4 April 2022 ASX | AIM: 'FME'



Justin Tremain, Non-Exec Chair
Allan Mulligan, Non-Exec Director
Aaron Bertolatti, Finance Director
Robert Mosig, Non-Exec Director
Elizabeth Henson, Non-Exec Director
Jardee Kininmonth, CEO
Brian Talbot, Technical Lead
Andrew Shepherd, GM - Project

## **Investment Highlights**

Development

- 100% ownership of the Panton PGM Project in Western Australia
- Panton JORC Mineral Resource Estimate (refer Appendix One)
  - 14.32Mt @ 4.89g/t PGM (6E),
     0.31g/t Gold, 0.27% Nickel
- 2.4Moz contained PGM's & Gold
- Full suite of PGMs, gold and base metals
- Resource outcrops | Mineralisation from surface
- Granted Mining Leases
- Metallurgical test work of >80%
   PGM recoveries to high grade PGM concentrate (crush, grind and flotation)
- ~\$4.3m cash (31 March 2022)

#### **Contact Details**

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# Further +100m PGM Intercepts from Drilling, Metallurgical Update & Management Appointment

Future Metals NL ("Future Metals" or the "Company", ASX|AIM: FME), a platinum group metals ("PGM") focused company, is pleased to report further shallow, wide PGM assay results from the resource definition drilling completed to date at its 100% owned Panton PGM Project ("Panton") in northern Western Australia. In addition, the Company is pleased to provide an update on its metallurgical workstream as well as announcing the appointment of Mr Andrew Shepherd as General Manager – Project Development.

## **Highlights**

- Assay results received for a further three resource definition holes, all confirming that the mineralisation extends to widths over 50 metres along the well drilled 3.5km strike
- Drill hole PS402 returned an unconstrained bulk intersection of 150.8m @ 1.18g/t
   PdEq<sup>3</sup> from 8m down hole and notable intercepts (at a 0.5g/t PGM<sub>(3E)</sub> cut-off, maximum 4m internal dilution) Of (refer to Table One and Appendix Two for full details):
  - o 32.88m @ 1.72 g/t PdEq<sup>3</sup> (1.33 g/t PGM<sub>3E<sup>2</sup></sub> & 0.19% Ni) from 28.12m
  - o 22.37m @ 1.36 g/t PdEq<sup>3</sup> (1 g/t PGM<sub>3E<sup>2</sup></sub> & 0.16% Ni) from 66.76m
  - o 12.1m @ 1.45 g/t PdEq<sup>3</sup> (1.05 g/t PGM3E<sup>2</sup> & 0.20% Ni) from 130.9m
- Drill hole PS397 also returned broad widths of shallow PGM and nickel mineralisation, with an unconstrained bulk intersection of 119.78m @ 1.06g/t PdEq<sup>3</sup> from surface including constrained intercepts of (refer to Table One and Appendix Two for full details):
  - o 37.1m @ 1.32g/t PdEq<sup>3</sup> (0.95 g/t PGM3E<sup>2</sup> & 0.16% Ni) from 8m
  - o 27.8m @ 1.25g/t PdEq³ (0.80 g/t PGM3E² & 0.21% Ni) from 59.2m
- An updated JORC Mineral Resource Estimate ("MRE") remains on track for second quarter once the assays are received in respect of the remaining 44 outstanding drill holes (refer to the Company's announcements of 8 December 2021, 17 February 2022 and 8 March 2022)
- Initial sighter work and detailed review of all metallurgical information from Panton's prior owners has been completed. Adapting test work regime to the anticipated ore feed of the bulk tonnage strategy. Includes both physical separation and flotation test work. Detailed review of hydrometallurgical information has now commenced
- Mr Andrew Shepherd has been appointed as GM Project Development in anticipation of the Company initiating study activities following completion of the updated MRE
- The Company remains in a well-funded position, with cash of approximately A\$4.3 million as at 31 March 2022

<sup>&</sup>lt;sup>1</sup> PGM6E = Palladium (Pd) + Platinum (Pt) + Rhodium (Rh) + Ruthenium (Ru) + Osmium (Os) + Iridium (Ir)

<sup>&</sup>lt;sup>2</sup> PGM3E = Palladium (Pd) + Platinum (Pt) + Gold (Au)

 $<sup>^{3}</sup>$  PdEq (Palladium Equivalent g/t) = Pd(g/t) + 0.76471xPt(g/t) + 0.875xAu(g/t) + 1.90394xNi(%) + 1.38936xCu(%) + 8.23xCo(%)



#### Mr Jardee Kininmonth, CEO of Future Metals, commented:

"Drill results continue to show the lateral extent of the mineralisation at Panton, with the reef system already known to show strong continuity along the 3.5km of strike. The current MRE only includes the upper and middle reefs which represent approximately 0.1 - 4.0 metres of mineralised width, while our latest drilling, and historical assays demonstrate that the mineralisation extends up to 50 metres, much wider than what is currently in the MRE.

We are also excited to have Andrew join to lead project development activities. He complements the team well with significant experience in managing mining operations, as well as having a strong study management and project evaluation background.

We continue to progress the metallurgical test work which confirms recoveries of over 70% and that a +100g/t PGM<sub>3E</sub> concentrate grade is attainable via single stage mill and rougher-scavengerflotation from the high-grade chromite reef that makes up the current 2.4Moz MRE (refer to Appendix One). Our intention is to remodel the MRE to include the bulk shallow PGM and Ni mineralisation thereby providing volume and scale to consider value-added alternatives for this lower grade mineralisation including bulk concentrate, separate concentrate or further downstream processing in order to produce higher value intermediate products. This forms the current focus of our ongoing metallurgical test work."

## **Exploration Drillhole Assay Results**

Further drill hole assays have now been received and continue to confirm much broader widths of shallow PGM mineralisation than modelled in the current 2.4Moz MRE (refer to Appendix One). Assays for the remaining holes submitted to the laboratory that remain outstanding are expected to be reported in April 2022 which will then enable modelling of an updated MRE based on the shallow, bulk tonnage mineralisation at Panton. The latest assay results are set out in Table One below (refer to Appendix Two for the drill hole details):

Hole	From	То	Interval	Pd (g/t)	Pt	Au (g/t)	PGM3E <sup>1</sup>	Ni	Cu	Co (pm)	PdEq <sup>2</sup>
No.	(m)	(m)	(m)		(g/t)		(g/t)	(%)	(%)		(g/t)
PS396	56.3	60.6	4.3	0.36	0.14	0.02	0.52	0.16	0.00	140	0.91
PS396	65	86	21	0.58	0.54	0.03	1.15	0.18	0.01	144	1.48
PS396	91	103	12	0.41	0.42	0.10	0.93	0.15	0.04	154	1.29
PS396	116	154.7	38.7	0.46	0.32	0.02	0.80	0.21	0.01	142	1.25
PS396	159	170	11	0.22	0.13	0.03	0.37	0.14	0.03	158	0.78
PS397	0	2.4	2.4	0.76	0.78	0.22	1.76	0.20	0.05	236	2.2
PS397	8	45.1	37.1	0.43	0.40	0.12	0.95	0.16	0.04	144	1.32
PS397	59.2	87	27.8	0.47	0.31	0.04	0.80	0.21	0.01	147	1.25
PS397	102	104.52	2.52	0.42	0.22	0.04	0.68	0.12	0.04	183	1.05
PS402	28.12	61	32.88	0.65	0.56	0.13	1.33	0.19	0.04	147	1.72
PS402	66.76	89.13	22.37	0.45	0.43	0.12	1.00	0.16	0.04	156	1.36
PS402	113	126	13	0.40	0.35	0.02	0.77	0.20	0.01	145	1.19
PS402	130.9	143	12.1	0.61	0.42	0.02	1.05	0.20	0.01	134	1.45
PS402	149	157	8	0.58	0.36	0.01	0.95	0.21	0.00	148	1.39

## **Table One | Drilling Assay Results**



<sup>&</sup>lt;sup>1</sup> 3E= Palladium (Pd) + Platinum (Pt) + Gold (Au)

 $<sup>{}^{2}\</sup>textit{PdEq}\textit{ (Palladium Equivalent g/t) = Pd(g/t) + 0.76471} \\ \textit{xPt}(g/t) + 1.90394 \\ \textit{xNi}(\%) + 0.875 \\ \textit{x}(\textit{Au}(g/t) + 1.38936 \\ \textit{xCu}(\%) + 8.23 \\ \textit{xCo}(\%) + 1.90394 \\ \textit{xNi}(\%) + 0.875 \\ \textit{x}(\textit{Au}(g/t) + 1.38936 \\ \textit{xCu}(\%) + 1.90394 \\ \textit{xNi}(\%) + 0.875 \\ \textit{x}(\textit{Au}(g/t) + 1.38936 \\ \textit{xCu}(\%) + 1.90394 \\ \textit{xNi}(\%) + 0.875 \\ \textit{x}(\textit{Au}(g/t) + 1.38936 \\ \textit{xCu}(\%) + 1.90394 \\ \textit{xNi}(\%) + 0.875 \\ \textit{x}(\textit{Au}(g/t) + 1.38936 \\ \textit{xCu}(\%) + 1.90394 \\ \textit{x}(\textit{x}(\texttt{u}) + 1.90394 \\ \textit{x}(\texttt{u}) + 1.9$ 



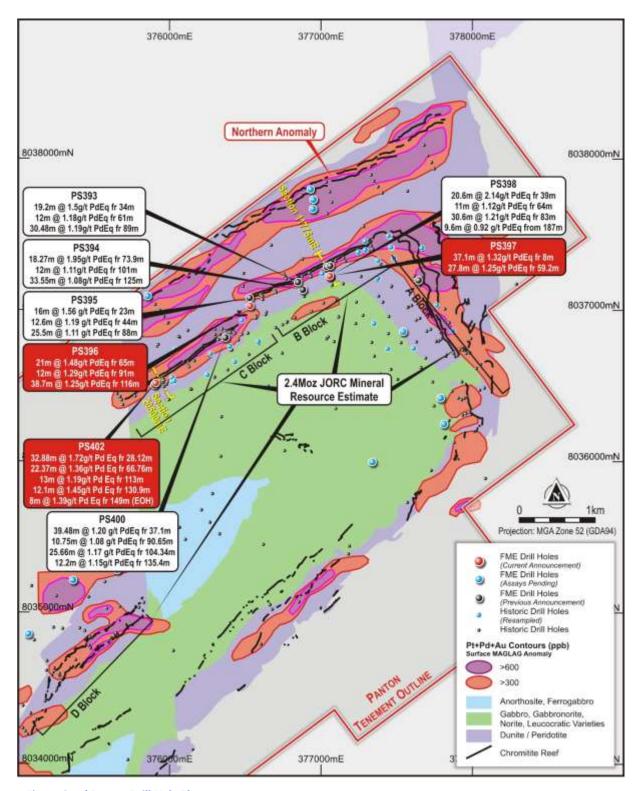


Figure One | Panton Drill Hole Plan



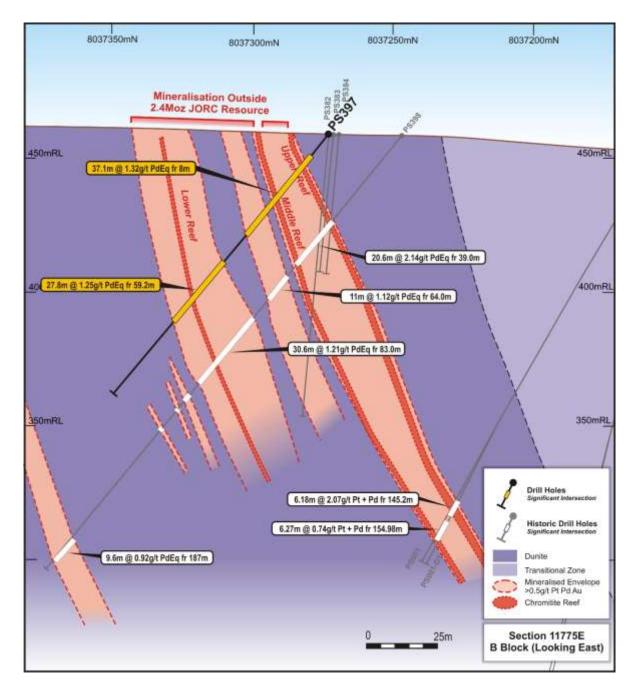


Figure Two | Future Metals' Exploration Drilling (PS397) - Panton Cross Section



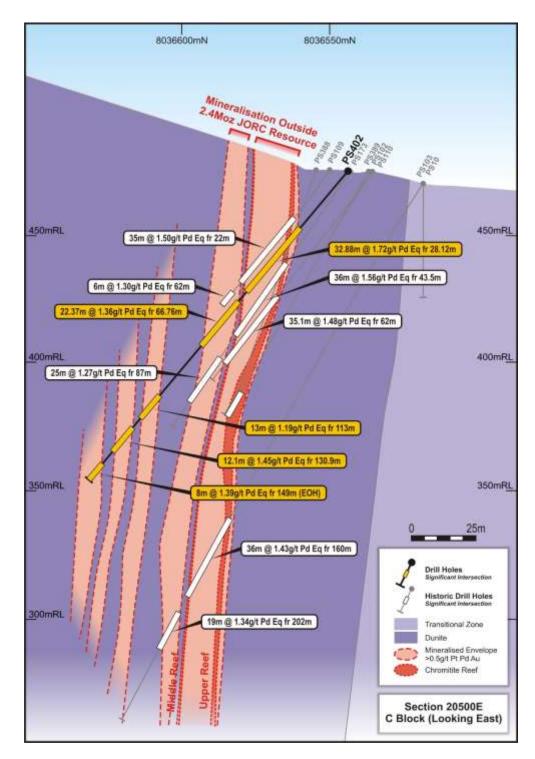


Figure Three | Future Metals' Exploration Drilling (PS402) - Panton Cross Section



#### **Metallurgical Update**

The Company has completed some preliminary sighter test work and an extensive review of the significant test work data from Panton's previous owners. The majority of the historical test work focussed on the chromite reef mineralisation, being the high-grade portion of the Panton orebody, which showed PGM recoveries of over 80% in combination with concentrate grades over  $100g/t \ PGM_{(3E)}$ . The Company's recent test work has largely confirmed this on flotation of the high-grade chromite reef with  $+100g/t \ PGM_{(3E)}$  at over  $70\% \ PGM_{(3E)}$  recovery.

The remodelling of the MRE to include shallow, bulk PGM and Ni mineralisation is expected to provide scale to enable the Company to consider value-added and optimisation alternatives for the processing of the lower grade PGM and Ni mineralisation. The Company's test work is now focussed on optimising recoveries and concentrate grades on the lower grade, bulk mineralisation. It has been observed that mineralised host dunite rock which surrounds the chromite reefs has a different composition, which potentially provide alternative options for processing and optimisation of the final product.

#### **Physical Separation**

The Company has commenced physical separation test work utilising a number of processing techniques which preconcentrate or separate ore feed based on its physical characteristics such as size, density or colour. The physical separation techniques being examined include ore sorting, heavy liquid separation ("HLS"), spirals and Wet High Intensity Magnetic Separation ("WHIMS"). These techniques have shown favourable results in historical test work programmes on Panton ore and the Company is now applying them to composite samples of the anticipated ore feed from a bulk tonnage operation. Panton ore is suitable given the difference in colour between chromite-rich ore, mineralised dunite, waste dunite, magnesite and talc. This may allow for the removal of gangue minerals ahead of the milling circuit, and separation of ore into high-grade and low-grade streams which can then be processed using targeted milling and reagent regimes. The WHIMS test work will substantiate prior test work demonstrating the amenability of extracting chromite from flotation tails to produce a chromite concentrate for sale as a by-product.

#### **Flotation**

In parallel with the physical separation test work, the Company is undertaking flotation test work which seeks to replicate the unit operations common to South African PGM facilities which process a high proportion of the Panton-analogous UG2 ore as their feed. This campaign will focus on the mineral deportment at each stage across a 3-stage mill-float ("MF") flow sheet involving an initial coarse grind and float, primary grind and float, and regrind and float with cleaning. The majority of the previous test work on Panton ore utilised a single-stage grind to 38µm followed by a long rougher float and scavenging stages. Initial sighter test work indicates that a single-stage fine grind creates significant flotation issues as it generates slimes and liberates free-floating gangue materials which inhibit the flotation of the base metal and PGM bearing minerals. A multi-staged MF approach avoids the issues associated with overgrinding, allows reagent regime to be adjusted through the flow sheet based on targeted outcomes, and reduces the mass pull to fine-grind unit operations. The Company is also carrying out flotation test work on material in the 'weathered' zone of the orebody, following up on previous results which indicated that acceptable recoveries could be achieved given the PGM metal elements at Panton occur as tellurides, antimonides and bismuthides.

## Hydrometallurgy

Prior test work has shown the potential for Panton to produce high value intermediate products with the Panton concentrate having good amenability to hydrometallurgical processing which provides several potential benefits over smelting<sup>1</sup>, including:

- It creates a refined product, allowing the producer to market directly to end customers, thereby improving payabilities & margins
- less capital intensive
- faster relative processing times leading to working capital position improvement
- significantly less electricity consumption, SO<sub>2</sub> and CO<sub>2</sub> emissions
- increased flexibility for integrated upstream production

<sup>&</sup>lt;sup>1</sup> 'Kell hydrometallurgical extraction of precious and base metals from flotation concentrates – Piloting, engineering, and implementation advances.' K.S. Liddell, M.D. Adams, L.A. Smith, and B. Muller





A hydrometallurgy test work program and scoping review will be initiated in H2 2022.

The Company is well positioned to assess the viability of a hydrometallurgical processing route given the prior experience of CEO, Mr Jardee Kininmonth and Lead Technical Adviser, Mr Brian Talbot at Galaxy Resources Ltd (and Allkem Ltd) where they were both responsible for commercially and technically evaluating and developing downstream hydrometallurgical businesses.

### Palladium Equivalent (PdEq)

Based on metallurgical test work completed on Panton samples, all quoted elements included in the metal equivalent calculation (palladium, platinum, gold, nickel, copper and cobalt) have a reasonable potential of being ultimately recovered and sold.

Metal recoveries used in the palladium equivalent (PdEq) calculations are the midpoint of the range of recoveries for each element based on metallurgical test work undertaken to date at Panton. It should be noted that palladium and platinum grades reported in this announcement are lower than the palladium and platinum grades of samples that were subject to metallurgical test work (grades of other elements are similar).

Metal recoveries used in the palladium equivalent calculations are shown below:

Palladium 80%, Platinum 80%, Gold 70%, Nickel 45%, Copper 67.5% and Cobalt 60%

Metal prices used are also shown below:

Palladium US\$1,700/oz, Platinum US\$1,300/oz, Gold US\$1,700/oz, Nickel US\$18,500/t, Copper US\$9,000/t and Cobalt US\$60,000/t

Metal equivalents were calculated according to the follow formula:

PdEq (Palladium Equivalent g/t) =  $Pd(g/t) + 0.76471 \times Pt(g/t) + 0.875 \times Au(g/t) + 1.90394 \times Ni(\%) + 1.38936 \times Cu(\%) + 8.23 \times Co(\%)$ 

This announcement has been approved for release by the Board of Future Metals NL.

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

The information in this announcement that relates to Exploration Results is based on, and fairly represents, information compiled by Mr Shane Hibbird, who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Hibbird is the Company's Exploration Manager and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Mr Hibbird consents to the inclusion in this announcement of the matters based upon his information in the form and context in which it appears.

The information in this announcement which relates to Mineral Resources was stated in the Company's ASX Prospectus dated 18 May 2021. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus relating to Mineral Resources, and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

The information in this announcement that relates to Metallurgical Results is based on, and fairly represents, information compiled by Mr Brian Talbot, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy. Mr Talbot is a full-time employee of R-Tek Group Pty Ltd (R-Tek) a specialist metallurgical consultancy. Mr Talbot has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Mr Talbot consents to the inclusion in this announcement of the matters based upon his information in the form and context in which it appears.

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 is forms part of United Kingdom domestic law pursuant to the European Union (Withdrawal) Act 2018, as amended.





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

# **About Panton PGM Project**

The 100% owned Panton PGM project is located 60 kilometres 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 1 kilometre off the Great North Highway which accesses the Port of Wyndham (refer to Figure Four).

The Panton PGM Project has a JORC Mineral Resource estimate of 14.32Mt @ 4.89g/t PGM, 0.31g/t Au and 0.27% Ni (refer to Appendix One).

The Panton mineralisation occurs within a layered, differentiated mafic-ultramafic intrusion referred to as the Panton intrusive which is a 10km long and 3km wide, south-west plunging synclinal intrusion. PGM mineralisation is hosted within two stratiform chromite reefs, the Upper and Middle reefs, within the ultramafic sequence.

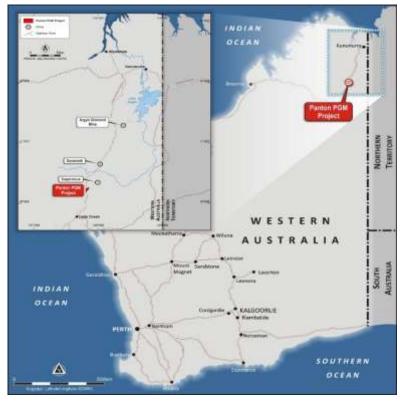


Figure Four | Panton PGM Project Location

## **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.





# **Appendix One**

# Panton JORC (2012) Mineral Resource Estimate

				Grade			Cont	ained
	_	PGM	Au	Ni	Cu	Со	PGM	Ni
	Tonnage (Mt)	(g/t)	(g/t)	(%)	(%)	(ppm)	('000oz)	(t)
Top Reef								
Measured	4.40	5.58	0.42	0.28	0.08	209	850	12,214
Indicated	4.13	6.26	0.38	0.31	0.09	232	880	12,745
Inferred	1.56	4.72	0.38	0.36	0.13	233	260	5,619
	10.09	5.73	0.40	0.30	0.09	222	1,990	30,579
Middle Reef								
Measured	2.13	2.76	0.10	0.18	0.03	186	200	3,783
Indicated	1.50	3.17	0.10	0.19	0.04	199	160	2,858
Inferred	0.60	2.58	0.10	0.19	0.05	195	50	1,161
	4.23	2.90	0.10	0.19	0.04	193	410	7,840
Total	14.32	4.89	0.31	0.27	80.0	214	2,400	38,492





# **Appendix Two**

# **Exploration Drill Hole Details**

Hole ID	Hole Type	Easting	Northing	RL (m)	Total Depth (m)	Inc (deg)	Azi (deg)
PS396	HQ core	376527	8037035	459	190.1	-55	330
PS397	HQ core	377054	8037268	459	120.2	-55	330
PS402	HQ core	375957	8036543	447	150	-50	330





# Appendix Three | 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</li> </ul>	<ul> <li>Sampling methods used for samples in this announcement were HQ3 Diamond Core which was cut in half, one half is sent for assay, the remaining half is retained for reference. 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</li> </ul>
	<ul> <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>geologists.</li> <li>½ core samples were sent to Bureau Veritas, Canning Vale, Western Australia.</li> <li>To ensure representative sampling, for each hole, the same half 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 a reference sample, and the left-hand side of the core was always sent for assay. At the laboratory the entire ½ core sample was crushed, a 300g split was pulverised to provide material for fire assay and ICP-MS.</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 referred to in this announcement were drilled HQ3 (61.0mm diameter). The top 10 to 50 metres was drilled with PQ3 diamond core drilling to ensure penetration of the weathered zone.</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. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</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 size, texture, weathering, structure, alteration, veining and sulphides. Core is digitally photographed.</li> <li>All holes are logged in full.</li> </ul>
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> </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. HQ3 core is cut in half and one half sent to the laboratory for assay, and the remaining half core 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> </ul>
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The sample size is considered appropriate for the material being sampled.</li> </ul>





Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<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> </ul>	<ul> <li>For Future Metals NL drill holes ½ core samples were sent to 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> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <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> </ul>	<ul> <li>Significant intercepts are calculated as composites and reported using 0.50g/t PGM3E (Pt + Pd + Au) cut-off grade. A maximum of 4m consecutive internal waste is allowed in composites.</li> <li>All significant intercepts are calculated by the Company's Exploration Manager and checked by management.</li> </ul>
Location of data points	<ul> <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	<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> </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> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased 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> </ul>	<ul> <li>The orientation of the drill hole relative to the geological target is as orthogonal as practicable however drilled intersections will be larger than true widths.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>All core sample intervals are labelled in the core boxes, recoded digitally and captured with the core photography. Cut core samples are collected in bags labelled with the sample number.</li> <li>Samples are 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.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>The Company employed industry-standard protocols. No independent audit has been conducted.</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> </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> </ul>





Criteria	JORC Code explanation	Commentary
		<ul> <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> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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 maficultramafic complex in 1970, followed by Minsaco Resources</li> </ul>
		which drilled 30 diamond holes between 1976 and 1987.  In 1989, Pancontinental Mining Limited and Degussa Exploration drilled a further 32 drill holes and defined a non-
		<ul> <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> </ul>
		<ul> <li>Panoramic Resources Ltd subsequently purchased the Panton PGM Project from Platinum Australia Ltd in May 2012 and conducted a wide range of metallurgical test work programmes on the Panton ore.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Panton intrusive is a layered, differentiated mafic to ultramafic body that has been intruded into the sediments of the Proterozoic Lamboo Complex in the Kimberley Region of Western Australia. The Panton intrusion has undergone several folding and faulting events that have resulted in a south westerly plunging synclinal structure some 10km long and 3km wide.</li> </ul>
		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.
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>	Details of all drill holes reported in this announcement are provided in Appendix Two.
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> </ul>	reighted averages of grades above of sog, the emist (i.e., ta).
	<ul> <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>4 metres of internal dilution is allowed in the reported intervals.</li> <li>Higher grade intervals are included in the reported grade intervals; and have also been split out on a case-by-case basis where relevant.</li> </ul>
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Where palladium equivalents are reported, these values are based on the following assumptions</li> </ul>





Criteria	JORC Code explanation	Commentary			
		Prices in USD			
		\$/(t or oz)			
		Cu %	9,000		
		Pt ppm	1,300		
		Au ppm	1,700		
		Pd ppm	1,700		
		Ni %	18,500		
		Со ррт	60,000		
		<ul> <li>Metal red</li> </ul>	coveries are based on past metallurgical test work.		
		Recovery			
			%		
		Cu	67.5%		
		Pt	80.0%		
		Au	70.0%		
		Pd	80.0%		
		Ni	45.0%		
		Со	60.0%		
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>	low angl maximise test work	gical drill holes have been deliberately orientated at le to the dip of the mineralised chromitite reefs to the amount of material recovered for metallurgicals. The drilled thickness is considerably greater than the kness in these drill holes as a result.		
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>	Drill hole announce	e plan included in Figure One of the body of thi ement.		
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>	<ul> <li>All result reported</li> </ul>	s at hand at the time of this announcement have beer l.		
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>	■ No other	r exploration data is relevant.		
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>	metallurg JORC Mi	ge of work will consist of additional mineralogical and gical test work. The Company plans to undertake a new ineral Resource model and estimate once all assay recently completed drilling have been received.		

