



ASX Announcement

28<sup>th</sup> April 2022

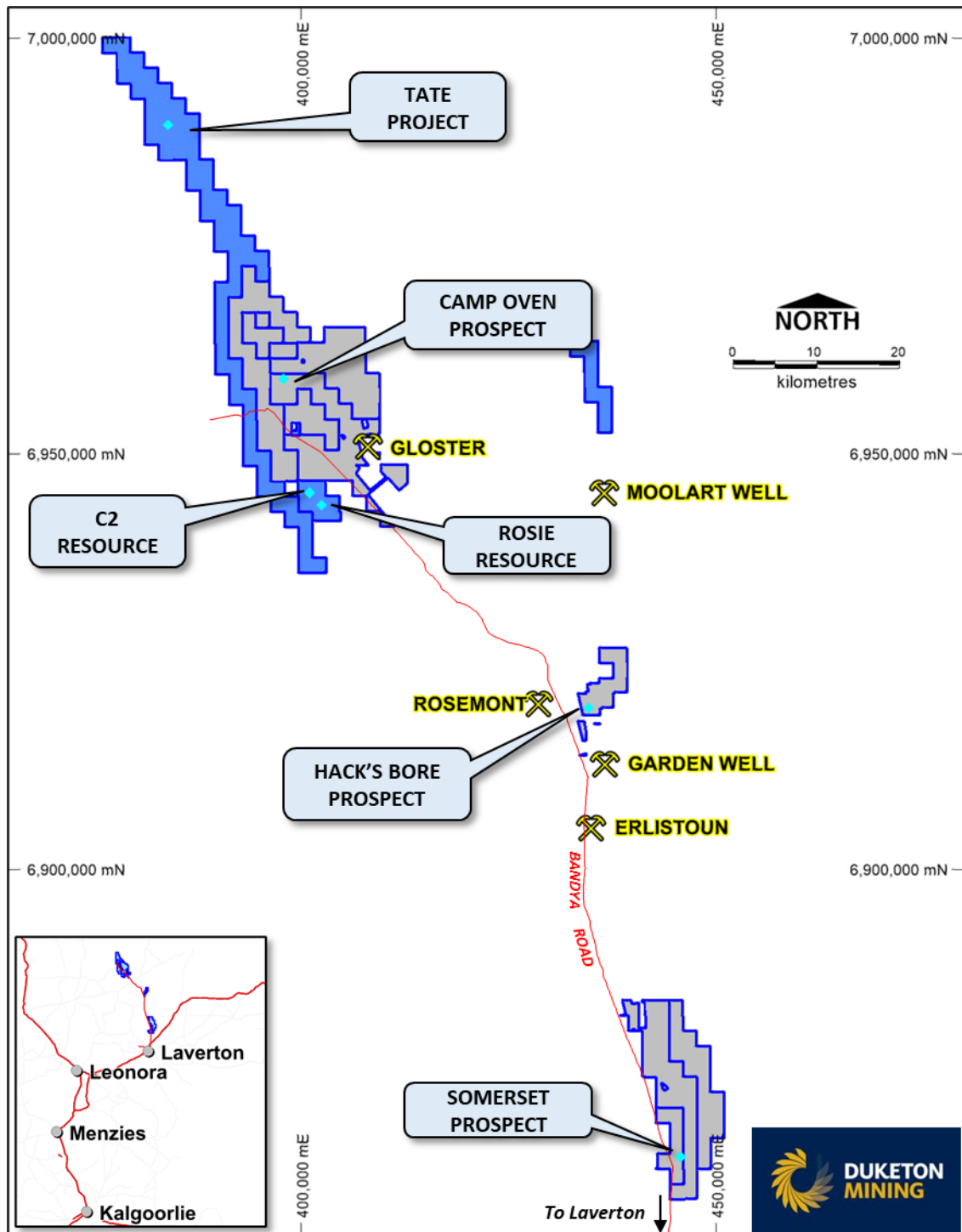
## **New Exploration Project Acquisition** *Capturing Belt Scale opportunities for mafic hosted nickel, copper, and PGE's*

Duketon Mining Ltd (ASX: DKM, "Duketon" or "the Company") is pleased to announce it has been granted a large exploration licence north of the Duketon Greenstone Belt that offers belt-scale exploration opportunities for nickel, copper, and PGE's in addition to the Duketon Project that hosts the Rosie and C2 deposits.

### **HIGHLIGHTS - Tate Project Tenement Acquisition (100% DKM)**

- The area is **prospective for intrusion related nickel, copper, and PGE's**.
- The tenement covers **213 km<sup>2</sup>** and encompasses the region between DKM's northern-most tenement and Cannon Resources (ASX:CNR) southern-most tenement
- The tenement represents a **strategic position** that covers the Hootanui Fault – the boundary between the Kurnalpi and Burtville Terranes
- **Two large mafic intrusions have been identified** from regional scale aeromagnetics.
  - One intrusion is **6km by 1.2km** and the other is **2.2km by 1.2km**
  - interpreted to be much younger than the surrounding granite and greenstones
  - intruding along the margin of two major geological terranes
- **Historical drilling (1994) completed by BHP** intersected the northern intrusion with a single aircore hole which **confirmed mafic lithology** beneath transported cover.
  - **Mafic rocks logged from 8m** beneath transported cover
  - **Anomalous in nickel and copper**

Stuart Fogarty, Duketon Mining Managing Director said; *"This new project is a valuable addition to the company's nickel exploration portfolio. The fact that BHP has drilled the one hole into the northern most intrusion is intriguing whilst the assays from that hole are weakly anomalous, they are absolutely enticing. I look forward to the results as we progress this project"*



**Figure 1: Plan of DKM Tenements showing Nickel Resources and Prospects**



Duketon Mining Ltd (**ASX: DKM**, “**Duketon**” or “**the Company**”) is pleased to announce it has been granted a large exploration licence north of the Duketon Greenstone Belt that is prospective for intrusion related nickel, copper, and PGE’s (the “Tate Project”). The tenement offers belt-scale exploration opportunities in addition to the Duketon Project that hosts the Rosie and C2 deposits.

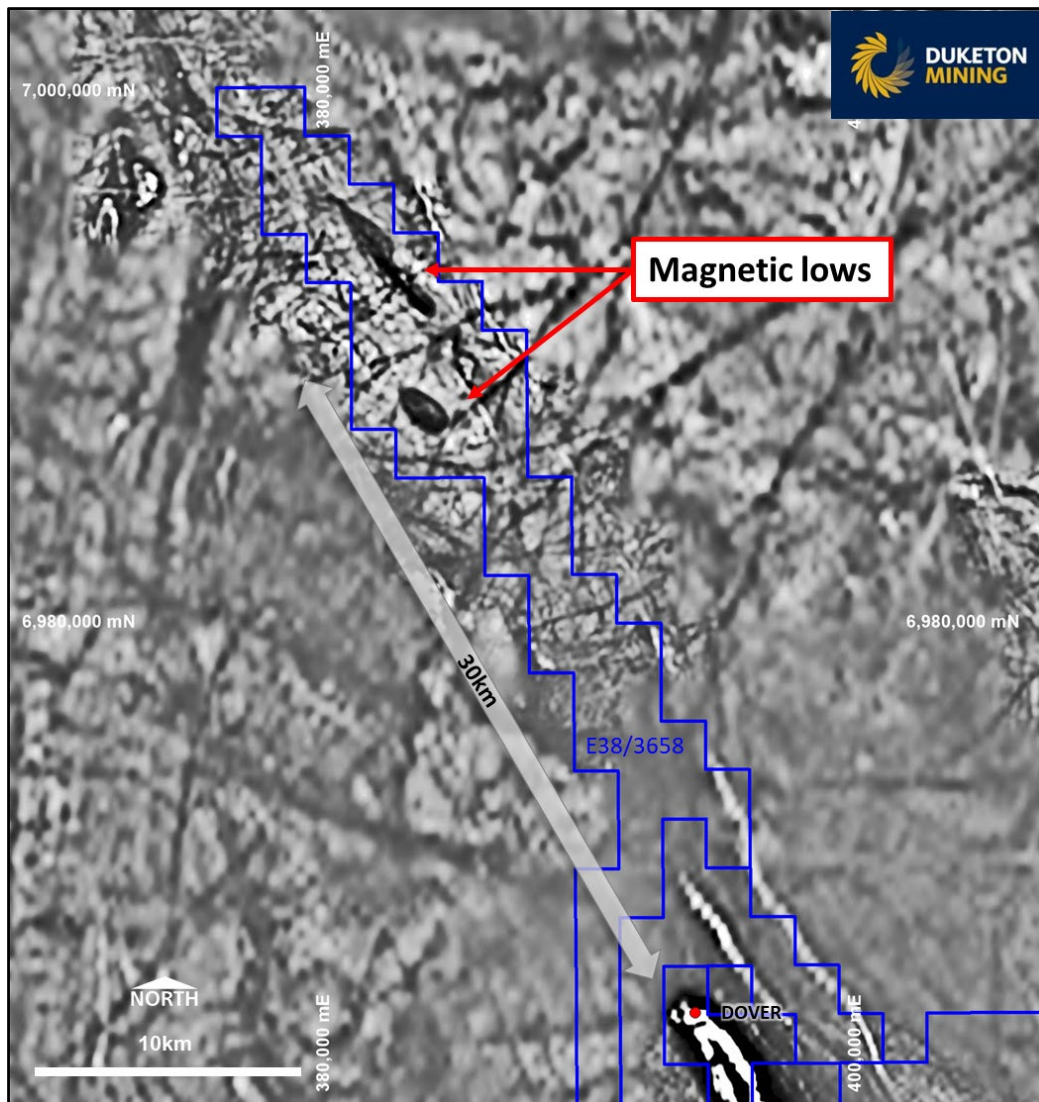
The tenement represents a strategic position covering the interpreted Hootanui Fault that is the boundary between two major geological terranes - the Kurnalpi and Burtville Terranes. It is a low-cost entry, prospective for mafic related nickel, copper, PGE deposits.

The tenement covers 213 km<sup>2</sup> and encompasses the area between DKMs northern-most tenement and Cannon Resources (ASX:CNR) Fisher East Project southern-most tenement.

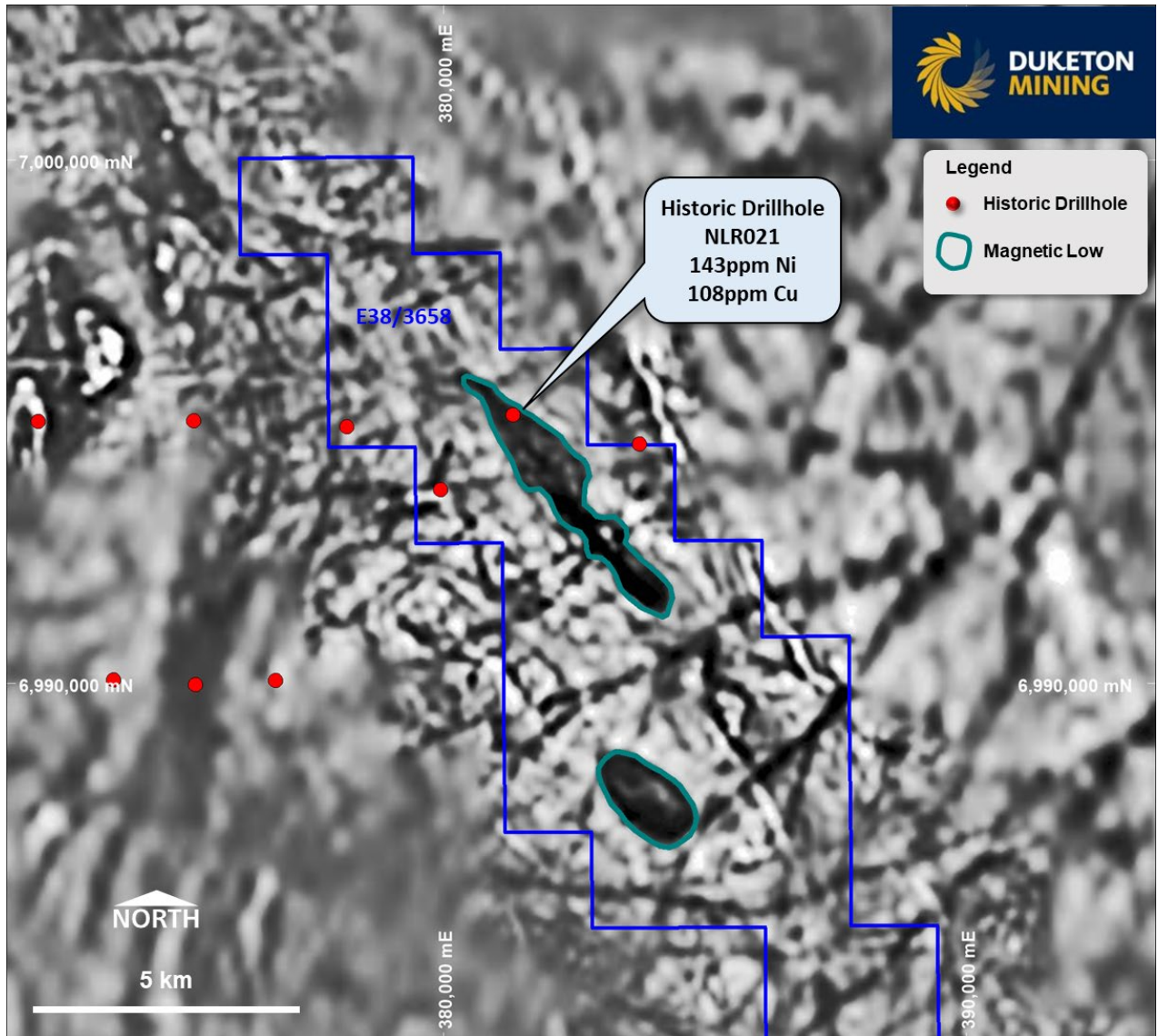
Two large, mafic intrusions have been identified in the data package. One is approximately 6km by 1.2km and the other is 2.2km by 1.2km.

A data review has shown there is a single historical BHP drill hole (1994) into the northern most intrusive drilled to 25 metres depth. This was logged as mafic rocks from 8m and the end of hole assay was reported to include 143 ppm nickel, 108 ppm copper, 86 ppm zinc, 2,710 ppm manganese and 9.9% iron. This is the only hole identified as intersecting either intrusion.

More recently (2013), a regional auger geochemical program has been completed covering this area along the interpreted position of the Hootanui Fault. No significant base metal anomalies were detected but previous drilling has shown a significant thickness of transported material possibly rendering the geochemical program ineffective.



**Figure 2: Plan of magnetic lows at the Tate Project**



**Figure 3: Plan of historic drilling and magnetic lows at the Tate Project**

This Project represents an early-mover opportunity leveraging off an alternative geological model for the area.

**Table 1: BHP Drill Hole (1994) – Geological Information**

Hole ID	From (m)	To (m)	Interval (m)	Lithology
NLR021	0	2	2	Transported sand cover
	2	6	4	Hardpan (laterite)
	6	8	2	Laterite
	8	24	16	Mafic rock – weathered (saprolite & saprock)
	24	25	1	Mafic rock - fresh





**Table 2: BHP Drillhole Collar Details**

Hole ID	East GDA94 (Zone 51)	North GDA94 (Zone 51)	Depth (m)	Dip	Azimuth	Comments
NLR021	381333	6995127	25	-90	360	Digitised from Original Drill Plan

### **Future Exploration**

Duketon proposes to complete field investigations including re-sampling (if available) and ground geophysical surveys covering the magnetic low zones and their immediate surrounds to generate targets amenable for drill testing.

#### **Authorised for release by:**

**Stuart Fogarty**

Duketon Mining Limited - Managing Director

+61 8 6315 1490

#### **Competent Person Statement:**

The information in this report that relates to exploration results is based on information compiled by Ms Kirsty Culver, Member of the Australian Institute of Geoscientists (AIG) and an employee of Duketon Mining Limited. Ms Culver has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a competent person as defined in the JORC Code 2012. Ms Culver consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

**Duketon Mining Limited** ACN 159 084 107

Level 2 25 Richardson Street West Perth WA 6005 T: +61 8 6315 1490

## JORC Table 1

# JORC Code, 2012 Edition – Table 1 report – Duketon Project

## Section 1 Sampling Techniques and Data – Tate Drilling

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Various drilling methods have been employed by previous workers in the historic data presented, including vacuum, aircore and auger.</li> <li>Drillholes have been sampled at various intervals which include multi and single metre composites.</li> <li>The exact sampling methods cannot be determined, with confidence, from the historic data.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>Various drilling methods have been employed by previous workers in the historic data presented, including vacuum, aircore and auger.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> </ul>	<ul style="list-style-type: none"> <li>Due to the historic nature of the data, recovery cannot be determined with confidence.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Not all geological data for historic drillholes is available. Where data is available, it has been compiled and entered into the company historic database. The data will be unsuitable for use in a Mineral Resource or more advanced study and is to be used as an exploration aid only.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The nature of the sub-sampling for the aircore chips has not always been determined due to the historic nature of the data.</li> <li>The sample preparation and sample size information is not always available due to the historic nature of the data.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their</li> </ul>	<ul style="list-style-type: none"> <li>QAQC protocols are not provided in the historic data and it is unlikely to be to the same level as current industry standards.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>derivation, etc.</i> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>The historic data cannot be verified and it has been collected from publicly available sources.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Some historic drillholes were reported on a local grid. Collars have been determined using historical maps provided with reports and correlated with Bing Aerial Maps.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Holes were drilled at various spacing depending upon the holes drilled previously in the area of interest.</li> <li>Hole spacing is appropriate for drilling at this early stage in the exploration process.</li> <li>Sample compositing has been applied.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The historic data is a guide to future exploration and at face value has been collected in a manner that is sensible with respect to gross geological trends however more detailed interpretation would be required to assess this further.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Due to the historic nature of the data presented, this cannot be determined.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No external audits or reviews have been conducted apart from internal company review.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The tenement (E38/3658) is owned Duketon Mining. It is in good standing and there are no known impediments to obtaining approvals to operate in the area.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Previous drilling in this area was completed by BHP Minerals in 1994. Refer WAMEX Report A44379.</li> <li>This work has been checked for quality as far as possible and provides the purpose for the proposed follow-up work presented in the release.</li> <li>An extensive auger geochemical program over the northern half of the Tate exploration licence was completed by Breaker Resources in 2013. Refer WAMEX Reports A099216, A099218, A106728, A106861 and A108629. Sampling was completed at a final spacing of 400m x 200m. Exploration completed was in line with current industry standards.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The anomalies presented in the historic data are sourced from typical Archaean Greenstone rocks of the Yilgarn Craton.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar details are provided in a table within the text of this announcement.</li> <li>No relevant RL information is contained within the BHP Minerals original report (WAMEX A44379).</li> <li>The bottom of hole assays are provided within the body of the text.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No top-cuts have been applied when reporting results.</li> <li>First assay from the interval in question is reported (i.e. Ni1)</li> <li>Aggregate sample assays calculated using a length weighted average</li> <li>No metal equivalent values have been used for reporting of results.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation orientations have not been determined.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to figures in document.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All drillhole locations are tabulated and significant intervals are provided in the release text.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to document.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further work may involve ground geophysical surveys along with field investigations. The results of this work will determine if further drilling is required at this prospect.</li> </ul>