# Alvarrões Continuity Increases and Mineralisation Extended 

- Further drilling confirms Alvarrões pegmatite sills are continuous laterally and down-dip
- Strong lepidolite mineralisation continues to be intersected, including

> 2.29 m @ $1.38 \% \mathrm{Li}_{2} \mathrm{O}$
> 3.05 m @ $1.26 \% \mathrm{Li}_{2} \mathrm{O}$

- Step-out drill hole extends mineralised zone 260 m down dip
- Maiden Mineral Resource Estimate on schedule for October 2017

Lepidico Ltd (ASX:LPD) ("Lepidico" or "Company") is pleased to advise that is has received further encouraging assay results from its Mineral Resource definition drill program at the Alvarrões Lepidolite Project in Portugal.

Holes ALVD 13, ALVD 14 and the lower part of ALVD08 all intersected multiple strongly mineralised lepidolite-bearing pegmatite sills. Importantly the sills were intersected at predicted elevations, confirming lateral and down-dip continuity, which provides confidence that the pegmatite system at Alvarrões will be of a sufficient scale to supply a long-life lepidolite concentrate feed for the Company's Phase 1 L-Max ${ }^{\circledR}$ Plant, proposed to be built in Canada and currently the subject of a Feasibility Study.

A summary of these latest results is presented in Table 1, while detailed results are provided as Appendix 1.

The final hole of the program (ALVD19) was a large step-out exploration hole, that has extended the mineralised zone at Block 1 by a further 260 m down-dip. Lepidolite mineralisation has now been identified by drilling over a strike of 400 m and approximately 600 m down-dip (Figure 1). Samples for holes ALVD15 - ALVD18 have been submitted for assay with results expected before the end of September. Samples from hole ALVD19 will be dispatched this week.

In total the drilling program comprised 19 holes for $1,246 \mathrm{~m}$ of HQ core, as detailed in Table 2.

Interpretation and modelling of results, including drill hole logs and assays received to date, is underway with the aim of defining a JORC Code compliant Mineral Resource estimate for Alvarrões in October 2017.

To aid interpretation, the Block 1 Main Sill is designated as sill " $M$," with sills above and below following in alphabetical sequence. To date twelve sills (H-S) have been identified, with sills in the Block 1/Block 2 area showing excellent continuity and predictability and being the focus of most of this first round of drilling. The sills in this area average 1.5 m to 3.0 m true thickness and carry between $20 \%$ to $30 \%$ lepidolite. Only rare occurrences of other lithium mineral species (minor amblygonite and spodumene) are noted, such that most of the lithium reports to lepidolite, as seen in sills $M$ and $N$ in hole ALVD13 (Figures 2 and 3 ). Pegmatite sills $\mathrm{L}, \mathrm{M}, \mathrm{N}$ and O are expected to be the greatest contributors to the initial resource estimate.


Figure 1. Location of diamond drill holes at Alvarrões, showing an initial focus on the Block1/Block 2 area to delineate a feed source for the proposed Phase 1 L-Max Plant. Location of Hole 19, which sits off the main map, is shown in the inset.

Following completion of the Mineral Resource estimate, an infill and extensional reverse circulation drilling program will be planned, with the objective of increasing confidence in the Resources at Block 1 and to generate an initial Mineral Resource estimate at the larger Block 3 area.

The work at Alvarrões is part of Lepidico's Mineral Resource definition program to establish a multideposit inventory of high-quality lithium mica Mineral Resources to provide feedstock for not just the proposed Phase $1 \mathrm{~L}-\mathrm{Max}^{\oplus}$ Plant but also conceptual larger-scale Phase 2 plants. Priority lithium mica deposits include Separation Rapids in Canada (Avalon Advanced Materials Inc concentrate offtake letter of intent), Alvarrões in Portugal (Grupo Mota ore access agreement), targets at the Moriarty and Peg 9 prospects in Western Australia (Maximus Resources and Pioneer Resources farm-in agreements, respectively) as well as other targets that are subject to the Company's ongoing evaluation.

Table 1. Latest lithium results (Batch 3) from the lepidolite-bearing pegmatites at Alvarrões\#

| Hole ID | From <br> $(\mathrm{m})$ | To <br> $(\mathrm{m})$ | Interval <br> $(\mathrm{m})$ | True <br> Thickness <br> $(\mathrm{m})$ | $\mathrm{Li}(\mathrm{ppm})$ | Li <br> $(\%)$ | Li2O <br> $(\%)$ | Pegmatite <br> Sill | Lepidolite <br> Content |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ALVD08 | 73.98 | 74.85 | 0.87 | 0.87 | 7310 | 0.73 | $\mathbf{1 . 5 7}$ | O | $40 \%$ |
|  | 89.55 | 90.4 | 0.85 | 0.85 | 6280 | 0.63 | $\mathbf{1 . 3 5}$ | P | $25 \%$ |
|  | 103.86 | 104.87 | 1.01 | $\mathbf{1 . 0 1}$ | 7860 | 0.79 | $\mathbf{1 . 6 9}$ | Q | $40 \%$ |
| ALVD13 | 45.94 | 48.9 | 2.96 | $\mathbf{2 . 2 9}$ | 6430 | 0.64 | $\mathbf{1 . 3 8}$ | M | $30 \%$ |
|  | 62.27 | 66.2 | 3.93 | $\mathbf{3 . 0 5}$ | 5831 | 0.58 | $\mathbf{1 . 2 6}$ | N | $30 \%$ |
| ALVD14 | 10.6 | 12.05 | 1.45 | $\mathbf{1 . 4 5}$ | 7840 | 0.78 | $\mathbf{1 . 6 9}$ | L | $20 \%$ |
|  | 35.68 | 37.75 | 2.07 | $\mathbf{2 . 0 7}$ | 3837 | 0.38 | 0.83 | M | $15 \%$ |
|  | 44.78 | 46.3 | 1.52 | $\mathbf{1 . 5 2}$ | 6461 | 0.65 | $\mathbf{1 . 3 9}$ | N | $35 \%$ |
|  | 50.7 | 51.7 | 1.00 | $\mathbf{1 . 0 0}$ | 6375 | 0.64 | $\mathbf{1 . 3 7}$ | O | $15 \%$ |

## Notes:

\# Includes samples for hole ALVD08 from 49.33 m to end of hole at 110.20 m ; and holes ALVD13 and ALVD14. Hole ALVD12 abandoned; no samples collected. Assays through ASL Global laboratories by four-acid digest method ME-MS61 (see Appendix 1). Liz $\mathrm{O}=$ elemental Li $\times 2.153$ conversion factor.


Figure 2. ALVD13, Sill M, Block 1, 2.29 m @ 1.38\% $\mathrm{Li}_{2} \mathrm{O}$ from 45.94 m ; 30\% lepidolite (estimated).


Figure 3. ALVD13, Sill N, Block 1, 3.05 m @ 1.26\% Li2O from 62.27 m; 30\% lepidolite (estimated).
Table 2. Alvarrões diamond drilling (HQ) drill hole location data*

| Hole ID | Easting <br> $\mathbf{( m )}$ | Northing <br> $(\mathbf{m})$ | Elevation <br> $(\mathbf{m})$ | Azimuth <br> $(\mathbf{m a g})$ | Dip | Depth <br> $(\mathbf{m})$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| ALVD01 | 640786 | 4476871 | 608 | 0 | -90 | 38.35 |
| ALVD02 | 640785 | 4476872 | 609 | 306 | -51 | 51.00 |
| ALVD03 | 640787 | 4476872 | 608 | 215 | -51 | 44.00 |
| ALVD04 | 640627 | 4476979 | 617 | 0 | -90 | 95.00 |
| ALVD05 | 640626 | 4476982 | 617 | 40 | -55 | 64.75 |
| ALVD06 | 640871 | 4477129 | 598 | 0 | -90 | 22.50 |
| ALVD07 | 640870 | 4477132 | 598 | 0 | -90 | 56.00 |
| ALVD08 | 640743 | 4477154 | 630 | 0 | -90 | 108.60 |
| ALVD09 | 641207 | 4477658 | 630 | 0 | -90 | $9.85^{\wedge}$ |
| ALVD10 | 641208 | 4477658 | 630 | 0 | -90 | 103.00 |
| ALVD11 | 641068 | 4477638 | 665 | 0 | -90 | 110.20 |
| ALVD12 | 640746 | 4477156 | 630 | 215 | -50 | $19.00^{\wedge}$ |
| ALVD13 | 640745 | 4477156 | 630 | 215 | -50 | 89.40 |
| ALVD14 | 640696 | 4476910 | 630 | 74.5 | -90 | 71.60 |
| ALVD15 | 640848 | 4476826 | 600 | 0 | -90 | 43.00 |
| ALVD16 | 640841 | 4477180 | 600 | 320 | -60 | 66.25 |
| ALVD17 | 640958 | 4477014 | 592 | 0 | -90 | 50.60 |
| ALVD18 | 640980 | 4477461 | 638 | 0 | -90 | 77.60 |
| ALVD19 | 640485 | 4477137 | 672 | 0 | -90 | 124.80 |
|  |  |  |  | Total | metres: | $\mathbf{1 2 4 5 . 5 0}$ |

*Hand-held GPS; all holes being re-surveyed by differential GPS.
^ Holes ALVD09 and ALVD12 abandoned; not sampled. Redrilled as ALVD10 and ALVD13, respectively.

## Further Information

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The information in this report that relates to Exploration Results is based on information compiled by Mr Tom Dukovcic, who is an employee of the Company and a member of the Australian Institute of Geoscientists and who has sufficient experience relevant to the styles of mineralisation and the types of deposit under consideration, and to the activity that has been undertaken, to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." Mr Dukovcic consents to the inclusion in this report of information compiled by him in the form and context in which it appears.

## About Lepidico Ltd

Lepidico Ltd is an ASX-listed Company focused on exploration, development and production of lithium. Lepidico owns the technology to a metallurgical process that has successfully produced lithium carbonate from non-conventional sources, specifically lithium-rich mica minerals including lepidolite and zinnwaldite. The L-Max ${ }^{\circledR}$ Process has the potential to disrupt the lithium market by providing additional lithium supply from alternative sources. The Company is currently conducting a Feasibility Study for a Phase 1 L-Max ${ }^{\circledR}$ plant, targeting production for 2019. Three potential sources of feed to the planned Phase 1 Plant are being evaluated, including the Separation Rapids deposit in Ontario, Canada in partnership with its owner Avalon Advanced Materials Inc, and Alvarrões in Portugal.

Lepidico's current exploration assets include an ore access agreement with Grupo Mota over the Alvarrões Lepidolite Mine in Portugal; a farm-in agreement with Pioneer Resources (ASX:PIO) over the PEG 9 lepidolite prospect in Western Australia; a farm-in agreement with Maximus Resources (ASX:MXR) on the lithium rights over the Moriarty Lithium Project in Western Australia; options over the Lemare and the Royal projects, both in Quebec, Canada; and an agreement with ASX-listed Crusader Resources (ASX:CAS) on potential deployment of L-Max ${ }^{\circledR}$ in Brazil and Portugal on suitable lithium mica opportunities.

## APPENDIX 1

Lepidico Ltd
Alvarroes Diamond Drilling - Batch 3 Assays (four-acid digest; ALS ME-MS61)


## APPENDIX 2. JORC Code (2012) Table 1 Report: Diamond Drilling, Alvarrões Project, Portugal, Sep 2017

## Section 1: Sampling Techniques and Data

| 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. | Half-core samples, cut by diamond core saw, were collected from selected intervals, from holes. ALVD08, ALVD 13 and ALVD14. HQ coring occurred from surface to end of hole. |
|  | Include reference to measures taken to ensure sample representativeness and the appropriate calibration of any measurement tools or systems used. | Continuous half-core (HQ) samples were taken from intervals selected on rock type (granite vs pegmatite) and on variation in mineralogy (lepidolite, zinnwaldite). |
|  | Aspects of the determination of mineralisation that are Material to the Public Report. | Samples were sent to ALS Minerals laboratories in Seville, Spain for sample preparation, with pulps sent by ALS to its Vancouver, Canada laboratory for analysis for Li and a suite of elements by 4 acid digest (ME-MS61). |
|  | 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. | Continuous half-core (HQ) samples were taken from intervals selected on rock type (granite vs pegmatite) and on variation in mineralogy (lepidolite, zinnwaldite). |
| 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). | All holes were drilled HQ core size from surface, standard tube, without pre-collars. Orientation not attempted. Downhole surveys taken. |
| Drill sample recovery | Method of recording and assessing core and chip sample recoveries and results assessed. | Samples were visually inspected and Core Recovery was recorded in drill logs. |
|  | Measures taken to maximise sample recovery and ensure representative nature of the samples. | Drilling was deliberately slowed in severely broken or oxidised ground to try to maximise core recovery. |
|  | 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. | There is no evident correlation between sample recovery and lithium grade. |
| 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. | Core was geologically logged on the basis of geological and mineralogical variation and sampled at appropriate intervals, ranging from 0.17 m to 1.0 m . |
|  | Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. | Logging was qualitative and semi-quantitative and recorded rock type, mineralogy, veining, alteration, colour, weathering and rock types using a standardised logging system. All core was photographed. |
|  | The total length and percentage of the relevant intersections logged. | All holes were logged over their entire length. |
| Sub- <br> sampling techniques and sample preparation | If core, whether cut or sawn and whether quarter, half or all core taken. | Core (HQ) was cut by diamond core saw, with halfcore samples collected. Samples were generally not taken from the host rock granite other than selvedges either side of the pegmatite.. |
|  | If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. | N/A |
|  | For all sample types, the nature, quality and appropriateness of the sample preparation technique. | Samples were sent to ALS Minerals laboratories Seville, Spain for prep, where the entire sample was crushed to $70 \%-2 \mathrm{~mm}$, then a 1 kg split taken by Boyd Rotary Splitter and pulverised to $85 \%$ passing 75 microns or better. |
|  | Quality control procedures adopted for all sub-sampling stages to maximise representativeness of samples. | This batch of 76 samples included 5 standards, 4 blanks and 5 duplicates dispersed throughout the batch. |


|  | 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. | Sampling technique and size is considered appropriate for this style of mineralisation. |
| :---: | :---: | :---: |
|  | Whether sample sizes are appropriate to the grain size of the material being sampled. | The larger HQ core was adopted as it is considered as a better method to sample pegmatite mineralisation. |
| 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. | Sample pulps were sent by ALS Seville to ALS in Vancouver, Canada and analysed for Li and a suite of elements by 4 acid digest (ME-MS61/ICP-MS). |
|  | 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. | Not applicable, no instruments used. |
|  | 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. | This batch of 76 samples included 5 standards, 4 blanks and 5 duplicates dispersed throughout the batch. |
| Verification of sampling and assaying | The verification of significant intersections by either independent or alternative company personnel. | A minimum of 2 company geologists have verified significant intersections. |
|  | The use of twinned holes. | No twinned holes were drilled. |
|  | Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. | Drill hole data and geological logs are recorded on paper in the field then entered into digital format before being uploaded to the company database. |
|  | Discuss any adjustment to assay data. | There has been no adjustment to assay data. |
| 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. | Preliminary drill hole coordinates were determined using a hand-held GPS. All collars are subsequently re-surveyed by differential GPS. |
|  | Specification of the grid system used. | UTM WGS84 zone 29T |
|  | Quality and adequacy of topographic control. | RL determined initially using hand-held GPS, and subsequently re-surveyed by differential GPS. |
| Data spacing and distribution | Data spacing for reporting of Exploration Results. | Holes are drilled on nominal 100 m centres, adjusted for topography and access to minimise ground clearing. |
|  | 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. | A Mineral Resource estimate has not yet been undertaken. |
|  | Whether sample compositing has been applied. | No sample compositing was applied. |
| 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. | The mineralisation comprises a system of subhorizontal pegmatites hosted within massive granite such that vertical holes and holes at a dip of 50 degrees are considered representative and unbiased. |
|  | 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. | The holes were drilled vertically or at a dip of 50 degrees. The drill orientation is considered appropriate for the system of sub-horizontal pegmatites and is not considered to have introduced a bias. |
| Sample security | - The measures taken to ensure sample security. | Core trays are transported to a nearby warehouse where sampling is undertaken. Samples are transported by road by courier to ALS laboratories in Seville, Spain. |
| Audits or reviews | - The results of any audits or reviews of sampling techniques and data. | No audits or reviews were conducted for this sampling program to date. |

Section 2: Reporting of Exploration Results

| 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 Alvarroes Lepidolite Project, located near Guarda in Portugal, currently comprises mining concession MNC000008, owned by Felmica Indistriais, which is $75 \%$ owned by Portuguese private company Grupo Mota ("Mota"). Lepidico has signed a binding term sheet with Mota governing a commercial relationship between the parties that includes the definition of a mineral resource at Alvarrões. |
|  | - 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. | Tenure is secure with no known impediments. |
| Exploration done by other parties | - Acknowledgment and appraisal of exploration by other parties. | Exploration was supervised and conducted by Lepidico Ltd staff and contractors. |
| Geology | - Deposit type, geological setting and style of mineralisation. | Lepidolite pegmatite mineralisation within the Seixo Amarelo-Gonaclo pegmatite system intruded into the Guarda granite, Guarda area, Portugal. |
| 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: | Refer to the body of the report - Tables 1 and 2; Figures 1 to 3 . |
|  | $\circ$ easting and northing of the drill hole collar | Refer to the body of the report - Table 2 |
|  | - elevation or RL (Reduced Level elevation above sea level in metres) of the drill hole collar | Refer to the body of the report - Table 2 |
|  | - dip and azimuth of the hole | Refer to the body of the report - Table 2 |
|  | depth $\circ$ down hole length and interception | Refer to the body of the report - Table 1 |
|  | - hole length. | Refer to the body of the report - Table 2 |
|  | - 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. | N/A |
| Data aggregation methods | - 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. | Intercepts were determined by adding adjacent sample intervals. Intercept grades were determined by weighting sample intervals with respective grades. |
|  | - 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. | N/A |
|  | - The assumptions used for any reporting of metal equivalent values should be clearly stated. | N/A |
| Relationship between mineralisation widths and intercept lengths | - These relationships are particularly important in the reporting of Exploration Results. | Drill holes are mostly vertical, or inclined at 50 degrees, drilling into sub-horizontal mineralised pegmatites. |
|  | - If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. | Vertical holes are essentially perpendicular to the sub-horizontal mineralised pegmatites. Inclined holes were drilled at a dip of 50 degrees to the horizontal plane. |
|  | - 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'). | Intercepts reported as true thickness. |


| 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. | A plan showing drill hole locations is provided in the body of the announcement as Figure 1. |
| :---: | :---: | :---: |
| 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. | Results for all samples received were reported in Appendix 1. |
| 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. | Summary results are presented in Table 1 and a full list of multi-element assays is provided as Appendix 1 to the announcement. |
| Further work | - The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). | The diamond drilling program has completed, with results for the last 5 holes pending. Further postulated work comprises infill and extensional drilling by the reverse circulation method. |
|  | - Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | Location of the current drilling and areas of possible extension and/or requiring infill are shown in Figure 1 of the announcement. |

