Yerrida North Project – Sumo Niobium Target

12 September, 2024

Large Compelling Niobium Soil Anomaly Identified in WA

Key Points

- **Large, robust and coherent niobium lag soil anomaly defined; the anomaly has been named the Sumo Niobium Target**
- **Sumo, which measures 2km long by 1km wide, is located 70km south-east of Sandfire Resources' DeGrussa Copper-Gold Project and within Great Western's 100% owned Yerrida North Project**
- **It is also located 30km north-east of Great Western's Oval and Oval South copper-gold targets, where drilling is set to start at the Oval copper-gold target later this month**
- **Sumo's prospectivity is highlighted by coincident pathfinder geochemistry which supports the potential for a niobium-mineralised system**
- **Field reconnaissance has verified Sumo as insitu, meaning it is not related to transported sedimentary material**
- **Sumo is located on magnetic and gravity highs, which further supports its potential**
- **Heavy mineral concentrate samples have been collected, with assays pending to determine niobium mineralogy and potential type of mineralisation system and future possible drilling programmes**

Great Western Exploration (ASX: GTE) is pleased to announce that it has defined a large niobium soil anomaly, named Sumo, in Western Australia.

The Sumo Niobium Target is within the Company's 100% Yerrida North Project, located on the western portion of the Yerrida Basin, approximately 800km north-east of Perth and 90km north-west of the town of Wiluna (see Figure 1), 70km south-east of Sandfire Resources' DeGrussa Copper-Gold Project.

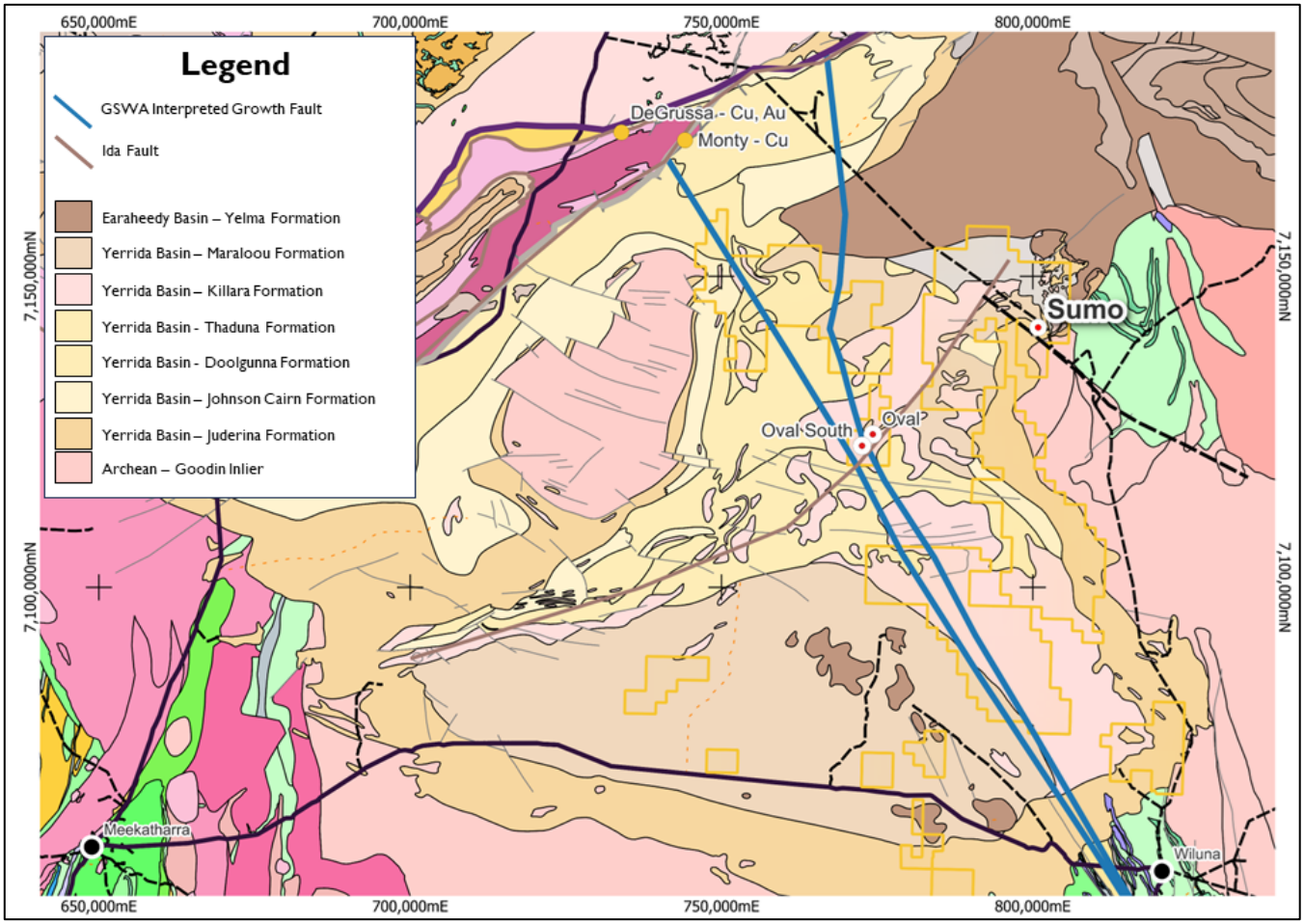


Figure 1: Location of the Sumo Niobium Target, within the Yerrida Basin.

The Sumo Niobium Target was defined by lag soil sampling, with a large, coherent >20ppm niobium anomaly measuring 2km x 1km wide delineated (Figure 2).

An external geochemistry consultant was engaged by the Company to assist in the interpretation of the lag soil sampling database and the nature of the defined niobium anomalism. This work found that the Sumo anomaly is co-incident with As, Ag, Bi, Cr, Mo, Sb, Sn, Ta, Ti, Th, U W and Zr, with these elements commonly associated with carbonatite niobium deposits (Figure 3). No evidence was found that Fe or Mn scavenging had provided a false anomaly.

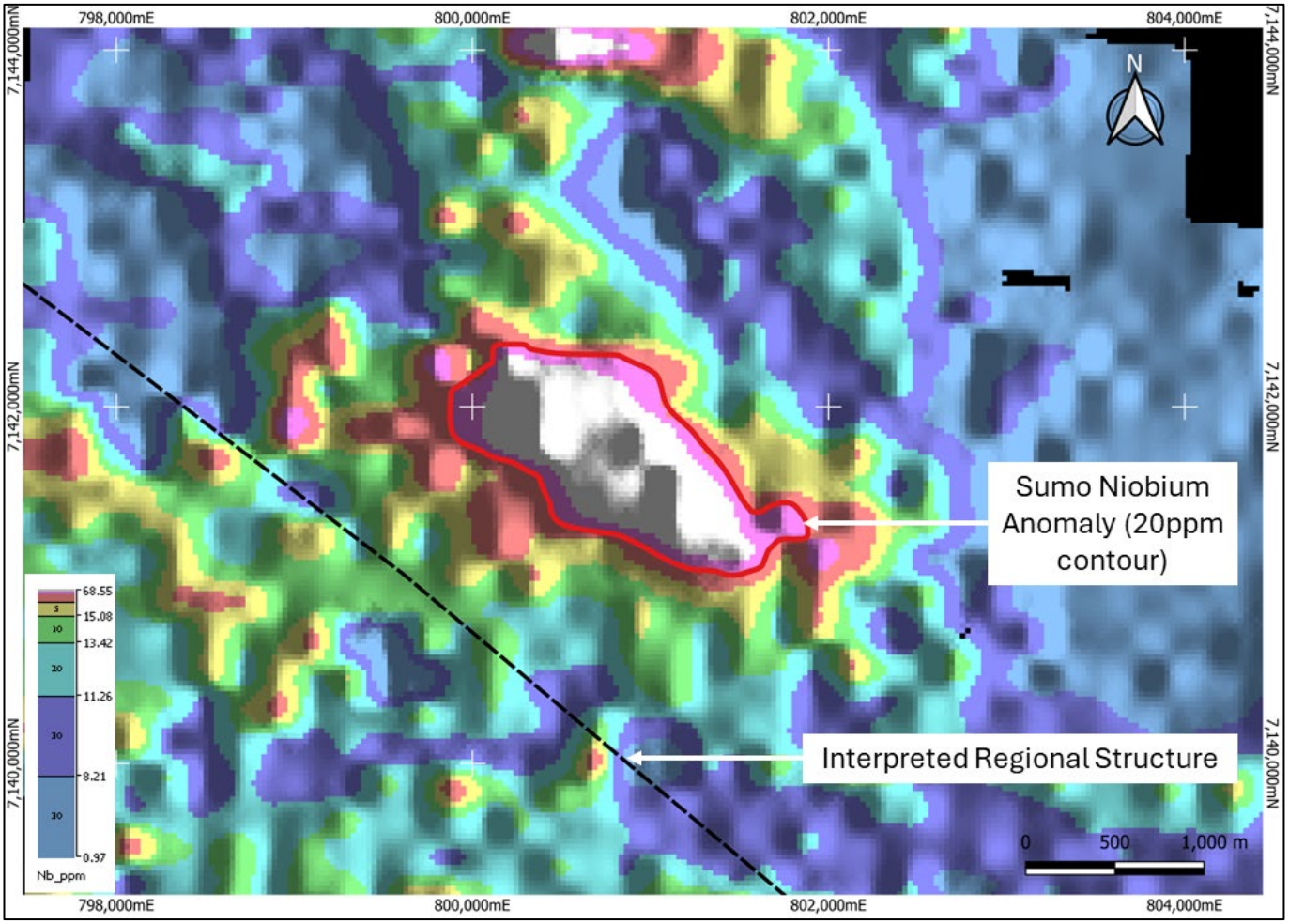


Figure 2: 2km x 1km discrete Sumo Niobium Target. Note regional structure interpreted from gravity and magnetic data, and potentially evident in the geochemistry results.

The Sumo niobium anomaly is located within a magnetic high (Figure 4), which contains a small zone of gravity high within the modelled inverted gravity data, which combined with the magnetic peak at this location may potentially represent a blind carbonatite. Field reconnaissance of the anomaly found no outcrop to explain the feature. However, it was found the anomaly is insitu and not related to transported sediments.

On the geochemistry consultant's recommendation, a heavy mineral concentrate (HMC) programme was completed across the anomaly. This process involves taking soil samples across the area of anomalism followed by the completion a spectral analysis to define the niobium and associated mineralogy. This process aims to determine the niobium mineralisation style (carbonatite/pegmatite/regolith) and define the forward exploration programme at the target. It is anticipated that results from this programme will likely be returned in October 2024.

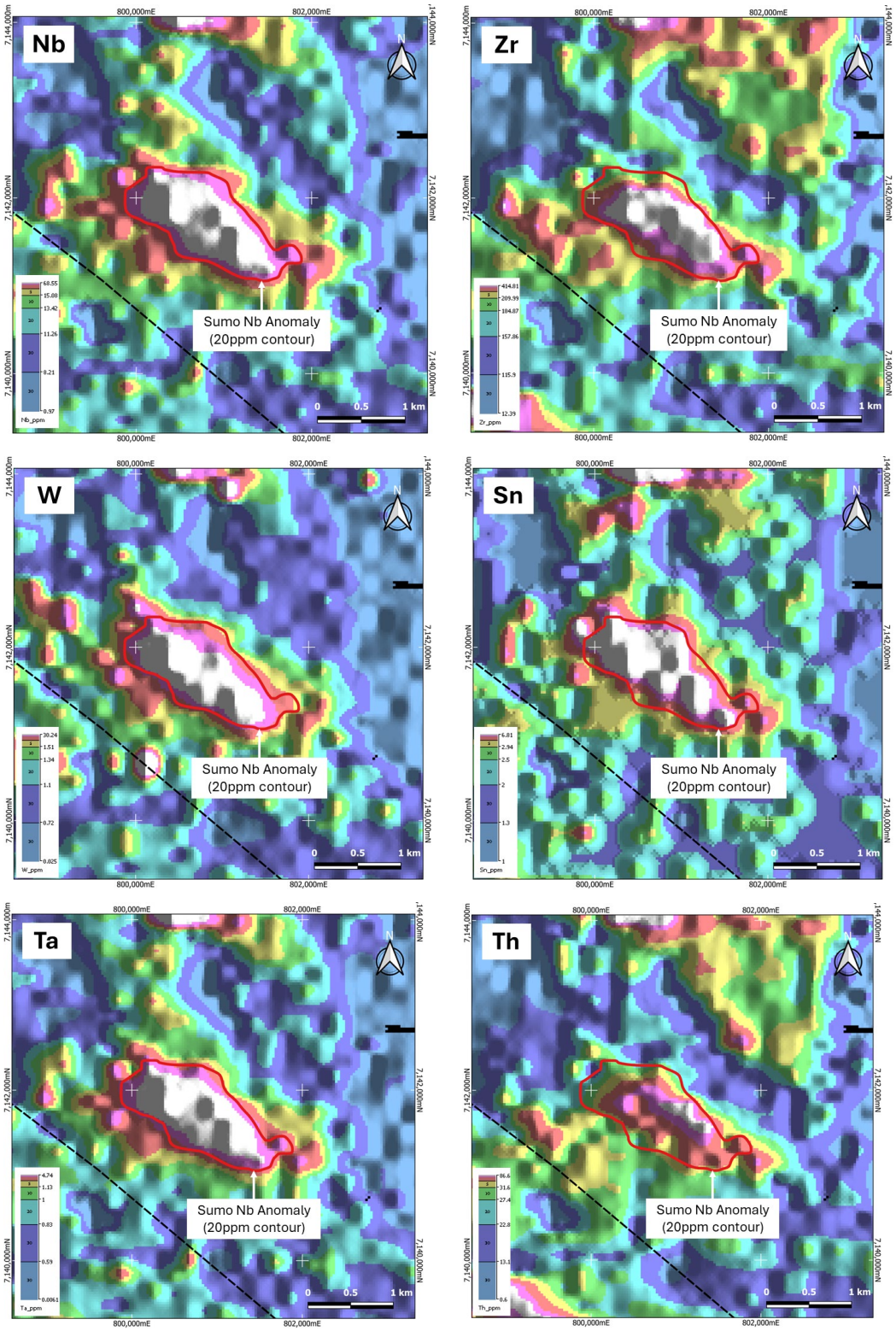


Figure 3: Niobium lag soil anomalism (top left), that strongly correlates with several pathfinder elements (Zr, W, Sn, Ta, Th), that are commonly associated with carbonatite niobium deposits. Note 20ppm Nb contour (red polygon) for comparison on individual pathfinder soil anomalism maps.

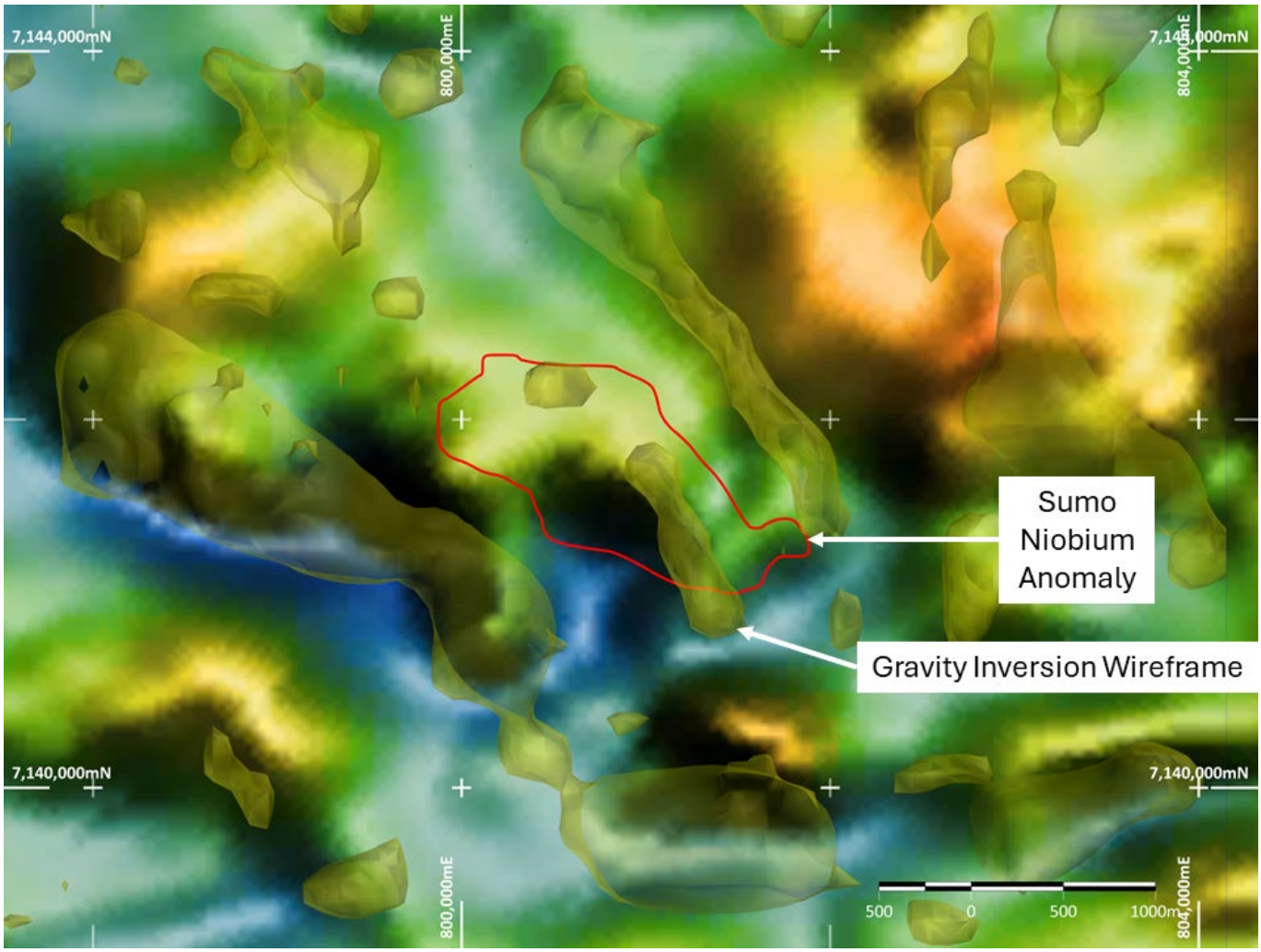


Figure 4: Nb contours (>20ppm, in red) and gravity density inversion wireframe model (+0.08 g/cm3, shown in transparent yellow) overlying total magnetic intensity (TMI) image.

The Sumo Niobium Target is another highly promising target that has been developed by the Company through analysis of the large dataset provided to Great Western by Sandfire Resources, following withdrawal by the latter from the Yerrida North joint venture (see GTE ASX Announcement 17 August 2023).

Great Western anticipates that more prospective targets will be defined as the Company assesses the dataset, undertakes fieldwork and completes further geological interpretation.

In addition, the Company anticipates the commencement of drilling at its giant Oval copper-gold target later this month.

Authorised for release by the Board of Directors of Great Western Exploration Limited.

For enquiries:

Shane Pike

Managing Director

Great Western Exploration

Tel: 08 6311 2852

Email: enquiries@greatwestern.net.au

Paul Armstrong

Investor & Media Relations

Read Corporate

Email: paul@readcorporate.com.au

Previous ASX Releases – GTE.ASX

1. 17 August 2023 Great Western Assumes 100% of Yerrida North.

Follow Great Western Exploration:

Subscribe to receive email updates: https://greatwesternexploration.com.au/subscribe

Follow on LinkedIn: https://www.linkedin.com/company/great-western-exploration-limited/

Competent Person Statement

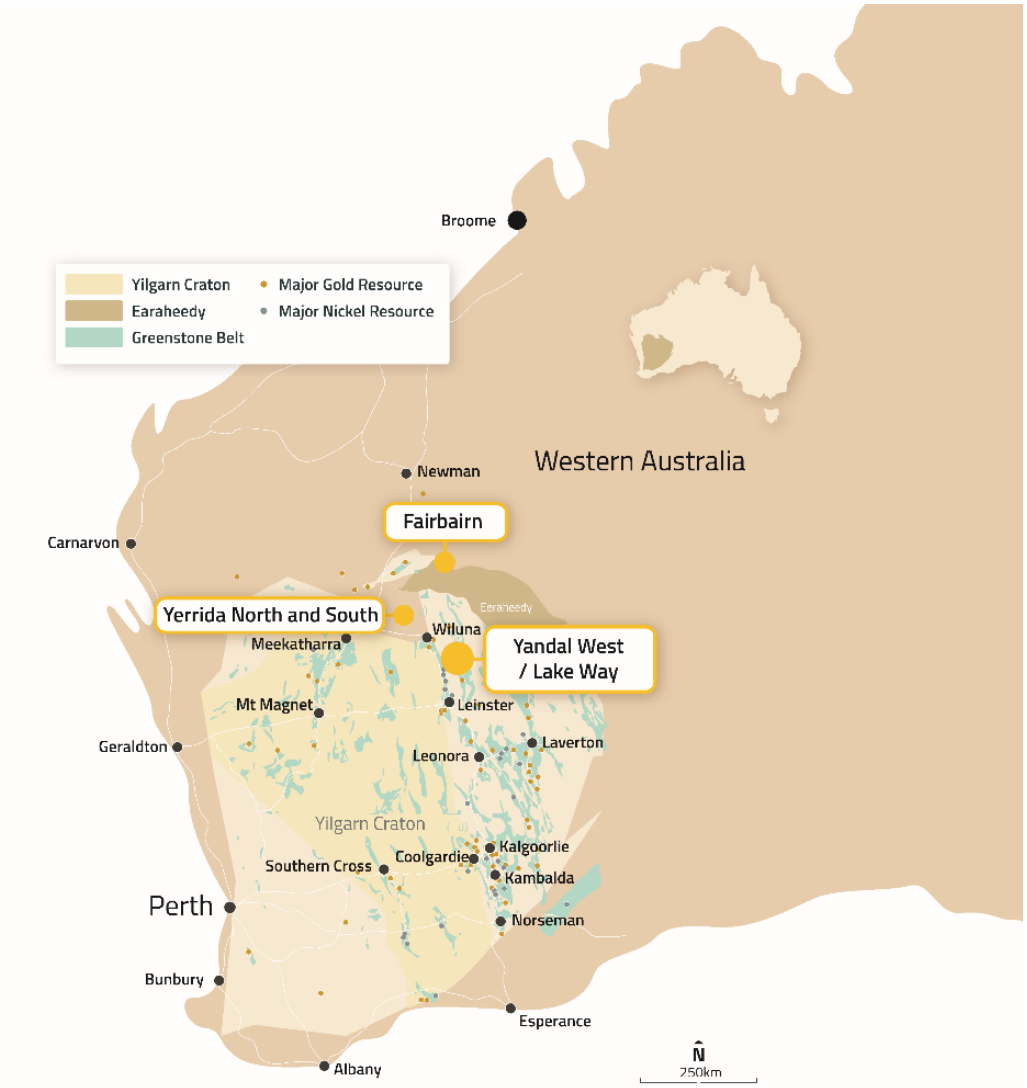
The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Shane Pike who is a member of the Australian Institute of Mining and Metallurgy. Mr. Pike is an employee of Great Western Exploration Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Pike consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Company's Exploration Results is a compilation of Results previously released to ASX by Great Western Exploration (17/08/2023). Mr. Shane Pike consents to the inclusion of these Results in this report. Mr. Pike has advised that this consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

About Great Western Exploration

Great Western Exploration (GTE.ASX) is an explorer with a world class, large land position in prolific regions of Western Australia. Great Western's tenements have been under or virtually unexplored.

Numerous work programmes across multiple projects are underway and the Company is well-funded with a tight capital structure, providing leverage to exploration success.

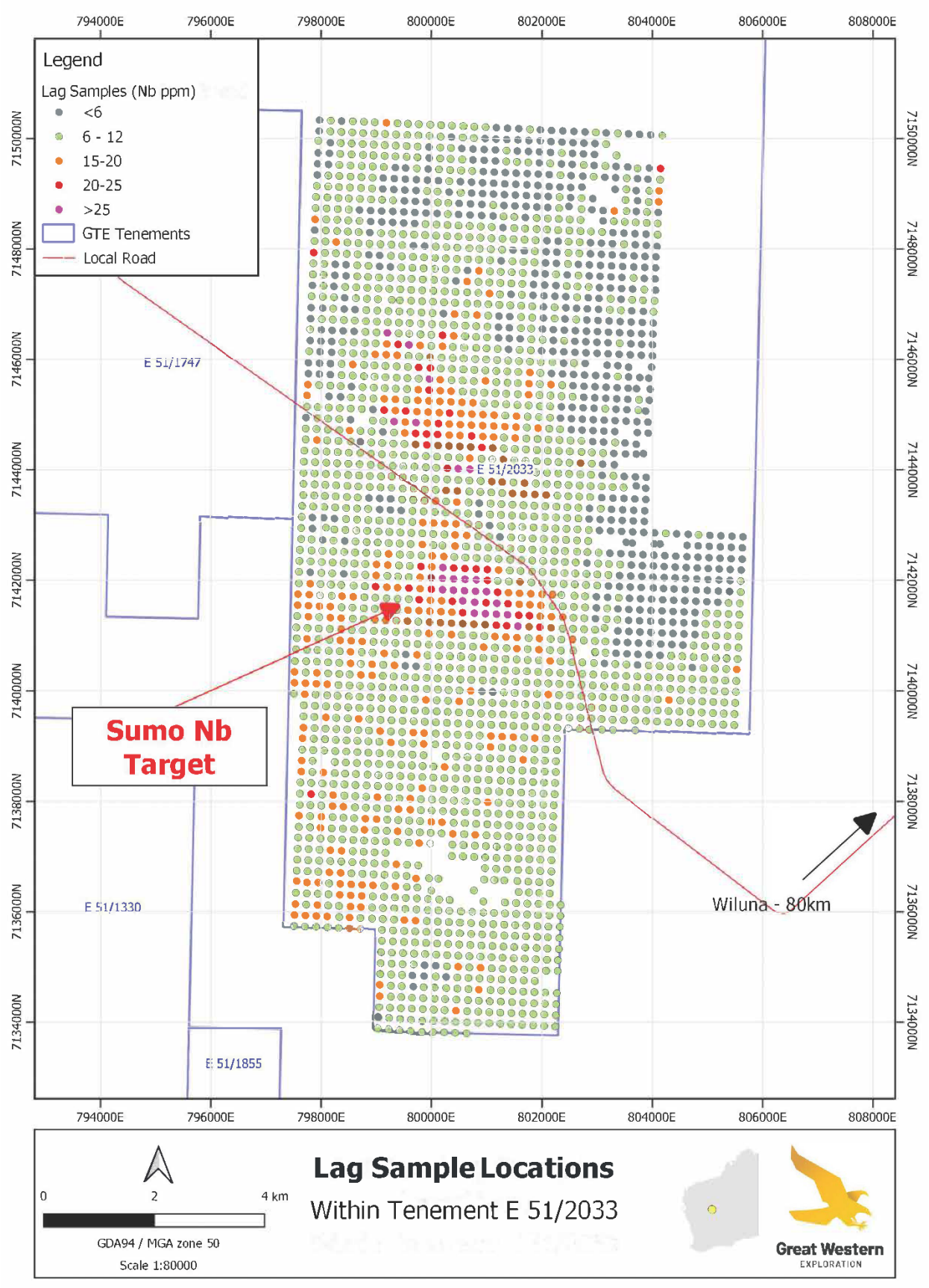


Appendix 1
Jubilee Lag Assay Statistics + Sample Locations

Jubilee Mines NL - Lag Assay Statistics

Element	Units	Detection Limit	Number	Min	Max	Mean	Standard Deviation	P25	P50	P75	P97.5	Contrast (P97.5/P50)	Contrast (Max/P97.5)
Ag	ppm	0.01	2814	BD	2.70	0.27	0.17	0.10	0.30	0.40	0.60	2.0	4.5
As	ppm	1	2814	BD	297	24	13	14	25	32	47	1.9	6.4
Bi	ppm	0.1	2814	BD	12.9	0.7	0.6	0.3	0.7	1.0	2.0	2.9	6.5
Cr	ppm	0.1	2814	2.900	1287.7	413.2	216.5	228.7	447.0	561.2	830.9	1.9	1.5
Fe	%	0.01	2814	1.00	60.00	41.17	13.08	39.36	45.36	49.27	55.65	1.2	1.1
Mn	ppm	1	2814	58	16607	953	1205	424	658	952	4136	6.3	4.0
Mo	ppm	0.1	2814	0.1	29.3	2.0	1.2	1.4	2.1	2.6	3.8	1.8	7.7
Nb	ppm	0.1	2814	0.7	40.7	10.3	4.6	7.1	10.1	12.9	19.9	2.0	2.0
P	ppm	1	2814	150	3670	520	177	420	500	580	907	1.8	4.0
Sb	ppm	0.1	2814	BD	23.4	2.8	2.1	0.9	2.8	4.1	7.2	2.6	3.3
Sn	ppm	0.1	2814	BD	7.1	1.8	0.9	1.2	1.8	2.4	3.7	2.1	1.9
Ta	ppm	0.1	2814	BD	3.1	0.7	0.3	0.5	0.7	0.9	1.5	2.1	2.1
Ti	%	0.005	2814	0.044	2.138	0.613	0.229	0.462	0.593	0.738	1.118	1.9	1.9
Th	ppm	0.2	2814	0.2	95.6	19.7	11.3	10.7	20.6	26.3	45.2	2.2	2.1
U	ppm	0.1	2814	0.2	11.4	2.4	0.9	1.8	2.6	3.0	4.0	1.5	2.9
W	ppm	0.1	2814	BD	35.9	1.0	0.8	0.6	1.0	1.3	2.0	2.0	18.0
Zr	ppm	0.1	2814	11.5	446.2	143.8	59.4	97.0	146.1	180.1	271.9	1.9	1.6

*BD: Below Detection (for statistical calculations half of the DL is used for samples below detection).


794000E
796000E
798000E
800000E
802000E
804000E
806000E
808000E
7150000N
7148000N
7146000N
7144000N
7142000N
7140000N
7138000N
7136000N
7134000N
Legend
Lag Samples (Nb ppm)
<6
6 - 12
15-20
20-25
>25
GTE Tenements
Local Road
E 51/1747
E 51/2033
E 51/1330
E 51/1855
Sumo Nb Target
Wiluna - 80km
0
2
4 km
GDA94 / MGA zone 50
Scale 1:80000
Lag Sample Locations
Within Tenement E 51/2033
Great Western
EXPLORATION

Appendix 2
JORC Code, 2012 Edition (Table 1) – Sumo Niobium

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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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.*	<u>Jubilee Mines lag sampling</u> • Surface lag sampling completed by *Jubilee Mines NL* (incorporating *Sir Samuel Mines NL)* in 2007 (see Wamex Report: A76325). Samples were sieved in-field with the -6mm/+2mm fraction collected for analysis. • Duplicate samples were collected at a rate on 1:25. CRMs were inserted at a rate of 1:25. • Analysis was undertaken by ACME Laboratory in Vancouver using the 1GEX method. <u>Xstrata ground gravity</u> • Completed for Xstrata by Haines Geophysics in 2008 (Wamex: A80197) • 868 stations with line spacing 400m x 200m (N-S, E-W), with 200m x 200m infill.
Drilling techniques	• *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).*	• Not applicable: No drilling undertaken.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Not applicable: No drilling undertaken.
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.* • *The total length and percentage of the relevant intersections logged.*	<u>Jubilee Mines lag sampling</u> • A basic description of the sample location (surface, slope and terrain) was recorded by field staff.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	<u>Jubilee Mines lag sampling</u> • Field sampling was completed by a Jubilee sub-contractor, *Jeandrex Field Services.* • A procedure was provided by Jubilee for the collection of the samples. • Sub-sampling has been completed by ACME Laboratory prior to analysis. • Field duplicate samples have been collected at a rate of 1:25.

Criteria	JORC Code explanation	Commentary
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.* • *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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	<u>Jubilee Mines lag sampling</u> • ACME Laboratory in Vancouver was selected by Jubilee to conduct low-detection-limit 1GEX method (42 elements). Reported assay results suggest a 4-acid digestion which quantitatively dissolves most geological materials. • No QAQC issues were noted by Jubilee. <u>Xstrata ground gravity</u> • Ground gravity survey data was collected using a Scintex CG5 and CG3 (0825 Cunya Gravity Survey, Wamex A80197).
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	<u>Jubilee Mines lag sampling</u> • Assay results and interpretation have been reviewed internally by company geologists and an external consultancy *Geochemical Services Pty Ltd*. • Data has been accessed directly from the Wamex government database, checked, and transferred to GTE's secure database. <u>Xstrata ground gravity</u> • *Newexco Exploration Pty Ltd* verified the quality of the ground gravity 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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	<u>Jubilee Mines lag sampling</u> • Hand-held GPS units were utilised to mark data location points (accuracy +/- 5m). GTE has utilised publicly available SRTM data to assign rLs. • The grid system used was GDA94 MGA zone 50.

Criteria	JORC Code explanation	Commentary
		Xstrata ground gravity • Horizontal and vertical control was established using a DGPS (+/- 0.1m). • The grid system used was GDA94 MGA zone 50.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	Jubilee Mines lag sampling • Surface lag samples were collected on a 200m x 200m grid (See Appendix 1). • Results reported herein are of exploration nature, designed to determine target zones for the next stages of exploration activities. Results are not appropriate for Resource or Reserve reporting. • No sample compositing has been undertaken. Xstrata ground gravity • Ground gravity survey stations were 400m x 200m (N-S, E-W), with 200m x 200m infill.
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.* • *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.*	Jubilee Mines lag sampling • Surface lag samples have been collected on a N-S/E-W grid. No bias was introduced. Xstrata ground gravity • Surface gravity stations have been collected on a N-S/E-W grid. No known bias was introduced.
Sample security	• *The measures taken to ensure sample security.*	Jubilee Mines lag sampling • Measures taken to ensure legacy sample security are unknown.

Criteria	JORC Code explanation	Commentary
		<u>Xstrata ground gravity</u> • Measures taken to ensure legacy Xstrata gravity survey data security are unknown.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	<u>Jubilee Mines lag sampling</u> • Assay data has been reviewed internally by GTE geologists and externally by *Geochemical Services Pty Ltd*. The data is deemed to be of good quality however a reporting error is noted in the Jubilee Wamex report A76325. In the report an aqua regia assay method is detailed, however the assay data is consistent with 4-Acid assay analysis. <u>Xstrata ground gravity</u> • Data has been reviewed by a third-party geophysical consultant, *Newexco Exploration Pty Ltd*. The data was verified to be of good quality.

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 settings.* • *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.*	

Tenement No:	E 51/2033
Tenement Type:	Exploration License, Western Australia
Status:	Granted – 24/09/2021
Location:	Wiluna District
Size (km2)	176
Ownership:	Great Western Exploration Limited (100%)
Native Title:	1. Yugunga Nya People #2 (WC2022/003): Determined (89%). Access agreement in place. 2. Yugunga-Nya Part A (WCD2021/008) – Determined (11%). Access agreement in place. 3. Gingirana #4 (WC2020/003) – Claim (89%). Competing claim with the YN#2.
Other Agreements:	None
Non-State Royalties:	None
Other Encumbrances:	None
Historical Sites:	None
National Parks:	None
Environment:	None
Tenement Security:	In good standing, no known impediments.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Rio Tinto: • Exploration for nickel sulphides. • Geophysical surveys and RC drilling completed (Wamex: A64750). Xstrata Nickel (nee Jubilee Mines / Sir Samuel Mines): • Targeting mafic-ultramafic intrusions associated with Ni-Cu-PGEs. • Lag sampling, soil sampling and ground geophysical surveys completed (Wamex: A76325, A80197, A85331, A85331 and A89209).
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The proposed deposit model is a carbonatite intrusive hosting Nb-REEs mineralisation. A Nb-enriched pegmatite is also possible. • The Sumo Nb target is located within the Yerrida Basin.

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.*
	• *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, no drilling undertaken.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No weighted averaging techniques completed. • No data aggregation conducted. • Metal equivalents not utilised/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').*	• Not applicable for lag geochemistry results or ground gravity surveys.
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.*	<u>Jubilee lag sampling</u> • Sample locations are shown in Appendix 1.
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.*	<u>Jubilee lag sampling</u> • Individual assays not reported, results have been summarised within the Appendix 1 statistics table.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations;*	• No other substantive exploration data available.

Criteria	JORC Code explanation	Commentary
	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.	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The next exploration stage will be assessing the results of the HMC test-work. Positive results will lead to air core (AC) and/or reverse circulation (RC) drilling.