chalice

ASX Announcement

11 June 2024

Gonneville Project metallurgical testwork and PFS update

Initial Pre-Feasibility Study metallurgical testwork indicates potential upside for flotation recoveries and project economics

Highlights

- **Preliminary results received from initial rougher flotation tests** on the first three low-grade composite sulphide samples tested as part of the Gonneville Project Pre-Feasibility Study (PFS):
  - Diagnostic tests show that the addition of a collector reagent in milling, longer residence time and acid pre-treatment all produced **favourable increases in metal recoveries** (relative to baseline conditions) at constant mass pull into bulk rougher concentrate:

Metal	Composite	Composite assay grade	Absolute increase in recovery (%)	
		g/t or %	Acid pre-treat	PAX in milling
Nickel-Cobalt	S21	0.16% Ni	+14%	+8%
	CR2	0.18% Ni	+5%	
	PYX C2	0.15% Ni	+9%	
Copper	S21	0.07% Cu	+8%	+11%
	CR2	0.13% Cu	+5%	
	PYX C2	0.13% Cu	+3%	
Palladium	S21	0.55g/t Pd	+4%	+4%
	CR2	0.71g/t Pd	+2%	
	PYX C2	0.59g/t Pd	+5%	

- Results indicate **potential upside for overall metal recoveries,** however cleaner stage tests under locked-cycle conditions are required to quantify the impact, as well as testing on other composites and variability samples to understand impacts across the Resource.
- Diagnostic work indicates that **partial oxidation/staining of sulphides** may have inhibited previous flotation tests, which should be mitigated through various processing techniques.
- Three of seven composites tested so far, taken from **17 dedicated metallurgical drill holes** drilled in H2 CY23 – the testwork programme is expected to continue through CY24.
- The Gonneville PFS is targeted for completion in **mid CY25** and iterations on starter case mining optimisations and designs are continuing.

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Overview

Chalice Mining Limited ("Chalice" or the "the Company", ASX: CHN) is pleased to provide an update on the ongoing Pre-Feasibility Study ("PFS") for the 100%-owned **Gonneville PGE-Ni-Cu-Co Project** ("Project"), located on Chalice-owned farmland ~70km north-east of Perth in Western Australia.

Chalice's strategy for the Project is to define the overall scale of the mineral system, progress development studies and regulatory approvals and select a strategic partner to assist in development of the Project. Subject to the outcomes of the PFS and subsequent feasibility study, Chalice is targeting a Final Investment Decision ("FID") in late CY26 and aiming to commence production in CY29 (Figure 1).

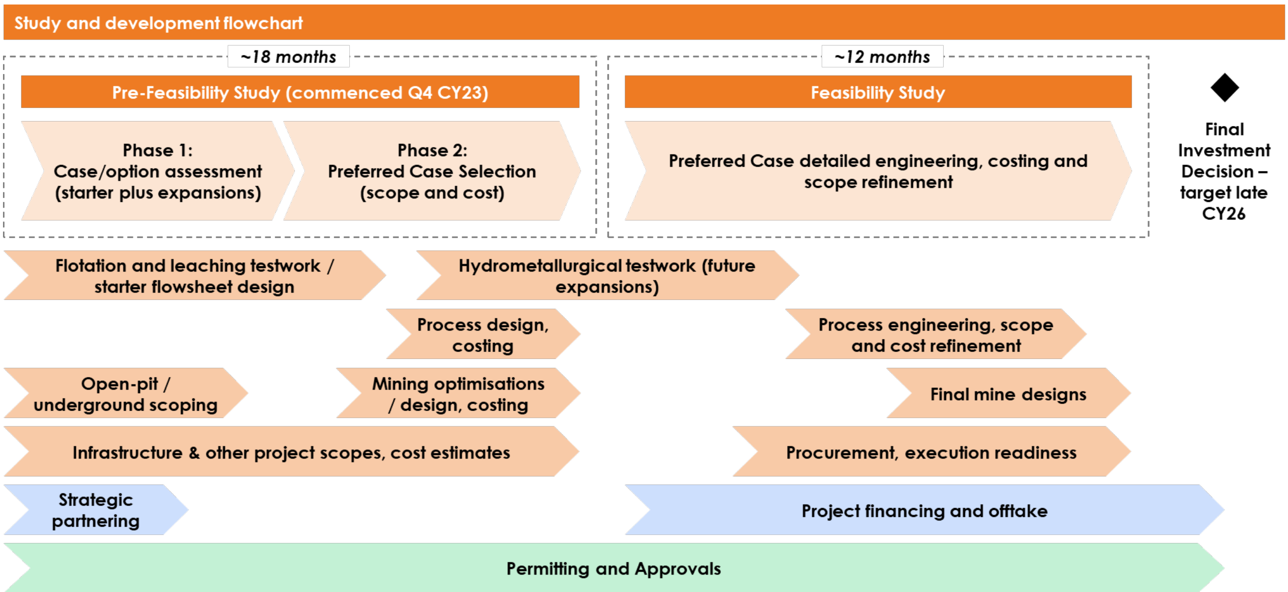

Figure 1. Gonneville Project study, permitting and development flowchart (simplified).

The purpose of the PFS is to select a preferred development case (in terms of scope, cost and timeline) to progress into a Feasibility Study (FS) and deliver an assessment of the financial viability of the Project.

The current focus of the ongoing Pre-Feasibility Study is three-fold:

- Complete detailed metallurgical testwork to determine geo-metallurgical domains, the optimal process flowsheet and refine the grade-recovery algorithms by metal for each domain;
- Assess the viability and cost of selective open-pit and underground mining methods for the initial development phase of the project (the 'starter case'); and
- Define and cost key infrastructure requirements (power, water and logistics) and finalise selection of a commercial/delivery model.

The Company has estimated that the PFS will cost ~A$15 million to complete, which is comfortably covered by Chalice's cash and investments balance (~A$107M at 31 March 2024).

Chalice commenced a significant program of metallurgical testwork in late CY23 given the complexity of mineralogy and flowsheet optionality inherent in the Project. This followed the drilling of 17 dedicated diamond drill holes to acquire metallurgical samples in H2 CY23. Metallurgical testwork on comminution, flotation and leaching by geo-metallurgical domain is approximately 10% complete.

Initial results from the metallurgical testwork indicate that partial oxidation/staining may be inhibiting flotation recovery, which can be mitigated somewhat with modified flotation conditions and/or acid pre-treatment. This indicates the potential to increase overall metal recoveries compared to those used in the 2023 Scoping Study (refer to ASX Announcement on 29 August 2023).

The Company has complemented its significant in-house metallurgical team with several Ni-Cu-PGE flotation and hydrometallurgical expert advisors globally to ensure that the testwork programme is completed at the highest possible standard as quickly as possible.

Flotation testwork

Flotation testwork for the PFS is underway on 99 metallurgical samples within seven domains (Appendix A). The 99 samples were taken from 17 dedicated metallurgical drill holes drilled in H2 2023. The seven composites cover the range of grades and mineralisation styles within the Gonneville Mineral Resource Estimate (Resource) (refer to ASX Announcement on 23 April 2024).

The initial focus of the programme was on lower-grade sulphide samples from the southern and eastern portion of the Resource, with the primary objective of improving nickel recovery to a low-grade concentrate suitable for hydrometallurgical processing. Mineralogical analysis has consistently indicated that ~70% of the nickel is in recoverable sulphide form and as such, improvements to the previous flotation recovery results in the 30-50% range continue to be a focus area.

Initial tests had a diagnostic focus on maximising flotation recoveries by domain and determining optimal conditions for each domain of the Resource. These tests used a bulk flotation flowsheet configuration designed to produce bulk concentrates for hydrometallurgical processing to test the impact of different conditions. Initial results from rougher flotation tests on three composites to date indicate that higher metallurgical recoveries are possible (relative to baseline conditions), subject to cleaner flotation tests, utilising:

- Pre-treatment of the feed in acidic conditions (pH of ~3), washing and filtration followed by flotation (three composites tested); or
- Collector reagent addition (75g/t of potassium amyl xanthate or PAX) in milling (only one composite tested to date); or
- Increased flotation cell residence time (25 mins vs baseline of 10mins) (only one composite tested to date).

These conditions demonstrate an increase in recovery at a constant mass-pull to rougher concentrate for the low-grade S21 composite (Table 1 and Figure 2).

Table 1. Rougher flotation results at ~5% mass pull for low-grade composites tested to date.

Metal	Composite	Composite assay grade	Absolute increase in flotation recovery relative to baseline conditions[1] (%)	
		% or g/t	Acid pre-treat	PAX in milling[2]
Nickel-Cobalt[3]	S21	0.16% Ni	+14%	+8%
	CR2	0.18% Ni	+5%	
	PYX C2	0.15% Ni	+9%	
Copper	S21	0.07% Cu	+8%	+11%
	CR2	0.13% Cu	+5%	
	PYX C2	0.13% Cu	+3%	
Palladium	S21	0.55g/t Pd	+4%	+4%
	CR2	0.71g/t Pd	+2%	
	PYX C2	0.59g/t Pd	+5%	

[1] Baseline bulk rougher conditions not directly comparable to scoping study sequential locked-cycle testwork conditions, but provided a reference point only to assess the absolute increase in recoveries through using various techniques
[2] PAX in milling only tested on S21 composite to date.
[3] Cobalt minerals are in solid solution within the nickel minerals.

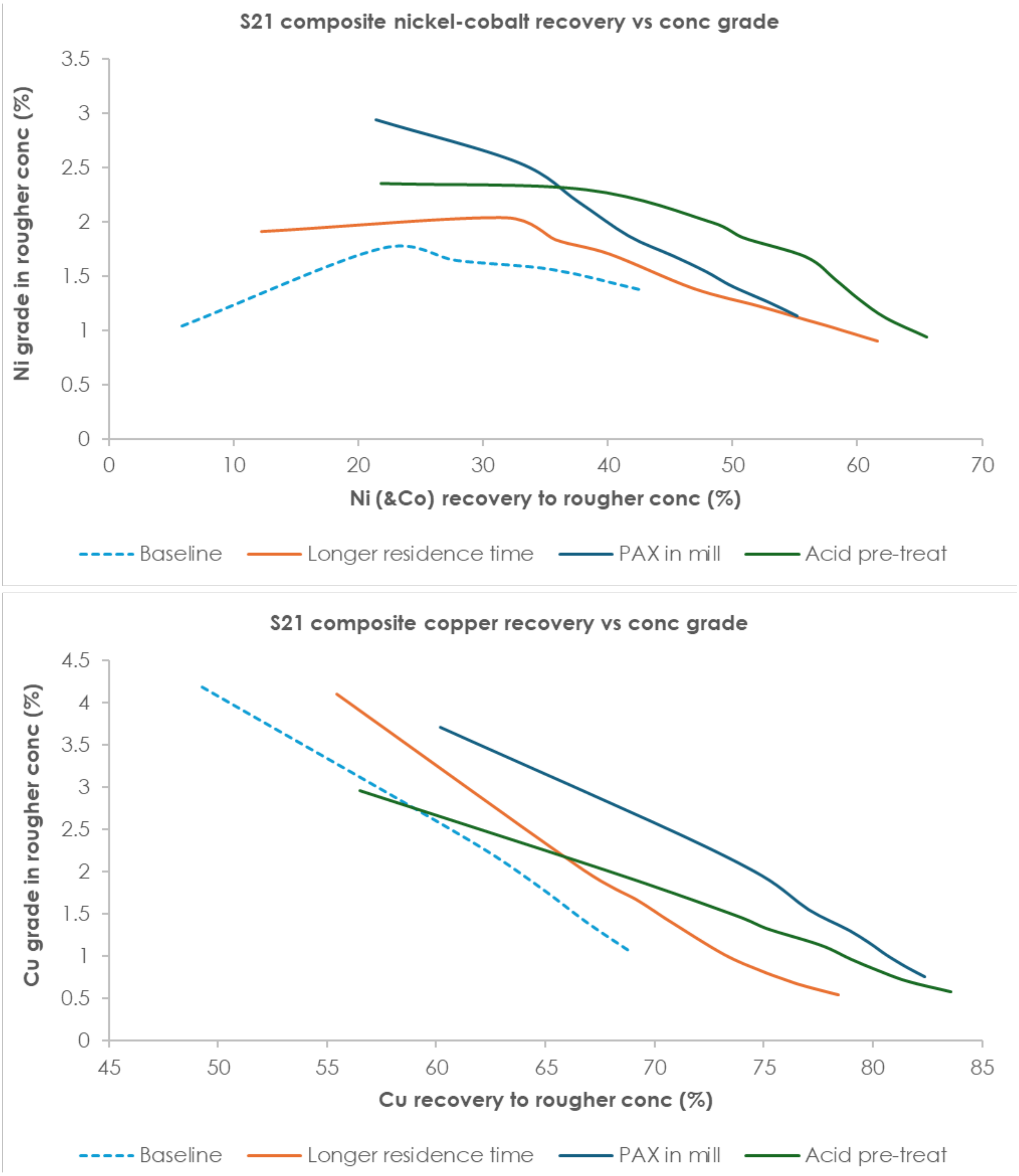

Figure 2. S21 composite nickel-cobalt and copper recovery vs conc grade curves.

Positive results for acid pre-treatment were also observed for the other two low-grade composites tested to date. All bulk rougher tests were conducted at a baseline 53µm (P80) primary grind size with standard reagents and are not directly comparable to the Scoping Study conditions (sequential copper-nickel flotation at a 38µm primary grind size).

Iron staining or partial oxidation of sulphides is thought to be impairing flotation performance, which appears to be mitigated with modified conditions or pre-treatment. Work is underway to improve the understanding of the extent of partial oxidation in the Resource and the extent to which this may have impacted previous samples tested during the Scoping Study.

Further composites are currently being tested and flotation optimisations are continuing – including tests using a combination of pre-treatment, PAX and other collector reagent addition and increased flotation time, which may yield further improvement. The testwork programme and recovery-cost trade-offs is a highly iterative process involving a degree of trial-and-error.

The results to date are promising and indicate potential upside for overall metal recoveries and project economics. However, the impact on overall flotation recoveries and project economics can only be quantified once cleaner stages under locked-cycle conditions are completed for all composites and variability samples.

The cost impacts of additional flotation time and PAX addition in milling are expected to be relatively minor, whereas pre-treatment with acid needs to be assessed in detail to determine the economic trade-off and associated risks. Chalice is currently of the view that additional collector use in milling, as well as increased flotation residence time, are more likely to provide an optimal outcome.

It should also be noted that the approaches have been applied to a bulk flotation flowsheet only (for diagnostic purposes), and the approach for sequential flotation to produce smelter grade concentrates is yet to be investigated. Further testwork is planned in the coming months to determine optimal conditions.

Process flowsheet design and staging

Several processing flowsheet options are being investigated, with the aim of maximising metallurgical recoveries while minimising costs and risk. Given the large scale of the Resource and unique characteristics of the Project, flowsheet design and optimisation are likely to continue throughout the study phases, with additional flowsheet steps and capital investment alternatives continually assessed.

Studies are investigating sequential Cu/Ni flotation plus flotation tails leaching as a smaller scale, simpler, starter process flowsheet, to produce Cu-PGE-Au and Ni-Co-PGE concentrates for sale to western smelters and a PGE-Au doré for sale to a western precious metal refinery (Figure 3).

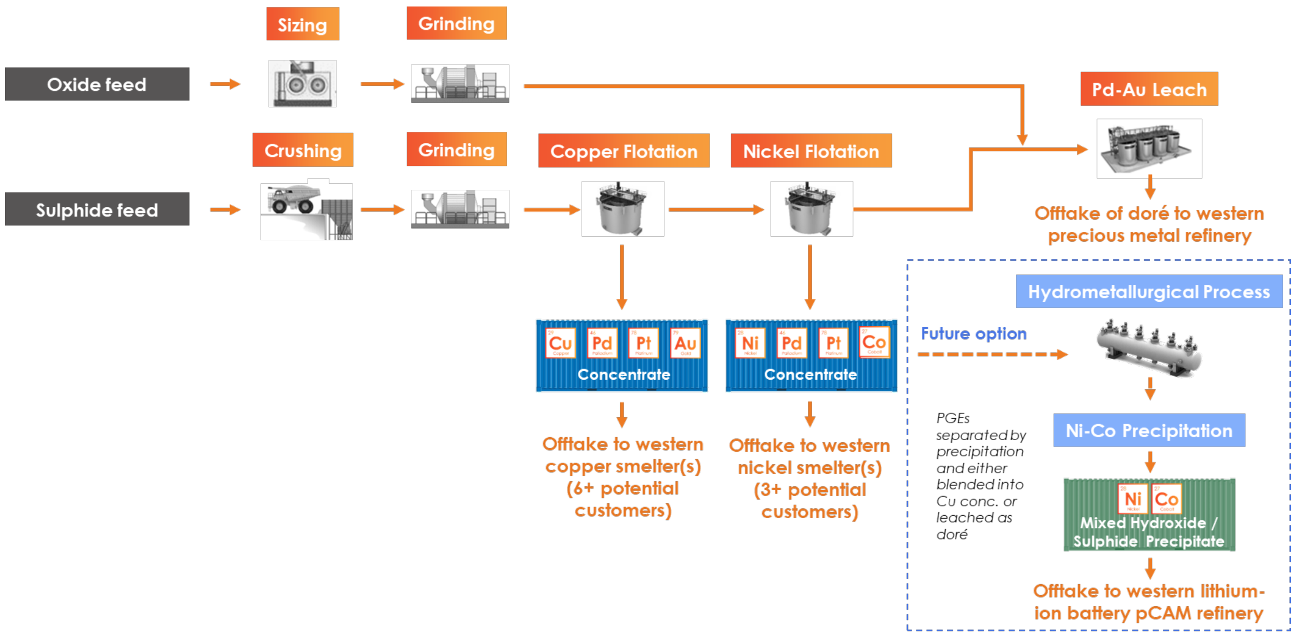

Figure 3. Gonneville Project process flowsheet (simplified).

This flowsheet is designed primarily on high-grade sulphide material, but also allows for the potential blending of stockpiled oxide material with flotation tails for leaching of palladium and gold over time.

This approach will reduce initial pre-production capital costs, on-site sulphide processing operating costs, and technical/complexity as well as ramp-up risks, relative to the Scoping Study flowsheet.

It is envisaged that a future expansion (of throughput and/or the process flowsheet) is likely at some point following first production. This should allow for the processing of lower-grade material (at reduced cut-off grade, or from a stockpile), where metal could be recovered to a low-grade Ni-Co-PGE or bulk Ni-Cu-Co-PGE concentrate and then treated by a hydrometallurgical process rather than being sold to a nickel smelter(s) – as envisaged in the Scoping Study process flowsheet.

Deferring this more complex hydrometallurgical process will provide time to reduce the technical risk associated with the hydrometallurgical circuit and allow it to be demonstrated on actual concentrate feed. Whilst this will adversely affect payabilities and recoveries, it is still considered to provide an overall more favourable option for an initial development.

Production of a nickel smelter concentrate initially is further supported by the continuing improvement of western nickel smelter offtake terms with the significant number of nickel sulphide mines shutting globally.

It is expected that several western nickel smelters will be attracted to the Gonneville concentrate. Indicative offtake terms have been derived from several early-stage discussions, together with advice from an independent marketing expert engaged by Chalice. Tests to date indicate ability to produce a clean, >8% nickel smelter concentrate with 20-35g/t Pd+Pt from the high-grade portion of the Resource, with low levels of deleterious elements. Blending strategies will be considered for samples that have indicated higher levels of MgO in concentrate.

Further testwork and refinement of the specification will continue during the next phase of studies. It is noted that offtake terms have not yet been negotiated with any party, however there is a high level of competition in the nickel smelting market given the lack of nickel sulphide concentrate sources available.

Table 2: Current indicative offtake assumptions for each metal in the Ni-Co-PGE concentrate.

Metal	Payability	Refining Charge
	%	US$/oz
Nickel	77-78%	-
Copper	30%	-
Cobalt	50%	-
Palladium	75%	25
Platinum	70%	25

Forward plan

Chalice continues to progress the Pre-Feasibility Study (PFS) for the Gonneville Project, which is targeted for completion by mid-CY25.

The 2023 Scoping Study investigated bulk open-pit development cases with the full hydrometallurgical flowsheet only, which are now considered future expansion cases. Smaller scale, selective open-pit and underground mining cases with the starter process flowsheet are being investigated as a priority as part of the PFS (a ‘starter case’).

The scale of the starter case is highly dependent on grade, recovery and payability inputs (in addition to macroeconomic inputs) and, as such, refinement of these variables is the current priority in parallel with mining optimisation and mine design iterations.

Ongoing project development activities include:

- **Metallurgical testwork** to support the PFS (on low grade and high-grade samples), including variability tests on potential geo-metallurgical domains and optimisation of comminution, flotation and leaching parameters. It is likely that all testwork for the Project will qualify as R&D expenditure (approximately 40% of costs refundable):
  - **Comminution** – various types of comminution equipment, grind size optimisation and staged grinding (mill-float-mill-float strategies) are all being tested with initial results expected in Q3 CY24.
  - **Sulphide flotation** – optimisation tests as well as mineralogy and economic assessments on higher-grade, low grade and transitional material are all ongoing on to determine the optimal grinding, reagent and flotation conditions.
  - **Oxide/flotation tails leaching** – testing is underway to determine optimal grinding, temperature, reagent consumption and metal recovery from solution technique. This will also assess the blending of oxide material with flotation tails.
  - **Grade-recovery algorithms for starter-case** – it is expected that grade-recovery algorithms for each metal that inform mining optimisations and mine designs for the PFS will be updated in Q4 CY24. Given the importance of this work in scoping the Project, the Company is completing the testwork as rapidly as possible.
  - **Hydrometallurgy testwork** – testwork on the Ni-Co-PGE concentrate will continue during the PFS and FS as a longer-term value-add, midstream processing opportunity for future expansion stages. Testing of several pressure leaching technologies is underway to produce nickel-cobalt mixed hydroxide precipitate (MHP) or mixed sulphate precipitate (MSP). The Company has applied for funding support from the WA and Commonwealth governments to support this testwork.
- Chalice intends to consult with the Commonwealth Government to maximise eligibility of Ni, Co and PGE processing under the proposed Production Tax Incentive recently announced.
- Waste and tailings geochemistry is ongoing, with stage 2 kinetic testwork on lower-grade sulphide samples in progress.
- State and Commonwealth regulatory approvals processes are underway following referral in March 2024; and,
- Scoping, costing and delivery model assessment of key infrastructure routes for power, water, and logistics.

Chalice commenced a process in April 2023 to attract a tier-1 strategic partner for Gonneville with the financial, technical, and marketing capabilities to assist Chalice in developing the Project. Chalice remains in active discussions as part of this partnering process, however there can be no guarantee at this time of a transaction.

This announcement is authorised for release by the Disclosure Committee.

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Competent Person Statements

The information in this announcement that relates to **metallurgical testwork results** in relation to the Gonneville Project is based on, and fairly represents information and supporting documentation compiled by Mr Ian Ritchie, BSc Eng PhD, of Salarium Pty Ltd, a consultant to the Company. Mr Ritchie is a Competent Person, and a Member of the Australian Institute of Mining and Metallurgy. Mr Ritchie is a qualified metallurgist and has sufficient experience that is relevant to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Ritchie does not hold securities in Chalice Mining Limited. Mr Ritchie consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

This announcement may contain forward-looking statements and forward information, (collectively, forward-looking statements). These forward-looking statements are made as of the date of this Report and Chalice Mining Limited (the Company) does not intend, and does not assume any obligation, to update these forward-looking statements.

Forward-looking statements relate to future events or future performance and reflect the Company's expectations or beliefs regarding future events and include, but are not limited to: the impact of the discovery on the Gonneville Project's capital payback; the Company's planned strategy and corporate objectives; estimated timing of the Gonneville Project development schedule; objectives of the strategic partnering process and targeted completion timeframe; the realisation of Mineral Resource Estimates; timing of anticipated production; sustainability initiatives; climate change scenarios; the likelihood of further exploration success; the timing of planned exploration and study activities on the Company's projects; mineral processing strategy; access to sites for planned drilling activities; planned production and operating costs profiles; planned capital requirements; the success of future potential mining operations and the timing of results from planned exploration programs and metallurgical testwork.

In certain cases, forward-looking statements can be identified by the use of words such as, aiming, "can", "commence", "considered", "continue", "could", "estimated", "expected", "for", "future", "is", "likely", "may", "plan" or "planned", "possible", "potential", "objective", "opportunity", "optionality", "should", "strategy", "targeted", "upside", "will" or variations of such words and phrases or statements that certain actions, events or results may, could, would, might or will be taken, occur or be achieved or the negative of these terms or comparable terminology. By their very nature forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

Such factors may include, among others, risks related to actual results of current or planned exploration and development activities; whether geophysical and geochemical anomalies are related to economic mineralisation or some other feature; obtaining appropriate approvals to undertake exploration and development activities; metal grades being realised; metallurgical recovery rates being realised; results of planned metallurgical test work including results from other domains not tested yet; the outcomes of feasibility studies, scaling up to commercial operations; the speculative nature of mineral exploration and development; changes in project parameters as plans continue to be refined and feasibility studies are undertaken; changes in exploration programs and budgets based upon the results of exploration; successful completion of the strategic partnering process; changes in commodity prices and economic conditions; political and social risks, accidents, labour disputes and other risks of the mining industry; delays or difficulty in obtaining governmental approvals, necessary licences, permits or financing to undertake future mining development activities; changes to the regulatory framework within which Chalice operates or may in the future; movements in the share price of investments and the timing and proceeds realised on future disposals of investments as well as those factors detailed from time to time in the Company's interim and annual financial statements, all of which are filed and available for review on the ASX at asx.com.au.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated, or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Appendix A Metallurgical samples – Gonneville Project

Table 3. Metallurgical composite details tested to date as part of the PFS.

Sulphide Composite ID	No. of samples	Litho-geochemical Domains	Holes selected	Composite grade
S21	17	Ultramafic Serpentinite SP1	JDMET013. JDMET014, JDMET015, JDMET016, JDMET017, JDMET018, JDMET020, JDMET023	0.55g/t Pd, 0.11g/t Pt, 0.01g/t Au, 0.16% Ni, 0.07% Cu, 0.014% Co
CR2	10	Ultramafic high-Cr2	JDMET013, JDMET014, JDMET015, JDMET018, JDMET019, JDMET020, JDMET023, JDMET024	0.71g/t Pd, 0.15g/t Pt, 0.003g/t Au, 0.18% Ni, 0.13% Cu, 0.021% Co
PYX C2	13	Ultramafic Pyroxenite	JDMET013, JDMET022, JDMET023 JDMET025, JDMET026, JDMET027	0.59g/t Pd, 0.12g/t Pt, 0.049g/t Au, 0.15% Ni, 0.13% Cu, 0.013% Co

Table 4. Drill hole details for metallurgical samples tested to date.

Hole ID	Type	Easting (m)	Northing (m)	Collar RL (m)	Depth (m)	Azi (°)	Dip (°)	Composite ID
JDMET013	Diamond	425,280	6,512,997	263	321.8	90	-57	S21, CR2, PYX C2
JDMET014	Diamond	425,035	6,512,698	251	270.8	90	-63	S21, CR2
JDMET015	Diamond	424,854	6,512,651	252	366.0	90	-60	S21, CR2
JDMET016	Diamond	424,890	6,512,605	249	231.3	117	-67	S21
JDMET017	Diamond	425,204	6,512,788	258	162.2	88	-66	S21
JDMET018	Diamond	425,158	6,512,919	265	357.3	91	-66	S21, CR2
JDMET019	Diamond	425,043	6,512,507	239	99.3	96	-77	CR2
JDMET020	Diamond	424,972	6,512,320	235	87.3	88	-59	S21, CR2
JDMET022	Diamond	425,317	6,512,288	237	156.3	91	-59	PYX C2
JDMET023	Diamond	425,565	6,513,379	247	149.6	95	-62	S21, CR2, PYX C2
JDMET024	Diamond	425,520	6,513,159	251	96.4	93	-60	CR2
JDMET025	Diamond	425,575	6,512,824	249	237.3	90	-61	PYX C2
JDMET026	Diamond	425,574	6,512,558	241	150.0	91	-59	PYX C2
JDMET027	Diamond	425,310	6,512,393	238	168.3	89	-60	PYX C2

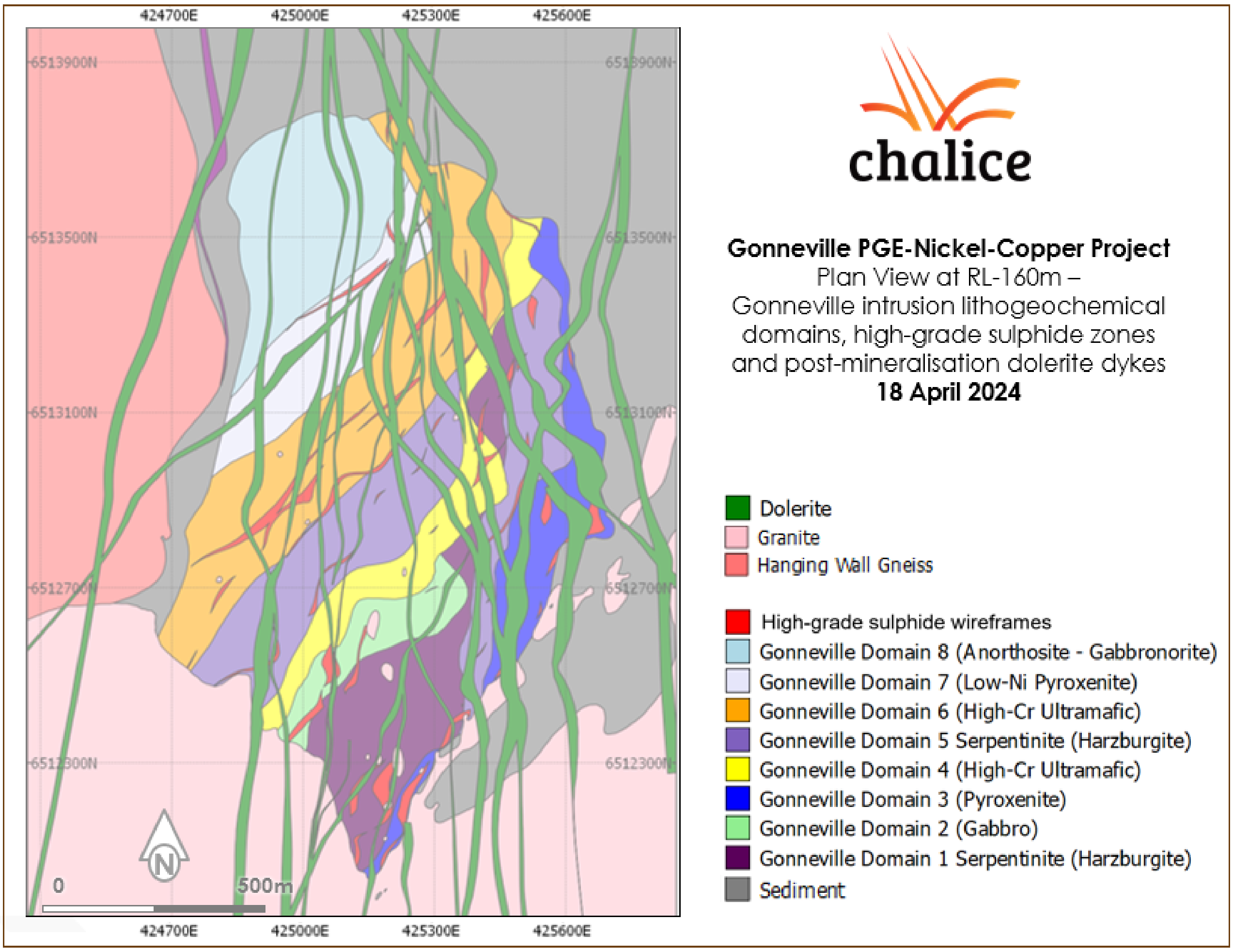

Figure 4. Gonneville Plan View – litho-geochemical domains, high-grade sulphide zones and post-mineralisation dolerite dykes.

Appendix B JORC Table 1

B-1 Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	PQ diamond core samples were obtained for the development of the composites and samples used in the metallurgical test work. Mineralised zones were identified through analysis of, and comparison with, pre-existing assays from adjacent twin holes, XRF instrumentation and visual identification of mineralisation through geological logging.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Samples for metallurgical test work were selected from mineralised zones throughout the deposit that best represented the variable ore types, as defined at the time. Sample intervals for test work were selected through analysis of, and comparison with, pre-existing assays from adjacent twin holes, XRF scan analysis and visual identification of mineralisation through geological logging.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Mineralisation is recognised by the presence of sulphides within the host Ultramafic rock. In diamond core, sample intervals were selected on a qualitative assessment of the geology and sulphide content, compared with the results XRF scan analysis and the results of pre-existing assays from adjacent twin holes.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond drill core is predominantly PQ size (85mm diameter). Limited HQ size (63.5mm diameter) has also been completed. Triple tube has been used from surface until competent bedrock and then standard tube thereafter. PQ and HQ is drilled at a maximum of 3m runs. Core orientation is by an ACT Reflex (ACT III RD) tool
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Individual recoveries of diamond drill core samples were assessed quantitively by comparing measured core length with expected core length from drillers mark. Generally, core recovery was excellent in fresh rock and approaching 100%. Core recovery in oxide material is often poor due to sample washing out. Core recovery in the oxide zone averages 60%

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	With diamond drilling triple tube coring in the oxide zone is undertaken to improve sample recovery. This results in better recoveries but recovery is still only moderate to good.
	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.	There is no evidence of a sample recovery and grade relationship in unweathered material. Paired statistical analyses comparing AC, RC and DD samples from throughout the deposit show that there isn't a statistically significant difference between these sample types. RC grades are observed to be slightly higher than DD grades, but mostly in the <0.1ppm Pd range, which means that the impact on the resource would be immaterial. All three sample types were therefore considered compatible for use in the grade interpolation.
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.	All drill holes were logged geologically including, but not limited to; weathering, regolith, lithology, structure, texture, alteration and mineralisation. Logging was at an appropriate quantitative standard for metallurgical sample selection.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging is considered qualitative in nature. Diamond drill core is photographed wet before cutting.
	The total length and percentage of the relevant intersections logged.	All holes were geologically logged in full.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond core samples were sampled in their entirety to provide sufficient volume of sample for metallurgical test work. Samples, typically comprising 10-12m lengths of full core, were crushed in their entirety and then sub-sampled at the metallurgical laboratory. None of these samples are being used for Resource estimation or similar purposes.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Diamond core only.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation is industry standard and comprises jaw crushing and sub-sampling for separate testing requirements at different crush sizes.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Not applicable to metallurgical samples
	Measures taken to ensure that the sampling is representative of the in-situ material	In all cases the entire length of core has been sampled and assayed as a single interval.

Criteria	JORC Code explanation	Commentary
	collected, including for instance results for field duplicate/second-half sampling.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Drill sample sizes are considered appropriate for the style of mineralisation sought and the nature of the drilling program.
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.	Pre-existing diamond drill core samples that were twinned as part of the metallurgical drill campaign underwent sample preparation and geochemical analysis by ALS Perth. Au-Pt-Pd was analysed by 50g fire assay fusion with an ICP-AES finish (ALS Method code PGM-ICP24). A 34 element suite was analysed by ME-ICP (ALS method code ME-ICP61) including Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn, Zr. Additional ore-grade analysis was performed as required for elements reporting out of range for Ni, Cr, Cu (ALS method code ME-OG-62) and Pd, Pt (ALS method code PGM-ICP27). These techniques are considered total digests. Assays for the metallurgical testwork have been undertaken by Nagrom using similar methods as described above.
	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.	Not applicable as no such tools or instruments were used for the assay of metallurgical composites.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified analytical standards, blanks and duplicates were inserted at appropriate intervals for diamond, RC and AC drill samples with an insertion rate of >10%. Approximately 5% of >0.1g/t Pd assays were sent for cross laboratory checks. All QAQC samples display results within acceptable levels of accuracy and precision.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant drill intersections are checked by the Project Geologist and then by the General Manager - Exploration. Significant intersections are cross-checked with the logged geology and drill core after final assays are received.
	The use of twinned holes.	All samples obtained for metallurgical test work have been drilled as twin holes of pre-existing diamond holes within the Mineral Resource Estimate area and provide a comparison between grade/thickness variations over a maximum of 5m separation between drill holes.

Criteria	JORC Code explanation	Commentary
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary drill data was collected digitally using OCRIS software before being transferred to the master SQL database. All procedures including data collection, verification, uploading to the database etc are captured in detailed procedures and summarised in a single document.
	Discuss any adjustment to assay data	No adjustments were made to the lab reported assay data.
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 estimation.	Diamond drill hole collar locations are recorded by Chalice employees using a handheld GPS with a +/- 3m margin of error.
	Specification of the grid system used.	The grid system used for the location of all drill holes is GDA94 - MGA (Zone 50).
	Quality and adequacy of topographic control.	RLs for reported holes were derived from handheld GPS pick-ups.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Not applicable – only new metallurgical testwork results being reported.
	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.	Not applicable. No drilling results reported and no Mineral Resource Estimate is being reported. Samples for metallurgical test work have been selected from holes throughout the deposit.
	Whether sample compositing has been applied.	Metallurgical samples were composited from contiguous lengths of drill core as selected as described above.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Diamond holes drilled to obtain sample for metallurgical test work were twins of pre-existing diamond holes that form part of the Resource. Original drill holes were typically oriented within 15° of orthogonal to the interpreted dip and strike of the zone of mineralisation.
	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 the drilling is not considered to have introduced sampling bias.
Sample security	The measures taken to ensure sample security.	Diamond core samples were collected in appropriately sized core trays and, following orientation and mark-up, were submitted to Auralia by a Chalice contractor where they were processed and composited.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable

B-2 Section 2 Reporting of Exploration Results

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 settings.	Exploration activities are ongoing over E70/5118 and E70/5119 and the tenements are in good standing. The holder CGM (WA) Pty Ltd is a wholly owned subsidiary of Chalice Mining Limited. There are no known encumbrances.
	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 drilling has occurred on granted Exploration Licences. There are no known impediments to obtaining a licence to operate. E70/5119 partially overlaps ML1SA, a State Agreement covering Bauxite mineral rights only.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	There is no previous exploration at Gonneville, and only limited exploration has been completed by other exploration parties in the vicinity of the targets identified by Chalice to date. Chalice has compiled historical records dating back to the early 1960's which indicate only three genuine explorers in the area, all primarily targeting Fe-Ti-V mineralisation. Over 1971-1972, Garrick Agnew Pty Ltd undertook reconnaissance surface sampling over prominent aeromagnetic anomalies in a search for 'Coates deposit style' vanadium mineralisation. Surface sampling methodology is not described in detail, nor were analytical methods specified, with samples analysed for V2O5, Ni, Cu, Cr, Pb and Zn, results of which are referred to in this announcement. Three diamond holes were completed by Bestbet Pty Ltd targeting Fe-Ti-V situated approximately 3km NE of JRC001. No elevated PGE-Ni-Cu-Co assays were reported. Bestbet Pty Ltd undertook 27 stream sediment samples within E70/5119. Elevated levels of palladium were noted in the coarse fraction (-5mm+2mm) are reported in this release. Finer fraction samples did not replicate the coarse fraction results. A local AMAG survey was flown in 1996 by Alcoa using 200m line spacing which has been used by Chalice for targeting purposes.
Geology	Deposit type, geological setting and style of mineralisation.	The target deposit type is an orthomagmatic PGE-Ni-Cu-Co sulphide deposit, within the Yilgarn Craton. The style of sulphide mineralisation intersected consists of massive, matrix, stringer and disseminated sulphides typical of metamorphosed and structurally

Criteria	JORC Code explanation	Commentary
		overprinted orthomagmatic Ni sulphide deposits.
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.	Provided in the body of the text.
	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.	No material information has been excluded.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. Cutting of high grades) and cut-off grades are usually Material and should be stated.	Not applicable – only new metallurgical testwork results being reported.
	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.	Not applicable – only new metallurgical testwork results being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable – 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.	Not applicable – only new metallurgical testwork results being reported.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not applicable – only new metallurgical testwork results being reported.
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.	Not applicable – no new exploration discovery results reported.
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	Not applicable – no exploration results excluded.

Criteria	JORC Code explanation	Commentary
	practiced to avoid misleading reporting of Exploration Results.	
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.	Extensive oxide leaching tests have been carried out on five separate composites and a geo-metallurgical programme is planned during the PFS. Flotation tails leaching of PGEs is not currently practiced, however, it is common place in gold operations. Milling and flotation of material similar to Gonneville is commonly practiced in other operations using similar approaches to those proposed in this PFS programme where produced concentrates are either sold commercially or treated in smelter-refinery complexes. Hydrometallurgical treatment of flotation concentrates in other projects has been extensively tested at a pilot-scale but not commercially implemented to date, though this is expected to change prior to implementation of this Project. Limited concentrate analysis suggests no significant levels of deleterious elements though control of magnesium bearing minerals in concentrates will be a key focus of the current programme. Other than the metallurgical results contained in this announcement, no new exploration results are reported.
Further work	The nature and scale of planned further work (e.g. Tests for lateral extensions or depth extensions or large-scale step-out drilling).	Pre-Feasibility study work is underway including metallurgical testwork, mining studies, hydrogeology studies, tailings studies and waste rock characterisation etc.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Not applicable