

# **Significant Rhodium Mineralisation at XC-22 Prospect**

#### **HIGHLIGHTS**

- The lower PGE-rich zone in YARC0022 has been assayed for the full six element PGE suite
- Significant rhodium up to 465ppb associated with platinum and palladium identified
- Rhodium is an extremely rare and valuable PGE
- PGE-rich zone now reports as; 13m @ 1.08g/t 4E (Pd+Pt+Rh+Au), 0.26% Ni & 0.21% Cu from 101m,
  - o including 2m @ 2.45g/t Pt, 0.40g/t Pd, 0.41g/t Rh, 0.03g/t Au, 0.23% Ni, 0.09% Cu from 112m
- Almost no assaying for rhodium in historical exploration at Yarawindah Brook
- Caspin to undertake selected re-assaying of past and upcoming drilling for full PGE suite

Caspin Resources Limited (ASX: CPN) ("Caspin" or "the Company") is pleased to provide results of further PGE assaying from drill hole YARC0022 at the XC-22 Prospect at the Company's Yarawindah Brook PGE-Ni-Cu Project in Western Australia.

# Significant Rhodium Results Complement Platinum and Palladium Mineralisation

Following the significant results in YARC0022 (see ASX announcement of 9 February 2022), the Company elected to analyse the lower PGE-rich mineralised zone for the full six PGE suite of elements, which consist of iridium (Ir), osmium (Os), rhodium (Rh) and ruthenium (Ru), as well as platinum and palladium. This analysis has returned significant grades of rhodium associated with the already recognised platinum and palladium mineralisation, with a peak value of **465ppb Rh**. Grades greater than 100ppb, or 0.1g/t, are considered highly significant. The revised intercepts are as follows:

13m @ 0.17g/t Pd, 0.74g/t Pt, 0.11g/t Rh, 0.26% Ni, 0.21% Cu from 101m, including 2m @ 0.40g/t Pd, 2.45g/t Pt, 0.41g/t Rh, 0.23% Ni, 0.09% Cu from 112m.

When adding the minor gold contribution, this can be expressed as 13m @ 1.08g/t 4E, 0.26% Ni & 0.21% Cu, including 2m @ 3.29g/t 4E, 0.23% Ni & 0.09% Cu.

Caspin's Chief Executive Officer, Mr Greg Miles, commented "This is an interesting new development for XC-22 and indeed our entire Yarawindah Brook Project. It's a pleasant surprise given this is the first time we've ever assayed for rhodium and bodes well for the discovery of more mineralisation. Because of its value, small amounts as low as 100ppb can make a significant contribution to the economics of PGE deposits. We've now got an extensive assaying program ahead of us and if we can demonstrate that rhodium mineralisation occurs consistently with platinum and palladium at XC-22, then we could be another step closer to an economic discovery."

# Caspin Resources Limited ABN 33 641 813 587

- Ground Floor, 675 Murray Street
   West Perth WA 6005, Australia
- PO Box 558, West Perth WA 6872

www.caspin.com.au ASX Code: CPN

E admin@caspin.com.au T +61 8 6373 2000



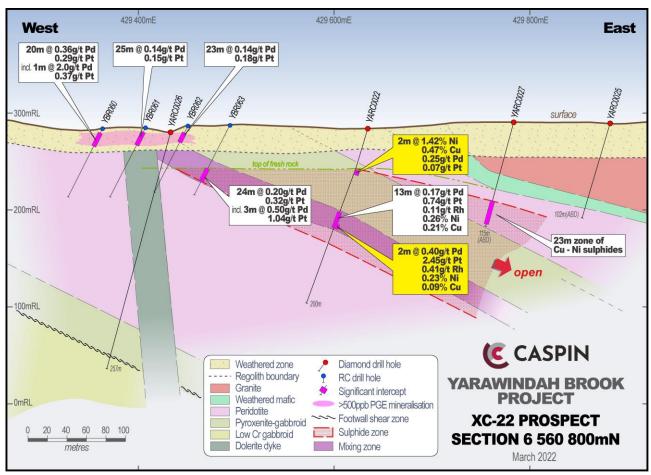


Figure 1. Section through XC-22 showing YARC0022 with updated rhodium assays and mineralisation in historical drilling. Diamond tails for YARC0025 and 0027 are currently in progress.

# **Implications for PGE Exploration at Yarawindah**

Despite the value of rhodium, routine analysis is rarely undertaken because of the scarcity of the metal and significant additional cost to assay the full 6-PGE suite. Prior to Caspin's involvement in the project, only five samples had ever been assayed for rhodium as part of a metallurgical sighter program in 2006. Therefore, the potential for rhodium mineralisation has never been evaluated. The Company is extremely encouraged that its first-ever assaying of rhodium has returned such significant results.

The Company will now review all of its past exploration results with a view to selecting zones of PGE-rich mineralisation for 6-element PGE assay, with the aim to identify further rhodium mineralisation.

The current phase of drilling at XC-22 is progressing well. Assaying for rhodium will be conducted after confirmation of platinum and palladium mineralisation, with a focus on the pyroxenite-peridotite contact zone which appears to be the host of mineralisation intersected so far.



# **Some Facts About Rhodium**

- Used in similar industrial applications to platinum and palladium, such as catalytic converters, but is generally more efficient.
- Chemically inert and doesn't oxidise making it an attractive alloying agent that improves resistance to corrosion.
- Extremely rare, usually produced as a by-product of nickel-copper and platinum-palladium processing using conventional sulphide flotation.
- Global production is dominated by South Africa with smaller contributions from Russia, Zimbabwe and Canada.
- Over the past 3 years the price has ranged from approximately US\$2,000oz to US\$27,000oz and is currently circa \$20,000oz.

Further information can be found at https://www.usgs.gov/centers/national-minerals-information-center/platinum-group-metals-statistics-and-information, https://www.kitco.com/charts/rhodium.html and https://en.wikipedia.org/wiki/Rhodium

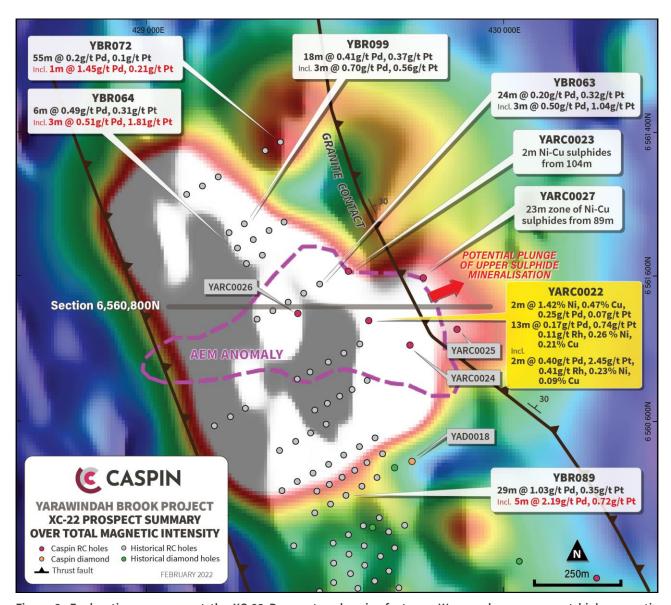


Figure 2. Exploration summary at the XC-22 Prospect and major features. Warm colours represent high magnetic response, typical of ultramafic rocks. YARC0024, YARC0025 and YARC0027 were unable to reach their target depth and will either be extended by diamond tails or re-drilled. YBR series holes not assayed for Ni or Cu.



**TABLE 1: Significant Drill Intercepts - XC-22 Prospect** 

										INT	ERSECT	ION		
HOLE ID	East	North	RL	Dip	Azi	EOH (m)	From (m)	Width (m)	Pd g/t	Pt g/t	Rh g/t	Au g/t	Ni %	Cu %
YARC0022	429624	6560872	280	-60	240	200	46	68	0.08	0.22	NA	0.02	0.22	0.17
						Incl.	46	2	0.25	0.07	NA	0.01	1.42	0.47
						And	101	13	0.17	0.74	0.11	0.06	0.26	0.21
						Incl	112	2	0.40	2.45	0.41	0.03	0.23	0.09

NA = Not Assayed.

This announcement is authorised for release by the Board of Caspin Resources Limited.

-ENDS-

For further details, please contact:

#### **Greg Miles**

Chief Executive Officer admin@caspin.com.au
Tel: +61 8 6373 2000

## **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Greg Miles, a Competent Person who is an employee of the company. Mr Miles is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Miles consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the Exploration Results information included in this report from previous Company announcements, including Exploration Results extracted from the Company's Prospectus announced to the ASX on 23 November 2020 and the Company's subsequent ASX announcements of 30 March 2021, 28 April 2021, 16 June 2021, 5 July 2021, 19 August 2021, 26 November 2021, 24 January 2022 and 9 February 2022.

# **ABOUT CASPIN**

Caspin Resources Limited (ASX Code: **CPN**) is a new mineral exploration company based in Perth, Western Australia. Caspin has extensive skills and experience in early-stage exploration and development. The Company is actively exploring the Yarawindah Brook Project in Australia's exciting new PGE-Ni-Cu West Yilgarn province and the Mount Squires Project in the West Musgrave region, one of Australia's last mineral exploration frontiers.

At the Company's flagship Yarawindah Brook Project, recent drilling campaigns at Yarabrook Hill have made new discoveries of PGE, nickel and copper sulphide mineralisation. Meanwhile, the Company continues to bring new targets to drill readiness by collecting geophysical and geochemical data across the project.

At the Mount Squires Project, Caspin has identified a 50km structural corridor with significant gold mineralisation and potential copper porphyry prospects. The Company will conduct further soil sampling and reconnaissance drilling along this trend. Caspin will concurrently continue to evaluate the potential for Ni-Cu mineralisation along strike from the One Tree Hill Prospect and Nebo-Babel Deposits.

#### **FOLLOW US**

LinkedIn: <a href="https://www.linkedin.com/company/caspin-resources-limited">https://www.linkedin.com/company/caspin-resources-limited</a>

Twitter: <a href="https://twitter.com/CaspinRes">https://twitter.com/CaspinRes</a>



DARWIN



# **ANNEXURE 1:**

The following Tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of the Exploration Results at the Yarawindah Brook Project.

**SECTION 1: Sampling Techniques and Data** (Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	RC drilling produced a 1m bulk where a representative sample (nominally a 12.5% split) was collected using a cone splitter. Average sample submitted for analysis was between 2-3 kg while overall sample weights averaged closer to 7-8 kg.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sampling techniques used are deemed appropriate for exploration purposes for this style of deposit and mineralisation.
	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.	
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other	Caspin drilling consisted of RC with face sampling bit (140 to 130 mm in diameter) ensuring minimal contamination during sample extraction.
	type, whether core is oriented and if so, by what method, etc).	Drill hole locations were surveyed by handheld GPS units which have an accuracy of ±5m.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	RC recoveries are visually logged for every hole and recorded in the database. Overall recoveries are >95% and there has been no significant sample recovery problems.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Samples are checked for recovery and any issues immediately rectified with the drilling contractor. Drilling techniques to ensure adequate RC sample recovery and quality included the use of "booster" air pressure. Air pressure used for RC drilling was 700-800psi.
		Logging of all samples followed established company procedures which included recording of qualitative fields to allow discernment of sample quality. This included (but was not limited to) recording: sample condition (wet, dry moist), sample recovery (poor, moderate, good) sample method (RC: scoop, split; DD core: half quarter, whole).
	Whether a relationship exists between sample recovery and grade and whether sample bias may have	No sample bias has been observed.



Criteria	JORC Code explanation	Commentary
	occurred due to preferential loss/gain of fine/coarse material.	
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.  Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging at the Yarawindah Brook Project records lithology, mineralogy, mineralisation, weathering, colour and other relevant features of the core. Logging of core is both qualitative (e.g. colour) and quantitative (e.g. mineral percentages). Full detailed logging will be completed with assays in hand.
		All logging information is uploaded into an Access Database which ensures validation criteria are met upon upload.
	The total length and percentage of the relevant intersections logged.	All drill holes are logged as they are drilled and subsequently logged in more detail following assay return.
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable.
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC drilling was sampled at 1 m intervals by a fixed cone splitter with a representative sample (nominally 12.5% of the total sample) taken. The representative sample was submitted to the laboratory, and the second sample retained as a duplicate sample in case a further sample was required.
		All samples are dry.
		Cone splitting of RC drill samples occurred regardless of the sample condition.
		RC drill sample weights range from 0.6kg to 17kg, but typically average 7-8kg.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	All Caspin samples were submitted to Bureau Veritas for multi-element analysis. Sample preparation involving oven drying, followed by primary crushing of the whole sample where required, secondary crushing, riffle splitting to obtain a subsample for pulverisation (total prep) using Essa LM5 grinding mills to a grind size of 90% passing 75 micron.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Caspin QC procedures involve the use of certified reference material (CRM) as assay standards and blanks along with field duplicates. The insertion rate of these will average 1:25.
	Measures taken to ensure that the sampling is representative of the in situ material collected,	Field duplicates were taken on 1m composites directly from the cone splitter.
	including for instance results for field duplicate/second-half sampling.	Review of duplicate results indicates that there is strong correlation between the primary and duplicate assay values, implying that the selected sample size is reasonable for this style of mineralisation.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate for the rock type, style of mineralisation (massive, stringer and disseminated sulphides), the



Criteria	JORC Code explanation	Commentary
		thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements within the Yarawindah Brook Project.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The analytical techniques used fused bead XRF for base metals and all other major and trace elements of interest. Au, Pt and Pd were determined by fire assay (~40 gram) with ICP/MS finish. Rhodium was determined by Fire Assay using nickel sulphide as the collecting medium and then analysed by ICP/MS finish.
	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.	Portable XRF assay results have not been reported.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Sample preparation for fineness checks were carried out by the laboratory as part of their internal procedures to ensure the grind size of >90% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material (CRM), blanks, splits and replicates as part of their in-house procedures. Certified reference materials, having a good range of values, are inserted blindly and randomly. Repeat and duplicate analyses returned acceptable results.
		No umpire laboratory checks have been undertaken by Caspin.
		No detailed assessment of historical QA/QC data has been undertaken to date.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	RC samples and corresponding assay results have been verified by multiple Caspin geologists with further reviews and interpretation continuing.
	The use of twinned holes.	None of the reported Caspin drill holes have been twinned.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data for the Yarawindah Brook Project was collected in the field using a set of standard excel spreadsheets on laptop computers using lookup codes. The information was sent to Geobase Australia for validation and compilation into an Access SQL database server.
	Discuss any adjustment to assay data.	No assay data has been adjusted.
Location of data points	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	Reported drill holes were located with a Garmin hand-held GPS with an accuracy of ±3m. This is considered appropriate for exploration drill holes.
points	estimation.	Downhole surveys were completed by the drilling contractors with the data provided to Caspin Resources.



Criteria	JORC Code explanation	Commentary
		Project is GDA94 MGA Zone 50.
	Quality and adequacy of topographic control.	The tenement package exhibits subdued relief with undulating hills and topographic representation is sufficiently controlled.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The holes drilled were for exploration purposes and have not been drilled on a grid pattern. Drill hole spacing is considered appropriate for exploration purposes.
	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.	Data continuity is not sufficient at the current time to justify the estimation of a resource.
	Whether sample compositing has been applied.	No sample compositing has been applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit	At this early stage of exploration, the certainty of the mineralisation thickness', orientation and geometry is not known.
	type.	RC holes were drilled at an appropriate azimuth and dip so that they intersected geology approximately perpendicular to strike.
	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.	The orientation of drilling relative to key mineralised structures is not considered to have introduced sampling bias.
Sample security	The measures taken to ensure sample security.	Sample chain of custody is managed by Caspin Resources. Samples for the Yarawindah Brook Project are stored on site and delivered to the Bureau Veritas laboratory by Caspin personnel.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No reviews have been carried out to date.

**Section 2: Reporting of Exploration Results** (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental	The Yarawindah Brook Project is located approximately 15 km SSE of New Norcia in the SW of Western Australia and comprises five granted Exploration Licences (E70/4883, E70/5166, E70/5116, E70/5330 and E70/5335).
	settings.	Tenements are held by Southwest Metals Pty Ltd or Search Resources of which Caspin Resources Limited controls 80%, and Mr Scott Wilson, retains a 20% interest.
		Caspin has entered into land access and compensation agreement with the property owners on which Yarawindah Brook, Avena, Ovis, Brassica and XC29 Prospects are situated.
		Aboriginal Heritage Access Agreements are in place



Criteria	JORC Code explanation	Commentary
		for the live tenements.
	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.	All tenements are in good standing. No Mining Agreement has been negotiated.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Yarawindah Brook Project area has been explored for Ni-Cu-PGE mineralisation since the discovery of outcropping Ni-Cu gossans in 1974. A series of drill programmes conducted by various companies since that time mainly focused on near-surface, laterite-hosted PGE mineralisation Later drilling programmes and limited electromagnetic surveying was conducted by Washington Resources, resulting in intersections of massive Ni-Cu-PGE sulphides; however, on-ground exploration of the project area has been limited since the GFC in 2008. The work completed by previous operators is considered by Caspin to be of a high standard.
Geology	Deposit type, geological setting and style of mineralisation.	The Yarawindah Brook Project is located within the Jimperding Metamorphic Belt hosted in the Lake Grace Terrane at the SW end of the Yilgarn Craton. In the area of the Yarawindah Brook, outcrop is poor with deep regolith development. Regionally, the lithological trend is NW, with moderate dips to the NE.
		The western portion of the project area is dominated by metasediments and gneiss containing lenses of mafic and ultramafic rocks. It is these mafic-ultramafic lithologies that are the hosts to Ni-Cu-PGE sulphide mineralisation and have been the main targets for exploration.
		The Yarawindah Brook Project is considered prospective for accumulations of massive, matrix and disseminated Ni-Cu sulphides, both within the mafic-ultramafic complex and as remobilised bodies in the country rocks.
Drill hole Information	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:  • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length.	Drill hole collar information is published in the body of the report.
	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.	Not applicable, all information is included.
	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade	Weighted averages for Yarawindah Brook mineralisation were calculated using variable



Criteria	JORC Code explanation	Commentary
Data aggregation methods	truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	parameters, due to the complications of reporting 5 elements: Ni, Cu, Pd, Pt, Rh and Au.
		Cut off grades for reporting significant intercepts are >0.1g/t Rh, Pd and/or Pt and/or Au and >0.2% Ni and/or Cu with a maximum internal dilution of 2m.
	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.	Short lengths of high-grade results use either a nominal 0.5% Ni or Cu lower cut-off or a geological boundary such as a massive sulphide interval, no minimum reporting length, 2 m maximum interval dilution and the minimum grade of the final composite of 0.5% Ni or Cu.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values reported.
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	Mineralisation at Yarabrook Hill is poorly defined and orientations are approximate. Mineralisation is generally intersected obliquely to true-width and approximations have been made based on geological interpretations; however, true widths are unknown.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Refer to Figures in body of text.
Balanced reporting	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.	All significant and relevant intercepts have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All relevant exploration data is shown in figures, in text and in this Annexure 1.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or largescale step-out drilling).	A discussion of further exploration work is outlined in the body of the report. Additional exploration work of RC drilling is planned.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	All relevant diagrams and inferences have been illustrated in this report.