



## ASX ANNOUNCEMENT

11<sup>th</sup> December 2025

### Advanced R&D Program Defines High-Priority Manganese Targets

#### HIGHLIGHTS

- **Specialist R&D program defines multiple targets supporting the hypothesis that primary exhalative stratiform manganese oxide deposits may exist at depth**
- **24 high priority targets identified for follow up ground examination**
- **Key outcome includes potential extensions to the high-grade Doherty Mine deposit**
- **Field mapping, sampling and drilling to be designed to test for stratiform manganese oxide deposits.**

**Great Dirt Resources Limited (ASX:GR8) ("Great Dirt" or "the Company")** is pleased to provide an update on ongoing exploration and research activities at its 100% owned Doherty and Basin Manganese Project in northern NSW (EL 9527). The work continues to advance geological understanding and refine manganese prospectivity models at Doherty to unlock district-scale potential. The project aligns with Australia's Critical Minerals Strategy 2023-2030, supporting the identification and development of manganese resources with potential applications in metallurgical and battery-grade markets.

The Company appointed Eureka Consulting Pty Ltd to undertake a state-of-the-Art R&D geoscience program aimed at reconstructing the 3D terrane architecture and defining target areas for both primary exhalative stratiform manganese oxide deposits and secondary, structurally controlled manganese deposits.

The study has resulted in 24 high priority targets. These targets are interpreted to have the highest recommended anomaly ranking based on the combination of structure, geophysics anomalism and association to known manganese mineralisation or alteration. On ground detailed mapping and sampling should lead to additional drill targets which can be prioritised based on responses.

**"Managing Director Marty Helean commented:** *"The identification of potential extensions to the high-grade Doherty Mine is highly encouraging and highlights the scale and quality of the project's potential. Combined with the additional 24 high-priority targets defined through this advanced R&D program, we now have a compelling pipeline of targets that will underpin our next phase of exploration."*

## Project Context and Exploration Rationale

The Doherty Project and surrounding areas, within EL 9527, contain mines that have historically produced metallurgical and battery-grade manganese.<sup>1</sup> The project area has not previously been explored by modern methods and is considered prospective for discoveries of high-grade manganese. Great Dirt has been conducting extensive soil sampling and has planned and initiated drilling programs to define and extend the known manganese anomalies, aiming to delineate larger, district-scale targets for future production. The Doherty and Basin projects (in the NW of the tenement) are located in a proven region for high-grade manganese that has supplied direct-ship manganese to battery manufacturers from the 1940s to 1960s.<sup>1</sup> During this time, the Doherty and Junior mines produced around 9,000 tonnes of high-grade manganese.<sup>1</sup>

Eureka Consulting conducted research that integrates Great Dirt's multi-disciplinary datasets, including geochemical assays, geophysical survey refinements (including regional and detailed, high resolution aeromagnetic and radiometrics, localised gravity, gradient array IP-Induced Polarisation), structural modelling and drilling results. The geophysical data has been reduced, processed and integrated with other exploration material where available. A large number of enhancements have been applied to both airborne survey magnetic and radiometric datasets and in particular, regression analysis and filtering of various combinations of primary radiometric data channels has provided relatively clear definition of areas of anomalism and potential exploration targets. The magnetic data too has been used primarily in interpreting structural and fault locations but also in characterising various 'domains' which have significance for regional and prospect scale mapping. Known association between magnetite enrichment or depletion and mineralisation plus alteration, especially potassic and propylitic (with associated increases in potassium and uranium channel radiometric signals), have been used in the derived interpretation and mapping. Through the processing applied to both the magnetic and radiometric data plus integration with additional mapping, geochemistry, gradient array IP and gravity data, an interpretation has been created which is collated in a GIS package to allow ease of integrating the data from the various other interpretable layers. These layers are all georeferenced and can be used with existing geological mapping to assist with forward exploration.

Eureka's Principal Geophysicist Peter Gidley has developed some new and modified techniques using proprietary software filters to enhance data and generate new knowledge regarding the potential formation and distribution of primary exhalative stratiform manganese oxide deposits. The utilisation of these specially designed proprietary filters and processing techniques formed an important part of this research project. This involved the development of some modified and new processing methods, using various modified computational procedures that have been effective in defining target areas. Geophysical conclusions based on the available data (using the detailed aeromagnetics and radiometrics) infer areas of both structural disruption and probable fluid migration which warrant further investigation. Alteration too is evidenced in the geophysical data, and this offers significant opportunities for exploration. Monitoring potassium channel radiometric data and calculating the anomalous potassium values also defined a number of potential target locations. Within Eureka's conclusions and recommendations, many targets have been defined.

The R&D has defined high priority explorations targets to be tested for primary stratiform manganese oxide deposits and fault controlled fluid pathways for secondarily remobilised manganese deposits. The specific priority target locations with reasons for their associated anomalism are listed in Table 1.

<sup>1</sup> GR8 ASX Announcement 8/11/2023: [Great Dirt Prospectus - JORC Independent Geologists Report](#)

Both syngenetic (primary bedding-hosted manganese) and epigenetic deposits are targeted.

Petrographic studies by Ashley (2023 and 2024) on various samples from the known deposits suggest *“The ultimate source of Mn to form the locally substantial Mn enrichments in the samples examined was from submarine exhalative hot spring deposits that formed part of the deep marine sequence of the Woolomin Group. These types of submarine Mn deposits commonly have enrichments in Ba, Sr, As and some transition metals. The imposition of low grade metamorphism on such deposits commonly results in formation of rhodonite ( $\pm$  other Mn silicates) and locally Mn oxides (e.g. hausmannite, braunite). These types of minerals might have occurred in the rocks in the Doherty and Junior mines area, but with the imposition of weathering (supergene processes under low-temperature, oxidising conditions) that have led to development of the contemporary landscape, the metamorphic Mn minerals would have been destroyed (perhaps to depths ranging from a couple of metres to perhaps as much as 100 m). High grade concentrations of supergene Mn oxide (that were worked historically in the area) are predicted to only extend to depths where supergene processes were operative, but due to mobility of Mn during the weathering process, Mn oxide could be deposited in the adjacent host rocks (e.g. chert) as fracture fill and impregnations.”* Petrographic studies have speculated that some Mn *“occurrences could represent the product of relatively low temperature hydrothermal deposition of Mn oxide with quartz/chalcedonic quartz, perhaps in a “epithermal-like” vein system that has overprinted earlier stratabound Mn-enriched rocks. This type of system could have formed at shallow crustal level and merge into products of the supergene environment.”*

The magnetic data defines a large syncline (Figure 1) where importantly, on and adjacent to the eastern limb of these magnetic lithologies, the Junior and Neranghi manganese deposits exist. If the beds hosting these deposits conformably wraps with the northern fold of the proposed syncline, then the western limb (where some albeit minor occurrences of the magnetic lithology exist), provides an additional and extensive length of potential host rocks for additional manganese deposits.

There appears to be magnetically derived lithological concentration of elevated geochemical sampling where the higher manganese analyses favour certain bedding. The lithologies are potentially host for stratiform manganese oxide deposits. Faulting has greater correlation for elevated manganese geochemical results, certainly away from the central north-south trending magnetically responsive east syncline fold limb.

The highest soil and rock sample manganese readings with the magnetic interpretation suggests that manganese remobilization and deposition may be using the structural elements of the geology to allow fluid movement. If the main manganese content were initially concentrated within the lithologies of the central magnetic zone, fluid movement and redeposition could have been enabled into favourable lithologies after passage along the structural corridors offered by the faults. These structures offer some scope for a focus of exploration for further deposits of manganese.

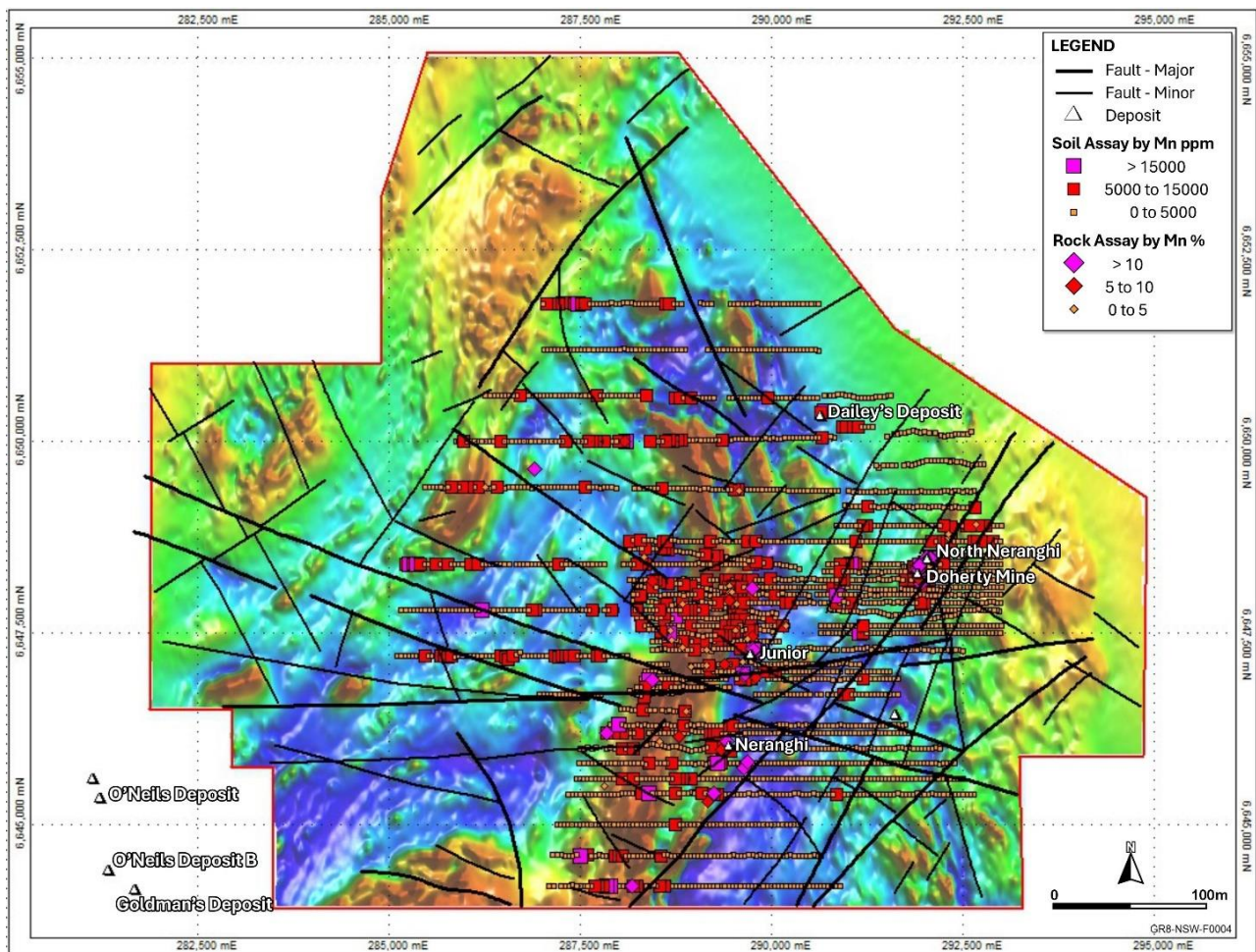


Figure 1: Geochemical sample data (with scaled >5,000 Mn ppm size symbols as indicated)<sup>2</sup>, over RTP (reduced to the pole) magnetics and interpretation. Note strong NE trend associated with the Doherty Mine and North Neranghi deposit. The potential extensions of this mineralisation will form part of the proposed drilling program of the Doherty mine area.

Figure 1 also details the geophysical relationship with the geochemistry and highlights further trends (> 5,000 Mn ppm)<sup>2</sup>. Using this dataset displayed, there appears to be a relatively strong correlation with the major and minor faults with the distribution of elevated manganese sample readings. The primary sample trends align with the structural controls except along the preferred central magnetic zone. A splay of sample readings<sup>3</sup> appears to extend to the east towards the NE trending fault zones of the Doherty Mine and North Neranghi deposit (Figure 1). This has revealed potential extensions of this mineralisation that will form part of the proposed drilling program of the Doherty mine area.

The magnetic identification of these faults is not only evident in the magnetic data, but also in some cases in the radiometric data. Importantly, there is strong evidence that these structures have provided pathways for fluid movement shown by increased potassium and thorium anomalism matching the interpreted traces of the structures. Coincidence of geochemistry manganese soil sampling trends with identified structural features also suggests these structures have provided pathways for fluid movement. Additionally, the occurrences of the known manganese deposits are flanked closely by the interpreted faults.

<sup>2</sup> GR8 ASX Announcement 24/06/2024: [New High-Grade Manganese discovered at the NSW Doherty Project, up to 50.3% Mn](#)

<sup>3</sup> GR8 ASX Announcement 10/04/2024: [Soil Sampling defines multiple 3km Manganese soil trends, Junior South Extension Rock Chips up to 50% Mn](#)



It is probable that the exploration areas and associated possible mineralisation will be dominated in their locations by the influences of structure and fluid invasion. In these instances, almost invariably anomalies occur where there have also been coincident magnetic indications of associated structure and radiometric anomalism. Due to the above, field mapping and examination will also focus on alteration.

## Recommendations and Next Steps

Eureka has recommended a staged program commencing with:

1. Ground verification of all high-priority targets.
2. Detailed mapping, rock-chip sampling and assay analysis.
3. Design of a targeted drilling program to test both stratiform and structurally controlled manganese systems.

A full list of priority targets and descriptions is provided in Table 1.

*Table 1: Target Listings with Priority and Descriptions.*

ID	Easting	Northing	Priority	Description
31	288582	6647505	3	Adjacent magnetic lithology and on structure.
30	288582	6646070	3	Fault location, intersection and magnetic lithology.
29	287903	6644203	3	Potassium high zone with structure and magnetic lens.
28	287525	6644582	3	Potassium high zone along magnetic lithology.
27	290683	6647714	3	Radiometrically anomalous but with NE fault intersection.
24	288791	6652269	3	Elevated potassium and intersecting fault.
23	287055	6646618	3	High potassium zone adjacent fault intersection.
21	286938	6646918	3	High potassium zone adjacent fault.
20	288673	6646931	3	Radiometrically anomalous adjacent faults and magnetic lineament. Close to creek.
19	289143	6646748	3	Thorium high zone (oxidation) adjacent major structures.
18	288478	6646762	3	Within magnetic sequence rocks and adjacent major fault.
16	288399	6645404	3	Fault intersection and adjacent magnetic lithology.
15	289352	6645848	3	Fault intersection and adjacent magnetic lithology.
12	287642	6646696	3	Intersection of major faults probably adjacent basic intrusive.
11	292798	6648876	3	Lineament inferred from regional extension of structure.
10	291003	6648380	3	Fault alignment and cross-cutting magnetic linears.
9	290155	6647623	3	Fault lineament and magnetic trend adjacent lithological boundary.
8	290964	6647519	3	Fault intersection and zone of cross-cutting magnetic linears.
6	292608	6649072	3	NE of North Neranghi deposit lying along significant fault.
5	292138	6648850	3	NNE of North Neranghi deposit with fault intersection.
4	290181	6650403	3	Fault intersection and adjacent Dailey's manganese Deposit.
3	289267	6648367	3	Magnetic trend dislocation and fault left lateral offset.
2	289437	6648824	3	Intersection of faults within central magnetic N-S zone and magnetic trend.
1	289411	6649463	3	Intersection of two faults within central magnetic N-S zone.
41	291062	6646866	2	Cara Formation boundary along interpreted fault.
40	287747	6647271	2	Isolated radiometric low anomaly along fault line.
38	288948	6649150	2	Fault and magnetic lithology intersections.

ID	Easting	Northing	Priority	Description
37	290501	6646200	2	Structures and coincident thorium anomaly zone.
36	287486	6645992	2	Elevated thorium and at fault intersection.
35	291310	6645887	2	Fault intersection within Cara Formation rocks.
34	292550	6647949	2	Fault intersection along Copeton Monzogranite lineament.
33	288425	6648171	2	Adjacent fault but with fold enclosed magnetic lithology.
32	286481	6647101	2	Fault location with anomalous radiometric lithology.
26	287120	6644217	2	Potassium anomaly zone extrapolated from structure.
25	286677	6644256	2	High potassium anomalism and along structure.
22	285828	6649072	2	Radiometrically anomalous and adjacent fold and magnetic lithologies.
17	288060	6649998	2	Fold axis inferred with fault intersection.
14	287394	6651786	2	Fold axis inferred at nose of fold plus fault intersection.
13	285189	6648197	2	Major structure (fault) on western limb of fold plus magnetic trend.
7	291342	6647257	2	Fault intersection at northern boundary of Cara Formation.
42	288282	6644699	1	Adjacent magnetic unit and fault/lineament.
39	286285	6650233	1	High potassium zone with north trending magnetic units.

*Note that the table of targets is sorted based on priority, from highest to lowest and colour coded. **Priority 3 Targets:** Interpreted to have the highest recommended anomaly ranking with the combination of structure, geophysics anomalism and association to known manganese mineralisation or alteration are regarded as requiring definite field follow-up (Gidley P. G. 2025. Doherty Manganese Project, Geophysical Summary, Interpretation Report with Data Integration. Eureka Consulting Pty. Ltd.)*

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

**For further information, please visit or contact:**



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## About Great Dirt Resources Ltd

Great Dirt's **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.



Great Dirt has significantly expanded its manganese exploration portfolio following the acquisition of two tenements (E45/6949 and E45/6950 – the '**Nullagine Project**'), ~ 50km northeast of Consolidated Minerals Woodie Woodie manganese mine, in the Shire of East Pilbara, Western Australia.

Following a successful ballot application and exploration licence grant, Great Dirt has expanded its WA portfolio to include a position in one of the most prominent lithium regions in Western Australia and worldwide. Tenement E45/6863 – '**Pilbara Project**' is located approximately 43km from Pilbara Minerals (ASX:PLS), Pilgangoora Lithium Project, one of the largest hard-rock lithium deposits in the world.

## Competent Person's Statement

Information in this announcement that relates to exploration results is based on and fairly represents information and supporting documentation prepared and compiled by Mr Michael Leu, who is a Member of the Australian Institute of Geoscientists and a Member of the Australasian Institute of Mining and Metallurgy. Mr Leu is the geological consultant for Great Dirt Resources Ltd. Mr Michael Leu has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves. Mr Michael Leu consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

## 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.

# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary																				
Sampling techniques	<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.</li><li>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 (eg submarine nodules) may warrant disclosure of detailed information.</li></ul>	<ul style="list-style-type: none"><li>The aircraft used was a Eurocopter AS350BA specifically configured for aerial surveying purposes.</li><li>The survey comprised approximately 1,272 line km. The east-west flight lines will be spaced at 100m perpendicular to the mapped geology and mineralisation trends, north-south tie lines will be completed every 1,000m. The flight height, and thus the sensor height, will be approximately 40m above ground level.</li><li>The magnetic sensor was a caesium vapour magnetometer with a sampling rate of 0.05 seconds and a resolution of 0.001nT. A base station, placed in a low magnetic gradient area, was used to correct the magnetic data collected by the survey aircraft.</li><li>The radiometric sensor was a gamma ray spectrometer (RSI Model RS-500) with a 16.8 litre detector pack with a sampling rate of 1 second over 256 channels. Thorium source tests was performed at the start and end of every day to confirm system sensitivity, resolution and peak position of the thorium window.</li><li>A radar altimeter (KRA405B) was used to determine the height above terrain with a 30cm resolution. The terrain height will then be calculated by subtraction of the radar altimeter height measurements from the gps height measurements.</li><li>Gradient array induced polarisation (GAIP) survey was undertaken by Fender Geophysics utilising GDD RX-32-16 channel receiver and GDD TxII transmitter.</li></ul> <table><tr><td>Array</td><td>Gradient</td></tr><tr><td>Receiver Dipole Length</td><td>25m (or 50m with 50% overlap)</td></tr><tr><td>Domain and Cycle</td><td>Time domain - 2 seconds or 0.125Hz</td></tr><tr><td>Line Length</td><td>500m</td></tr><tr><td>Line Separation</td><td>100m</td></tr><tr><td>Tx Dipole Length</td><td>1500m</td></tr><tr><td>Number of Lines</td><td>18 (including overlap lines)</td></tr><tr><td>Total Line km</td><td>9km</td></tr><tr><td>Number of Stations</td><td>378</td></tr><tr><td>Bearing</td><td>90°</td></tr></table> <ul style="list-style-type: none"><li>Gravity survey was undertaken by Fender Geophysics utilising Scintrex CG5 Gravity Meter and Trimble R8/3 GNSS system.</li></ul>	Array	Gradient	Receiver Dipole Length	25m (or 50m with 50% overlap)	Domain and Cycle	Time domain - 2 seconds or 0.125Hz	Line Length	500m	Line Separation	100m	Tx Dipole Length	1500m	Number of Lines	18 (including overlap lines)	Total Line km	9km	Number of Stations	378	Bearing	90°
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		<table><tr><td>Line Spacing</td><td>100m</td></tr><tr><td>Station Spacing</td><td>25m</td></tr><tr><td>Line Direction</td><td>East-West</td></tr><tr><td>Number of Stations</td><td>1150 initially, reduced to 876</td></tr><tr><td>Number of Repeats</td><td>44 (5%)</td></tr><tr><td>Surveying</td><td>Real Time Kinematic (RTK) GNSS</td></tr><tr><td>Gravity Datum</td><td>AAGD07</td></tr><tr><td>Survey/Positioning Datum</td><td>GDA94, MGA zone 56</td></tr><tr><td>Elevation Datum</td><td>AHD (Australian Height Datum). GRS80 Ellipsoid heights for gravity were determined using AUS Geoid09</td></tr></table>	Line Spacing	100m	Station Spacing	25m	Line Direction	East-West	Number of Stations	1150 initially, reduced to 876	Number of Repeats	44 (5%)	Surveying	Real Time Kinematic (RTK) GNSS	Gravity Datum	AAGD07	Survey/Positioning Datum	GDA94, MGA zone 56	Elevation Datum	AHD (Australian Height Datum). GRS80 Ellipsoid heights for gravity were determined using AUS Geoid09
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Drilling techniques	<ul style="list-style-type: none"><li>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.).</li></ul>	<ul style="list-style-type: none"><li>Not applicable</li></ul>																		
Drill sample recovery	<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>Not applicable</li></ul>																		
Logging	<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 applicable</li></ul>																		
Sub-sampling techniques and sample preparation	<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></ul>	<ul style="list-style-type: none"><li>Not applicable</li></ul>																		

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
Quality of assay data and laboratory tests	<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 (eg 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>Not applicable</li> </ul>
Verification of sampling and assaying	<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>Not applicable</li> </ul>
Location of data points	<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>	<p>Airborne Magnetic and Radiometric Surveys</p> <ul style="list-style-type: none"> <li>Novatel 14 channel precision differential capable GPS system</li> <li>2 Hz (0.5 sec) recording rate</li> <li>GPS differential correction receiver</li> <li>Thomson survey navigation and guidance system</li> <li>For the gravity survey a project benchmark was established. This provided a highly accurate position with GDA2020 positions and AHD elevations. An 8 hour static observation was collected and processed to determine position. Stations positions and elevations will be surveyed using Real Time Kinematic (RTK) GNSS positioning allowing accurate positioning of the stations before observation.</li> <li>GAIP survey points determined by Garmin GPS62.</li> </ul>
Data spacing and distribution	<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</li> </ul>	<p>Airborne Magnetic and Radiometric Surveys</p> <ul style="list-style-type: none"> <li>Line spacing of the survey east-west flight lines will be spaced at 100m perpendicular to the mapped geology and mineralisation trends, north-south tie lines will be completed every 1,000m</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <li><i>Whether sample compositing has been applied.</i></li> </ul>	
<i>Orientation of data in relation to geological structure</i>	<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>Not applicable</li> </ul>
<i>Sample security</i>	<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>Not applicable</li> </ul>
<i>Audits or reviews</i>	<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>The magnetic, radiometric, GAIP and gravity survey data have been audited and reviewed by Southern Geoscience.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<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 licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Doherty and Basin Manganese Projects are contained within EL 9527 held Great Dirt Pty. Ltd. that is a wholly-owned subsidiary of by Great Dirt Resources Ltd.</li> <li>The Great Dirt Resources Ltd holds 100% interest and all rights in the Doherty and Basin Manganese Projects.</li> <li>EL9527 lies within predominantly rural free-hold land requiring Great Dirt Pty. Ltd. to enter into formal land access agreements with individual landowners, prior to any field activity, as prescribed by New South Wales State Law including the Mining Act 1992. The Great Dirt Pty. Ltd. has rural land access agreements over the majority of EL9527</li> <li>EL9527 is considered to be in good standing.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>All historical exploration records are publicly available via the Geological Survey of New South Wales's websites: DIGS®, Digital Imaging Geological System, (<a href="http://search.geoscience.nsw.gov.au">search.geoscience.nsw.gov.au</a>) and Minview (<a href="http://minview.geoscience.nsw.gov.au">minview.geoscience.nsw.gov.au</a>).</li> </ul> <p>Key Sources of Exploration done by other parties include:</p> <ul style="list-style-type: none"> <li>Brown R.E., Brownlow J.W. &amp; Krynen J.P. 1992. Manilla– Narrabri 1:250 000 Metallogenic Map, Metallogenic study and Mineral Deposit Data sheets. Geological Survey of New South Wales, Department of Mineral Resources, Sydney. Mineral Deposit Data Sheet MAO186 Daileys Deposit page 177; Mineral Deposit Data Sheet MAO188 North Neranghi page 178; Mineral Deposit Data Sheet MAO189 Dougherty Mine (Hungerford and Spencer's Deposit) page 178; Mineral Deposit Data Sheet MAO190 Junior Mine page 179; Mineral Deposit Data Sheet MAO191 Neranghi page 179</li> <li>Fitzpatrick K.R. 1975. Woolomin–Texas Block: Woolomin beds and associated sediments. In: Markham N.L. &amp; Basden H. eds. The mineral deposits of New South Wales, pp. 338–349. Geological Survey of New South Wales, Sydney.</li> <li>Hall L.R. 1959. Manganese. Geological Survey of New South Wales, Mineral Industry 25</li> <li>Lloyd A. C., (GS1943/008) Mine Inspector's report 1951, 1954, 1956, 1957, 1958, 1959, 1960, 1961 and 1962 (MR02854, D004054500). Dougherty Mine - Hungerford and Spencer's Deposit; Manganese Deposits Barraba (MR02854, D004054499). Unpublished Report held by the Department of Regional New South Wales – Resources, Geological Survey of New</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>South Wales</p> <ul style="list-style-type: none"> <li>Lloyd, J. C., 1962. Mineral deposits of the Namoi Region, R00031183 (GS1962/136). Unpublished Report held by the Department of Regional New South Wales – Resources, Geological Survey of New South Wales</li> <li>Lusk, J. 1963. Copper ore and their distribution in Western New England. M.Sc. Thesis, University of New England</li> <li>NSW Department of Primary Industries, Manganese</li> <li>Several small-scale mines extracted battery and metallurgical grade manganese from the 1940's-1960's. These mines are recorded in the Metallic and Industrial Deposits records in Minview and Brown et al. 1992. The key Mine Records are reference as follows: 150081-Unnamed, 150082-Unnamed, 150083-Unnamed, 150188-Daileys Deposit, 150190-Unnamed, 150191-Dohery Mine (Hungerford and Spencers Deposit), 150192-Junior Mine (Spencers Manganese Mine), 150193-Unnamed</li> <li>Various parties have held different parts of the Exploration Licence (EL) 9527 in different periods and explored for different commodities.</li> <li>No party has ever completed systematic exploration across the area for manganese.</li> </ul> <p>Key Research for Exploration Concepts:</p> <ul style="list-style-type: none"> <li>Ashley P.M. 1986. An unusual manganese silicate occurrence at the Hoskins mine, Grenfell district, New South Wales. Australian Journal of Earth Sciences 33, 443–456</li> <li>Roy S. 1981. <i>Manganese Deposits</i>. 458pp. Academic Press, New York</li> </ul>
Geology	<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>Volcanogenic-exhalative stratiform manganese deposits</li> <li>The known previously exploited surficial supergene manganese oxides were very high-grade (46-74% MnO<sub>2</sub>)<sup>1</sup> and relatively discrete deposits that occur where either structural, surficial or hydrothermal processes have concentrated underlying mineralisation. These deposits were mined by artisanal miners because they were outcropping, deposits located between areas of outcrop or concealed by transported cover would have gone unrecognised. These blind deposits would contain similar high-grade mineralisation to that mined.</li> <li>The proposed new exploration concept is these surficial deposits are not an expression of an underlying manganese silicate deposit but are actually formed from a primary exhalative stratiform manganese oxide deposit. This dramatically increases the size of the targets to district scale deposits. Historical rudimentary exploration would have been uninterested in</li> </ul>

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		<p>manganese mineralisation below 45% as no market existed for mineralisation sub-metallurgical grade with no beneficiation available.</p> <ul style="list-style-type: none"> <li>Evidence supporting this exploration concept is: Surficial high-grade supergene manganese oxide deposits are likely present regionally, outcropping, some identified, and probably also blind deposits, remaining undiscovered. EL9527 is prospective for these deposits, evidence is found in the numerous mineral occurrences highlight existing resources and extensions to historical mines. Multi-element assays of samples collected by field team and analysed by ALS confirm the high-grade ore has clear chemical affinities with submarine volcanic-sedimentary exhalative Mn deposits, especially the Mn/Fe ratio and anomalous concentrations of Ba, Sr, Co, Cu, As and W, signature characteristics of deep marine fumarolic modern day manganese deposits (Ashley 1986). Ashley states this strongly implies a submarine volcanic exhalative environment of deposition. He notes the high Mn/Fe accords with hydrothermal exhalative Mn deposits at submarine spreading ridges and in ophiolite terrains with exhalative Mn deposits generally (e.g., Roy 1981)</li> </ul> <p>Deposit type, geological setting and style of mineralisation is detailed in the following technical reports.</p> <ul style="list-style-type: none"> <li>Ashley P. M. 2023a. Petrographic Report on Seven Rock Samples from EL9527, East Of Barraba, Northern N.S.W. for Great Dirt Resources Limited.</li> <li>Ashley P. M. 2023b. Petrographic Report on Fifteen Rock Samples from EL9527, East Of Barraba, Northern N.S.W. for Great Dirt Resources Limited</li> <li>Ashley P. M. 2024. Petrographic Report on Two Rock Samples from EL9527, East Of Barraba, Northern N.S.W. for Great Dirt Resources Limited</li> <li>Gidley P. G. 2025. Doherty Manganese Project, Geophysical Summary, Interpretation Report with Data Integration. Eureka Consulting Pty. Ltd.</li> <li>Whybrow J. and Leu M. R. 2024. Exploration Licence 9527, Annual Report For Period Ending (Part A) 8th February 2024</li> <li>Whybrow J. and Leu M. R. 2025. Exploration Licence 9527, Annual Report For Period Ending (Part A) 8th February 2025</li> </ul>
Drill hole Information	<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:</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole 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> <li>• 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.</li> </ul>	
Data aggregation methods	<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>• Not applicable</li> </ul>
Relationship between mineralisation widths and intercept lengths	<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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>
Diagrams	<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>• Pertinent maps for this stage of Project are included in the release.</li> <li>• Coordinates in MGA94 Zone 56.</li> </ul>
Balanced reporting	<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 results described in this announcement have been reported.</li> </ul>

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<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All substantive data has been disclosed.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>24 high priority targets have been developed. These targets are interpreted to have the highest recommended anomaly ranking with the combination of structure, geophysics anomalism and association to known mineralisation or alteration. On ground detailed mapping and sampling should lead to additional drill targets which can be prioritised based on responses.</li> </ul>