ASX Announcement

15 April 2024

ROLL-FRONT URANIUM POTENTIAL AT RELIEF WELL

Highlights:

- **Relief Well Uranium Prospect immediately adjoins Paladin Energy's Carley Bore Uranium Project (15.6MLbs U_3O_8 announced resource)**
- **Extensive 8km long palaeochannel confirmed at Relief Well, prospective for roll-front style uranium mineralisation**
- **Drill planning underway for testing of roll-front uranium mineralisation at Relief Well**
- **Unconformity-Type and fault-related uranium mineralisation potential along the Gneuda Formation-Moorarie Supersuite contact.**

Odessa Minerals Limited (ASX:ODE) ("Odessa" or the "Company") is pleased to provide an update on uranium potential of the Relief Well Uranium Project ("Project") at Lyndon, located approximately 200km northeast of Carnarvon in Western Australia.

David Lenigas, Executive Director of Odessa, said:

"Re-processing of VTEM data has confirmed the prospectivity of the Relief Well area for significant palaeochannel-hosted uranium mineralisation along strike from Paladin's 15.6 million pound U_3O_8 Carley Bore Uranium Deposit. These palaeochanel-hosted uranium deposits are typically amenable to low-cost, low-impact in-situ leach recovery. Coupled with the at-surface uranium mineralisation at the Jailor Bore and Baltic Bore prospects, the Company believes that the highly under-explored Lyndon Project is set to provide further uranium discoveries in the months to come. Odessa will now proceed with seeking Heritage and Departmental approvals to undertake first-pass drilling to refine key target areas at the Relief Well prospect."

Relief Well Uranium Prospect

Re-processing of the 2007 Newera Uranium Ltd VTEM survey data[1] has confirmed the presence of a palaeochannel at the Relief Well prospect with a strike length of >8km that remains open to the south (Figure 1). Depth-slice analysis of re-processed VTEM imagery has delineated the deepest portions of the palaeochannel that are most likely to host significant roll front-type uranium mineralisation.

Relief Well is directly along strike and an upstream extension of the palaeochannel that is host to Paladin Energy's Carley Bore 15.6MLbs U_3O_8 resource[2] (Figure 2). Stratigraphy is interpreted to consist of the Birdrong Sandstone of the Winning Formation with interfingering shale units that act as an aquitard 'trap' for roll front-type uranium mineralisation.

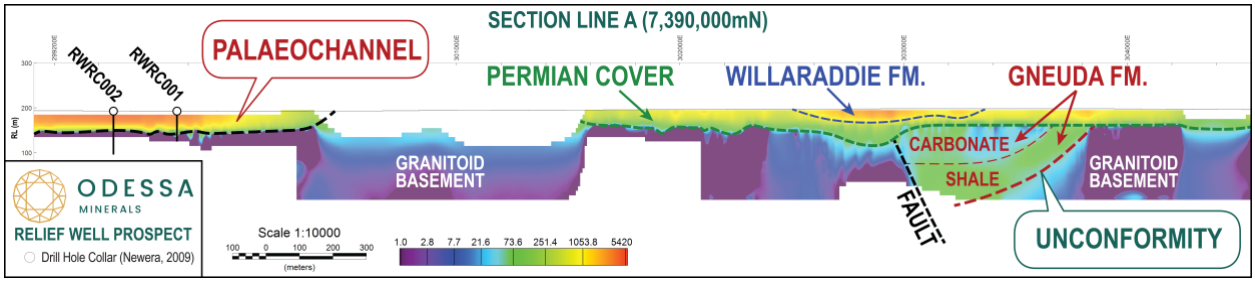

Figure 1: Conductivity Cross Section through Relief Well Palaeochannel. Newera drill holes disaplyed[3].

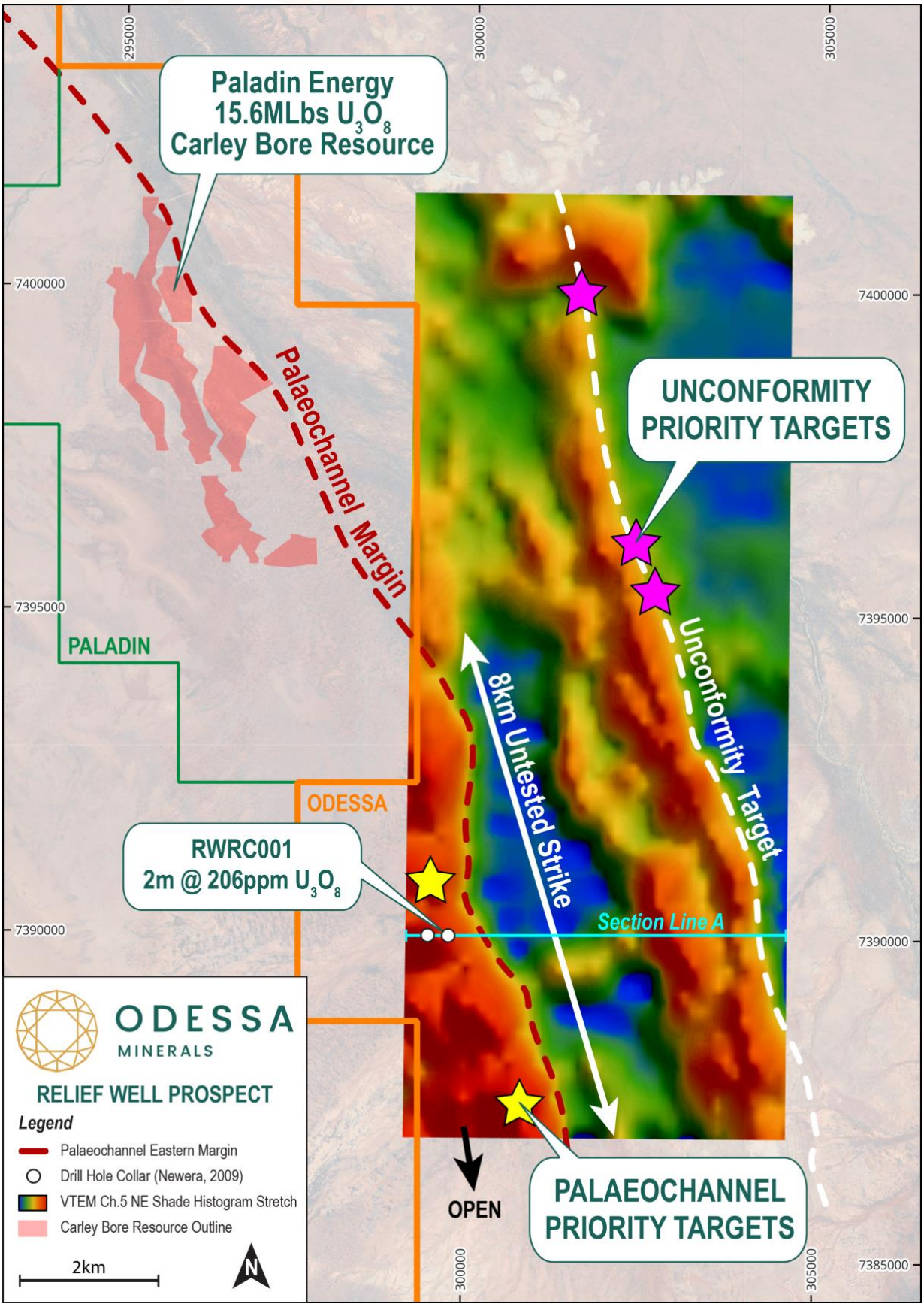

Figure 2: Relief Well Prospect interpreted palaeochannel extension from the Carley Bore Uranium Deposit[2]. Newera drill holes displayed[3].

Next Steps

The Company will now proceed with drill planning and seek approvals from both the Native Title parties and the Department to conduct drilling at the Relief Well prospect.

Newera Uranium Ltd completed two RC holes (prefix RWRC) to test the VTEM palaeochannel anomaly during 2008-2009, confirming the presence of uranium mineralisation as well as shale horizons within the palaeochannel, ranging from 10m to 50m in thickness[3]. Since then, no further drilling was undertaken to test the remaining 8km trend.

First-pass drilling by Odessa will be conducted in transverses to locate REDOX boundaries within the palaeochannel, with a particular focus on the deepest portions of the palaeochannel. Upon review of the results of first-pass reconnaissance drilling, infill drilling will be required to map the extents of REDOX boundaries and continuity of the shale 'trap' horizons throughout the palaeochannel. Any discovered roll-front uranium mineralisation will be systematically tested during infill drilling.

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 unconformity and hydrothermal alteration that may indicate the presence of uranium mineralisation (Figure 3).

Additional VTEM surveying is required 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 to date.

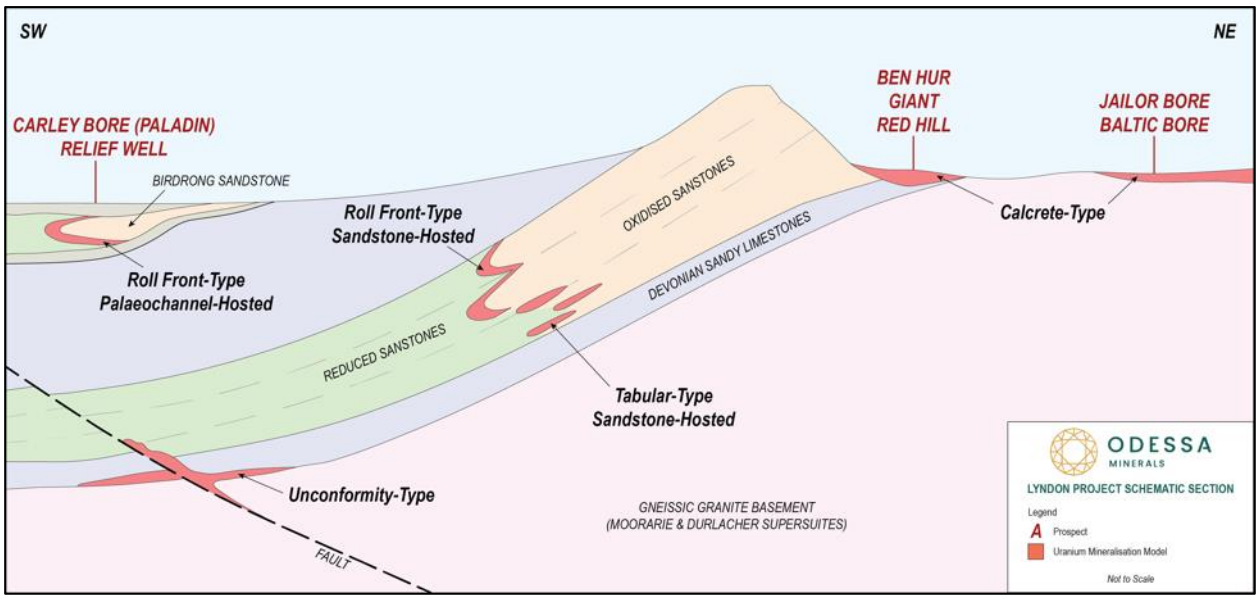

Figure 3: Schematic model section of potential uranium mineralisation styles across the Lyndon Project area. The relative position of prospects are displayed.

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.

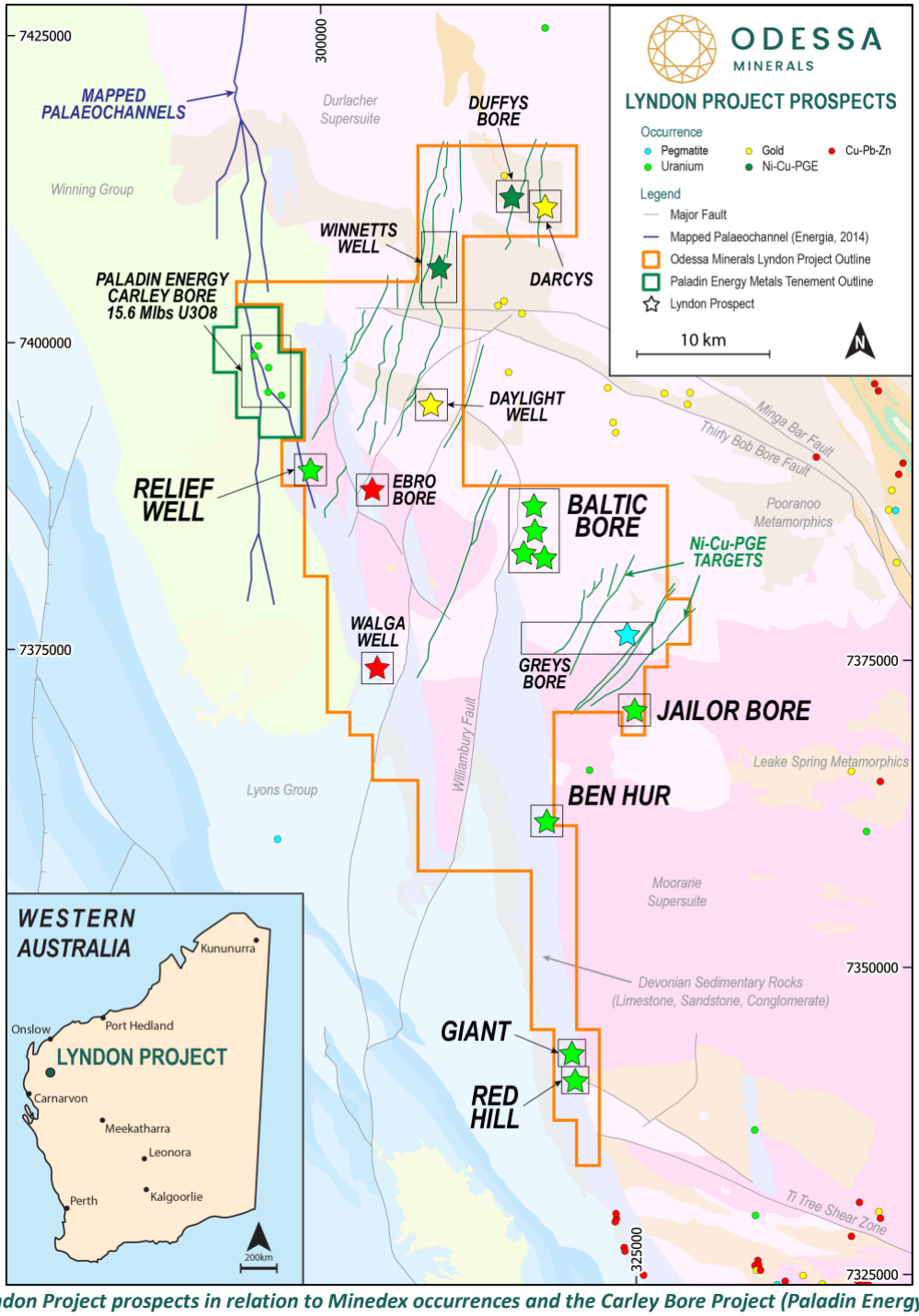

Figure 4: Lyndon Project prospects in relation to Minedex occurrences and the Carley Bore Project (Paladin Energy). Underlain with GSWA 1:500k bedrock geology and structures.

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.

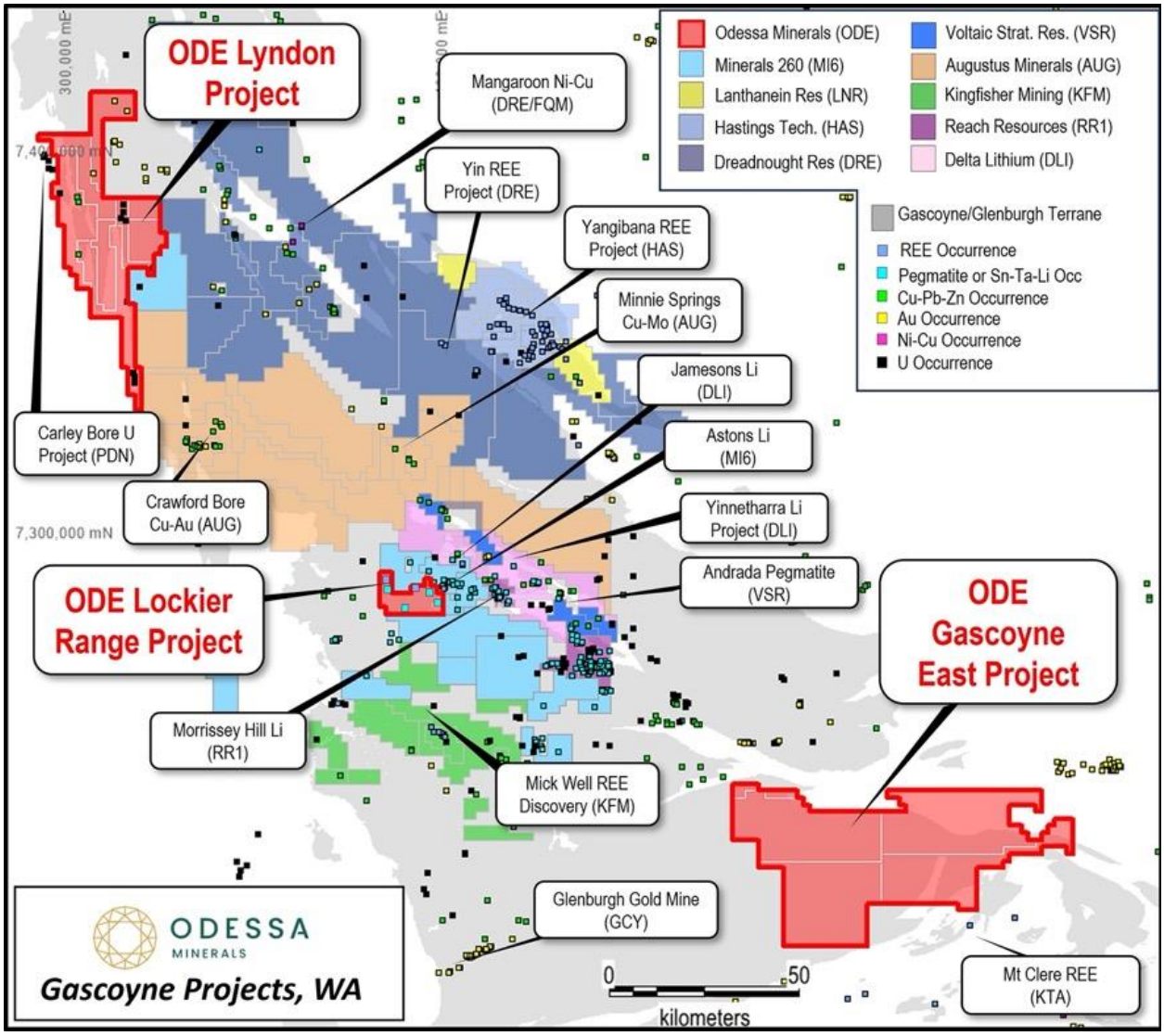

Figure 5: Odessa Minerals regional Gascoyne Project location map overlain with Geological Survey WA Minedex Occurrences.

Referenced Data

1. WAMEX Report A78570, Newera Uranium Ltd
2. ASX Announcement Dated 12th February 2014, Energia Minerals Ltd
3. WAMEX Report A81885, Newera Uranium Ltd

About Odessa Minerals

Odessa Minerals Ltd is an ASX listed company (ASX: ODE) that holds exploration licenses over 3,000km^2 of highly prospective ground in the highly sought-after Gascoyne region of Western Australia. Odessa's Projects are located in close proximity to significant recent lithium/pegmatite discoveries and lie in a north-south corridor of recent world class REE carbonatite discoveries.

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www.odessaminerals.com.au

Competent Persons Statement

Information in this report relating to exploration information is based on historic data compiled by Odessa Minerals and reviewed by Peter Langworthy, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Langworthy is Managing Director (Principal Consultant) of Omni GeoX Ltd and 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 by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Langworthy consents to the inclusion of the data in the form and context in which it appears.

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JORC CODE, 2012 EDITION – TABLE 1 REPORT

1.1 Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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 (e.g.,* *submarine nodules) may warrant disclosure of detailed information.*	**Newera Uranium Ltd Drilling** • RC drilling was conducted by Kennedy Drilling Pty Ltd with individual 1m samples collected. • Sampling was undertaken as 4m composites of 1m samples in areas of no suspected mineralisation, and as 1m samples in mineralised zones. **Newera Uranium Ltd Versatile Time Domain Electromagnetic (VTEM) Survey** **Survey Specifications** • Versatile time domain electromagnetic (VTEM) data was acquired between 20th February to 3rd April 2008 • Line spacing: 500m • Flight Direction 090-180 degrees • Total Line Length: 779.3km • Base Frequency: 25 Hz • No. of Channels: 34 • Current: 154 Amps • Survey Height: 38m above nominal surface • Pulse Width: 7.3 ms **Data Processing** • Conductivity depth transformations calculated for all AEM lines and CDI sections and 3D gridding applied to generate a conductivity voxel in GEOSOFT_VOXEL format • Iso surfaces derived at mS/s factors of: 1-10, 10-100, 100-1,000, and 1,000-10,000 • Resultant depth slices generated between -400mRL and +100mRL at 100m intervals • Data Processing completed by external geophysical consultant Terra Resources
Drilling techniques	• *Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., 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).*	**Newera Uranium Ltd Drilling** • RC drilling was conducted by Kennedy Drilling Pty Ltd with individual 1m samples collected. • Sampling was undertaken as 4m composites of 1m samples in areas of no suspected mineralisation, and as 1m samples in mineralised zones.

Criteria	JORC Code explanation	Commentary
		• Holes were drilled vertically, perpendicular to the expected mineralisation trend
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	**Newera Uranium Ltd Drilling** • RC drilling was conducted by Kennedy Drilling Pty Ltd with individual 1m samples collected. • Sampling was undertaken as 4m composites of 1m samples in areas of no suspected mineralisation, and as 1m samples in mineralised zones. • Holes were drilled vertically, perpendicular to the expected mineralisation trend • No records of recovery exist
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	**Newera Uranium Ltd Drilling** • RC drill chips were logged at one metre intervals both quantitatively and qualitatively by a geologist noting; depth, lithology, colour, moisture, alteration, veining, structure, sulphide content and texture. • The total length of the drill holes were geologically logged
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	**Newera Uranium Ltd Drilling** • RC drilling was conducted by Kennedy Drilling Pty Ltd with individual 1m samples collected. • Sampling was undertaken as 4m composites of 1m samples in areas of no suspected mineralisation, and as 1m samples in mineralised zones. • One duplicate, two certified reference materials (CRM) were inserted into the sample sequence for each hole as part of the quality control and assurance procedure. • CRMs alternated between blank material, Gu-0, Gu-1 and Gu-2 standards.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.*	**Newera Uranium Ltd Drilling** • Samples were analysed by pressed powder XRF methods, analysing for U, V, Th, SO_3, P_2O_5, Sr, Ca, K, Al • Sampling was undertaken as 4m composites of 1m samples in areas of no suspected mineralisation, and as 1m samples in mineralised zones. • One duplicate, two certified reference materials (CRM) were inserted into the sample sequence for each hole as part of the quality control and assurance procedure. • CRMs alternated between blank material, Gu-0, Gu-1 and Gu-2 standards.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Verification of sampling and assaying</td><td>• The verification of significant intersections by either independent or alternative company personnel.
• The use of twinned holes.
• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
Discuss any adjustment to assay data.</td><td>• This report contains a compilation of historic drilling results.
• The oxides U_3O_8 and V_2O_5 are the industry accepted form of reporting Uranium and Vanadium assay results. Where historic results were reported in U ppm and V ppm, assay results were converted to stoichiometric oxides (U_3O_8 and V_2O_5) using the element-to-oxide stoichiometric conversion factors in the table below:
<table><tr><th>Element</th><th>Conversion Factor</th><th>Oxide</th></tr><tr><td>U</td><td>1.1792</td><td>U_3O_8</td></tr><tr><td>V</td><td>1.7852</td><td>V_2O_5</td></tr></table></td></tr>
<tr><td>Location of data points</td><td>• 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.
• Specification of the grid system used.
• Quality and adequacy of topographic control.</td><td>• Historic work by Uranerz, Samantha Mines and Pacminex do not contain accurate survey information. The Company is relying upon the MINEDEX database locations for general description of the historic work and has digitised locations from maps presented in WAMEX reports using known geographical points (e.g. water bores, airfields and creeks) as reference.
• In the case of data presented by Newera and Raiasama, survey is under the control of hand-held GPS with an assumed accuracy of +-5m.
• The Company converts historic data and uses MGA94 Zone 50 in this report.</td></tr>
<tr><td>Data spacing and distribution</td><td>• Data spacing for reporting of Exploration Results.
• 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 estimation procedure(s) and classifications applied.
• Whether sample compositing has been applied.</td><td><u>Newera Uranium Ltd Drilling</u>
• As presented in the body of this release in maps compiled from historic data, the sample and drill spacing is variable.

<u>Newera Uranium Ltd Versatile Time Domain Electromagnetic (VTEM) Survey</u>
• Line spacing: 500m
• Flight Direction 090-180 degrees
• Total Line Length: 779.3km</td></tr>
<tr><td>Orientation of data in relation to geological structure</td><td>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
• 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.</td><td><u>Newera Uranium Ltd Drilling</u>
• RC drilling is vertical for flat-lying palaeochannel and calcrete deposits

<u>Newera Uranium Ltd Versatile Time Domain Electromagnetic (VTEM) Survey</u>
• Line spacing: 500m
• Flight Direction 090-180 degrees
• Total Line Length: 779.3km</td></tr>
<tr><td>Sample security</td><td>• The measures taken to ensure sample security.</td><td>• Historic work only and sample security not reported.</td></tr>
<tr><td>Audits or reviews</td><td>• The results of any audits or reviews of sampling techniques and data</td><td>• This report contains historic information compiled from open file reports. The work is on-going and field checking is pending.
• Processing of VTEM data completed by external geophysical consultant Terra Resources</td></tr>
</table>

1.2 Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	**Lyndon Project** • The Lyndon Project consists of granted exploration licenses under the name of Odessa Lyndon Pty Ltd, a 100% owned subsidiary of Odessa Minerals Ltd. Tenement numbers are. E 08/3217, E 08/3364, E 08/3434, E 09/2435, E 09/2605 • One exploration license is in application E 09/2938 applied for on 2/8/2023 and is pending grant.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	As noted in the body of this release, this project has undergone successive exploration campaigns from the early 1970s until 2014. Data within in this announcement can be found in: • Newera Resources, 2007 – WAMEX A76714 • Newera Resources, 2008 – WAMEX A78570 • Newera Resources, 2009 – WAMEX A81885 • Newera Resources, 2009 – WAMEX A85561 • Energia Minerals Ltd, 2014 – ASX Announcement dated 12 February 2014
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Project area encompasses 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. The western parts of the Project include the Palaeozoic-Mesozoic basin margin sedimentary sequences of the Southern Carnarvon Basin: the Merlinleigh Sub-Basin, marked by Devonian sedimentary carbonates; Carboniferous-Permian glacigene sediments of the Lyons Group; and a thin veneer of the siliciclastic sequences of the Cretaceous Winning Group that were deposited coincident with NW-SE rifting. • Uranium mineralisation is found across multiple styles. Mineralisation at Paladin Energy's Carley Bore Project is roll-front type, hosted within the Cretaceous Birdrong Sandstone and concentrated at redox boundaries. VTEM data suggests the Birdrong Sandstone extends across the Odessa Lyndon Project, in which the Relief Well prospect is situated. Jailor Bore, Baltic Bore and Ben Hur prospects express calcrete-type mineralization. • Daylight Well and Darcy's prospects exhibit lode-gold mineralisation associated with shearing and faulting of the Minga Bar and Thirty Bob Bore fault systems. • Base Metal (Cu-Pb-Zn) mineralization at Walga Well and Ebro Bore resembles sedimentary-hosted Mississippi Valley Type mienralisation. Potential exists for

1.2

Criteria	JORC Code explanation	Commentary
		sedimentary exhalative, Irish-type and carbonate replacement deposit styles. • Ni-Cu-PGE mineralisation will be hosted within the Mundine Well intrusive suite, interpreted to be part of the same intrusive suite as Dreadnought Resource's Money intrusion. • Geology displayed within the Cross Section is interpreted from available GSWA 1:500k scale Open File maps.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *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.*	• Drill hole information presented in the body of this release includes relevant information where applicable and where available/compiled.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Uranium assays are converted to the oxide U_3O_8 using a conversion factor of 1.1792 (U_3O_8 is 84.7% uranium by weight).
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• Historic drilling reported. Mineralisation is considered as relatively flat lying tested with predominantly vertical drill holes. True width and drill width are considered approximately equivalent.

1.2

Criteria	JORC Code explanation	Commentary
Diagrams	• *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.*	• Maps and sections included in the body of this release.
Balanced reporting	• *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.*	• Appropriate disclosure on reporting historic results is provided within this release. All reported results are to be considered as historic and are subject to verification and confirmation works by the Company.
Other substantive exploration data	• *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.*	• Odessa Minerals completed an airborne radiometric survey in 2022. The uranium band anomalism is broadly consistent with the reporting of historic results and coincides with MINEDEX mineral occurrences, thus providing confidence in the presence of significant uranium mineralisation as presented. • Carley Bore Resource source: • ASX Announcement Dated 12th February 2014, Energia Minerals Ltd
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Ground-based mapping and sampling at the Project • Additional VTEM surveying is being considered to extend the extents of available geophysical data across the entire palaeochannel • First-pass drilling of Relief Well to map the extents of REDOX boundaries within the palaeochannel • Follow-up infill drilling based on the results of Phase 1 drilling