

# HIGH PRIORITY DRILL TARGETS IDENTIFIED FROM YUMBARRA AND FOWLER PROJECT GRAVITY MODELLING

# HIGHLIGHTS

- Recently completed Yumbarra and Fowler Project gravity surveys have been modelled and integrated with historic detailed aeromagnetic and VTEM survey data
- Surveys identified high priority targets for follow up
- Priority targets for nickel in Yumbarra located on inferred ultramafic basal contact zones and inferred feeder zones
- Planning for drilling has commenced

Osmond Resources Limited (**ASX:OSM**) (**Osmond** or the **Company**) is pleased to provide the results of the recently completed detailed gravity programs across our Fowler and Yumbarra Projects, Western Gawler Craton, South Australia (Figure 1).

The recently acquired detailed gravity has been integrated with historical detailed Airborne Magnetic, VTEM, Gradient Array IP and MLEM to identify coincident magnetic-gravity-VTEM anomalies across the project areas. Gravity data also aids in determining depth to basement and regional structures that may host mineralization or offset it, providing valuable information for drill target planning.

## **Osmond Resources Executive Director, Andrew Shearer, commented**

"The addition of detailed gravity to the already first-class legacy dataset of aeromagnetics, VTEM, gradient array IP and MLEM data has provided an extremely robust and detailed geophysical dataset which has defined some very exciting targets.

Magmatic Nickel sulphide orebodies are generally dense due to high metal content, conductive due to the presence of sulphides and magnetic due to the presence of pyrrhotite which is commonly found in the mix of magmatic nickel and copper sulphides.

Recent work has identified numerous targets that match this exploration criteria, supported by the multi-layered geophysics modelling and favourable geological context."



## Yumbarra Project (South Australia)

The Yumbarra Project gravity survey consisted of 925 gravity stations with a maximum spacing of 500m x 500m, and a minimum spacing of 250m x 250m over priority areas (Figure 2).

The purpose of the gravity survey was to cover a series of proven and inferred ultramafic intrusives to identify potential dense, metallic sulphide bodies at depth, adding one more layer of definition to already modelled detailed aeromagnetic, VTEM, MLEM and IP targets.

The proposed geological model is that magmatic massive sulphide deposits tend to settle at the base of the layered ultra mafic sill chamber, in surrounding fractures and within the 'neck' of the dykes that feed the magmatic sill chambers. Exploration for these types of these types of deposits will focus on identifying dense, conductive and magnetic anomalies on the basal margins of the ultramafic cumulate rocks and within the vertical-subvertical feeder dykes.

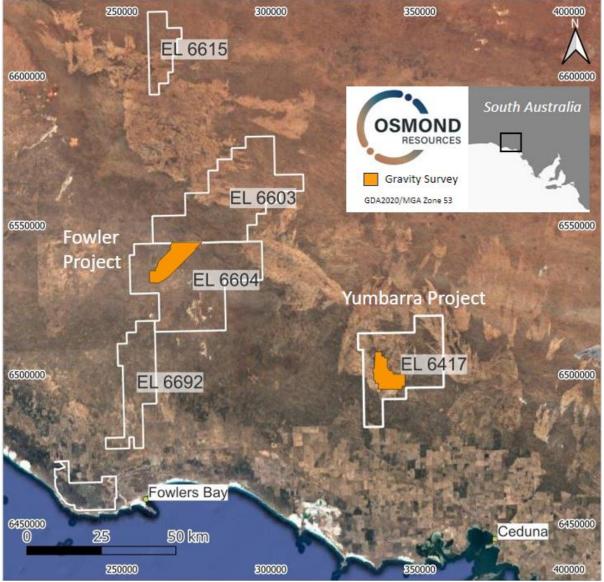


Figure 1: Fowler Project and Yumbarra Project gravity survey areas.

The Yumbarra gravity data has identified numerous dense gravity anomalies associated with the margin of the ultramafic intrusives, which coincide with VTEM conductors and magnetic



anomalism (Figure 3). Previous calcrete sampling and drilling confirm Nickel anomalism of some of the priority targets. The best historic intersection reported by Dominion Gold in 2001 was 3m at 1357 ppm Ni and 1066 ppm Co in aircore hole 01YBAC042<sup>1</sup> is adjacent to a newly defined coincident gravity and VTEM anomaly (Figure 3). Other priority targets are untested but supported by multiple layers of geophysics. These targets will be ranked in order of prospectivity and will become the focus for drill testing.

Osmond will begin an environmental survey as required by the conditions of the Exploration License in Yumbarra Conservation Park with drilling testing of priority targets expected to occur early in the second half of 2024.

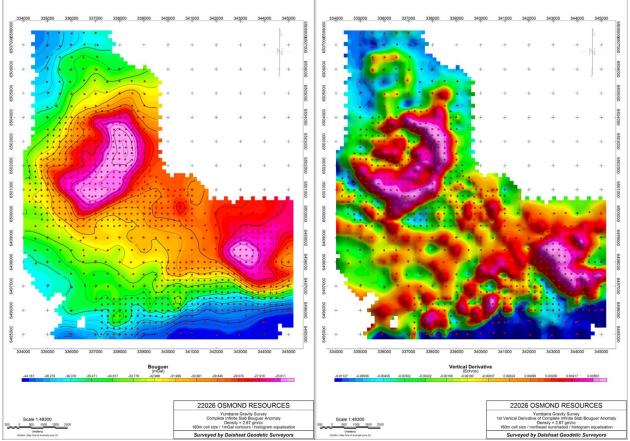
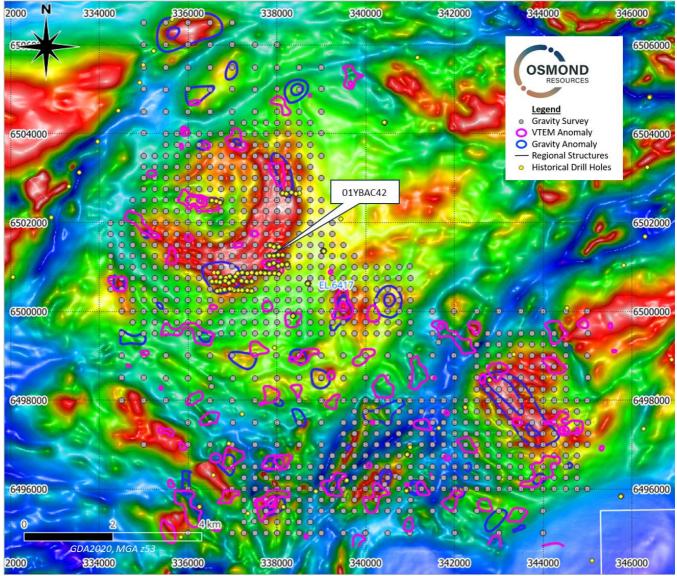


Figure 2: Yumbarra gravity survey stations (red dots) with Complete Infinite Slab Bouger Anomaly image (left) and 1<sup>st</sup> Vertical Derivative of Complete Infinite Slab Bouger Anomaly image (right)

<sup>&</sup>lt;sup>1</sup> Previously reported OSM ASX Announcement 20<sup>th</sup> April 2022, "Osmond Resources, Prospectus", page 213



*Figure 3: Yumbarra gravity anomalies (Blue) with VTEM anomalies (Magenta) on detailed RTP Magnetic image* 

### **Fowler Project (South Australia)**

Fowler Project helicopter supported gravity survey consisted of 450 new gravity stations at a spacing of 500m x 500m, set offset from the historical gravity stations thus effectively decreasing the gravity spacing to approx.  $350m \times 350m$  in some areas (Figure 4).



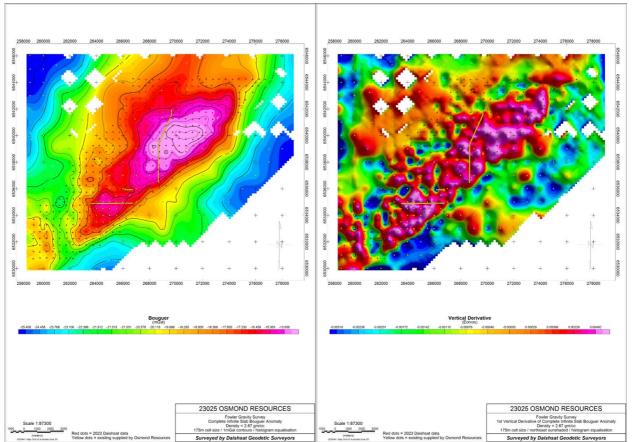


Figure 4: Fowler gravity survey stations (red dots) and historical gravity stations (yellow dots) Complete Infinite Slab Bouger Anomaly image (left) and 1<sup>st</sup> Vertical Derivative of the Complete Infinite Slab Bouger Anomaly image (right)

Modelling of the gravity data along with VTEM and detailed Aeromagnetics have identified high density anomalism along the eastern contact of the mafic-ultramafic intrusive, with some correlation with geochemical anomalism<sup>2</sup> in S and Pd, as well as with VTEM anomalism (Figure 5). The density, VTEM, magnetic and sulphur anomalism along the mafic-ultramafic contact with the surrounding rock units is significant in that this zone may represent the basal contact zone along which metallic sulphides are collected. Near southern reaches of the target area, the density anomalism shifts to the inferred hinge zone defined by the magnetic data. Due to their ductile nature, sulphides will often migrate toward the hinge of fold structures during deformation events. This inferred hinge zone and basal contact are high priority targets for Osmond's follow up exploration in 2024, which may involve follow up MLEM and ultimately drill testing.

Refinement of the modelling and target ranking is ongoing over the Fowler Project.

<sup>&</sup>lt;sup>2</sup> Previously reported OSM ASX announcement 28<sup>th</sup> August 2023, "EXPLORATION ON SOUTH AUSTRALIAN PROJECTS ACCELERATED BY UP TO TWO YEARS"



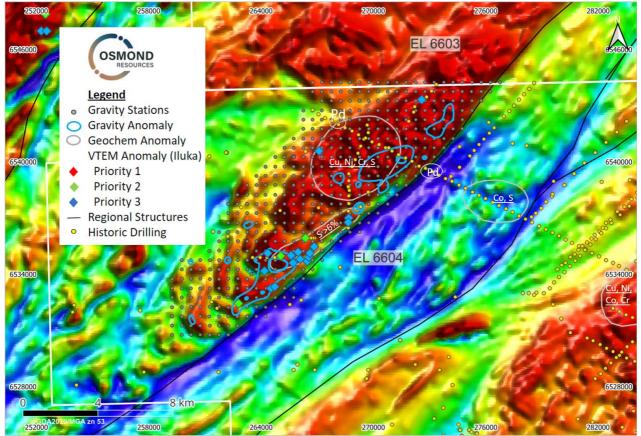


Figure 5: Fowler Gravity stations with gravity anomaly outlines (Magenta) and geochem anomalism (top of basement drill samples) on Total Magnetic Intensity Image

### **Planned work**

Osmond will continue with model refinement and target ranking over the remainder of the year. Additional geophysics, such as a Moving-Loop Electro-Magnetic (MLEM) survey may be investigated as a potential method for prioritising the numerous coincident Gravity-Magnetic-VTEM anomalies identified from the latest gravity survey and provide refined target definition for drill testing in 2024.

#### -Ends-

This announcement has been approved for release by the Board of Osmond Resources.

# CONTACT

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# ABOUT OSMOND RESOURCES

Osmond Resources Limited is a mineral and exploration company committed to increasing shareholder wealth through the exploration, development and acquisition of mineral resource projects.

Osmond was formed with the purpose of assembling a portfolio of projects predominantly located in the Gawler Craton region of South Australia and the Glenelg structural zone of western Victoria. (Please refer to maps below.) Since its incorporation, the Company has secured agreements in respect of a number of tenements that are considered highly prospective for gold, copper, nickel and REE. The Company is excited by recent exploration successes in these frontier areas for gold and base metals.

Osmond has entered into acquisition agreements in South Australia, with Fowler Resources Pty Ltd (Fowler) for exploration tenements EL6417 (Yumbarra Tenement), EL6615 (Tallacootra Tenement) and EL6692 (Coorabie Tenement) and with Kimba Resources Pty Ltd (Kimba) (being a wholly-owned subsidiary of ASX-listed Investigator Resources Pty Ltd (Investigator)) for EL6603 and EL6604 (together, the Fowler Tenements); and in Victoria with Providence Gold and Minerals Pty Ltd (Providence), for EL6958 (Sandford Tenement).

# PROJECTS

**The Fowler Domain Projects** straddle the boundary of this geological domain in far western South Australia. These major crustal scale domain bounding structures that traverse the tenements have potential to host structurally upgraded magmatic Ni-Cr-Cu-PGE; layered intrusive-hosted Ni-Cr-PGE; IOCG (Hiltaba Suite) deposits; intrusion-related (Tunkillia-type) Au; and orogenic Au. While the proximity of the Fowler Domain Projects to nearby mineral occurrences is no guarantee that it will be prospective for an economic reserve, recent discoveries by Western Areas Limited (ASX:WSA) in the Fowler Domain have indicated the nickel-copper sulphide pedigree of the region.

**The Yumbarra Project** located in the Nuyts Domain of the Gawler Craton contains a highly magnetic feature that is interpreted as a layered ultramafic intrusive. Historical drilling has reported a best intersection of Ni-Co anomalism in basement drilling of 1357 ppm Ni and 1066 ppm Co (further details provided on page 46 and 78 of the Independent Geologist Report in the Osmond Prospectus). There are also identified electromagnetic surveying targets yet to be drilled on this target.

**The Sandford Project** located in western Victoria is considered prospective for Avebury-style nickel; SEDEX base metals; porphyry Cu-Au; porphyry Mo-Au; (R)IRGS style deposits; and orogenic Au deposits related to major structures that pass through the tenement. In addition, rare earth element (REE) potential is recognised within the tenement, for clays developed at the base of the extensive duricrusts that formed from the deep weathering of basement granitoid bodies with elevated REE concentrations. Initial targeting on the Sandford Project has commenced and will seek to identify prospective regions for the formation of the REE hosted clays and also base and precious metal occurrences.

**The Salt Wells Project** is located in Churchill County, Nevada, U.S., within close proximity to major highways and within 25 kilometres of the town of Fallon that has a population of over 8,500 people. The Project consists of 276 mineral claims, covering an area of ~36km2 with surface salt



samples in the northern area recording up to 810 ppm lithium, and 1% boron (5.2% boric acid equivalent) (see ABR ASX Release 25 May 2018, "American Pacific Borate and Lithium agrees earn in rights to acquire 100% interest in two Borate and Lithium exploration Projects in Nevada, USA"). Borates were produced from surface salts in the 1800's from the northern part of the Project area.

Th **Iberian One Project** (Spain), recently Osmond entered into a staged Earn-In Agreement to acquire up to 100% of the Iberian One Project, located in Spain. The Project is prospective for Potassium Sulphate (SOP), Alumina products and Graphite. Osmond has commenced due diligence during a six month exclusivity period.



Osmond Resources Projects

### **Competent Persons Statement**

The information in this report that relates to Mineral Resources is based on information compiled by Mr Charles Nesbitt. Mr Charles Nesbitt is a full-time employee of Osmond Resources Ltd. Mr Charles Nesbitt has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC code). Mr Charles Nesbitt consents to the inclusion of this information in the form and context in which they occur