

#### KAMEELBURG NIOBIUM INVESTIGATIONS CONTINUE

#### **Highlights**

- Further mapping of Niobium (pyrochlore) rich dykes progressing well, with interpretation to date of intermittent strike length over 200m via multiple narrow dykes
- Additional dykes to be investigated at the periphery of the REE-rich carbonatite via costeaning
- Metallurgical testwork continues, currently awaiting mineralogy and petrology results from QEMSCAN
- Appointment of new country manager to oversee the detailed mapping and sampling of the Niobium and REE rich dykes allowing for a maiden drill programme to commence

Aldoro Resources Ltd ("Aldoro", "The Company") (ASX: ARN) is pleased to provide an update on recent investigations into the niobium rich mafic intrusives which previously returned assay results of 5 to 9 % Nb<sub>2</sub>O<sub>5</sub> (see ASX: ARN release on 27 December 2023). Additional mapping continues for other pyrochlore bearing intrusives with further rock chip samples being collected.

On the south-west margin of the giant Kameelburg carbonatite, recent ground investigations revealed that multiple pyrochlore bearing intrusive dykes were located and could be intermittently traced up to 200m in strike length with widths up to 1m. However, it was found much of the area is covered with colluvium obscuring the full extent of the dyke system which appear to dip to the northeast. As a result, a total of 7 rock chip samples were recently collected and submitted for wet chemistry with results pending.

Name	Easting	Northing	Rock type	Colour	Strike	Dip &Dir.
24KMRK0001	629947	7702141	Siderite	Dark red-brown	n/a	n/a
24KMRK0002	629930	7702138	Siderite	Red-brown	n/a	n/a
24KMRK0003	629918	7702068	Mafic dyke	Light grey	314	38 E
24KMRK0004	629899	7702072	Mafic dyke	Light grey	N-S	vertical
24KMRK0005	629884	7701964	Mafic dyke float?	Black	n/a	n/a
24KMRK0006	629922	7701988	Mafic dyke float?	Light grey	n/a	n/a
24KMRK0007	629890	7702066	Mafic dyke	Light grey	287	84 E

Table 1: Rock Chip sampling data, Datum WGS84\_33South.







Figure 1: Pyrochlore bearing dykes and samples collected and mapping, note the strike extents are interpreted based on intermittent exposures. The limited outcrop sites in the colluvium band, as shown, is restricted to several marble-syenite contacts and the mafic dykes.

#### **Maiden Drilling Programme Planning**

A new country manager/geologist Andreas Palfi has been appointed to oversee the planned mapping and sampling programme aimed at targeting the high grade REE dykes along the southeastern margin of the carbonatite plug and the Niobium-rich dykes on and off the intrusive. The programme aims to model the dykes allowing for drill collars to be strategically placed. As announced on 27<sup>th</sup> December, Aldoro is undergoing advanced discussions with drill contractors for a 2,000m diamond drill core programme.

#### **Metallurgical Testwork Update**

The metallurgical test work for REE and Nb has been protracted due to the Christmas period and backlog of samples from QEMSCAN facility which analyses the mineralogy and petrological makeup of the disaggregated mineral grains including the morphology and size. This will allow for subsequent fine tuning of the sizing and floatation agents including pH. Results are currently pending.





# Kameelburg Geology Reference Map

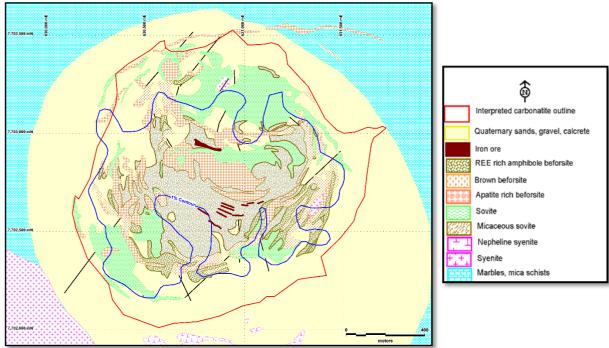


Figure 3: Geological Map of the Kameelburg Carbonatite derived from published data (after Prins, 1981) with >1% TREO contour. Datum is UTM WGS84 zone 33.

#### References

**Prins (1981)**: Figure 18.9 page 18-23, Section 18.4 Ondurakorume Carbonatite Complex by V.J. Verwoerd. Geological Survey of Namibia Publication: The Geology of Namibia, Vol3: Palaeozoic to Cenozoic by R.McG.Miller

#### **About Aldoro Resources**

Aldoro Resources Ltd is an ASX-listed (*ASX: ARN*) mineral exploration and development company. Aldoro has a portfolio of critical minerals including rare earth, lithium, rubidium and base metal projects. The Company's projects include the Kameelburg REE Project in Namibia, the Wyemandoo lithium-rubidium-tungsten project, the Niobe lithium-rubidium-tantalum Project and the Nandee Igneous Complex in Western Australia.





#### Disclaimer

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#### **Competent Person Statement**

The information in this announcement that relates to Exploration Results and other technical information complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). It has been compiled and assessed under the supervision of Mark Mitchell, technical director for Aldoro Resources Ltd. Mr Mitchell is a Member of the Australasian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Mitchell consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

This announcement has been approved for release to ASX by the Board of Aldoro Resources





### JORC Code, 2012 Edition – Table 1

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (eg' 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> <li>Rock samples were collected from outcrop/subcrop of the targeted dyke. At each site approximately 1-5kg of the targeted lithology was collected. Each sample was bagged and tagged (internally and labelled externally).</li> <li>Data recording. At each site pertinent geological and location information was recorded on datasheets, which were later entered into digital spread sheets. Each site was photographed covering each sample site and a general view of the terrain.</li> <li>Each sample will be crushed, pulverised and subsampled (Intertek SP02) and a charge fused with lithium borate and an ICP-MS finish (FP6). Prep work was conducted at Interteks Tsumeb laboratory before being exported to their Perth laboratory for analysis.</li> </ul>
Drilling techniques	<ul> <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>	No drilling reported.
Drill sample recovery	<ul> <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>	No drilling reported
Logging	<ul> <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> </ul>	No drilling reported.





Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <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> <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> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>No drilling reported.</li> <li>For the rock chip and soil sampling the techniques applied are appropriate for initial investigations. They are not intended to be used is any resource calculations.</li> <li>The quality control procedures for the rock sampling are considered good in respect to the use of duplicates and standards which were used to measure the repeatability and consistency of the analytical results.</li> <li>While the measure of representativity is somewhat biased with small samples based on dominate lithology present for the purposes of exploration potential (not resource calculations) the sampling is consider adequate.</li> <li>The 1-5kg rock samples are appropriate given the dykes mineral grainsize. The soil sample size is appropriate given the amount of material sieved to get the sufficient fine material.</li> </ul>
Quality of assay data and laboratory tests	<ul> <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 (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The rock samples were consigned to Intertek's Tsumeb facility before being shipped to Intertek's Genalysis Laboratory in Perth for Lithium Borate Fusion and ICP-MS finish. These techniques are considered appropriate given the refractory nature of REE in conventional total acid leaches. It is unknown what assay techniques were used for the drill samples.</li> <li>No handheld instrument data is reported.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	No drilling reported.





Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <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> <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> </ul>	<ul> <li>The datum used the WGS84-33S,</li> <li>A Hitachi pXRF X-MET8000 Expert GEO unit with inbuilt GPS was used for location data</li> </ul>
Data spacing and distribution	<ul> <li>Quality and adequacy of topographic control.</li> <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 estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The rock sampling was targeted on the outcropping dyke of interest from historical data.</li> <li>The surface sampling is adequate for delineating the 2D spread of any mineralisation but makes no interpretation of the vertical extent of mineralisation. The results must not be considered in any context of mineral grade or resource estimation. Therefore, no resource inferences can be made. The drilling data is not sufficient to indicate any continuity of mineralisation at depth.</li> <li>No mineral compositing has been done for the surface samples, but for the drill samples some composition was done based on lithology.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>The grid rock sampling makes no consideration of any structures other than the dyke extending in country rock.</li> <li>No drilling reported.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples collected by inhouse geologists and lodged with the laboratory under strict export/import procedures.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No sampling audit reviews are mentioned in the open file reports





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	<ul> <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> <li>Exclusive Prospecting Licences EPL 7372. 7373 and 7895 see text and table in release for ownership, agreement type. No native title, wilderness or National Parks impacted. Licences are on local pastoral licences, sub surface minerals owned by the state.</li> <li>All three EPL are held by the related agreement parties. All three licences have renewals pending, as this is their first renewal period no impediments are envisaged. All necessary documents to fulfil the renewal process have been lodged, and are compliant with the various Acts and regulations, so the renewals should be a mere formality.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous relevant exploration was undertaken by: AMCOR (1960s-70s), results are not quoted in this release.</li> <li>Kinloch Resources Limited (2012-2016), results are not quoted in this release</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	• The Kameelburg Project is located in the northern Central Damara Orogenic Belt in Namibia and covers the Cretaceous Kameelburg Carbonatite plug and associated radial dykes intruding precursor syenites in the older host Neoproterozoic marbles and schists. The plug is approximately 1.4km in diameter and rises up to 275m above the surrounding peneplain. The intrusion consists of an initial pre-curser phase of nepheline syenite/syenite followed by two sovite and three beforsite phases with remanent rafts of volcanic breccia and syenite, the vestiges of earlier intrusive phases. The country rock consists of marbles, quartzite's, mica schists of the Damara Supergroup. Rare earth metals are known to occur in all five phases with higher concentrations in the more magnesium and iron rich beforesites. The REE mineralisation style is consistent with fractionated carbonatite intrusive plugs.





Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </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>	<ul> <li>Rock results tabulated in the report have co-ordinates the RL's are derived by the handheld GPS the DEM values are yet to be allocated.</li> <li>No drilling reported.</li> <li>No pertinent information has been excluded in this release.</li> </ul>
Data aggregation methods	<ul> <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> <li>No weighting or averaging techniques or truncations are undertaken in the rock sampling.</li> <li>No data aggregation methods were used.</li> <li>No metal equivalents have been used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <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> <li>No relationships between mineralisation widths and intercepts have been made.</li> <li>No comment on the geometry of the mineralisation has been made.</li> <li>No drilling conducted.</li> </ul>
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.	<ul> <li>Appropriate location and geology maps are presented in the body of the announcement</li> </ul>





Criteria	JORC Code explanation	Commentary
Balanced reporting	<ul> <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> <li>All rock assays have been provided, on the carbonatite and off the carbonatite see ASX:ARN 23 March 2023.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>No other data apart from surface exploration data is presented in this release as the available metallurgical data is still underway.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Short term future work plans involve detailed mapping sampling to reveal the high REE and Nb systems in the Carbonatite Complex. This will allow the placement of drill collars.</li> <li>Diagrams of future work are not provided as the review is required first.</li> </ul>

