**ASX and Media Release**
**12 October 2022**

# Niobe's Rubidium & Lithium Maiden Resource Achieved

## Key Highlights

- **Maiden inferred JORC Mineral Resource estimate delivered for the Niobe Rubidium-Lithium Project of 4.6Mt @ 0.17% $Rb_2O$ and 0.07% $Li_2O$ using a 0.05% $Rb_2O$ cut-off grade.**
- **Equivalent to 8,060 contained tonnes of $Rb_2O$ and 3,080 contained tonnes of $Li_2O$.**
- **Mineral Resource defined by Aldoro's 115 RC holes for 7,318m and historical 40 holes for 1,146m with 29 mineralised domains (pegmatites) identified with most being stacked over three main clusters.**
- **Mineralisation remains open at shallow depths, allowing potential to increase resource size.**
- **Phase 3 diamond drilling is planned to grow the resource size and upgrade the classificiation.**
- **Major achievement in delivering maiden Mineral Resource within 12 months of acquiring the tenement licence.**
- **The Niobe Mineral Resource is one of the highest-grade undeveloped Rubidium deposits globally. A development feasibility study has been commenced.**

Aldoro Resources Limited (**Aldoro**, **The Company**) (**ASX: ARN**) is pleased to provide a maiden Inferred JORC Mineral Resource estimate for its 100% owned Niobe Rubidium-Lithium Project located 80km by road northwest of Mount Magnet, Western Australia. Ashmore Advisory Pty Ltd were contracted to undertake the resource modelling and helped in the phase 2 drilling planning to increase the confidence in the modelling.

The Niobe Rubidium-Lithium Project consists of a cluster of pegmatite dykes that stretch across the 1.4km width of the prospecting licence P59/2137 and 6 named pegmatitic bodies have been identified with four consisting of multiple stacked dykes. Drilling has concentrated on five areas, Niobe Main, Northeast, Breakaway, Southeast and Niobe Flats (single dyke).

The 2022 Aldoro drilling consisted of 115 holes for 7,318m with inclined holes (dip -55 /-60) varying from 30 to 156m deep and allowing the modelling up to 110m deep (vertical). Thick zones of mineralisation remain open (particularly in the south west of the Project) with mineralisation being open along strike and along dip in most directions with extensional drilling. The results of this recent drilling were integrated with the mid 1980's drilling by Pancontential who analysied the Li-Suite metals in 40 holes for 1,146m.

Ashmore Advisory was engaged to complete the Mineral Resource Inferred estimate within the guidelines of the JORC 2012 Code and used a cut-off grade of 0.05% $Rb_2O$ to produce

**4.615Mt @ 0.17% Rb2O and 0.07% Li2O (Inferred Resource Estimate)**

| Type | Total High Level Estimate | | | | |
|---|---|---|---|---|---|
| | Tonnage t | Rb2O % | Li2O % | Rb2O t | Li2O t |
| Oxide | 111,000 | 0.15 | 0.07 | 170 | 70 |
| Transitional | 974,000 | 0.17 | 0.05 | 1,670 | 530 |
| Fresh | 3,530,000 | 0.18 | 0.07 | 6,220 | 2,480 |
| **Total** | **4,615,000** | **0.17** | **0.07** | **8,060** | **3,080** |

Table 1: Inferred Mineral Resource Estimate

Notes

- Reported above a $Rb_2O$ cut-off grade of 0.05%, Rubidium Carbonate ($Rb_2CO_3$) price at 99% is USD $1,050/kg – Reference: Metal.com
- Tonnages and grades have been rounded to reflect the relative uncertainty of the estimate

The Mineral Resource estimate has been classified as Inferred on the basis of confidence in the geological and grade continuity and consideration of the sampling and assay quality, sampling density and confidence in the estimation of the $Rb_2O$ and $Li_2O$ grade.

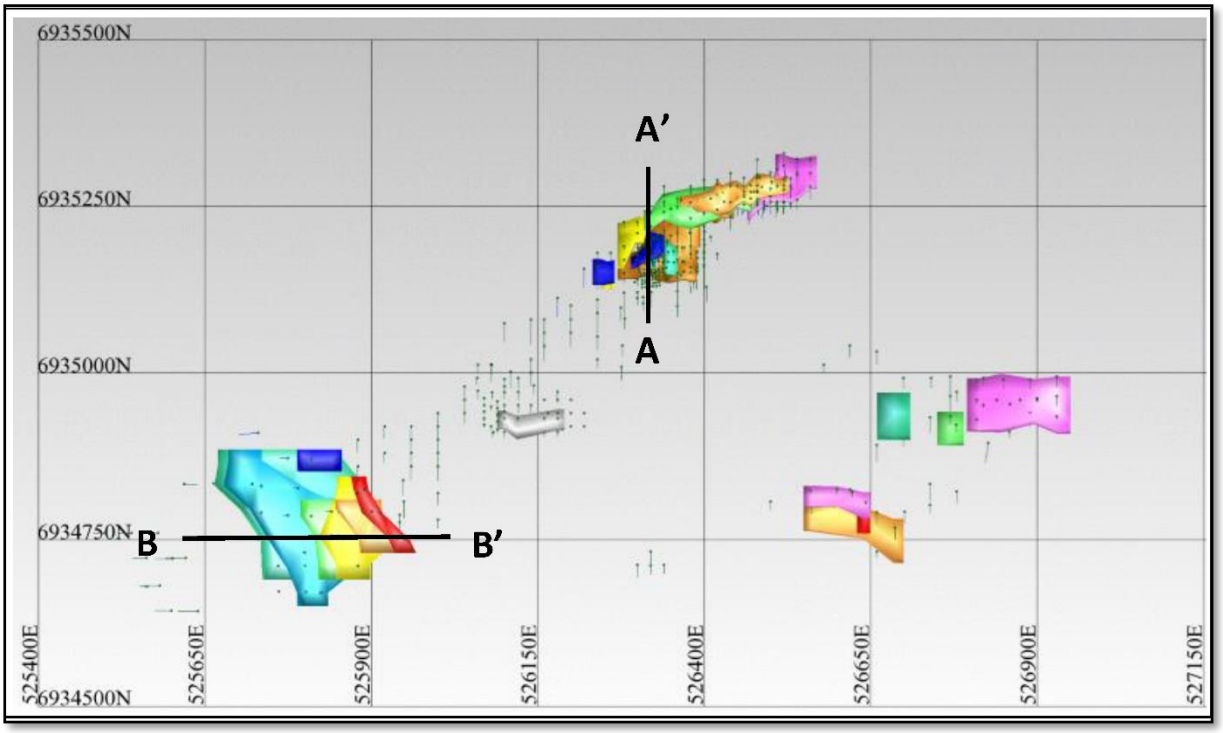


*Figure 1: Plan view of the mineralisation domains and wire frames*. Note the image shows all the historical holes where drilling has lithological control but not all historical holes were analysed for rubidium and lithium.

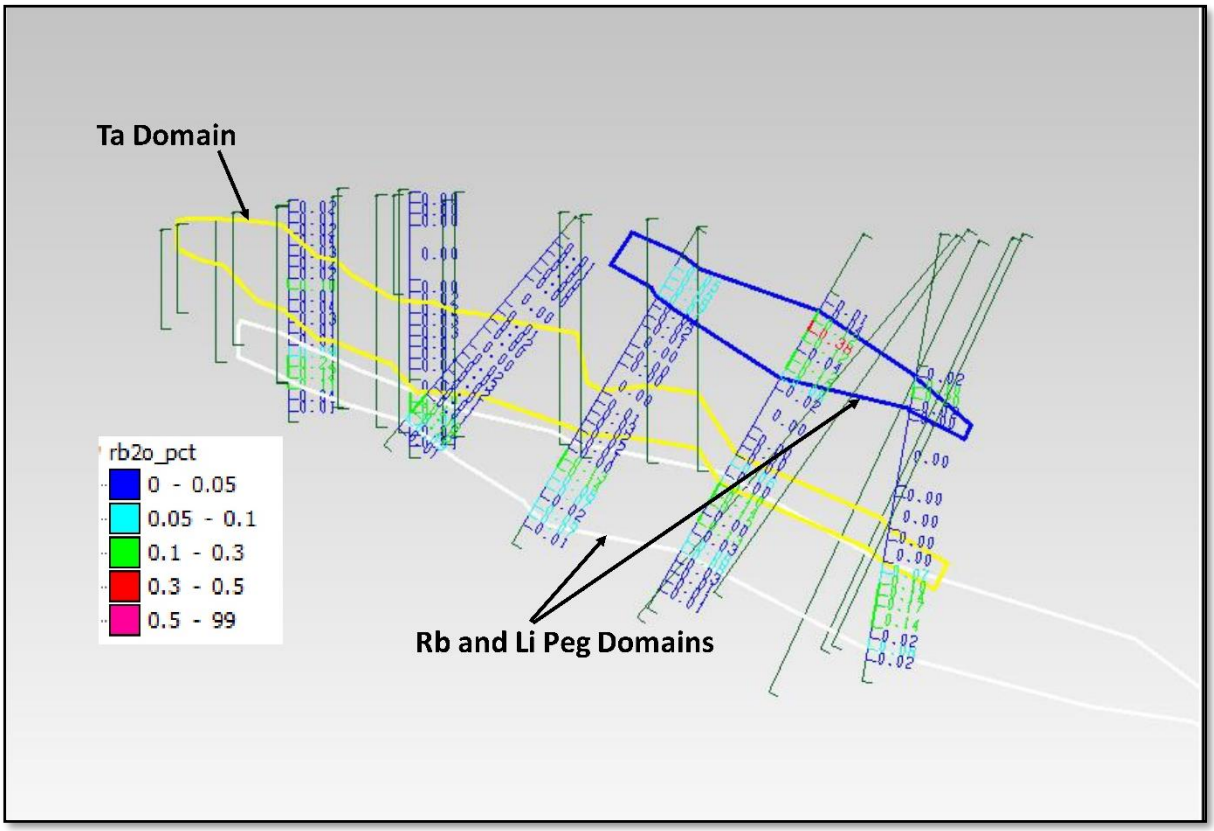


*Figure 2:Cross section view of Niobe's mineralised section A-A' (see Figure 1)* through the northern dipping pegmatites, Niobe Main with $Rb_2O$ assays

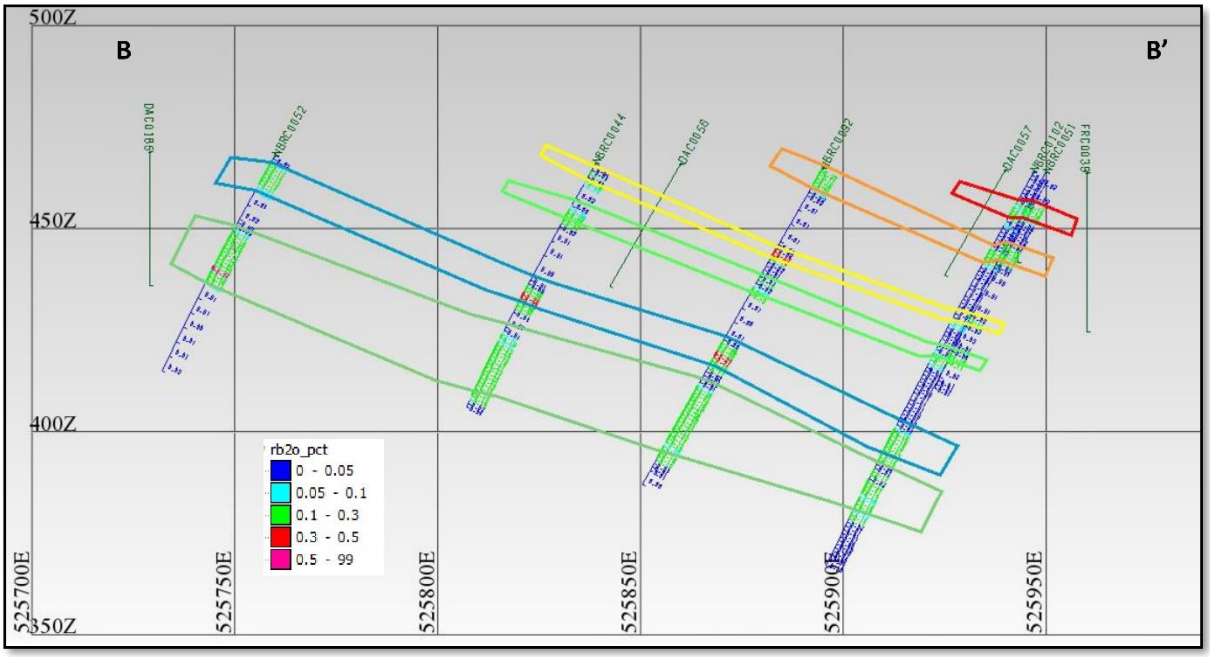


*Figure 3: East-West cross section B-B' through the breakaway pegmatitites, which dip to the east showing $Rb_2O$ assays*

## Summary of JORC 2012 Table 1

A summary of JORC Table 1 (included as Appendix 1) is provided below for compliance with the Mineral Resource and in-line with the ASX requirements of listing rule 5.8.1

***Geology and Mineralisation Interpretation***

The Niobe project lies in the east-northeast trending Archean Dalgaranga Greenstone Belt, a synclinal belt approximately 50km long and 20km wide consisting of metasediments, felsic volcanics and lesser basalts within the Murchison Terrane. The NE/NNE trending synclinal axis is interpreted to lie NW of the project area and accounts for the general strike of the pegmatites. The underlying geology within the Niobe project area is dominated by felsic volcanics and volcaniclastic sediments in the northwest corner, whilst the remainder of the area is underlain by a gabbro sill with an ultramafic base that outcrops to the southeast of the licence. The mapped pegmatites are within the upper section of the gabbro sill and are partially obscured by colluvium associated with a southerly flowing drainage system. The pegmatites are up to 30 metres thick, trending east-northeast with a moderate northerly dip and are typically coarse grained dominated by a quartz-feldspar-mica assemblage. The pegmatite morphology is variable, including lenticular and sigmoidal forms that are zoned with a quartz core and halos of different minerals including microlite, beryl, fluorite, topaz, muscovite, zinnwaldite, lepidolite, tourmaline, tantalite-columbite, cassiterite and scheelite. Pegmatite swarms are found in the northern part of the greenstone belt and are interpreted as late-stage fluidisation events derived from the local granitoids which are hosted in metagabbro and pelitic schists. Tantalum, beryllium, tin, tungsten, lithium and molybdenum mineralisation is known to be associated with the pegmatites.

An Aldoro sponsed ore characterisation study conducted by UWA using XRD and TIMA analysis found the primary mineralogy of selected surface samples includes quartz, albite feldspar, and Fe-rich muscovite. Li-rich phases include zinnwaldite and small amounts of petalite. Secondary mineral phases include orthoclase, oligoclase, monazite, topaz, zircon, nepheline, kaolinite, corundum, almandine, and grossular garnets. Overall mineralogy is relatively simple with the presence of medium to coarse crystal grains, with some replacement and small amounts of replacement and intergrowth. Rb levels were found to increase with the presence of micas and elemental mapping revealled some Rb backgound levels within the albite, but the high levels of Rb are dominant in the micas in particular the zinnwaldite and Fe-rich muscovite.

The Mount Farmer pegmatites generally dip at 30 to 40 degrees to the Northwest and strike Northeast with stike lengths over 1000m and variable thickness from <1 to 40mand appear as a number of stacked dykes, with at least three in the Main/Northeast area. The Breakaway pegmatites strike over 250m Northwest and dip 30-40 degrees to the east and appear to be controlled by an interpreted sinistral movement along Northeast-southwest fault and consists of at least 7 stacked pegmatites, the largest 30m thick.

Over 300 drill hole have been drilled from historical drilling, however only 31 of these have had their cuttings analysed for lithium suite elements (ASX:ARN 27 August 2021) with 1m sample intervals at ~10m E-W by 15m N-S. In 2022, Aldoro undertook two RC drilling programmes with 115 holes drilled for 7,318m over the Main, Northeast, Breakaway, Southeast and Niobe Flats bodies. A total of 29 individual pegmatites were intersected with widths of <1 to 60m thick with an average of 6.9m thickness. The pegmatites dykes generally dip between 30 to 40 degrees with the Main, Northeast and southeast dipping to the northwest, Breakaway to the east- northeast and Niobe flats appears to be flat lying. Drill foot print areas vary with Main/Northeast 450m along strike by 60-200m wide (3.25ha),

Breakaway 200 x 250m (4.37ha), Southeast 2 main areas of 200 x 50m (1.67ha) and Niobe flats 100m by 25m (0.23ha). The pegmatite Rb and Li mineralisation is highest in the northern clusters, the Breakawy, Main and Northeast occurrences.

***Drilling Techniques***

The drilling database used for the Mineral Resource Estimate consists of 155 RC holes for a total of 8,464m with a total of 2,354 one metre assays across 411 pegmatite intersections for over 3,000m of pegmatite. Drilling was conducted at a range of densities based on the drill programme with general spacing 20x20m for Main and 20x40m Northeast, 40x50m breakaway and 30x30m Southeast. The RC drilling utilised a 5" rockface sampling hammer and a cyclone cone splitter for representative samples.

| Company | Year | Drill Type | Number of holes | Metres Drilled | Pegmatite Interval sampling | Number of Pegmatite Samples |
|---|---|---|---|---|---|---|
| Pancontinental | 1985 | RC | 20 | 528 | 1m | 327 |
| Pancontinental | 1986 | RC | 20 | 618 | 1m | 396 |
| Aldoro | 2022 | RC | 115 | 7,318 | 1m | 2354 |
| **Total** | | | **155** | **8,464** | | **3,077** |

Table 2: Drilling data used in the resource estimate.

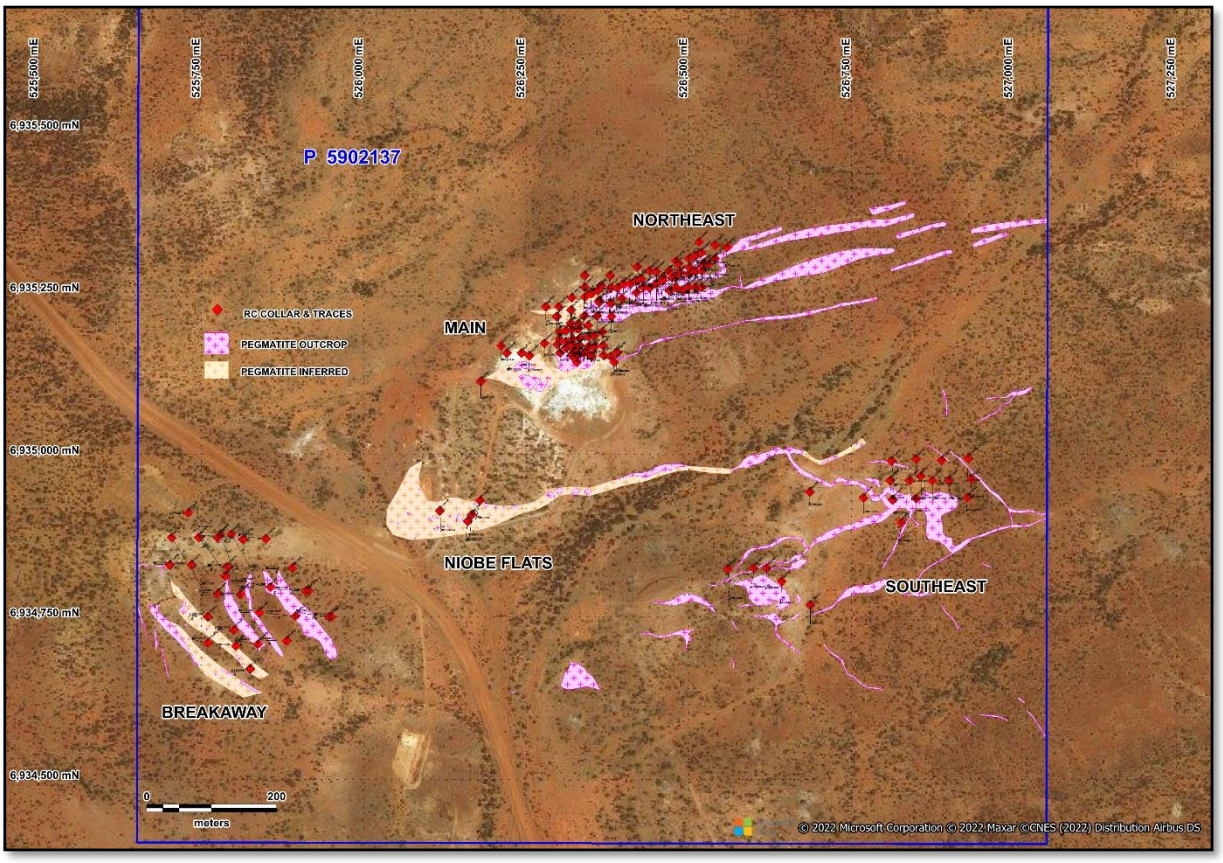


*Figure 4 Drilll hole plan with drill traces*

***Sampling Techniques***
RC samples were either cone split (2022) or spear sampled (1985/86) at 1m intervals in pegmatite and contact zones to produce a sample on average in the 2-3kg range. These samples upon arrival to the lab were sorted, dried and pulverised to -75µm with a quality target of 85% passing, and linear split to produce a 25g charge

***Sampling Analysis***
The 2022 RC drill chip samples were sent to Intertek Genalysis where the samples were dried, crushed, sub sampled with a charge analysed by sodium peroxide fusion method FP6/OES and FP6/MS in Al, B, Ba, Be, Ca, Cs, Fe, K, Li, Mg, Mn, Nb, P, Rb, S, Sn, Sr, Ta. The 1985/86 samples were analysed at SGS where they wer dried, pulverised to -80mesh, split and pulverised again to -200mesh in Cr steel mill before 3 charges were taken for 3 separate analytical techniques. 1) XRF-1 (Nb, Rb) pressed powder XRF method, 2) ERF-1 (Ta, Sn, Cs, K) low dilution fusion XRF and 3) D3(a) (Li, Na) mixed acid total digest with a AAS finish.

***Mineral Resource Classifcation***
The Mineral Resource estimate is classified as inferred on the basis of confidence in the heologiccal and grade continuity and by taking into account the quality of the sampling and assay data, and confidence in the esitimation of the $Rb_2O$ and $Li_2O$ content. Continuity analysis indicates that more sampling is required to improve the structure of the variograms and enable the estimate to improved from the inferred status.

***Estimation Methology***
A block model was generated in Surpac software. The parent block dimensions used were 5m NS by 5m EW by 2.5m vertical with sub-cells of 1.25m by 1.25m by 1.25m. The parent block size dimension was based on approximately half drill hole spacing of the closest spaced drilling at Niobe.

The block model was created and $Rb_2O$ and $Li_2O$ were estimated in Surpac using Ordinary Kriging ("OK") grade interpolation in up to three passes. The first pass used a minimum of six composites and a 20m search radius. For the second pass, a minimum of four composites and a 40m search radius were used. For the final pass, a minimum of two composites and a 60m search radius were used. A maximum of 16 composites was used for each pass.

***Cut -off Grades***
The mineral Resource Estimate for the Niobe deposit has been reported above a cut-off grade of 0.05%$Rb_2O$ to represent the portion of the resources that may be considered for economic extraction by open pit methods. While this cut off grade is commensurate with cut-off grades used in China, elsewhere no standerd is set as the majority of Rb produced is by lithium-spodumene producers who only declare a $Li_2O$ cutoff as Rb is a by product. Granada Gold (TSX.V:GGM - 22 August 2022) in Canada has released an inferred resource with a 170ppm bottow cut-off, well below 500ppm cut-off used by Aldoro

***Mining Factors***
The mineralisation investigated at Niobe is shallow and suitable for open-pit mining. It is anticipated that due to the open ended nature of the Resource drilling so far that additional drilling will extend the mineralisation beyond the current extent of the inferred Mineral Resource estimate. The interpreted pegmatites have only been investigated to a vertical depth of 110m and this can be extended to 200m.

***Metallurgical Factors***

Preliminary metallurgical testwork is currently underway at the School of Minerals Processing & Bioengineering at Central South University in Changsha, China under the guidance of Professor Zhiguo He. Dr He's research work is predominantly focusses on the beneficiation and extraction of rare metals such as rubidium and lithium from a variety of minerals. (**ASX:ARN 2 May 2022**). Dr He is adapting his various technologies in mineral processing, including combining the process of magnetic and flotation separation and selective precipitation and solvent extraction technologies to enhance the enrichment of rubidium and lithium recoveries from pegmatites.

Dr He has recently completed separability and extractability projects for five large rubidium/lithium mines in China. Having acquired ten authorised invention patents in China is evidence on continuing his commercialisation processing research. By utilising Dr He's technology, total production cost of rubidium compounds (RbCl, $Rb^2CO^3$, $Rb^2SO^4$, etc) from low rubidium content tailings (rubidium grades as low as 0.07% or 700ppm) is less than 50% of the saleable product market value.

**ENDS**

**About Aldoro Resources**

Aldoro Resources Ltd is an ASX-listed (***ASX: ARN***) mineral exploration and development company. Aldoro has a portfolio of pegmatite critical minerals with the Wyemandoo and Niobe pegmatite projects located in the Murchison Province. Wyemandoo is an early stage project with a large corridor of pegmatite swarms with Lithium, Rubidium and Tungsten mineralisation. The Niobe project is another pegmatite critical metal project with anomalous rubidium, lithium, caesium and tantalum mineralisation. The company also has a nickel focused advanced exploration at the Narndee Igneous Complex, which is prospective for Ni-Cu-PGE mineralisation.

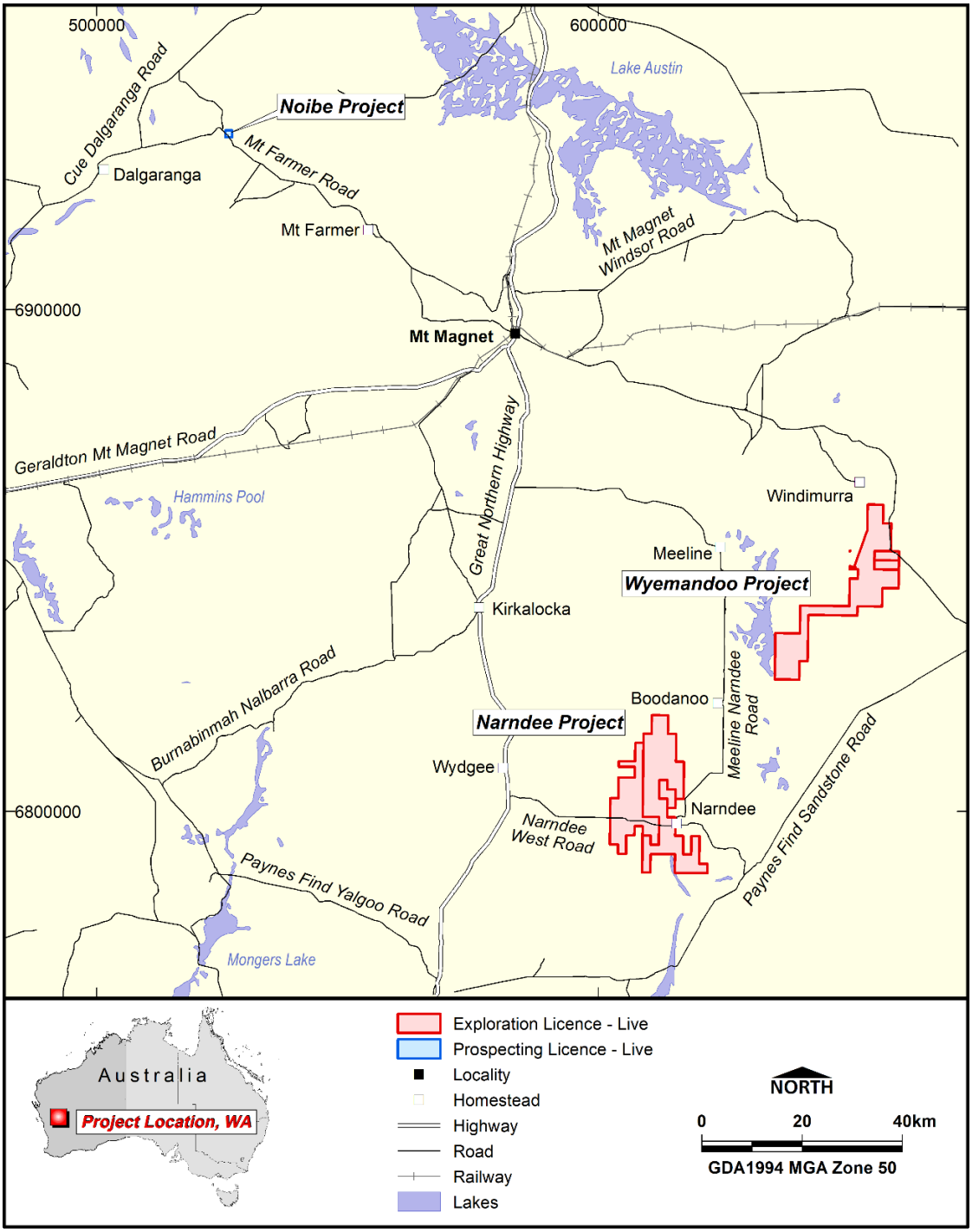


*Figure 5. Location of the ARN landholding over the NIC and Niobe projects.*

**Disclaimer**

Some of the statements appearing in this announcement may be in the nature of forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Aldoro operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Aldoro's control.

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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, a technical (geological) director of 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 – Appendix 1

# JORC Code, 2012 Edition – Table 1 report template

## 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 (eg 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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • No details provided from Pancontinental' s report other than samples were collected at 1m intervals.<br>• It is unknown how representative these samples are, given they are historical in nature with limited data provided. Pancontinental (1985-86) reported taking 3kg splits from the RC drill chips.<br>• The mineralisation of the pegmatites at Niobe is based on the analytical results by successive explorers including Tantalum Australia who conducted extensive drilling to define a tantalum resource (not the target commodity of the Exploration Target). Petrology did identify zinnwaldite micas as the main source of Li and presumably Rb and Cs.<br>• Pancontinental conducted RC drilling collecting 1m interval samples, however no comments on the sampling procedures were documented.<br>• The main lithium mineral was zinnwaldite, in a micaceous cluster form, which may have had an influence on the sampling methodology if not considered.<br>• Aldoro collected outcrop rock chips and samples from reverse circulation or RC (chip) drilling.<br>• Drilling for assay samples was undertaken on a regular spaced grid. All potential ore intervals and their contacts into barren wall rock were sampled.<br>• RC drill hole samples were collected in 1m intervals from the beginning to end of each hole. Each 1m sample was split directly using a rig-mounted cyclone splitter and then collected into a uniquely numbered calico bag. The remaining material for each 1m interval was collected directly off the cyclone into a numbered plastic bag and kept near the drill site for geological logging. Representative 1m |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | samples for pegmatite intervals and 4m composites for country rock samples were collected.<br>• Mineralisation was initially determined visually and confirmed by geological logging and geochemical analyses. |
| ***Drilling techniques*** | • *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).* | • RC drilling using a Schram universal rig was used by Pancontinental (1985-86) and a NQ face sampling hammer and NQ 4" rods. The holes were orientated by compass and clinometer (rig). No down hole orientation tools were reported probably due to shallow nature of the drilling.<br>• RC drilling using a Schram T450 universal rig and rock face sampling hammer with 127mm diameter (5") was used by Aldoro in 2022. The holes were orientated by compass and clinometer (rig). A gyro probe was sent down the hole at the end of each hole and orientation data recorded every 30m. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • No reporting of drill chip recoveries was mentioned on the logs by Pancontinental.<br>• It is unknown what measures were taken to maximise sample recovery by Pancontinental.<br>• It is unknown any relationship between recovery and grade, as recovery was not reported by Pancontinental.<br>• Sample recoveries assessed qualitatively, no routine weighing or other assessment processes by Aldoro.<br>• Standard drilling techniques used by Aldoro to maximise sample recovery with cone splitter on cyclone used to collect samples in a calico bag and the remainder into a green plastic bag. |
| ***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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | • RC holes were geologically logged by Rig Geologists. No geotechnical logging was completed by either party.<br>• The logging completed by both parties is qualitative.<br>• The RC chips have been logged on a lithological rather than a metreage basis. No volume comparisons were made between sample intervals. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *The total length and percentage of the relevant intersections logged.* | • Representative drill chips for each 1m interval in the RC holes were collected by the Rig Geologist. The drill chips from these intervals were dry and wet sieved and then lithologically logged. The RC logging undertaken on the 1m intervals documented the lithology, colour, texture, alteration and mineralisation of each interval using Aldoro's standardised logging codes. |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | • It is not known what method the RC chips were subsampled by Pancontinental other than they were split, collecting a 3kg split per metre.<br>• Sample control duplicates were taken in all mineralised zones by Pancontinental, with 84 samples collected at 3-5m intervals. These were analysed, also at SGS separately, and results compared with their counterparts, four were found outside acceptable limits. Investigation found one due to interval error and the other 3 were due to grind issues with coarse micas in the charge residue.<br>• It is not known whether grain size was a consideration in the sub-sampling technique used by Pancontinental.<br>• The size of the sample (approximately 3 kg) from the drilling method used by Aldoro is the industry standard for the mineralisation style analytical technique. The cone splitter used on the cyclone is considered an appropriate technique for reducing bias in the sample collection.<br>• RC samples were either cone split (2022) or spear sampled (1985/86) at 1m intervals in pegmatite and contact zones to produce a sample on average in the 2-3kg range. These samples upon arrival to the lab were sorted, dried and pulverised to -75µm with a quality target of 85% passing, and linear split to produce a 25g charge.<br>• QAQC standard samples of CRM pulps and coarse blank material were included routinely by Aldoro.<br>• It is not known by Aldoro whether grain size is a consideration in the sub-sampling technique as no size screening has been conducted. |
| ***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.* | • The samples collected Pancontinental were analysed at SGS with the same preparation (dry pulverised to -80mesh, split pulverised to -200mesh in Cr steel mill) but 3 different analytical methods |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *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.*<br>• *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.* | 1. XRF-1 (Nb, Rb) pressed powder XRF method<br>2. XRF-1 (Ta, Sn, Cs, K) low dilution fusion<br>3. D3(a) (Li, Na) mixed acid total digest with AAS finish<br>• By today's standards these techniques are not ideal and have low sensitivity given the refractory nature of some elements with sodium peroxide fusion and ICP-MS being the recommended method.<br>• For reported historical drilling, QAQC procedures, accuracy, and precision have not been established.<br>• The 2022 RC drill chip samples were sent to Intertek Genalysis where the samples were dried, crushed, sub-sampled with a charge analysed by sodium peroxide fusion method FP6/OES and FP6/MS in Al, B, Ba, Be, Ca, Cs, Fe, K, Li, Mg, Mn, Nb, P, Rb, S, Sn, Sr, Ta.<br>• Assay and laboratory procedures used are industry standard. The technique is considered near total for the elements of interest.<br>• A Bruker S1 Titan with factory calibration was used for pXRF readings, but these readings have not been reported as wet geochemistry is considered a more appropriate analytical tool for assessment of the mineralisation.<br>• Standard reference materials were analysed routinely by pXRF and found to be reporting withing acceptable limits.<br>• No geophysical tools used by Pancontinental or Aldoro. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • No verification techniques were reported by Pancontinental.<br>• Aldoro's visual inspections were logged, interpreted and reported.<br>• No twinned holes were drilled by either party.<br>• Full documentation procedures including manual checks were reported by Pancontinental, including the laboratory except for the final analytical data. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • All survey, lithology and assay data were input to a database by Aldoro. Data validation and cross-checking was conducted using manual checks and an automated verification function.<br>• Assay data was presented as raw lab data with no assay adjustments. |
| ***Location of data points*** | • *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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • The hole collars were established on a surveyed grid system with no GPS data given. The local grid was converted to eastings and northings by georeferencing maps with key landmark identifiers then comparing to located satellite images, giving confidence to location data. The collar survey accuracy is unknown.<br>• The converted data used GDA94 UTM Zone 50 datum.<br>• The topographic control was limited to STRM data, with the relative topographic error minimized due to the generally flat topography and close collar spacing.<br>• Drillhole collars were measured by Aldoro using a handheld GPS, and the coordinates are in GDA94, UTM Zone 50S format.<br>• Aldoro holes are surveyed by a Reflex GYRO SPRINT-IQ.<br>• No downhole survey information is available for reported historical drilling. |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • The drill hole spacing completed by Pancontinental was generally 10m (E-W) and 15m (N-S) with angle holes drilled in along N-S lines with offline vertical holes. The 31 holes were confined to an area approximately 80m (E-W) by 65m (N-S).<br>• The grid pattern used by Aldoro is considered adequate for establishing geological and grade continuity both along strike and down dip. The data acquired from drill holes is considered adequate for the definition of a resource estimation in accordance with the JORC code.<br>• Sample compositing has not been applied by either party. |
| ***Orientation of data in relation to geological structure*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have* | • The orientation of drilling and sampling completed by both parties is near perpendicular to the interpreted mineralised pegmatites, which has enabled accurate measurement of the true width of the mineralisation and unbiased sampling. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *introduced a sampling bias, this should be assessed and reported if material.* | |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • It is unknown what sample measures were taken to ensure sample security by Pancontinental.<br>• The chain of custody for sampling procedures and sample analysis was managed by Aldoro's Rig Geologists and Field Technicians.<br>• Sample material was geologically logged and the numbered calico sample bags were then collected from designated pegmatite intervals. These intervals were determined by the Aldoro Rig Geologist either at the time of drilling or at the completion of a drill hole.<br>• Individual calico sample bags from the drilling were placed in poly weave bags and then trucked to the Intertek laboratory. Staff from the laboratory checked the sample bags and totals for each sample batch before commencing sample preparation.<br>• Remaining RC chip samples collected for the drill hole library and are stored in secure facilities.<br>• Assay pulps for all assayed samples are retained in permanent storage by Aldoro. |
| ***Audits or reviews*** | • *The results of any audits or reviews of sampling techniques and data.* | • No audits or reviews were reported on the sampling technique or data generated by either party. |

## 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 Niobe Project consists of a single prospecting licence P59/2137, which is 100% held by Aldoro Resources Ltd<br>• The tenement is located 70km from Mount Magnet.<br>• The tenement is in good standing and there is no known impediment to obtaining a license to operate in the area. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *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.* | |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • Historical exploration was initially for beryl by prospectors then primarily for tantalum with the development of the Niobe resource. There has been no systematic exploration for Rubidium, lithium or Caesium despite the presence of LCT type pegmatites. e<br>○ **Late 1950's to 1984**. Exploration was conducted by prospectors who located the main mineralised zones of the pegmatites and quarried these for beryl and included limited exploitation of eluvial tantalite and cassiterite.<br>○ **1984 to 1999**. Systematic exploration by Pancontinental Mining Ltd included geological mapping, rock chip sampling, drilling (RC, RAB, Diamond), costeaning, petrography, metallurgy, resource definition, trial mining and rehabilitation. Their focus was tantalum but included some lithium analysis. Geochemical analysis from 40 holes predominantly into the main Niobe pegmatite dilation but also into the northeast Niobe lobe were analysed for Li and included Cs, Ta, Rb, Nb, Sn, Na, and K. A total of 13 surface rock samples and 38 semicontinuous costean samples were also analysed with the same suite of elements. A total of 15 RC chip samples were petrographically described, 4 of which contained zinnwaldite.<br>○ **1999-2003** Australian Gold Mines NL and Kemet Corporation formed Tantalum Australia and undertook assessment of the Dalgaranga and Warda Warra pegmatite fields with the view to exploit the tantalum mineralisation. Work included new geological mapping, conducted further drilling and resource investigation. They processed stockpile and tailings through the Dalgaranga tantalum plant.<br>○ **2007-2017** Diversity Resources Pty Ltd acquired the ground and operator Meridian 120 Mining Pty Ltd |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | conducted a detailed review, undertaking new geological mapping, orientation soil sampling and compilation of a digital database.<br>○ **2018-2021** Meridian acquired the project and undertook further geological mapping, rock chip sampling and consolidation of the projects database. A total of 6 rock chip samples and 2 drill chip resamples were collected and analysed for Li, Cs, Nb, Rb, Sn and Ta. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The area is underlain by gabbroic rocks of the Niobe layered mafic intrusion. The Niobe mafics are separated from the main Windimurra mass by a major fault zone and a sliver of felsic and sedimentary schists. The layering trend at Niobe is very different from that of the main Windimurra mass. It generally strikes east-north-easterly, and dips to the north. Metamorphic grade at Niobe is possibly higher than at Windimurra.<br>• There are numerous pegmatite dykes at Niobe. Some contain lithium mica. Composite rock samples from the pegmatites have given assays up to 2.6% lithium oxide, 276 ppm tantalum, and 3296 ppm tungsten (0.42% $WO_3$).<br>• The nearby granite pluton, immediately east of the licence area, is probably the parent source of the pegmatites this granite is named as part of the Wogala Suite. It is described as a metamorphosed monzogranite containing muscovite and biotite and local accessory fluorite.<br>• In a geochronology report (Wingate, 2015) the same granite is said to be part of the Tuckanarra Suite and a sample of it from near the north-eastern corner of the current licence area is described as biotite monzogranite with quartz, K-feldspar, plagioclase, biotite and muscovite plus accessory minerals. Its magmatic crystallisation age |

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>was determined by the zircon uranium-lead method as 2,678 million years (plus or minus 8 million years).<br>• Topaz, fluorite, beryl, lepidolite and trace tantalite have been recorded at Mount Niobe not far from the project area, suggesting strong fractionation of a granite/pegmatite magma capable of depositing rare metals.</td></tr>
<tr><td>Drill hole Information</td><td>• 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:<br>○ easting and northing of the drill hole collar<br>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar<br>○ dip and azimuth of the hole<br>○ down hole length and interception depth<br>○ hole length.<br>• 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.</td><td>• Historical drilling results completed by Pancontinental were reported to the ASX on 27/08/2021.<br>• Aldoro drilling results were reported to the ASX on 21/07/2022 and 10/08/2022.<br>• The drilling database used for the Mineral Resource Estimate consists of 155 RC holes for a total of 8,464m with a total of 2,354 one metre assays across 411 pegmatite intersections for over 3,000m of pegmatite.<br><table><tr><th>Company</th><th>Year</th><th>Drill Type</th><th>Number of holes</th><th>Metres Drilled</th><th>Pegmatite Interval sampling</th><th>Number of Pegmatite Samples</th></tr><tr><td>Pancontinental</td><td>1985</td><td>RC</td><td>20</td><td>528</td><td>1m</td><td>327</td></tr><tr><td>Pancontinental</td><td>1986</td><td>RC</td><td>20</td><td>618</td><td>1m</td><td>396</td></tr><tr><td>Aldoro</td><td>2022</td><td>RC</td><td>115</td><td>7,318</td><td>1m</td><td>2354</td></tr><tr><td>Total</td><td></td><td></td><td>155</td><td>8,464</td><td></td><td>3,077</td></tr></table>• No relevant information has been excluded.</td></tr>
<tr><td>Data aggregation methods</td><td>• 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.<br>• 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.</td><td>• No weighting or averaging techniques were used on samples or assays prior to reporting Exploration Results.<br>• There has been no cutting of high-grade intercepts as the nature of mineralisation in the pegmatite lenses and the evidence of continuity from drill assay results is sufficient to accept higher grade values that are consistent between the intercepts.<br>• No metal equivalent values are reported.</td></tr>
</table>

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • The drill hole results referenced are based on down-hole lengths and may not reflect the true width of mineralisation or thickness of host lithologies, which may be unknown. |
| ***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.* | • Appropriate maps and tabulations are presented in the body of the announcement. |
| ***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.* | • Balanced reporting of intersection results has been provided in this and all previous announcements. |
| ***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.* | • There is no other substantive exploration data to report. |
| ***Further work*** | • *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Future work will consist of further down dip drilling, extension and infill drilling with positions determined by 3D modelling of the results to date to build a resource.<br>• Drone aerial photography will be conducted, and a DEM created.<br>• No diagrams are provided. |

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| ***Database integrity*** | • *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*<br>• *Data validation procedures used.* | • Lithology data were logged manually by Pancontinental personnel and digitally by Aldoro personnel.<br>• Previous assay data was checked and imported into a standard database system. Recent assay data was received from the laboratory in an electronic format and are imported directly into the same standard database system. Interval checks were completed on this data to ensure there were no data overlaps or duplicates.<br>• All data were validated by Geobase Australia.<br>• Any errors recorded from the various validation processes were manually checked and correlated back to the original database. If necessary, field checks were made to confirm validation issues. |
| ***Site visits*** | • *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*<br>• *If no site visits have been undertaken indicate why this is the case.* | • The Competent Person Mark Mitchell has made numerous visits to the Niobe Project.<br>• He was responsible for the coordination of the drilling program, management and validation of the drilling database. |
| ***Geological interpretation*** | • *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral* | • The geology of the intrusive pegmatite system is relatively simple. Confidence in the geological interpretation is high.<br>• The distribution of $Rb_2O$ and $Li_2O$ and other attributes estimated within the pegmatite bodies is more complex.<br>• The data used to establish the geological model consisted of surface outcrop mapping, down hole geological logging of |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | RC drill chips, and field observations.<br>• Geology has been the primary basis for the interpretation of the mineralised volume which is based solely on the logged rock type 'pegmatite'. |
| ***Dimensions*** | • *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.* | • Drill footprint areas vary with Main/Northeast 450m along strike by 60-200m wide (3.25ha), Breakaway 200 x 250m (4.37ha), Southeast 2 main areas of 200 x 50m (1.67ha) and Niobe flats 100m by 25m (0.23ha). The pegmatite Rb and Li mineralisation is highest in the northern clusters, the Breakaway, Main and Northeast occurrences. |
| ***Estimation and modelling techniques*** | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* | • A block model was generated in Surpac software. The parent block dimensions used were 5m NS by 5m EW by 2.5m vertical with sub-cells of 1.25m by 1.25m by 1.25m. The parent block size dimension was based on approximately half drill hole spacing of the closest spaced drilling at Niobe.<br>• The block model was created and $Rb_2O$ and $Li_2O$ were estimated in Surpac using Ordinary Kriging ("OK") grade interpolation in up to three passes. The first pass used a minimum of six composites and a 20m search radius. For the second pass, a minimum of four composites and a 40m search radius were used. For the final pass, a minimum of two composites and a 60m search radius were used. A maximum of 16 composites was used for each pass. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.*<br>• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | |
| ***Moisture*** | • *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | • Tonnages were assigned on a dry density basis. |
| ***Cut-off parameters*** | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • The mineral resource estimate for the Niobe deposit has been reported above a cut-off grade of 0.05% $Rb_2O$ to represent the portion of the resources that may be considered for economic extraction by open pit methods. While this cut-off grade is commensurate with cut-off grades used in China, elsewhere no standard is set as the majority of Rb produced is by lithium-spodumene producers who only declare a $Li_2O$ cutoff as Rb is a by-product. Granada Gold (TSX.V:GGM August 2022) in Canada has released an inferred resource with a 170ppm bottom cut-off, well below 500ppm cut-off used by Aldoro. |
| ***Mining factors or assumptions*** | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the* | • The mineralisation investigated at Niobe is shallow and suitable for open-pit mining. It is anticipated that due to the open-ended nature of the resource drilling so far that |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | additional drilling will extend the mineralisation beyond the current extent of the inferred mineral resource estimate.<br>• The interpreted pegmatites have only been investigated to a vertical depth of 110m and this can be extended to 200m. |
| ***Metallurgical factors or assumptions*** | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.* | • Preliminary metallurgical testwork is currently underway at the School of Minerals Processing & Bioengineering at Central South University in Changsha, China under the guidance of Professor Zhiguo He.<br>• Dr He's research work is predominantly focusses on the beneficiation and extraction of rare metals such as rubidium and lithium from a variety of minerals. (ASX:ARN 2 May 2022).<br>• Dr He is adapting his various technologies in mineral processing, including combining the process of magnetic and flotation separation and selective precipitation and solvent extraction technologies to enhance the enrichment of rubidium and lithium recoveries from pegmatites. |
| ***Environmental factors or assumptions*** | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these* | • No assumptions have been made regarding possible waste and process residue disposal options. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | |
| ***Bulk density*** | • *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*<br>• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | • The bulk densities used were derived from known bulk densities from similar geological terrains. |
| ***Classification*** | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • The Mineral Resource estimate is classified as inferred based on confidence in the geological and grade continuity and by considering the quality of the sampling and assay data, and confidence in the estimation of the $Rb_2O$ and $Li_2O$ content.<br>• Continuity analysis indicates that more sampling is required to improve the structure of the variograms and enable the estimate to improve from the inferred status.<br>• The Mineral Resource estimate appropriately reflects the view of the Competent Person. |
| ***Audits or reviews*** | • *The results of any audits or reviews of Mineral Resource estimates.* | • No independent audits or reviews have been undertaken. |
| • **Discussion of relative** | • *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an* | • The relative accuracy of the Mineral Resource Estimate is reflected in the classification and reporting of the Mineral |

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| **accuracy/ confidence** | *approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*<br>• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*<br>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | Resource in accordance with the guidelines of the 2012 JORC Code.<br>• No statistical or geostatistical studies have been undertaken to quantify the relative accuracy of the estimate.<br>• No production data is available. |