9 August 2023

Next-Generation Geophysical Program Commenced at Carr Boyd

HIGHLIGHTS

- Next-generation helicopter-borne TargetEM system has commenced 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^2 survey will target entire Carr Boyd internal and basal contacts along with the nearby Colreavy Komatiite

Figure 1: Estrella Managing Director Chris Daws onsite at Carr Boyd with deployed TargetEM system

Office Address London House, Level 8, 216 St Georges Terrace, PERTH WA 6000 Postal Address GPO Box 2517, PERTH WA 6831
Phone +61 8 9481 0389 Fax +61 8 9463 6103 Email info@estrellaresources.com.au

Estrella Resources Limited (ASX: ESR) (Estrella or the Company) is pleased to announce the commencement signing of 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^2 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 the TargetEM system has been deployed at Carr Boyd as we advance exploration efforts at the 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^2, so that we can potentially locate drill targets that have previously evaded detection with older technology.

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 lighting 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).

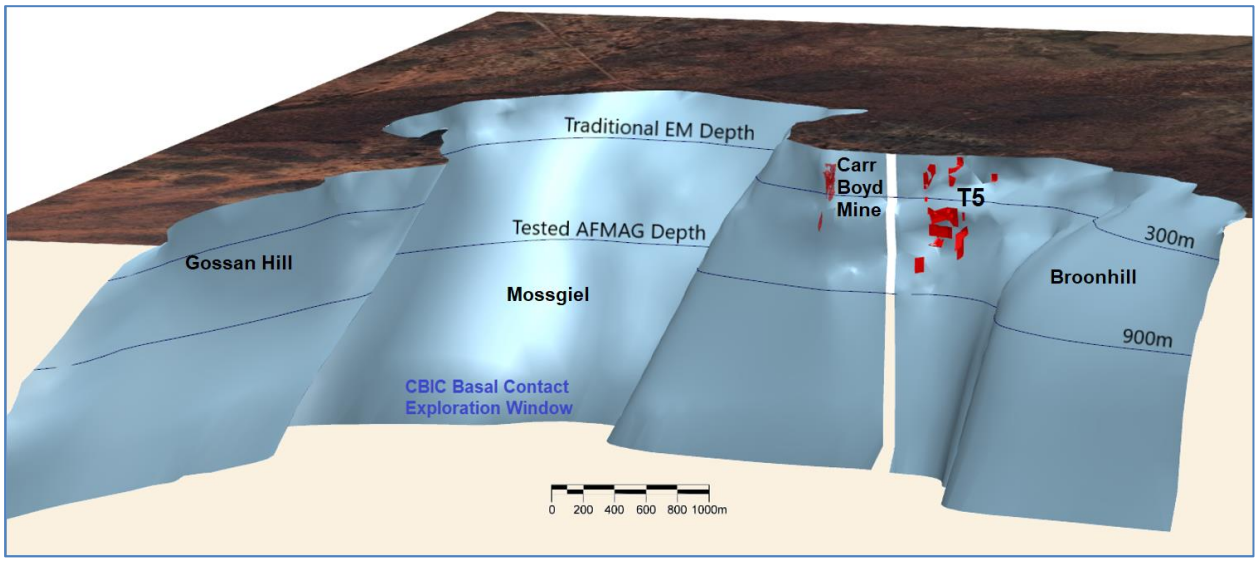

Figure 2: Depth of investigation of the AFMAG system with respect to traditional airborne EM and the known mineralisation at Carr Boyd

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

FURTHER INFORMATION CONTACT

Christopher J. Daws
Managing Director
Estrella Resources Limited
+61 8 9481 0389
info@estrellaresources.com.au
Media:
David Tasker
Managing Director
Chapter One Advisors
E: dtasker@chapteroneadvisors.com.au
T: +61 433 112 936

Compliance Statement

With reference to previously reported Exploration Results and Mineral Resources, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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 announcement.

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.