ASX Announcement

26 May 2025

ADDITIONAL URANIUM TARGETS IDENTIFIED AT LYNDON PROJECT

Highlights:

- **First-pass reconnaissance mapping for unconformity-type and calcrete-type uranium mineralisation at Lyndon Project completed**
- **140 rock chip samples collected from unconformities, dolomites, vuggy fault breccias and calcretes**
- **Calcrete has previously been found to have developed over fault intersections with unconformities and stratigraphic contacts, showing prospectivity for additional uranium discoveries**
- **More than 100km strike of prospective Devonian carbonate – Glenburgh Terrane at Lyndon Project**
- **Unconformities at Lyndon remain largely unexplored but are related to uranium mineralisation, as proven at the Ben Hur, Giant and Red Hill prospects**
- **Devonian carbonates of Western Australia are known hosts of copper-lead-zinc Mississippi Valley-Type deposits – base metal prospectivity analysis underway at Lyndon**

Odessa Minerals Limited (ASX:ODE) ("Odessa" or the "Company") is pleased to provide an Exploration Update for the Lyndon Project ("Project"), located approximately 200km northeast of Carnarvon in Western Australia.

Zane Lewis, Non-Executive Chairman of Odessa, said;

"We are pleased to have completed the first round of fieldwork for the 2025 exploration program at the Lyndon Project. Our team has successfully completed first-pass mapping of key prospective structures, including the collection of 140 rock chip samples to evaluate the potential for additional uranium discoveries, with a key aim of determining the prospectivity for unconformity-type uranium mineralisation. The rock chip samples are currently undergoing analysis, with assay results anticipated to be received in July.

Additionally, Odessa has initiated a prospectivity analysis for Mississippi Valley-Type base metal deposits within the Devonian Carbonates, an important step in broadening our exploration focus and unlocking the value of the Lyndon Project. We look forward to sharing updates as we advance our exploration efforts at Lyndon."

Lyndon Uranium Mineralisation

Uranium mineralisation at the Lyndon Project is present in multiple types, including calcrete- and roll front-type, with the Project being considered prospective for unconformity-type uranium mineralisation (Figure 1). Historic work at the Ben Hur prospect has shown that, in addition to calcrete-type mineralisation, uranium mineralisation is present within the matrix of a limestone host proximal to an outcropping portion of the Devonian-Glenburgh unconformity[1]. Since then, no further work has been conducted along the unconformity with all uranium exploration focusing on calcrete-type mineralisation at Giant, Red Hill, Baltic Bore and Jailor Bore.

[1] Refer to ASX announcement called "Uranium at Odessa's Lyndon Project Gascoyne Region, Western Australia" dated 29 January 2024

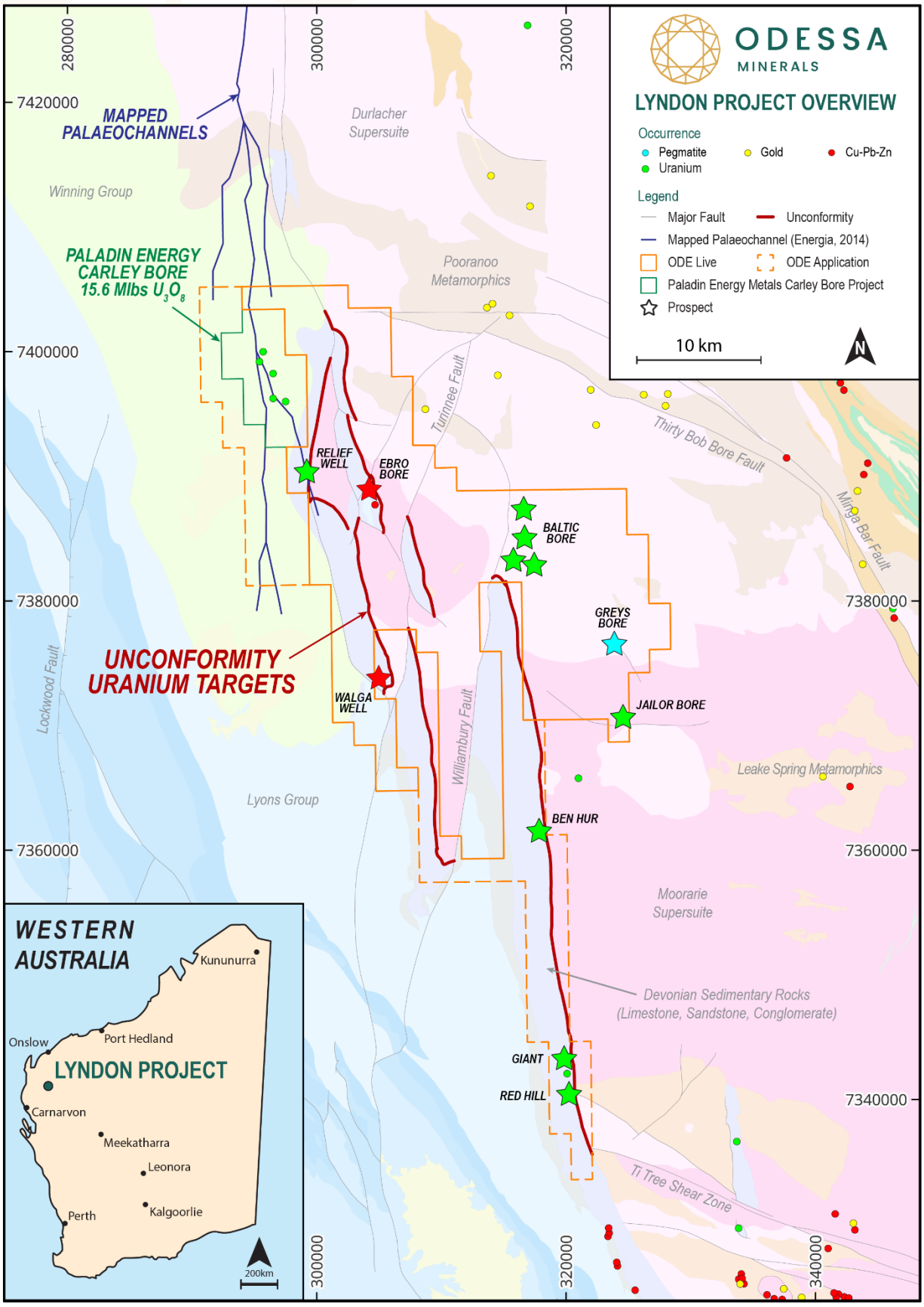

Figure 1: Lyndon Project in relation to Minedex occurrences and the Carley Bore Project (Paladin Energy). Underlain with GSWA 1:500k bedrock geology and structures. Unconformity targets highlighted by red lines.

Exploration by Odessa for uranium mineralisation at the Lyndon Project previously focused on roll front-type mineralisation at the Relief Well prospect and calcrete-type mineralisation at the Baltic Bore and Jailor Bore prospects. The Devonian sediments of the Gneuda Formation represent promising uranium targets within the Lyndon Project, including surficial calcrete-type, sandstone-hosted tabular-type and unconformity-type mineralisation (Figure 2).

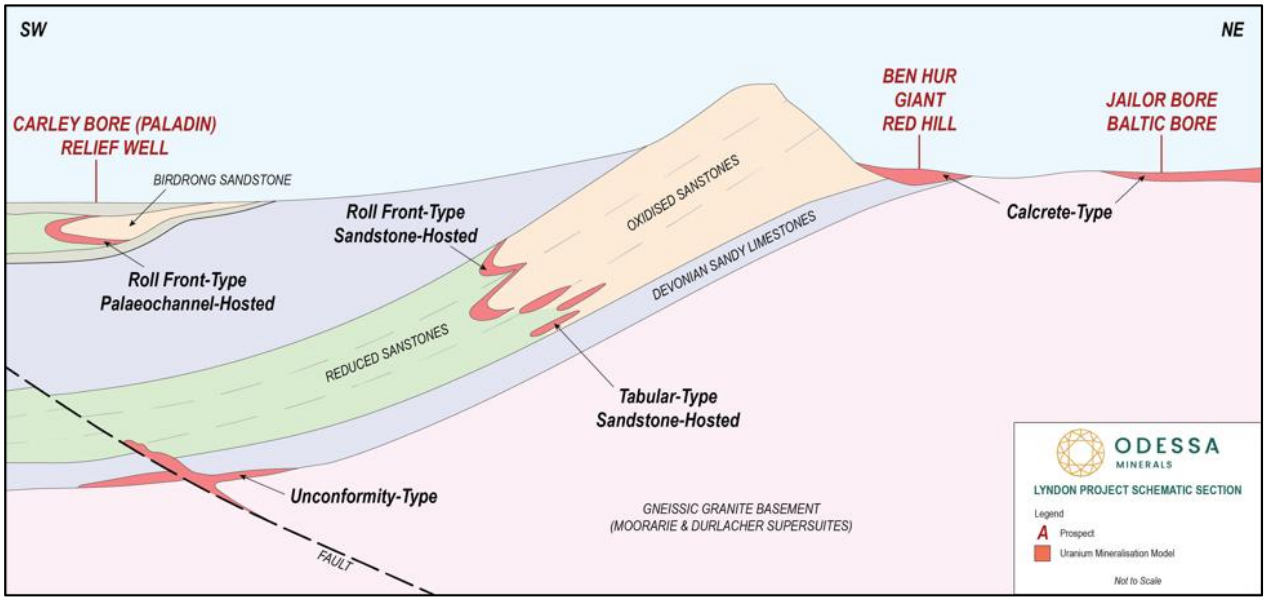

Figure 2: Schematic model section of potential uranium mineralisation styles across the Lyndon Project area. The relative position of prospects are displayed.

Re-processing and re-interpretation of 2008-2010 VTEM data[2] by Odessa Minerals highlighted multiple targets across the Gneuda Formation that are prospective for unconformity-type and calcrete-type uranium mineralisation.

Recently completed fieldwork focussed on priority targets where faults intersect stratigraphic boundaries at the Project, including the unconformity between the Gneuda Formation and Glenburgh Terrane. These fault-intersections are particularly prospective targets, where uranium sourced from the radiogenic granites of the Glenburgh Terrane are more likely to concentrate in the porous, reducing units of the Devonian sequence and overlying calcrete.

The initial results from mapping across the northern portion of the Project shows that calcrete has developed over portions of the unconformity, primarily where faults intersect (Figure 3). 140 rock chip samples have been collected from calcrete, neighbouring carbonate and fault breccias to determine the potential for uranium mineralisation.

[2] Refer to ASX announcement called "Uranium at Odessa's Lyndon Project Gascoyne Region, Western Australia" dated 29 January 2024.

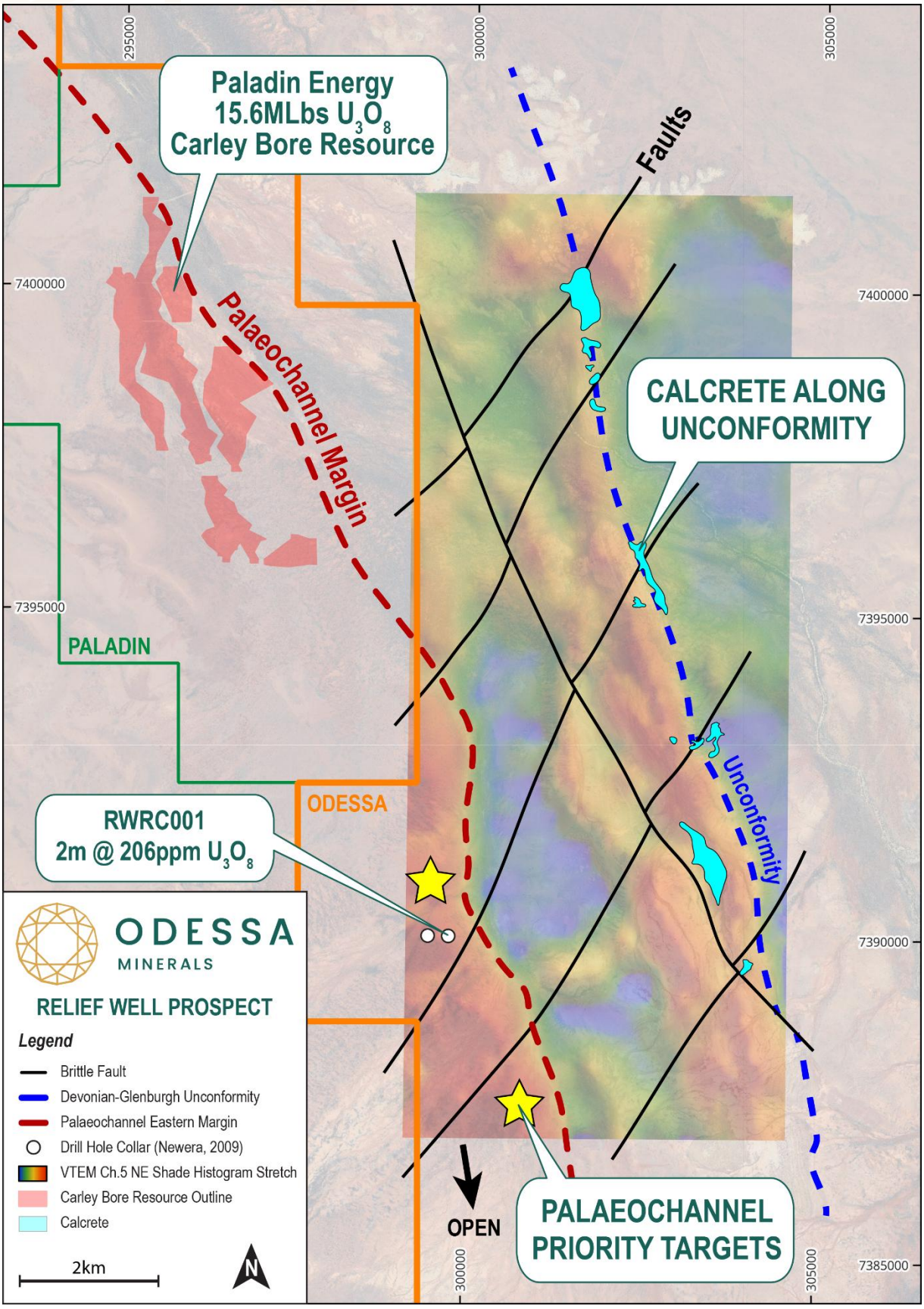

Figure 3: Relief Well Prospect interpreted palaeochannel extension from the Carley Bore Uranium Deposit. Calcrete developed over structural intersection between faults and the unconformity. Newera drill holes displayed.

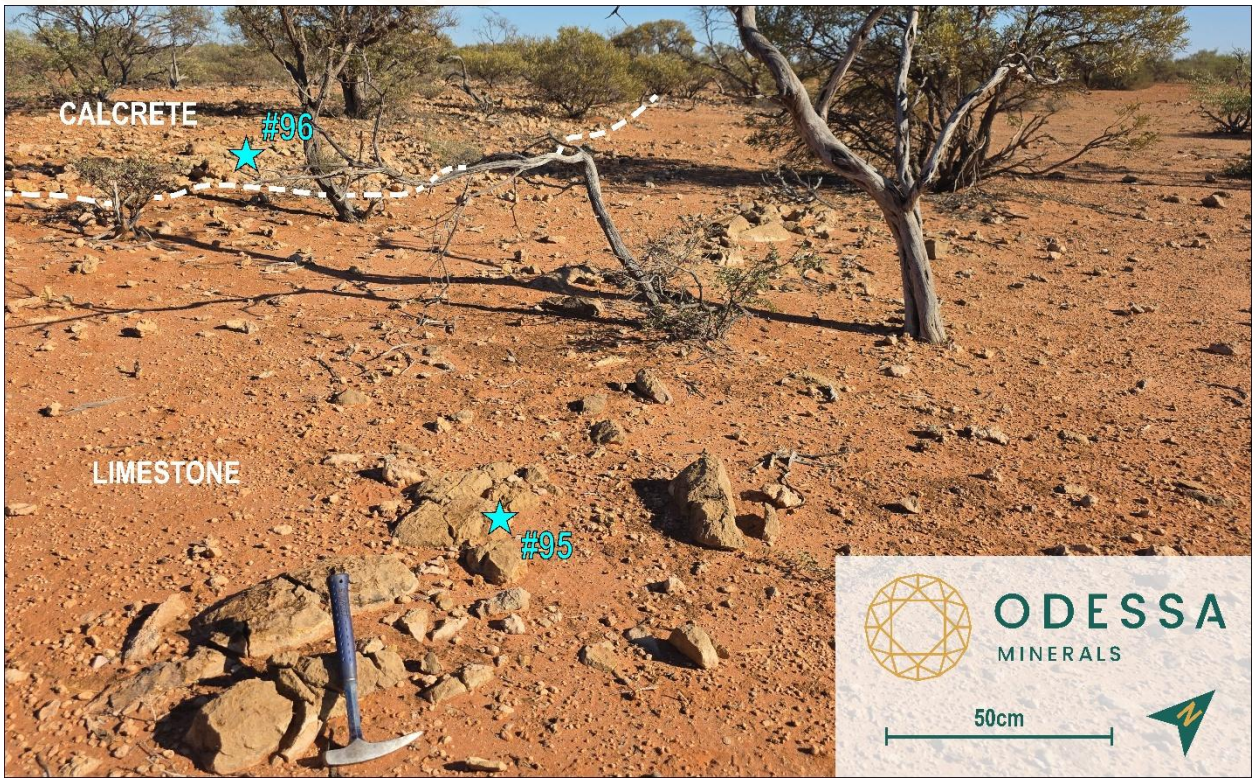

Figure 4: Outcrop photograph looking northwest from Sample #95 (limestone), showing overlying calcrete (sample 96). Location: 302,423mE, 7,395,233mN.

Next Steps

Following detailed mapping, future systematic drilling along the contact between the Gneuda Formation and the underlying Durlacher and Moorarie Supersuites is required to map out the location of the concealed unconformity and hydrothermal alteration that may indicate the presence of uranium mineralisation.

Additional mapping will be undertaken across the Devonian sequence in order to delineate the potential for the units to host Mississippi Valley-Type copper-lead-zinc mineralisation, analogous to the deposits of the same-aged Lennard Shelf.

Additional VTEM surveying is required at Relief Well to map out the full extents of the palaeochannel along strike to the south and to the west, where the paleochannel remains open but has not been surveyed or drill tested to date.

Odessa continues to engage with the Native Title Group to expand the surveyed areas at Baltic Bore to obtain clearances for additional calcrete-type uranium targets.

Lyndon Project Overview

The Lyndon Project is located on the margin of the Carnarvon Basin and Gascoyne Complex approximately 200km south of Onslow and 200km NE of Carnarvon, in Western Australia. The project consists of over 1,000km^2 of exploration licenses and applications.

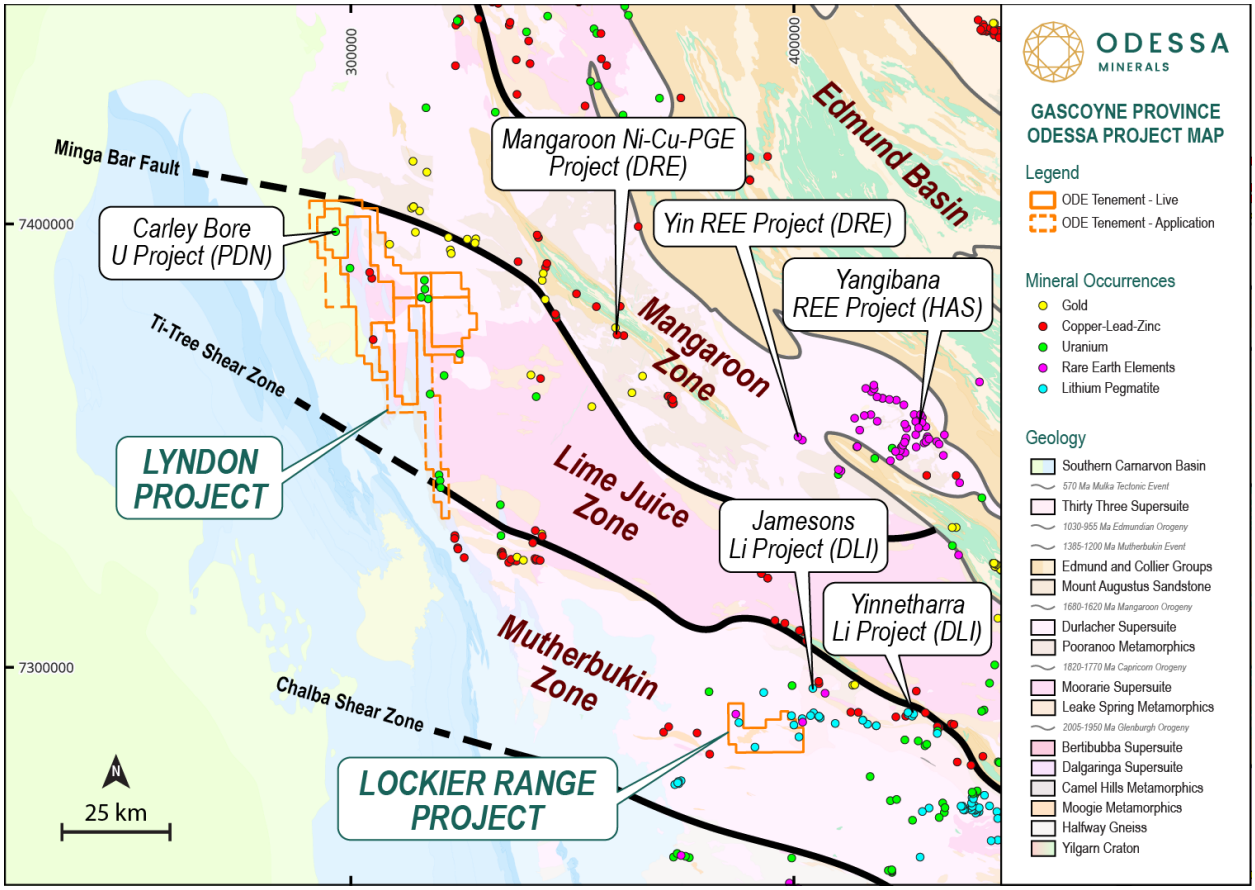

Figure 5: Odessa Minerals regional Gascoyne Project location map overlain with Geological Survey WA Minedex Occurrences.

The Company has previously conducted detailed airborne magnetics and radiometrics over a large part of the project area. The Project encompasses multiple MINDEX occurrences and is prospective for Lithium-pegmatites, uranium, rare earth elements, intrusive Ni-Cu-PGE, orogenic gold and sedimentary-hosted Cu-Pb-Zn mineralisation (Figure 3).

The Project area covers the unconformity between the eastern margin of the Phanerozoic Carnarvon Basin overlying Precambrian basement of the Gascoyne Province. The basement consists of Proterozoic granites, metamorphic gneisses and schists of the Gascoyne Complex. The western parts of the Project include the Palaeozoic-Mesozoic basin margin sedimentary sequences of the Southern Carnarvon Basin including the Merlinleigh Sub-Basin, marked by Devonian sedimentary carbonates; Carboniferous-Permian glaciogene sediments of the Lyons Group; and the siliciclastic sequences of the Cretaceous Winning Group that were deposited coincident with NW-SE rifting.

About Odessa Minerals

Odessa Minerals Ltd (ASX: ODE) is an ASX listed company that holds exploration licenses over highly prospective ground in the highly sought-after Gascoyne region of Western Australia. The Company continues to review projects that provide significant exploration upside and compelling acquisition opportunities, and remains committed to creating shareholder value through discovery, exploration and development of mining projects in tier-one locations.

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