

22 June 2023

## Next-Generation Geophysical Program to Commence at Carr Boyd

### HIGHLIGHTS

- ➔ Next-generation helicopter-borne TargetEM system to be deployed at Carr Boyd by Expert Geophysics
- ➔ TargetEM offers significant technology and sensitivity upgrades from previous airborne systems
- ➔ World-first Audio-Frequency-Magnetic (AFMAG) time-domain data to be collected will **vastly improve depth and quality of investigation in potentially detecting drill targets** over previous systems
- ➔ 253km<sup>2</sup> survey targets entire Carr Boyd internal and basal contacts along with the nearby Colreavy Komatiite

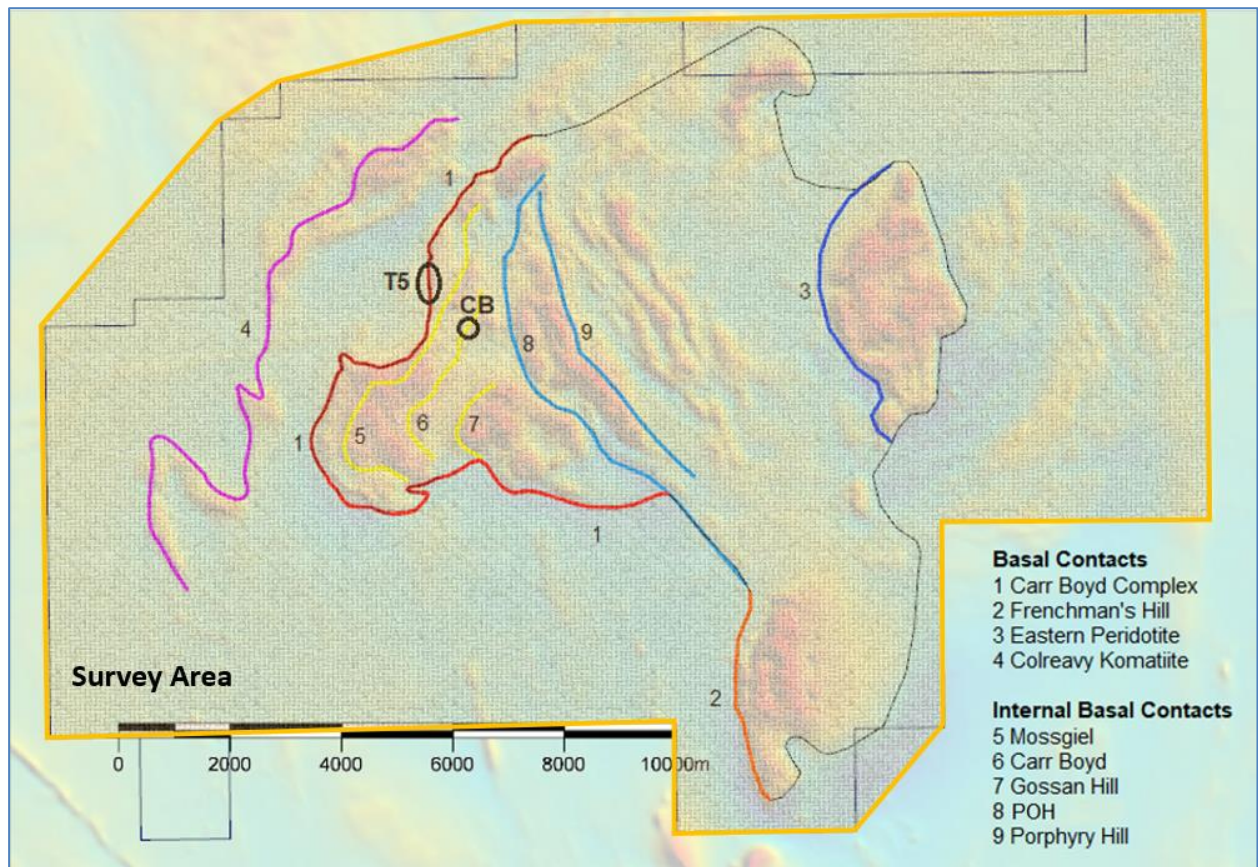


Figure 1: Location of the next-generation TargetEM survey with respect to Estrella's tenements

Estrella Resources Limited (ASX: ESR) (Estrella or the Company) is pleased to announce the signing of an agreement with Canadian-based geophysical firm Expert Geophysics to commence a world-first helicopter-borne electromagnetic survey (TargetEM) at the Company's Carr Boyd Project, approximately 80km NNW of Kalgoorlie in Western Australia.

The 253km<sup>2</sup> survey will target all of Estrella's tenure at Carr Boyd as shown in Figure 1, encompassing all prospective horizons identified in the recent exploration review including the high priority Colreavy Komatiite target which has had no previous modern geophysics undertaken.

**Commenting on the highly anticipated program, Estrella Managing Director Chris Daws said:**

"I am extremely pleased and excited to be able to inform shareholders that we will be advancing exploration efforts at our 100% owned Carr Boyd Ni/Cu/PGE project.

We have always looked to improve our discovery advantage utilising ultra-modern exploration techniques and technology. We were the first to successfully use the revolutionary e-vibe seismic system in W.A. and our team is now employing a world-first in geophysical surveying methods. This is next-gen geophysical system technology that even the majors have not yet utilised.

The geophysical survey will cover our entire tenement package at Carr Boyd, some 253km<sup>2</sup>, so that we can potentially locate drill targets that have previously evaded detection with older technology. The program will be funded through the recent equity provided by Radium Capital.

I look forward to reporting the results as we continue to unlock Carr Boyd's geological secrets."

The R&D personnel at Expert Geophysics were the developers behind the highly successful and award winning VTEM, ZTEM and Air-MT systems. The TargetEM system contains many structural, electrical, and software improvements over previous helicopter-borne EM systems that have greatly improved the sensitivity and depth of investigation. Estrella will host the first fully commercial deployment of the system at Carr Boyd in July 2023.

In addition to airborne time-domain low-noise electromagnetic data, the Company will be acquiring VLF, magnetics and high-frequency AFMAG data. AFMAG acquired on a time-domain system, has never been released commercially. The system and software have been in development and testing for several years; however, Expert Geophysics now wishes to exploit it more widely and is now making it available in Australia.

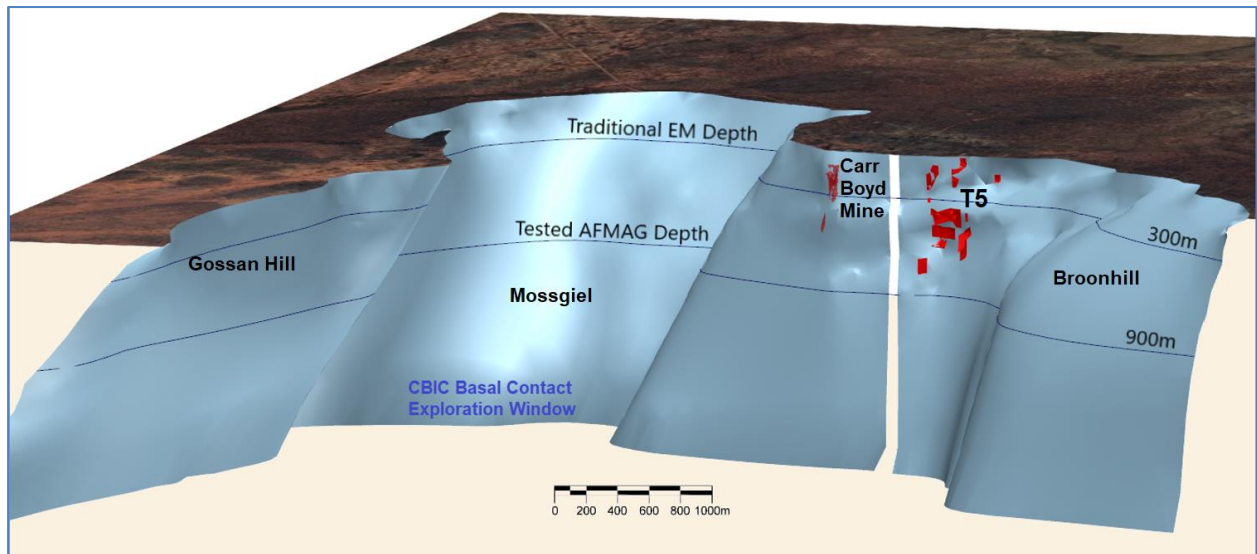
AFMAG technology utilizes naturally occurring electromagnetic fields in the audio-frequency range, which are associated with global lightning discharges. Thunderstorms release energy converted to electromagnetic fields that propagate through the ionosphere-Earth interspace. The electromagnetic fields and currents induced by these fields in the subsurface are used in the combined system to understand differentiation in the electrical resistivity of the subsurface.

The advantages of the AFMAG data with respect to Estrella's Carr Boyd exploration program include:

1. The AFMAG complementary data will allow the system to measure across a broader range of resistivities than any other time-domain system on the market, revealing a more significant distinction of geology and structure at depth. The system can also resolve highly resistive targets. With the seismic data already collected, this will enable true 3-dimensional geological interpretation, which can be used to constrain internal exploration windows and model prospective horizons within the Carr Boyd igneous complex (Figure 1) before drilling.
2. In the case of nickel-copper-PGE type targets, the system can detect "superconducting type massive sulphides", which are problematic for other time-domain systems, along with significant alteration zones followed by disseminated sulphides.
3. The new system's capability will also enable recognition of superparamagnetic (SPM) anomalies and compensate for induced polarization (IP) effects which is an issue for other airborne time-domain systems (especially prominent in Australia). These effects create pseudo anomalies and mask the useful inductive EM response. The most intensive IP effects exist in areas of volcanic-sedimentary rocks and surficial clay deposits covering parent rocks. This is common across the Goldfields and applies to the Carr Boyd basal contact and the Colreavy Komatiite.



4. AFMAG data measured at the lowest possible frequencies will allow the system to see deeper than any airborne time-domain system. This will be especially useful at Carr Boyd where the basal contacts dip steeply (Figure 2).



**Figure 2: Depth of investigation of the AFMAG system with respect to traditional airborne EM and the known mineralisation at Carr Boyd**

The 2023 exploration review collated all previous geophysics survey results gained either on-ground or via aircraft from the 1980's until present. Anomalies in the data over Carr Boyd exist, however each technique has its limitations and nothing definitive was ever identified or adequately tested, including the T5 discovery made by Estrella.

The TargetEM system with the additional AFMAG acquisition gives Estrella the opportunity to update the Carr Boyd conductivity and magnetic models and to incorporate the seismic interpretation along with the recent findings of the collaboration with the CSIRO.

The TargetEM system (Figure 3) will be available in July 2023 and Estrella very much looks forward to working with Expert Geophysics in Australia.



**Figure 3: The TargetEM loop under testing**

The Board has authorised for this announcement to be released to the ASX.

#### **FURTHER INFORMATION CONTACT**

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#### **Competent Person Statement**

The information in this announcement relating to Exploration Results is based on information compiled by Steve Warriner, who is the Exploration Manager of Estrella Resources, and a member of The Australasian Institute of Geoscientists. Mr. Warriner has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity 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 Resource and Ore Reserves". Mr Warriner consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

#### **Forward Looking Statements**

This announcement contains certain forward looking statements which have not been based solely on historical facts but, rather, on ESR's current expectations about future events and on a number of assumptions which are subject to significant uncertainties and contingencies many of which are outside the control of ESR and its directors, officers and advisers.

## APPENDIX 1 JORC TABLE 1 – CARR BOYD EXPLORATION

### Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>ESR drilling included diamond core - half core samples with a maximum of 2m and minimum 0.25m length. DD core samples have been half cut with an automatic core saw.</li> <li>Core is cut and sampled to ensure the sample is representative and no bias is introduced. Cutting of specific, banded or stringer sulphide zoned core is done orthogonal to the banding to ensure there is no bias.</li> <li>Determination of mineralisation has been based on geological logging, visual sulphide estimates and confirmation using a pXRF machine. Samples were dispatched to an accredited laboratory for multi-element analysis.</li> <li>Diamond core drilling was used to obtain 6m length samples from the core barrel which are then marked in one metre intervals, based on core block measurements and core recovery.</li> <li>Samples are selected based on geological logging boundaries or on nominal meter marks. Collected samples weigh a nominal 2-3 kg (depending on sample length). Samples have been dispatched to an accredited commercial laboratory in Perth for analysis.</li> <li>Samples are being analysed using a 4-acid digest, ME- ICP for 33 elements and all samples are also being tested for Au &amp; PGE elements using ICP analysis.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Drilling was undertaken using NQ2 sized drill core.</li> <li>Holes have been collared with mud rotary from surface, HQ rough cored to top of fresh rock then NQ2 cored to EOH.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <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>	<ul style="list-style-type: none"> <li>Core recovery was recorded by the field crew and verified by the geologist.</li> <li>RQD measurements were digitally recorded to ensure recovery details were captured.</li> <li>Sample recovery in all mineralised zones is high with negligible core loss observed.</li> <li>Diamond core drilling is the highest standard and no relationship has been established between sample recovery and reported grade as the core is in very good condition.</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>Detailed industry standard of collecting core in core trays, marking metre intervals and drawing core orientation lines were undertaken.</li> <li>Core trays were photographed wet and dry prior to sampling.</li> <li>Prior to 2021 drill hole logs were recorded in Excel spread sheets and validated in Micromine Software as the drilling progressed.</li> <li>In 2021 a digital logging system, Logchief, was implemented which validates data as it is recorded and uploads that data remotely to a centralised database.</li> <li>The entire length of all holes are logged.</li> </ul>
<b>Sub-sampling techniques</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,</li> </ul>	<ul style="list-style-type: none"> <li>Core is half cut using an automatic core saw to achieve a half-core sample for laboratory submission. The sample preparation</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>and sample preparation</b>	<p>rotary split, etc and whether sampled wet or dry.</p> <ul style="list-style-type: none"> <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>	<p>technique is considered industry best standard practice.</p> <ul style="list-style-type: none"> <li>No field duplicates have been collected for DD holes. Field duplicates will be collected once initial results are returned and resampling of the mineralised zones is warranted.</li> <li>Sample sizes are appropriate to the grain size of the mineralisation.</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 derivation, etc.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are selected based on geological logging boundaries or on nominal meter marks. Collected samples weigh a nominal 2-3 kg (depending on sample length). Samples have been dispatched to an accredited commercial laboratory in Perth for analysis.</li> <li>Samples are being analysed at Intertek and ALS Laboratories in Perth using a 4-acid digest, ME- ICP for 33 elements and all samples are also being tested for Au &amp; PGE elements using ICP analysis.</li> <li>For ESR drilling, QAQC included Certified Reference Material (CRM's) and blank (Blanks) samples inserted at the laboratory.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to 2021 drill hole logs were recorded in Excel spread sheets and validated in Micromine Software as the drilling progressed.</li> <li>In 2021 a digital logging system, Logchief, was implemented which validates data as it is recorded and uploads that data remotely to a centralised database hosted by Maxgeo.</li> <li>Hole CBDD028 is twinning hole CBP042. No other twinning is warranted at this stage.</li> <li>No adjustments to assay data were undertaken.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>For drill collars, RC and DD holes were surveyed with DGPS equipment using the MGA94, Zone 51 coordinate system. Mineral Resource estimation was carried out on this grid.</li> <li>Topography is relatively flat and control is more than adequate given the early stage of the project. A 3D drone ortho-photographic survey has been used to create a DTM of the project area.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill data spacing of all drill data is sufficient to establish the degree of geological and grade continuity appropriate for estimating a Mineral Resource.</li> <li>Drill hole spacing ranges from 10m by 10m in the most well-drilled portion of the deposit and broadens to approximately 40m by 80m over the remaining areas. Spacing is adequate to establish the degree of geological and grade continuity for estimating a Mineral Resource.</li> <li>Samples were composited to 1m lengths prior to Mineral Resource estimation.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key</li> </ul>	<ul style="list-style-type: none"> <li>The geometry of drill holes relative to the mineralised zones achieves unbiased sampling of this deposit type.</li> <li>No orientation-based sampling bias has been identified.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	
<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>Samples are in the possession of ESR personnel from field collection to laboratory submission in Kalgoorlie.</li> </ul>
<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 independent audit or review has been undertaken.</li> </ul>



## Section 2 - Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Carr Boyd Nickel Pty Ltd (a wholly owned subsidiary of ESR) holds a 100% interest in the nickel and base metal rights to the project.</li> <li>All of the tenements are current and in good standing.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Carr Boyd Rocks deposit was discovered by Great Boulder Mines, in a joint venture with North Kalgurli Ltd in 1968. The deposit was mined between 1972 and 1975, during which time they explored for additional breccia pipe occurrences near the mine.</li> <li>WMC acquired Great Boulder Mines Ltd in 1975, briefly reopening the mine in 1977 before closing it permanently shortly thereafter due to a collapse in the nickel price. The mine had produced 210,000t at 1.44% Ni and 0.46% Cu before its closure.</li> <li>From 1968 Pacminex Pty Ltd held most of the ground over the CBLC outside of the immediate mine area.</li> <li>Between 1968 and 1971 they conducted extensive exploration programs searching for large basal contact</li> <li>and/or stratabound Ni-Cu deposits. It was during this time that most of the disseminated and cloud sulphide occurrences such as those at Tregurtha, West Tregurtha and Gossan Hill were discovered.</li> <li>Defiance Mining acquired the regional tenements from Pacminex in 1987 and focused on exploration for PGE deposits between 1987 and 1990. In 1990 Defiance purchased the Carr Boyd Rocks mine from WMC and switched focus to the mine area between 1990 and 2001, leaving many PGE targets untested.</li> <li>From 1990 Defiance dewatered the mine to conduct testwork and feasibility studies on the remnant mineralisation. Metallurgical testwork, Mineral Resource estimations, and scoping studies were completed. Around 1996 the focus shifted again to regional exploration for large tonnage basal contact deposits.</li> <li>In 2001 Titan Resources Ltd (Titan) acquired the project and recommenced economic evaluations of the remnant material at Carr Boyd Rocks before embarking on another regional exploration program focusing on the basal contact. An aeromagnetic survey, airborne EM reprocessing, and several programs of RAB and RC drilling were completed.</li> <li>From 2005 Yilgarn Mining entered a JV with Titan and continued with some regional exploration but focused most attention in and around the Carr Boyd Rocks mine.</li> <li>In 2007 Titan was acquired by Consolidated Minerals Ltd (Consmin). Consmin conducted IP surveys and detailed gravity surveys but did not drill any targets before selling the project to Salt Lake Mining (SLM) in 2013. SLM completed limited drilling to meet expenditure commitments, before selling the project to Apollo Phoenix Resources in 2016.</li> </ul>



Criteria	JORC Code explanation	Commentary
<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>Apollo sold the project to ESR in 2018.</li> <li>The Project lies within the Achaean Yilgarn Craton in a 700km belt of elongate deformed and folded mafic, ultramafic rocks and volcanic sediments intruded by granitoids which is referred to as the Norseman-Wiluna Belt. The belt has been divided into several geological distinct terranes, with the project area lying at the northern end of the Gindalbie terrane (Swager, 1996). The geology of the Carr Boyd area is dominated by the Carr Boyd mafic-ultramafic intrusive complex ("CBIC").</li> <li>Several distinctive styles of Ni and Ni-Cu mineralisation have been identified within the CBIC. At the Carr Boyd Rocks Nickel Mine Ni-Cu mineralisation is hosted within several 20 to 60m diameter brecciated pipe-like bodies that appear to be discordant to the magmatic stratigraphy. Mineralisation is hosted by a matrix of sulphides (pyrrhotite, pentlandite, pyrite and chalcopyrite) within brecciated bronzite and altered country rock clasts.</li> <li>Stratiform Ni-Cu-PGE mineralisation has been identified at several different locations within the layered magmatic complex.</li> <li>ESR is in the process of re-mapping and reclassifying the Carr Boyd Igneous Complex. Previous "Layered Intrusive" models are misleading as the complex is made up of many overprinted and juxtaposed, smaller layered and non-layered intrusives that have progressed from ultramafic to mafic over time. The complex is better described as a magma feeder zone, where the earliest melts passing through the Morelands Formation have assimilated graphitic sulphidic shales, reached sulphur saturation and deposited nickel sulphides along basal contacts.</li> <li>These basal contacts are not restricted to the base of the complex, but can form within the complex, wherever access was gained by these earlier flows.</li> <li>The complex has then been intruded and inflated over time by progressively more mafic, barren magmas to produce what we see today.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <li><i>A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length</i></li> </ul> </li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration results with all relevant drillhole information are reported in the body of the text.</li> <li>All drill hole information relevant to this resource report/statement has been included in the appendices. No relevant drill hole information has been excluded.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration results with all relevant drillhole information are reported in the body of the text.</li> <li>Significant Grade Intersections are reported on a 0.5% Ni cut-off</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>Composite assay grades are determined by geology and nickel-copper-sulphur content.</li> <li>Assays are length and SG weighted when calculating average grades over an intersection.</li> <li>Metal equivalent values have not been used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Most drill holes were angled to 060° or 270° so that intersections were orthogonal to the orientation of mineralisation.</li> <li>True widths have been stated where possible however, the variable orientation of mineralisation within magma feeders combined with a structural overprint and steep drill angles make true width calculations highly misleading.</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>Relevant diagrams have been included within the Mineral Resource report main body of text.</li> </ul>
<b>Balanced Reporting</b>	<ul style="list-style-type: none"> <li>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.</li> <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 new drillhole information within this announcement is reported</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>No other substantive data exists.</li> <li>Everything meaningful and material is disclosed in the body of the report.</li> <li>Geological observations are included in the report.</li> <li>No bulk samples, metallurgical, bulk density, groundwater, geotechnical and/or rock characteristics test were carried out.</li> <li>There are no known potential deleterious or contaminating substances.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. 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 by ESR may include a Scoping Study for the T5 Mineral Resource estimate.</li> <li>Refer to diagrams in the body of text within the Mineral Resource report.</li> <li>Diamond drilling and DHTM geophysical testing is continuing.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>The data for this Mineral Resource estimate was collected and logged using Excel spreadsheets and validated using Micromine Software. The data will be loaded into an externally hosted and managed database.</li> <li>It is assumed that due care was taken historically with the process of transcribing data from field notes into digital format for statutory annual reporting.</li> <li>All assays were reported by laboratories in digital format reducing the likelihood of transcription errors.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No site visit has been conducted by the Competent Person, due to the level of study so far conducted at the Project.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation is considered to be good and is based predominantly on ESR diamond drilling.</li> <li>Geochemistry and geological logging has been used to assist identification of lithology and mineralisation.</li> <li>The Project consists of steep east dipping lodes, striking approximately north-south. The current interpretation is considered robust.</li> <li>Structural observations on diamond core confirm the geometry of the mineralisation.</li> <li>Recent drilling by ESR has confirmed the geological and grade continuity.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul style="list-style-type: none"> <li>The T5 Mineral Resource extends over a north-south strike length of 360m (from 6,673,420mN – 6,673,780mN) and includes the 720m vertical interval from 420mRL to -300mRL.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul style="list-style-type: none"> <li>Using parameters derived from modelled variograms, Ordinary Kriging (OK) was used to estimate average block grades in three passes using Surpac software. Linear grade estimation was deemed suitable for the T5 estimate due to the geological control on mineralisation. Maximum extrapolation of wireframes from drilling was 35m down-dip beyond the last drill holes on section.</li> <li>No previous estimates have been conducted for T5.</li> <li>There is potential to receive credits for cobalt, platinum, palladium and silver in the produced concentrate.</li> <li>Nickel, copper, cobalt, platinum, palladium and silver are considered to be the economic or potentially economic metals. MgO was interpolated as it could be a deleterious element, however additional metallurgical studies are required to confirm this.</li> <li>The parent block dimensions used were 10m NS by 5m EW by 5m vertical with sub-cells of 1.25m by 0.625m by 0.625m. The parent block size dimension was selected on the results obtained from Kriging Neighbourhood Analysis that suggested this was the optimal block size for the T5 dataset. In the northern portions of the main units, drill spacing was reduced to approximately 10m by 10m. Therefore, grade was interpolated into a</li> </ul>

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	<ul style="list-style-type: none"> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<p>smaller block size of 5m (Y) by 2.5m (X) for this area.</p> <ul style="list-style-type: none"> <li>An orientated 'ellipsoid' search was used to select data and adjusted to account for the variations in lode orientations, however all other parameters were taken from the variography. Three passes were used. The first pass had a range of 30m, with a minimum of 4 samples. For the second pass, the range was 60m, with a minimum of 2 samples. For the third pass, the range was extended to 100m, with a minimum of 1 sample. A maximum of 16 samples was used for all three passes.</li> <li>No assumptions were made on selective mining units.</li> <li>Strong positive correlations exist between nickel and all the remaining elements apart from MgO. Nickel and MgO have a weak to moderate negative correlation. The correlations are typical of nickel sulphide deposits in WA.</li> <li>The mineralisation was constrained by mineralisation envelopes prepared using a nominal 0.4% nickel plus copper cut-off grade for sulphide mineralisation, with internal higher grade constrained by wireframes at a nominal 1.2% nickel plus copper cut-off grade. A minimum down-hole length of 1m was adopted for the interpretation. The wireframes were applied as hard boundaries in the estimate.</li> <li>Statistical analysis was carried out on data from 23 lodes. The low coefficient of variation of nickel grades observed in the basic statistics for all domains suggested that no top cuts were necessary.</li> <li>Validation of the model included detailed comparison of composite grades and block grades by northing and elevation. Validation plots showed reasonable correlation between the composite grades and the block model grades.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages and grades were estimated on a dry in situ basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The Statement of Mineral Resources has been constrained by the mineralisation solids and reported above a nickel plus copper cut-off grade of 0.5% for the T5 mineralisation that could potentially be mined with underground techniques.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Ashmore has assumed that the deposit could potentially be mined using underground mining techniques with toll treatment of the ore at a third party concentrator.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical</li> </ul>	<ul style="list-style-type: none"> <li>Metallurgical test work has not yet been conducted. It is assumed the T5 mineralisation will achieve similar metallurgical recoveries to the nearby Carr Boyd Mine.</li> </ul>



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	<i>methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>ESR will work to mitigate environmental impacts as a result of any future mining or mineral processing.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>A total of 2,922 density measurements were taken from diamond drill core at the Project, analysed using the dry weight / wet weight technique.</li> <li>It is assumed there are minimal void spaces in the rocks within the T5 deposit.</li> <li>Bulk densities for the transitional mineralisation were assigned in the block model based on the average of the measurements of 2.80t/m<sup>3</sup>. Bulk densities for fresh mineralisation were estimated or a regression equation was utilised for smaller domains. Average waste densities were assigned based on lithology and weathering from measurements.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC). The Mineral Resource was classified as Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The Inferred Mineral Resource was assigned to the interpreted mineralisation defined with a maximum drill hole spacing of 40m by 80m.</li> <li>The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by recent infill drilling conducted by ESR, which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades.</li> <li>The Exploration Target appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>Internal audits have been completed by Ashmore which verified the technical inputs, methodology, parameters and results of the estimate.</li> </ul>
<b>Discussion of relative</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or</li> </ul>	<ul style="list-style-type: none"> <li>The lode geometry and continuity has been adequately interpreted to reflect the applied level of Mineral Resource. The data quality is</li> </ul>

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<b>accuracy/ confidence</b>	<p><i>procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></p> <ul style="list-style-type: none"> <li><i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<p>good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses.</p> <ul style="list-style-type: none"> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> <li>No previous estimates have been conducted for T5.</li> </ul>