

#### **ASX ANNOUNCEMENT**

23<sup>rd</sup> November 2023



# **Commencement of Aerial Survey**

Thomson Aviation has commenced an aerial magnetic and radiometric survey over the Doherty Manganese Project and surrounds.

#### **HIGHLIGHTS**

- Thomson Aviation Pty Ltd have commenced an aerial geophysical survey over the Doherty Manganese Project which historically produced battery and metallurgical grade manganese oxide as direct ship ores (ASX Announcement 15 November 2023).
- Magnetic and radiometric data and imagery expected from Thomson aviation, two weeks after survey completion.
- Survey results to be interpreted and analysed to define the stratigraphy and structural history and highlight primary exploration targets.

Great Dirt Resources Limited (ASX:GR8) ('Great Dirt', or 'the Company') is pleased to announce that Thomson Aviation Pty Ltd has commenced an aerial magnetic and radiometric survey over the Doherty Project and surrounds.

The data derived from this aerial magnetic and radiometric survey will be the preliminary component of the geographic information system to be developed for the Doherty Project. The backbone of this data is the digital elevation model derived from this survey and augmented with regional data sources.

Deliverables from this survey will include magnetic and radiometric images of various sorts (TMI, RTP, U, Th, K, total count etc) and will be overlain on the digital elevation model. The stratigraphy will be determined by differential responses in the magnetic and radiometric products. Sharp breaks in stratigraphy and arcuate or curvilinear features will be used to develop a structural interpretation. The above combined with any intrusion related alteration signatures, or evidence of supergene enrichment will be used to develop targets for future exploration.



#### **Survey Details**

The survey area, shown in Figure One, comprises approximately 1,172 line km within an area of 102 km2. The survey will be flown by a rotary wing aircraft (Jetranger). The east-west flight lines will be spaced at 100m which is perpendicular to the mapped geology and mineralisation trends. Tie lines will be completed every 1,000m and be oriented north-south. The flight height, and thus the sensor height, will be approximately 40m above ground level.

The survey will take between 4-7 days depending upon weather. This survey should enable the modelling of stratigraphic units and any structural controls related to their presentation.

Magnetic surveys are the most common form of exploration for mineral deposits and generally considered to be the most cost-effective tool for large scale reconnaissance surveys. The survey will detect disturbances in the earths magnetic field by buried magnetised materials. Types of geological formations that can affect the earths magnetic field for example are basic igneous rocks, rocks that contain iron oxide, mineralisation or rock types that contain magnetite and pyrrhotite.

Radiometric surveys detect and map natural radioactive emanations and gamma rays from rocks and soil. All gamma radiation detected in surveys come from the natural decay products of three elements, uranium, thorium and potassium (U, Th, K). The combination and variation of the relative amounts of these three elements as determined by the survey should define changes in stratigraphy and is an invaluable tool for geological reconnaissance. Furthermore, these variations can also define areas affected by mineralising solutions, metamorphic processes, leaching and supergene alteration, and can assist in locating some intrusion related mineral deposits. This method can also directly define uranium mineralisation.

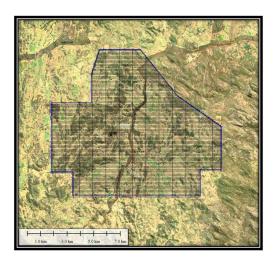


Figure 1: Aerial survey area within EL9527

Targeting from the survey data will be completed by Bill Peters from Southern Geoscience.



# **Great Dirt's Managing Director, Marty Helean said,**

'We are pleased to announce our ongoing commitment to the refinement and enhancement of data sets, strategically aimed at providing a more precise definition of targets for upcoming exploration endeavours and their respective surroundings. Anticipating a comprehensive assessment, we eagerly await the forthcoming review of deliverables in collaboration with Southern Geoscience scheduled for December 2023.'

Authorised for release to the ASX by the Board of Great Dirt Resources LTD.

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### **About Great Dirt Resources LTD**

Great Dirts' Doherty and Basin Projects are contained within EL 9527, located near the Barraba township, in northern NSW. These projects are prospective for high-grade manganese, with both projects having produced metallurgical and battery grade manganese historically. The Doherty Project comprises the old Doherty and Junior Mines, plus other workings and occurrences of manganese. The Basin Project contains several smaller manganese workings.

From 1941, for two decades, mines of the Doherty Project produced around 9,000 tonnes of battery and metallurgical grade manganese, both from opencut and underground operations. The battery grade ore was delivered to Eveready in Sydney for use in dry cell batteries, the metallurgical grade ore was purchased by BHP for use in steel production.

Great Dirt believes that historical work, while having discovered manganese, is unlikely to have located all sources in the area. Floaters, large rock fragments in the soil profile, of high-grade manganese ore reported outside known mine areas are a direct indication of unidentified manganese mineralisation. Additionally, notes on the mineral occurrences of the area refer to extensions and deposits along strike that were not mined.

A program of modern, systematic, geochemical and geophysical surveys will test known targets and their extents and could locate previously unrecognised blind deposits. Subsurface geophysical methods and drilling is likely to yield further targets that could be developed into projects to produce metallurgical and battery grade manganese.

### No New Information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

## **Forward Looking Statement**

This report contains forward looking statements concerning the projects owned by Great Dirt Resources LTD. If applicable, statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on management's beliefs, opinions and estimates as of the dates the forward looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.