcement 'Mining and Processing Breakthrough' on 13 February 2023

2: As set out under Table 1: Bulk Ore Sorting Test Results, Future Metals Announcement 'Mining and Processing Breakthrough' on 13 February 2023

3: As set out under Table 2: Bulk Ore Sorting Test Results, Future Metals Announcement 'Mining and Processing Breakthrough' on 13 February 2023

4: Refer to Table 1 of this announcement



#### Figure 1: High-Level Flowsheet





# **Flotation Reagent Optimisation**

The Company has continued to optimise its flotation test work subsequent to demonstrating the ability to consistently achieve a high-grade concentrate at high recoveries. As part of this ongoing work, the Company has successfully demonstrated the ability to achieve strong results with **79.4% PGM<sub>3E</sub><sup>1</sup>** recovery at a concentrate grade of **309g/t PGM<sub>3E</sub><sup>1</sup>** without the need for nitrogen sparging, thereby reducing the capital and operating costs and simplifying the flow sheet. A summary of the results from this reagent optimisation test work is provided below:

Table 3: Summa	rv of Reagent	Ontimisation	Results
Table J. Jullina	iy of Reagent	opunisation	Nesuits

Test	Concentrate Grade							Head Grade					
No.	Mass Pull	P	t	Po	ł	A	u	PGM	3E <sup>1</sup>	Pt	Pd	Au	PGM <sub>3E</sub> <sup>1</sup>
	%	g/t	Rec	g/t	Rec	g/t	Rec	g/t	Rec			g/t	
FT022	2.64	140	82.4	155	77.5	14.1	73.3	309	79.4	4.47	5.29	0.51	10.3

# Chromite Concentrate as a Valuable By-Product

As previously reported, test work has demonstrated the ability to produce a saleable chromite concentrate from flotation tailings through a magnetic separation circuit. Chromite concentrate is a high-value bulk product primarily used for the production of ferrochrome, a non-substitutable input into the production of stainless steel. The major suppliers of chromite concentrate include South Africa, Turkey, Zimbabwe & Albania. Given its importance to the steel industry and the limited deposits in Western jurisdictions it is listed as a critical mineral in the United States, Australia, Japan and India.

The Company has commenced further optimisation test work and will assess the inclusion of a chromite concentrate circuit as part of the Project's flow sheet in the Scoping Study. Chromite concentrate has the potential to be a valuable by-product and reduce tailings at site.



Figure 2: South African Chromite Concentrate Price Chart - January 2018 to April 2023 Source: Mining Bulletin





Figure 3: Global Chromite Concentrate Market - Geographic Production Distribution, 2022 Source: International Chromium Development Association

# Corporate

The Company advises, in accordance with the terms of the Company's Performance Rights Plan, that 800,000 Performance Rights have now vested to Jardee Kininmonth having achieved 12 months continuous service with the Company. Please refer to ASX announcement dated 31 January 2022 for further details of these Performance Rights.

# For further information, please contact:

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Sasha Sethi	

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulation (EU) No. 596/2014 as it forms part of United Kingdom domestic law pursuant to the European Union (Withdrawal) Act 2018, as amended by virtue of the Market Abuse (Amendment) (EU Exit) Regulations 2019.

#### **Competent Person's Statement**

The information in this announcement that relates to metallurgical test work managed by Independent Metallurgical Operations Pty Ltd ("IMO") is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of IMO, who has been engaged by Future Metals NL to provide metallurgical consulting services. Mr Adamini has approved and consented to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.



#### **Notes to Editors:**

### About the Panton PGM-Ni Project

The 100% owned Panton PGM-Ni Project is located 60kms north of the town of Halls Creek in the eastern Kimberly region of Western Australia, a tier one mining jurisdiction. The project is located on three granted mining licences and situated just 1km off the Great North Highway which accesses the Port of Wyndham (refer to Figure 4).

The Project hosts an independent JORC Code (2012) MRE of 129Mt @  $1.20g/t PGM_{3E}$ , 0.19% Ni, 0.04% Cu and 154ppm Co (1.66g/t PdEq<sup>2</sup>) at a cut-off grade of 0.90g/t PdEq for contained metal of 5.0Moz PGM<sub>3E</sub>, 239kt Ni, 48kt Cu and 20kt Co (6.9Moz PdEq). The MRE includes a high-grade reef of 25Mt @  $3.57g/t PGM_{3E}^{1}$ , 0.24% Ni, 0.07% Cu and 192ppm Co (3.86g/t PdEq) for contained metal of 2.9Moz PGM<sub>3E</sub>, 60kt Ni, 18kt Cu and 5kt Co (3.2Moz PdEq) (refer to the Company's announcement of 21 June 2022 for further details).

PGM-Ni mineralisation occurs within a layered, differentiated mafic-ultramafic intrusion referred to as the Panton intrusive which is a 12km long and 3km wide, south-west plunging synclinal intrusion. PGM mineralisation is hosted within a series of stratiform chromite reefs as well as a surrounding zone of mineralised dunite within the ultramafic package.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the announcement referenced above.



Figure 4 | Panton PGM Project Location

# About Platinum Group Metals (PGMs)

PGMs are a group of six precious metals being Platinum (Pt), palladium (Pd), iridium (Ir), osmium (Os), rhodium (Rh), and ruthenium (Ru). Exceptionally rare, they have similar physical and chemical properties and tend to occur, in varying proportions, together in the same geological deposit. The usefulness of PGMs is determined by their unique and specific shared chemical and physical properties.

PGMs have many desirable properties and as such have a wide variety of applications. Most notably, they are used as auto-catalysts (pollution control devices for ICE vehicles), but are also used in jewellery, electronics, hydrogen production / purification and in hydrogen fuel cells. The unique properties of PGMs help convert harmful exhaust pollutant emissions to harmless compounds, improving air quality and thereby enhancing health and wellbeing.



# JORC Code (2012) Edition Table 1

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Sampling methods used for samples used in the flotation and tailings leaching test work in this announcement were sourced from both PQ3 Diamond drill core and Chromitite reef mineralisation mined from the underground decline in 2007. PQ3 Diamond Core which was cut in half, and one half further cut into a quarter. One quarter is sent for assay, one quarter is retained for reference and the remaining half is used as a metallurgical test sample. Sample intervals were generally 1m in length but modified to honor geological changes such as lithology contacts. Minimum sample length was 30cm.</li> <li>All sampling was either supervised by, or undertaken by, qualified geologists.</li> <li>1/4 core samples were sent to Bureau Veritas, Canning Vale, Western Australia.</li> <li>To ensure representative sampling, for each hole, the same quarter of the original core was sent for assay, for example when looking at the core down hole, the right-hand side was retained in the core tray as the metallurgical sample, and the upper left-hand side of the core was always sent for assay with the lower left hand side always retained as the reference material. At the laboratory the entire 1/4 core sample was crushed, a 300g split was pulverised to provide material for fire assay and ICP-MS.</li> <li>Historical metallurgical results were from composites created by a prior owner of the Panton project, Platinum Australia NL. The following information in Table 1 relates solely to metallurgical samples collected by Future Metals NL.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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.).</li> </ul>	<ul> <li>All drill holes in this release were drilled PQ3 (83.0mm diameter)</li> <li>Core is orientated using a BLY TruCore UPIX Orientation Tool.</li> <li>The drilling contractor was Terra Drilling. Triple tubes are utilised in the weathered horizon (less than 10m) and standard tubes for the remainder of the drill hole.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Each core run is measured and checked against the drillers core blocks. Any core loss is noted. To date core recoveries have been excellent with very little core loss reported.</li> <li>The drilled widths of mineralisation in these drill holes are larger than the true widths.</li> <li>No relationship between recovery and grade has been identified.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature.</li> </ul>	<ul> <li>All drill core has been logged onsite by geologists to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Logging is qualitative and records lithology, grain</li> </ul>
	<ul> <li>Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul><li>size, texture, weathering, structure, alteration, veining and sulphides. Core is digitally photographed.</li><li>All holes are logged in full.</li></ul>



Criteria	JORC Code explana
Sub-sampling techniques	<ul> <li>If core, whether all core taken.</li> </ul>
and sample preparation	<ul> <li>If non-core, whe and whether sar</li> </ul>
	<ul> <li>For all samp appropriateness</li> </ul>
	<ul> <li>Quality control stages to maxim</li> </ul>
	<ul> <li>Measures take representative of for instance r sampling.</li> </ul>
	<ul> <li>Whether sample the material bei</li> </ul>
Quality of assay data and	<ul> <li>The nature, qua and laboratory technique is cor</li> </ul>
laboratory tests	<ul> <li>For geophysical instruments, etc analysis includii times, calibratic etc.</li> </ul>
	<ul> <li>Nature of qua standards, bland and whether acc and precision has</li> </ul>
Verification of sampling	<ul> <li>The verification independent or</li> </ul>
and assaying	<ul> <li>The use of twin</li> </ul>
	<ul> <li>Documentation data verification protocols.</li> </ul>
	<ul> <li>Discuss any adj</li> </ul>
Location of data points	<ul> <li>Accuracy and q (collar and dow and other location</li> </ul>
	<ul> <li>Specification of</li> </ul>
	<ul> <li>Quality and ade</li> </ul>
Data spacing	<ul> <li>Data spacing fc</li> </ul>
and distribution	<ul> <li>Whether the dates of the dates</li></ul>
	<ul> <li>Whether sampl</li> </ul>
Orientation of data in relation to	<ul> <li>Whether the or sampling of po this is known of</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>All core that is sampled is cut using a diamond saw. PQ3 core is cut in half, and then one half cut again into quarters. One quarter core is sent to the laboratory for assay, and the remaining core is kept as a reference.</li> <li>Generally, core samples are 1 metre in length, with a minimum sample length of 30 centimetres. Sample lengths are altered from the usual 1 metre due to geological contacts, particularly around the chromitite reefs.</li> <li>The sample size is considered appropriate for the material being sampled.</li> </ul>
Quality of assay data and laboratory tests Verification of sampling and assaying	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	<ul> <li>For Future Metals NL drill holes ½ core samples were sent, Bureau Veritas, Canning Vale, Western Australia.</li> <li>Future Metal NL analysis of samples had Pt, Pd and Au determined by lead collection fire assay with a 40 gram charge with ICP-MS finish providing a lower detection limit of 1ppb. Determination of As, Co, Cr, Cu, Ni and S was by Inductively Coupled Plasma following a mixed acid digest. Both ICP and fire assay analytical methods are total.</li> <li>No geophysical tools were used.</li> <li>Laboratory repeat analysis is completed on 10% of the samples submitted for assay.</li> <li>Intersections are not reported in this release.</li> <li>No adjustments were made to the data other than converting ppm to % by dividing by 10,000.</li> </ul>
Location of data points	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collars are located using a hand-held GPS. Down hole surveys are taken with a north seeking gyroscope at regular intervals of 30m down hole.</li> <li>Grid system used is Map Grid of Australia 1994, Zone 52.</li> <li>The topographic control is considered better than &lt;3m and is considered adequate.</li> </ul>
Data spacing and distribution Orientation of	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> <li>Whether the orientation of sampling achieves unbiased</li> </ul>	<ul> <li>Data spacing down hole is considered appropriate at between 0.3 and 1m intervals.</li> <li>Samples have not been composited.</li> <li>The orientation of the drill hole relative to the</li> </ul>
data in relation to geological structure Sample	<ul> <li>sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>geological target is as orthogonal as practicable however drilled intersections will be larger than true widths.</li> <li>All core sample intervals are labelled in the core</li> </ul>
security		boxes, recoded digitally and captured with the core photography. Cut core samples are collected in bags labelled with the sample number. Samples are



	Criteria
	Audits or reviews
	Section 2 Rep
	Criteria
	Mineral teneme and land tenure status
R D R D R	
	Exploration do

Criteria	JORC Code explanation	Commentary
		delivered to the Company's transport contractor in Halls Creek directly by Company personnel. Samples are then delivered to the laboratory by the transport contractor.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>The Company employed industry-standard protocols. No independent audit has been conducted.</li> </ul>
		<ul> <li>This announcement includes historical results generated by a prior owner of the Panton Project, Platinum Australia NL. The Company is not able to independently verify these results however based on historical reporting, consultants used and parallels to the Company's own results, it believes the results can be reported and relied upon.</li> </ul>

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>The Panton PGM Project is located on three granted mining licenses M80/103, M80/104 and M80/105 ('MLs'). The MLs are held 100% by Panton Sill Pty Ltd which is a 100% owned subsidiary of Future Metals NL.</li> <li>The MLs were granted on 17 March 1986 and are currently valid until 16 March 2028.</li> <li>A 0.5% net smelter return royalty is payable to Elemental Royalties Australia Pty Ltd in respect of any future production of chrome, cobalt, copper, gold, iridium, palladium, platinum, nickel, rhodium and ruthenium.</li> <li>A 2.0% net smelter return royalty is payable to Maverix Metals (Australia) Pty Ltd on any PGMs produced from the MLs.</li> <li>There are no impediments to working in the area.</li> <li>The Panton deposit was discovered by the Geological Survey of Western Australia from surface mapping conducted in the early 1960s.</li> <li>Pickland Mather and Co. drilled the first hole to test the mafic-ultramafic complex in 1970, followed by Minsaco Resources which drilled 30 diamond holes between 1976 and 1987.</li> <li>In 1989, Pancontinental Mining Limited and Degussa Exploration drilled a further 32 drill holes and defined a non-JORC compliant resource.</li> <li>Platinum Australia Ltd acquired the project in 2000 and conducted the majority of the drilling, comprising 166 holes for 34,410 metres, leading to the delineation of a maiden JORC Mineral Resource Estimate.</li> <li>Panoramic Resources Ltd subsequently purchased the Panton PGM Project from Platinum Australia Ltd in May 2012 and conducted a wide range of</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>ore.</li> <li>The Panton intrusive is a layered, differentiated mafic to ultramafic body that has been intruded into the sediments of the Proterozoic Lamboo</li> </ul>



Criteria	JORC Code expla
Drill hole Information	<ul> <li>A summary understanding tabulation of drill holes:         <ul> <li>easting</li> <li>elevati sea lev</li> <li>dip and</li> </ul> </li> </ul>
	<ul> <li>down l</li> <li>hole le</li> <li>If the exclusion</li> <li>basis that the exclusion doe</li> <li>the report, explain why the</li> </ul>
Data aggregation methods	<ul> <li>In reporting l techniques, truncations (e grades are us</li> </ul>
	<ul> <li>Where aggree of high grade results, the should be sta aggregations</li> <li>The assumpt</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>equivalent val</li> <li>These relation reporting of E</li> <li>If the geome the drill hole reported.</li> </ul>
	<ul> <li>If it is not known in the reported, the effect (e.g. 'do</li> </ul>
Diagrams	<ul> <li>Appropriate tabulations o significant di</li> </ul>

Criteria	JORC Code explanation	Commentary
		several folding and faulting events that have resulted in a south westerly plunging synclinal structure some 10km long and 3km wide.
		<ul> <li>PGM mineralisation is associated with several thin cumulate Chromitite reefs within the ultramafic sequence. In all there are three chromite horizons, the Upper group Chromitite (situated within the upper gabbroic sequence), the Middle group Chromitite (situated in the upper portion of the ultramafic cumulate sequence) and the Lower group Chromitite (situated toward the base of the ultramafic cumulate sequence). The top reef mineralised zone has been mapped over approximately 12km.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	the relevant previous ASX announcements related to the exploration results.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> </ul>	
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Metallurgical drill holes have been deliberately orientated at a low angle to the dip of the mineralised chromitite reefs to maximise the amount of material recovered for metallurgical test work. The drilled thickness is considerably greater than the true thickness in these drill holes as a</li> </ul>
Diagrams	<ul> <li>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 drill hole collar locations and appropriate sectional views.</li> </ul>	to the exploration results.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	announcement.



Criteria	JORC Code explanation	Commentary
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>No exploration results are being reported in this specific announcement.</li> <li>No other exploration data is relevant.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Next stage of work will consist of additional mineralogical and metallurgical test work.</li> </ul>