

## Coincident Nickel-Copper-PGE Anomalies Identified

*Anomalism further highlights the prospectivity of the Berkshire Valley Project in the southwest Yilgarn Craton*

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### Key Points:

- Access to the full IGO Limited (ASX: IGO) datasets has revealed selected PGE assaying of auger geochemical sampling;
- Several areas display coincident nickel-copper-platinum-palladium anomalism;
- Geochemical suite suggests the presence of sulphides associated with the mafic/ultramafic intrusions
- Data analysis highlights areas requiring further work to follow up where Ni-Cu anomalism has no associated PGE assays;
- PGE anomalism further highlights the prospectivity of the Berkshire Valley Project.

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Todd River Resources Limited (ASX: TRT) (TRT or the **Company**) is pleased to announce that it has received additional sampling and assay data relating to the Berkshire Valley Project in the southwest Yilgarn Craton. Recently the Company announced that it had entered into two binding sale agreements to purchase all of the shares in Marlee Base Metals Pty Ltd (MBM) and Moonknight Pty Ltd (Moonknight) who between them currently hold the two tenements that make up the Berkshire Valley Project (Figure 1).

As previously outlined in the ASX announcement dated 1 July, three separate programs of auger sampling were completed along 8km of strike along the western mafic/ultramafic trend (Figure 2). Initial sampling was completed on a 200m x 50m grid pattern with infill lines to 100m spacing completed in places. The sampling methodology involved taking either a bulk "BLEG" sample or a 100g (at -1mm size fraction) soil sample from 1m depth. These samples were all assayed for a number of elements including gold, nickel, chrome, copper and sporadically for PGE's. Analysing the full dataset highlighted the following in terms of the PGE assays:

- Samples from two of the three auger programs were assayed for platinum;
- Samples from one of the three auger programs were assayed for both platinum and palladium;
- Samples from one of the three auger programs were assayed for neither platinum nor palladium.

From the gridded data it is clear that several areas are anomalous in PGE's and importantly there are a number of clear coincident Ni-Cu-PGE anomalies. Firstly, at the southern limit of the sampling there is a tight,



coherent Ni-Cu-Pt-Pd anomaly and secondly further north along strike over an area of approximately **1.4km x 600m** in the central zone of sampling there is a Ni-Cu-Pd anomaly with a strong Pt anomaly immediately to the west. This is illustrated in Figure 3.

Significantly the strongest coincident Ni-Cu anomaly lies approximately 500m north of the limit of the PGE assaying and provides an immediate area for follow up work.

Aside from the 8km zone of sampling discussed above, the remaining >34 kilometres of interpreted strike of mafic/ultramafic intrusives remains almost entirely untested.

TRT Managing Director Will Dix said:

*“Being able to assimilate the entire auger geochemical data set and understand how everything pieces together along that 8km stretch of ground is a great start in understanding some of the opportunities this project will present us. The zones of Ni-Cu-PGE anomalism in soils or auger sampling are significant and give the Company early target areas to follow up with detailed geophysics and drilling.*

*We are also strongly encouraged given the underlying strength of the magnetic signatures that additional areas both on the western and eastern mafic/ultramafic trends will deliver further high priority zones once the sampling coverage is expanded.”*

#### **Planned work program**

Following the anticipated completion of each transaction, the Company will move quickly to engage all stakeholders and implement an exploration strategy and plan.

Anticipated work will include but will not be limited to:

- further auger sampling across prospective stratigraphy;
- detailed geophysical programs over selected areas; and
- drilling selected targets based on the outcomes of geochemical sampling and geophysics.

#### **About the Berkshire Valley Project**

The two Berkshire Valley tenements which are currently held by MBM and Moonknight cover an area of 270km<sup>2</sup> within the western gneiss belt of the South West Province of the Yilgarn Craton. The project contains a 42 kilometre long chain of mafic-ultramafic intrusions identifiable in magnetic imagery which the Company believes are analogous to the host intrusions at the Julimar discovery (Figure 4) and therefore have the potential to host similar style magmatic Ni-Cu-PGE mineralisation.

Previous investigations by the Co-operative Research Centre for Landscape Environments and Mineral Exploration (CRC LEME) identified the region as having anomalous chrome, copper and nickel associated with mafic and ultramafic units in a 2006 report on laterite geochemistry. This is supported by associated anomalous Ni, Cu and PGE levels identified in auger drilling carried out by Independence Group (IGO) between 2006-2009 (based on Mineral Exploration Reports lodged with the DMIRS through WAMEX reports).

Completion of the acquisition (see ASX Announcement 1 July 2020) is expected to occur following shareholder approval at a general meeting to be held mid-August 2020.

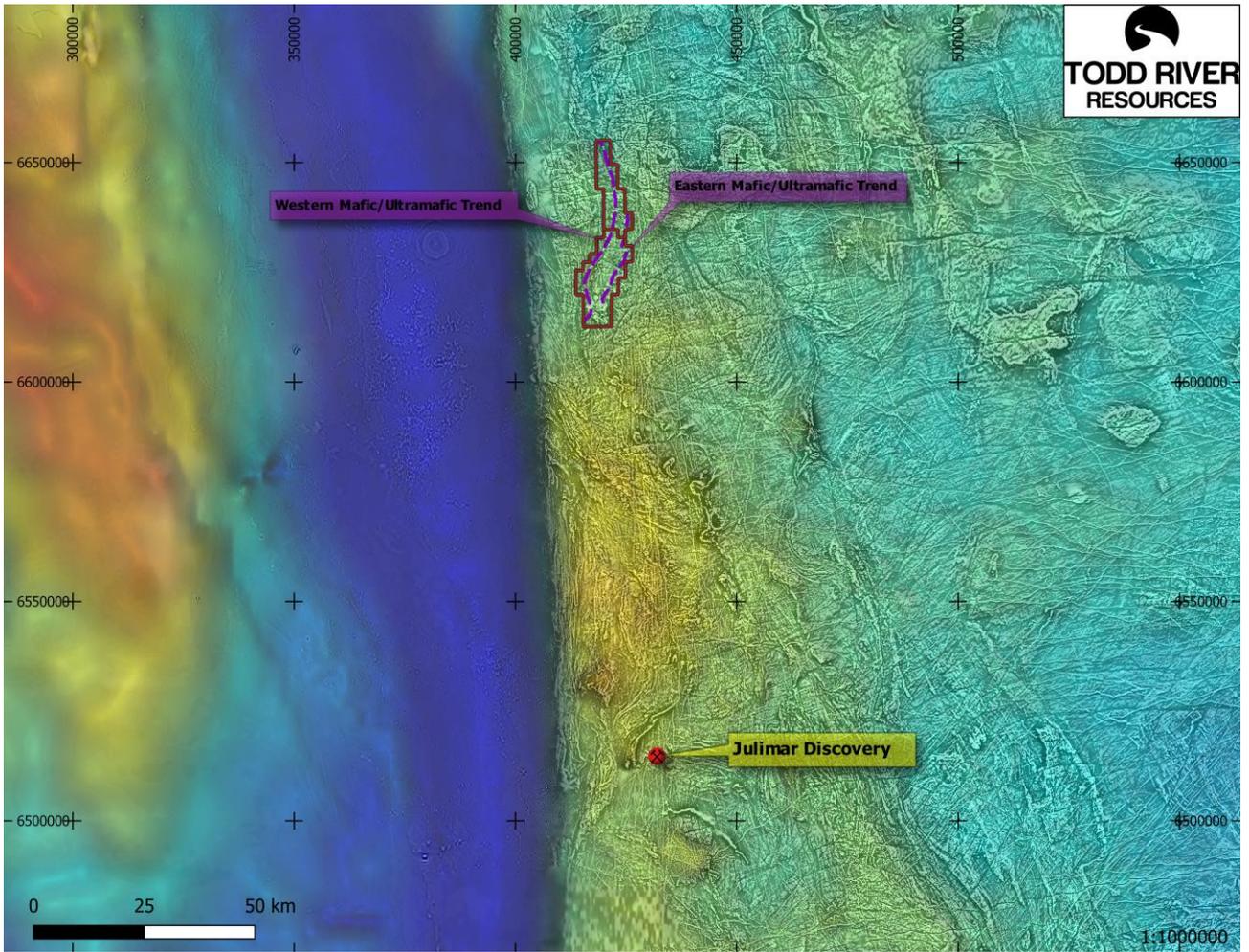


Figure 1 – Location of the Berkshire Valley Project – gravity over TMI magnetics

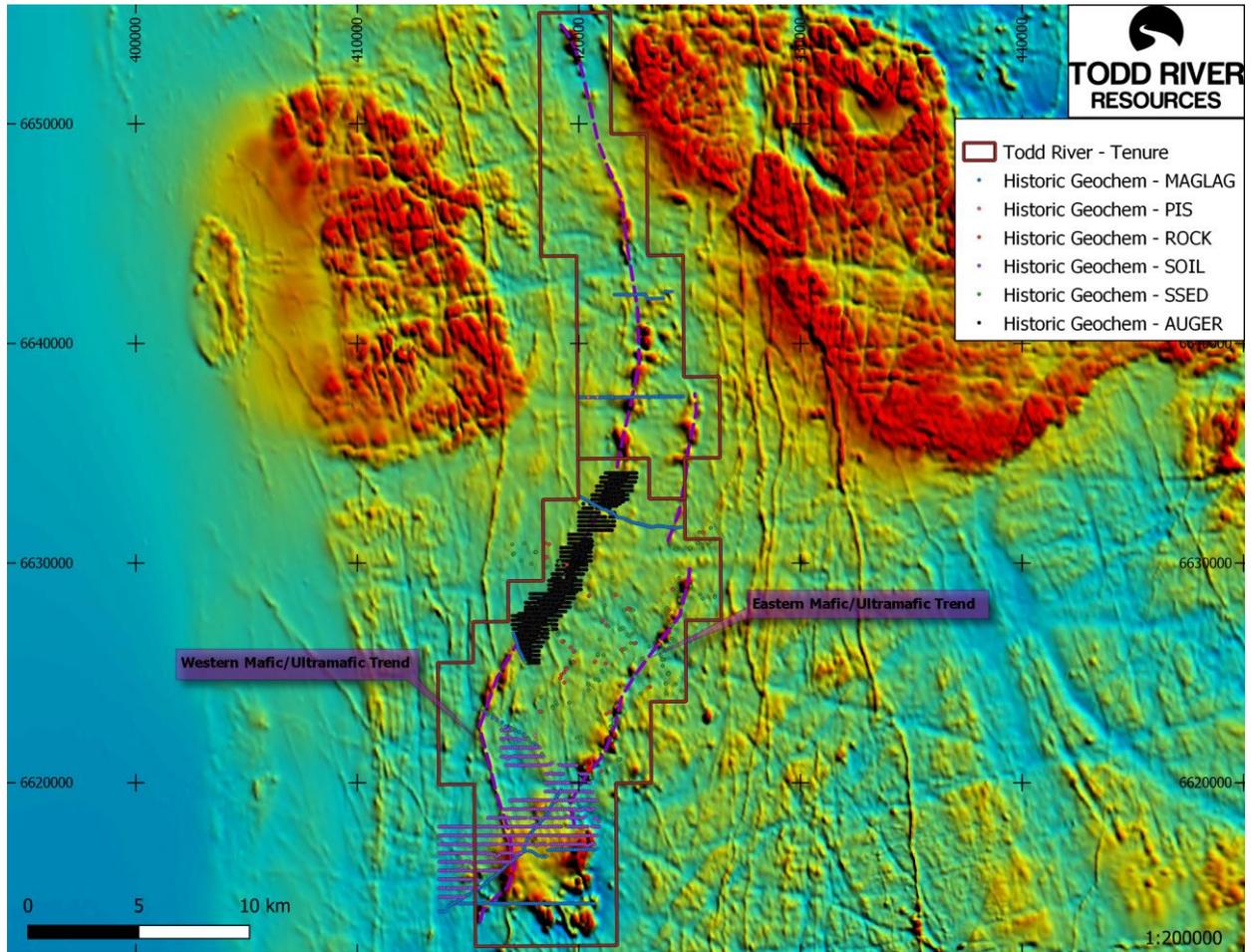


Figure 4 – Geochemical status plan showing the various different sampling techniques and coverage completed by IGO over the Berkshire Valley tenements.

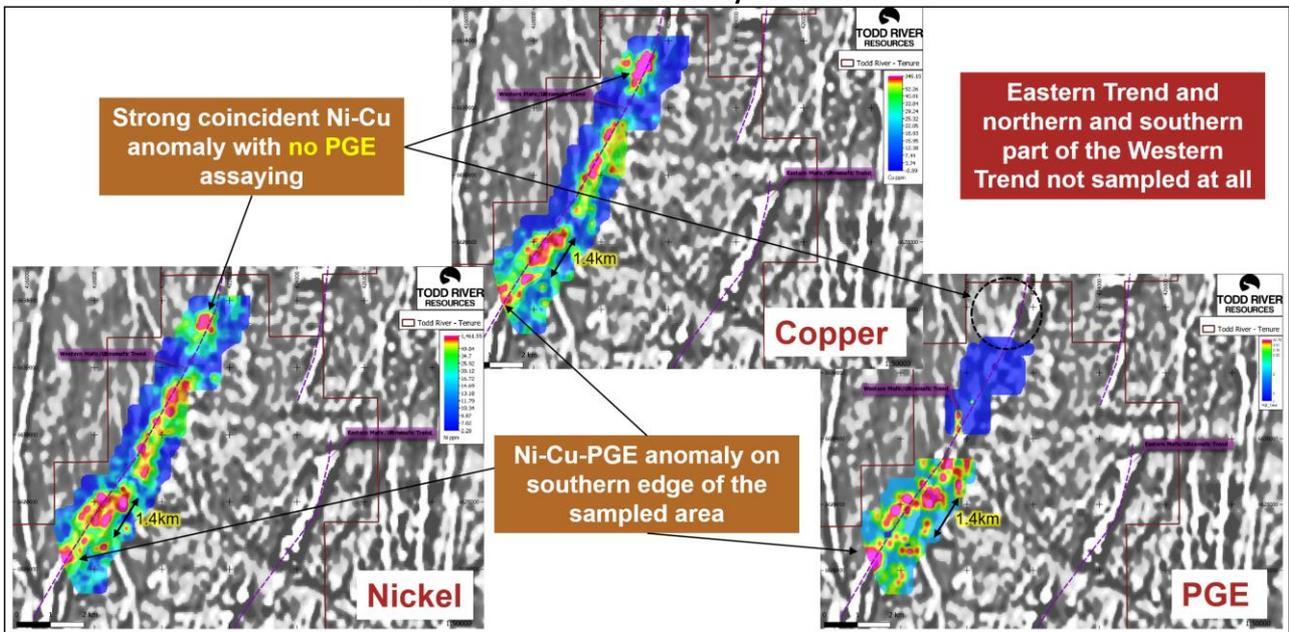
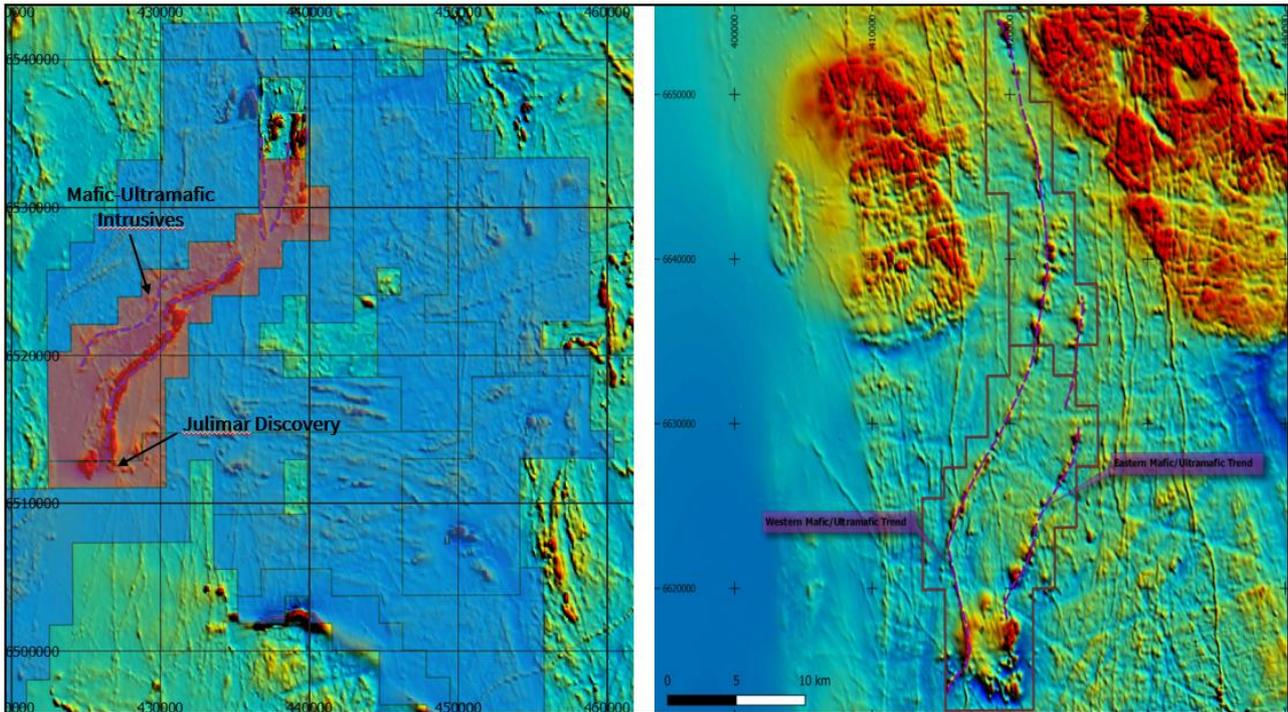


Figure 3 showing the gridded Ni (left) and Cu (central) and Pt+Pd (right) results from geochemical auger sampling completed by IGO in 2007 over magnetics covering over 8km of strike on the western mafic/ultramafic trend



**Figure 4 – Comparison between the Chalice Gold Julimar Project (left) and the Berkshire Valley Project (right) showing the trend and extent of mafic/ultramafic intrusions on each project. NOTE: the scale of both figures is the same with 1 square = 10km<sup>2</sup>**

**Authorised by:**

**Will Dix**

**Managing Director – Todd River Resources**

**Enquiries:**

Will Dix

+ 61 (0) 8 6166 0255

### **About Todd River Resources**

Todd River Resources (ASX: TRT) is an Australian-based resources company that has base and precious metal projects in Western Australia and the Northern Territory. The Company has resources at both its Mt Hardy and Manbarrum Projects and has recently announced the proposed purchase of a number of exciting base metal projects in Western Australia.

With a strong management team and tight capital structure, Todd River is well placed to pursue additional base metal opportunities across its extensive exploration portfolio that also includes the Berkshire Valley and Petermann Range Projects.



### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by William Dix, who is a full time employee of Todd River Resources. Mr Dix is a member of the Australian Institute of Mining and Metallurgy. Mr Dix has sufficient experience of relevance to the style of mineralization 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 Dix consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

### **Forward Looking Statements**

This announcement includes forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "will", "progress", "anticipate", "intend", "expect", "may", "seek", "towards", "enable" and similar words or expressions containing same.

The forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this announcement and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. Given these uncertainties, no one should place undue reliance on any forward looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Neither the Company nor any other person, gives any representation, warranty, assurance, nor will guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. To the maximum extent permitted by law, the Company and each of its advisors, affiliates, related bodies corporate, directors, officers, partners, employees and agents disclaim any responsibility for the accuracy or completeness of any forward-looking statements whether as a result of new information, future events or results or otherwise.



## Appendix C - JORC Table One – Compilation of historical data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p>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.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of the determination of mineralisation that are Material to the Public Report.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Lag samples approximately 1Kg of +4mm material taken as close to surface as possible</p> <p>Auger sampling phase 1 – 100g bulk sample from 1m down hole was collected from each hole</p> <p>Auger sampling phase 2 – 100g sample of -1mm material from 1m down hole was collected from each hole</p> <p>Aircore drilling – originally 4m composite samples were collected with anomalous samples being resampled as 1m samples</p>
Drilling techniques	<p>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).</p>	<p>Work completed by IGO WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Auger drilling – no details are available regarding the size of the auger used</p> <p>Aircore/RAB drilling – no details are available regarding the size of the bit used</p>
Drill sample recovery	<p>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.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>No comments are made about drilling recoveries</p>
Logging	<p>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.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>All holes were logged for lithology by IGO geologists and recoded digitally. Logging is all available in the WAMEX data</p>
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Aircore/RAB samples were collected with a spear to ensure a</p>



	<p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>representative sample. Initially 4m composites were collected and anomalous samples later re sampled as individual 1m samples</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Auger Geochemical samples and drill samples were routinely sent to ultratrace in Perth assay code AR_ICP_MS and AR_ICP_OES or Kalassay and all samples assayed for Au, As, Bi, Cu, Co, S and selected samples for a broader suite of minerals</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>No information available</p>
Locations of data points	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>All drillholes have accompanying collar and survey files and were located with GPS – the project falls in projection zone 50</p>
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Auger phase 1 was originally 200m x 50m Auger phase 2 infill to 100m x 50m Phase 3 400m x 100m spacing to extend previous work</p>
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	<p>Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527</p> <p>Auger samples are point samples</p> <p>Aircore samples are of weathered material with no drill core collected</p>
Sample security	<p>The measures taken to ensure sample security.</p>	<p>No Information available</p>



Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No sampling audits have been conducted
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## 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. 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.	The Berkshire valley Project is located on tenements E70/5204(Moonknight Pty Ltd) and E70/5385 (Marlee Base Metals Pty Ltd) both of which are recently granted and cover previous tenements held by IGO Limited which is where the historic work was carried out.  Both tenements are in good standing and are not subject to any joint ventures
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	All significant previous work is outlined in WAMEX open file reports.  TRT has accessed and reviewed all of this work and compiled our own database on the project from the available open file data. The WAMEX reports used for the purpose of this work include:  A088939 A076527 A085553 A079982  All of these reports are compiled by IGO Limited and contain comprehensive written descriptions of their work and associated .txt files of all drilling and sampling completed.  The documents appear correct and the geo-spatial data recorded matches with images produced when verified independently
Geology	Deposit type, geological setting and style of mineralisation.	Not relevant
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: <ul style="list-style-type: none"> <li>o Easting and northing of the drill collar</li> <li>o Elevation of RL (Reduced Level – elevation above sea level in metres) of the drill collar</li> <li>o Dip and azimuth of the hole</li> <li>o Down hole length and interception depth</li> <li>o Hole length</li> </ul>	Historic drilling only reported  Work completed by IGO Limited WAMEX file records A088939, A085553, A079982 and A076527
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.	From reading the open file reports, no aggregation or averaging was conducted on the data reported here.



	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
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 Relevant
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.	See Figures 3-6 in the document
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 samples are shown on Figures 3-6.
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.	No substantial new information is available other than that reported above.
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.	Additional geochemical sampling and geophysics will be completed once the proposed transaction is completed