



ACN: 009 146 794

ASX ANNOUNCEMENT  
ASX: DKO. Frankfurt: ORM  
29 May 2017

## Battery Grade Lithium Carbonate Produced from Sepeda Petalite

– For Immediate Release –

### Highlights:

- **Battery grade 99.97%  $\text{Li}_2\text{CO}_3$  produced from Sepeda petalite during metallurgical test work at Dorfner-Anzaplan in Germany**
- **Test work confirms that industry standard, commercially proven methods can be used for lithium carbonate production from Sepeda petalite - reducing development risk**
- **Previous results have already highlighted the potential for Sepeda to produce a very-low impurity petalite concentrate, via conventional methods, suitable for the European technical market**
- **Sighter metallurgical test work, on Sepeda material, has now produced an ultra-low impurity technical grade petalite concentrate and chemical (battery) grade lithium carbonate**
- **Results will be incorporated into the Scoping Study – due to be finalised in June 2017**

DAKOTA MINERALS LTD (“Dakota”, “DKO” or “the Company”) (ASX: DKO, FRANKFURT: ORM), is pleased to announce the conclusion of its sighter metallurgical test work programme, conducted by Dorfner-Anzaplan in Germany. Material was tested from the Sepeda Lithium Project (“Sepeda”), Portugal, *the largest LCT pegmatite-hosted JORC compliant lithium Mineral Resource in Europe*.

Initial results show that battery-grade (**99.97%  $\text{Li}_2\text{CO}_3$** ) lithium carbonate can be produced from Sepeda material using industry-standard, conventional methods of calcination, acid baking and leaching. This will allow Dakota to pursue “off-the-shelf” processing technologies for Feasibility Studies at Sepeda, substantially reducing development risk and keeping costs predictable.

As announced previously by the Company on 24 April, results from the sighter metallurgical test work show that a very-low impurity petalite concentrate has been produced by flotation, which is suitable for the premium technical market in Europe.

The technical market offers significant potential to Dakota. Lithium products are used directly in a variety of technical applications, mostly for use in glass and ceramics. Whilst the markets are well established, the demands are very specific, and these products typically require lithium with extremely low iron concentration to meet specialist end-user requirements.

### CORPORATE DIRECTORY

Non-Executive Chair  
John Fitzgerald

President & CEO  
David J Frances

Executive Technical Director  
Francis Wedin

Non-Executive Director  
Dudley J Kingsnorth

### FAST FACTS

Issued Capital:	370.4m
Options Issued:	31.1m
Market Cap:	\$20.4m
Cash:	\$15.5m

### CONTACT DETAILS

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Test work results will now be collated and used in finalising Dakota's Scoping Study in the coming weeks.

Dakota Minerals CEO David Frances commented: *"With the confirmation that lithium carbonate can be produced from Sepeda petalite, as expected, this is another major step towards our strategic goal of becoming a sustainable supplier of lithium products to the burgeoning European market. We expected that petalite from Sepeda, being a lithium aluminium silicate similar to spodumene, was likely to work well with conventional processing technologies. This was our strategic reason for targeting petalite over other, less conventional sources available in Europe. We now have the potential to develop a staged execution with low development risk, producing both exceptionally low-iron petalite concentrate for the lucrative technical market, and battery-grade lithium carbonate for the rapidly expanding European battery market. We now expect to finalise the Scoping Study within the next two weeks."*

### **Sighter Metallurgical Test Work Summary**

Dorfner-Anzaplan were commissioned in October 2016 to conduct initial, "sighter" metallurgical test work on a composite reverse circulation (RC) drilling sample from the Sepeda Lithium Project, provided by Dakota. The test work was preliminary in nature, and designed to give an indication on the possibility of processing petalite material from Sepeda with conventional, commercially-tested methods, to produce a technical-grade, low-impurity concentrate, and battery-grade lithium carbonate. Physical processing to produce concentrate was completed and reported in April this year.

#### **Dorfner-Anzaplan Completed Tests: Concentrate Production:**

- Comminution to various grind sizes
- Mineral liberation analysis (MLA)
- De-sliming
- Flotation tests to produce petalite concentrate
- Magnetic separation

Flotation tests successfully produced a 4.4% Li<sub>2</sub>O petalite concentrate, in line with commercial specifications. After magnetic separation, this was shown to contain very low iron, at 0.01% Fe<sub>2</sub>O<sub>3</sub>, making the concentrate potentially suitable for the premium technical grade concentrate market. The concentrate produced was then used for the hydrometallurgical portion of the test work, to produce lithium carbonate.

#### **Dorfner-Anzaplan Completed Tests – Hydrometallurgy:**

- Calcination test work
- Acid baking and leaching
- Impurity removal by neutralisation, ion exchange and crystallisation
- Precipitation of Li<sub>2</sub>CO<sub>3</sub>
- Purification by bicarbonation

The above process involving calcination, acid baking, leaching and impurity removal is an industry standard, commercially-proven methodology for processing lithium aluminium silicates such as spodumene or petalite into a lithium carbonate and/or a lithium hydroxide product suitable for the battery industry.

Lithium carbonate precipitation yielded a battery grade product (99.88%  $\text{Li}_2\text{CO}_3$ ) with a Na content as low as 0.02 wt.-%. True recovery could not be measured, as due to the preliminary nature of the tests, locked cycle test work involving recycling of the residual liquor after precipitation was not carried out. Recycling of the residual liquor will keep the remaining lithium content in the system thereby significantly increasing the recovery. By bicarbonatation the purity of the product was enhanced further, with lithium carbonate grade of 99.97%, and Na below the detection limit. Further optimisation will be carried out as part of feasibility studies later in the year.

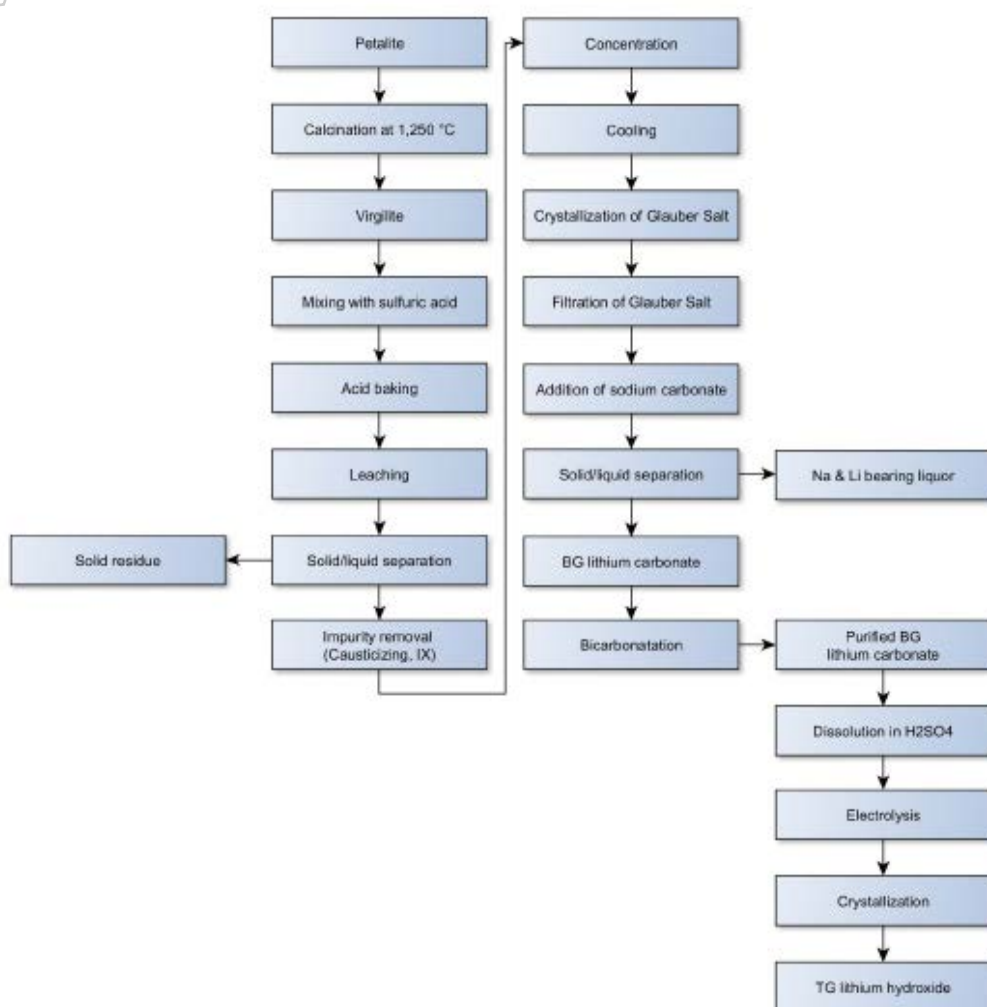


Figure 1: Flow sheet of hydrometallurgical process

## About Dakota Minerals

Dakota Minerals' aim is to become a sustainable supplier of ultra-low impurity petalite concentrate and lithium carbonate/hydroxide, to the high-tech glass and ceramics industry and the European electric vehicle and stationary storage battery markets via its projects in northern Portugal. *The Company has already made progress towards this objective through the discovery of the largest JORC lithium pegmatite resource in Europe at its Sepeda project and the production of ultra-low impurity petalite concentrate and battery grade lithium carbonate during metallurgical test work.*

### Portugal: Lusidakota

Dakota's Lusidakota lithium projects in Northern Portugal, to which Dakota has 100% rights through its binding agreement with Lusorecursos LDA, are located over three broad districts of pegmatitic dyke swarms, which contain spodumene- and petalite-bearing pegmatites. The three main districts are the Serra de Arga, Barroso-Alvão and Barca de Alva pegmatite fields, all three of which are highly prospective for lithium mineralisation. The Lusidakota tenement package consists of thirteen exploration licences (one granted and twelve under application). After encouraging initial results, work at the Sepeda lithium project near the Barroso-Alvão district has accelerated, with a maiden JORC Mineral Resource announced in Feb 2017, initial metallurgical testwork now completed, and a scoping study nearing completion. Portugal, as the leading lithium producer in Europe<sup>1</sup>, was identified by the Company to be a high priority jurisdiction for lithium exploration, for the following reasons:

- Portugal contains numerous swarms of known LCT pegmatites in multiple districts.
- Many countries in Europe are leading the world in uptake of electric vehicles (EVs) using lithium-ion batteries, with EVs already totalling 24% of all new vehicle sales in Norway in 2016.
- Lithium-ion batteries are already being produced in Europe to meet this increasing demand, and production capacity in car-producing countries such as Germany is growing dramatically to keep up.
- Nine lithium-ion "megafactories" across Europe are either already producing, under construction or planned for development, including Nissan<sup>2</sup>, Samsung<sup>3</sup>, BMZ<sup>4</sup>, Daimler-Mercedes<sup>5</sup>, Tesla<sup>6</sup>, Audi<sup>7</sup> and LG Chem<sup>8</sup>.
- Battery producers will require a large lithium supply from safe, nearby jurisdictions. Sourcing lithium from Europe would also significantly reduce the carbon footprint of the car production supply chain.
- Portugal has public policies deemed to be highly supportive of mining: it ranked in the global Top 10 of all countries in the Fraser Institute 2015 Survey of Mining Companies for Policy Perception Index, an assessment of the attractiveness of mining policies<sup>9</sup>.

<sup>1</sup> USGS Mineral Commodity Summaries, 2016

<sup>2</sup> <http://europe.autonews.com/article/20160121/ANE/160129975/nissan-will-produce-leafs-new-advanced-batteries-in-uk>

<sup>3</sup> <http://www.samsungsdi.com/sdi-news/1482.html>, <https://cleantechnica.com/2015/05/25/samsung-sdi-begun-operations-former-magna-steyr-battery-pack-plant/>

<sup>4</sup> <http://www.electronics-eetimes.com/news/european-battery-gigafactory-opens-1/page/0/1>

<sup>5</sup> <http://media.daimler.com/deepink?cci=2734603>

<sup>6</sup> <https://electrek.co/2016/11/08/tesla-location-gigafactory-2-europe-2017-both-batteries-and-cars/>

<sup>7</sup> <http://europe.autonews.com/article/20160120/ANE/160129994/-audi-will-build-electric-suv-in-belgium-shift-a1-output-to-spain>

<sup>8</sup> <http://www.lgchem.com/global/lg-chem-company/information-center/press-release/news-detail-783>

<sup>9</sup> Fraser Institute Survey of Mining Companies 2015

For these reasons, the Company has been pursuing projects in areas most prospective for the lithium-bearing minerals, petalite and spodumene, in Portugal.

### **Lithium Processing in Europe**

Dakota is of the view that as the Company's Portuguese deposits of petalite are closer to potential downstream processing locations than the spodumene deposits in Australia and Canada, which tend to be in remote locations, they offer the following economic advantages:

- The established storage and transportation infrastructure associated with the distribution of minerals in Europe will reduce the investment required by Dakota for these capabilities. The net result is that deliveries of concentrates will probably be made on a daily basis.
- The proximity of potential downstream processing facilities will reduce the storage facility requirements at the mine/concentrator site.
- The proximity of the Dakota lithium projects to established communities familiar with the mining and processing of petalite will eliminate the need for fly-in fly-out arrangements.
- The combination of the above factors is likely to reduce the minimum size of an economic independent supply lithium battery supply chain in Europe; reducing the capital requirements of the supply chain.

### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Dr Francis Wedin, who is a Member of the Australasian Institute of Mining and Metallurgy. Dr Wedin is a full-time employee of Dakota and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Dr Wedin consents to the inclusion in this report of the matters based upon the information in the form and context in which it appears. All material assumptions and technical parameters underpinning the JORC 2012 reporting tables in the relevant market announcements referenced in this text continue to apply and have not materially changed.

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#### **Contacts:**

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**Tel: +61 (8) 228 4408**

**David J Frances**  
**President & CEO**

## Sepeda - JORC Table 1

### Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary																																																																		
Sampling techniques	<p><i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></p>	<p>Metallurgical samples described in this text were sampled from SC001 and SC002, from Dakota’s Phase One programme at Sepeda. For details of this programme, see Dakota’s news release from 07/11/2016.</p> <p>RC holes were sampled every metre, with a rig-mounted cyclone splitter and one tier riffle splitter, including a dust suppression system, used to split samples off the rig. Approximately 85% of the RC chips were split to 600x900mm green plastic bags, for potential re-sampling, whilst 15% was captured at the sample port in draw-string calico sample bags.</p>																																																																		
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i></p>	<p>To ensure sample representivity, drilling was conducted as perpendicular as possible to the strike of the main mineralised pegmatite bodies as mapped on the surface. Samples were split and weights were ensured to be of sufficient size (1-3kgs) to be adequately representative of the pegmatite body, which was verified with the use of field and lab duplicates.</p>																																																																		
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</i></p>	<p>The metallurgical testwork samples were composed of ten green plastic bags weighing 15-20kg each, which were sent in their entirety to Dorfner-Anzaplan in Germany. These are detailed in the following table, along with grades of each sample:</p> <table><tr><th>HOLE_ID</th><th>FROM_M</th><th>TO_M</th><th>INTERVAL_M</th><th>SAMPLE</th><th>Li2O_%</th></tr><tr><td>SC001</td><td>52</td><td>53</td><td>1</td><td>A0019</td><td>1.765</td></tr><tr><td>SC001</td><td>69</td><td>70</td><td>1</td><td>A0041</td><td>3.725</td></tr><tr><td>SC001</td><td>73</td><td>74</td><td>1</td><td>A0045</td><td>1.292</td></tr><tr><td>SC001</td><td>74</td><td>75</td><td>1</td><td>A0047</td><td>1.507</td></tr><tr><td>SC001</td><td>102</td><td>103</td><td>1</td><td>A0065</td><td>1.787</td></tr><tr><td>SC002</td><td>60</td><td>61</td><td>1</td><td>A0102</td><td>1.012</td></tr><tr><td>SC002</td><td>68</td><td>69</td><td>1</td><td>A0113</td><td>1.809</td></tr><tr><td>SC002</td><td>94</td><td>95</td><td>1</td><td>A0132</td><td>2.175</td></tr><tr><td>SC002</td><td>96</td><td>97</td><td>1</td><td>A0135</td><td>1.572</td></tr><tr><td>SC002</td><td>124</td><td>125</td><td>1</td><td>A0170</td><td>1.163</td></tr></table>	HOLE_ID	FROM_M	TO_M	INTERVAL_M	SAMPLE	Li2O_%	SC001	52	53	1	A0019	1.765	SC001	69	70	1	A0041	3.725	SC001	73	74	1	A0045	1.292	SC001	74	75	1	A0047	1.507	SC001	102	103	1	A0065	1.787	SC002	60	61	1	A0102	1.012	SC002	68	69	1	A0113	1.809	SC002	94	95	1	A0132	2.175	SC002	96	97	1	A0135	1.572	SC002	124	125	1	A0170	1.163
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Criteria	JORC Code explanation	Commentary
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</i>	The samples used in the metallurgical testwork were RC in nature, from Dakota's phase one drilling programme in 2016. Drilling has been conducted by SPI SA using a truck-mounted SPIDRILL 260 rig (and compressor (rated 33 bar, 35m <sup>3</sup> /min). The drill rig utilised a reverse circulation face sampling hammer, with 5.5-inch bit. The sampling was conducted using a rig-mounted cyclone with cone splitter and dust suppression system. Downhole surveying was conducted using a Reflex Gyro system.
	<b>Drill sample recovery</b>	Sample recovery in percent, sample quality and moisture content was recorded by the geologist for all 1m intervals in RC holes. Generally, RC samples were dry (only three wet samples within mineralised intercepts), sample quality is good and recoveries excellent, generally above 80%. Sample recovery was recorded by the geologist as "good" for all RC holes.
	<i>Method of recording and assessing core and chip sample recoveries and results assessed</i>	
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples</i>	Sample recovery on RC was closely monitored by the geologist whilst drilling, for consistency of sample volume. Rods were flushed with air after each three-metre interval to prevent contamination.
	<i>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.</i>	No material bias has been identified.
Logging	<i>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.</i>	One metre samples were laid out in lines of 20, with RC chips collected and geologically logged for each metre interval on a plastic logging sheet, then stored in RC chip trays marked with hole IDs and depth intervals. Geological logging information (including but not limited to main rock types, mineralogy in percent abundance, degree of weathering, degree of schistosity, colour and vein percent) was recorded directly onto hard-copy sheets, and later transferred to an Excel spread sheet. The rock-chip trays are stored at the Lusidakota office in Portugal for future reference.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	Logging has been primarily quantitative. All RC chips and core has been photographed.
	<i>The total length and percentage of the relevant intersections logged</i>	The logging database contains lithological data for all intervals in all holes in the database.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core is referred to in this report.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	The RC samples were split at the rig using a cyclone splitter, which is considered appropriate and industry standard.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	RC rockchip samples were submitted to Dorfer-Anzplan in Germany, where the following concentration process was carried out: <ul style="list-style-type: none"> <li>Comminution to various grind sizes</li> <li>Mineral liberation analysis (MLA)</li> <li>De-sliming</li> <li>Flotation tests to produce petalite concentrate</li> <li>Magnetic separation</li> </ul>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Quality Assurance and Quality Control utilised standard industry practice, using prepared standards, field blanks (approximately 1kg), replicates sampled in the field and pulp replicates at the lab during the initial analysis of the split samples in 2016. Field and lab duplicate results demonstrated good precision. Results were within two standard deviations.



Criteria	JORC Code explanation	Commentary
	<i>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.</i>	Duplicates submitted by DKO from the original drill programme in 2016 included field RC duplicates. Results from these samples correlated well and showed good precision.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample sizes (15-20kg per green bag, 200kg in total), are considered appropriate as representative for early stage metallurgical testwork.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>RC samples were originally assayed at NAGROM's laboratory in Perth, for a ten-element suite using a sodium peroxide fusion digest, an ICP-MS finish. The processing carried out by Dorfner-Anzaplan was as follows:</p> <ul style="list-style-type: none"> <li>• Calcination test work</li> <li>• Acid baking and leaching</li> <li>• Impurity removal by neutralisation, ion exchange and crystallisation</li> <li>• Precipitation of <math>\text{Li}_2\text{CO}_3</math></li> <li>• Purification by bicarbonation</li> </ul> <p>Dorfner-Anzaplan used ICP-MS to determine element concentrations during the metallurgical testwork, which is considered appropriate.</p>
	<i>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.</i>	No downhole geophysical surveys were conducted and no geophysical tools were used to determine any elemental concentrations.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Not applicable as this report deals with metallurgical testwork results only.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Not applicable as this report deals with metallurgical testwork results only.
	<i>The use of twinned holes.</i>	Not applicable as this report deals with metallurgical testwork results only.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Hard copy field logs are entered into and validated on an electronic Excel database, both of which are stored at the DKO Perth office. Data verification is carried out by the Senior Geologist on site.
	<i>Discuss any adjustment to assay data.</i>	$\text{Li}_2\text{CO}_3$ and Li were used for the purposes of reporting, as reported by Dorfner-Anzaplan. The adjustment factor between Li and $\text{Li}_2\text{CO}_3$ is 5.3240. No other adjustment or data calibration was carried out.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Both drill-hole locations were located using a Leica Viva GNSS CS15, which has an accuracy of +/- 5mm vertical and +/-10mm horizontal. Down hole surveying of drill holes was conducted using a Reflex Gyroscope.
	<i>Specification of the grid system used.</i>	The grid system used is WGS84 Zone 29N.
	<i>Quality and adequacy of topographic control.</i>	<p>RL data to date has been collected using a Leica Viva GNSS CS15, which has an accuracy of +/- 5mm vertical and +/-10mm horizontal.</p> <p>Topographic control is also assured using data provided by a drone detailed topographic survey conducted in 2016, with an accuracy of 0.1m.</p>
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Drill spacing for the selected metallurgical samples was 80m (between SC001 and SC002)



Criteria	JORC Code explanation	Commentary
	<i>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.</i>	Not applicable as this report deals with metallurgical testwork results only.
	<i>Whether sample compositing has been applied.</i>	Not applicable as this report deals with metallurgical testwork results only.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Not applicable as this field relates to drilling, and this report deals with metallurgical testwork results only.
	<i>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.</i>	Not applicable as this field relates to drilling, and this report deals with metallurgical testwork results only.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	DKO contract geologists and field assistant conducted all sampling and subsequent storage in field. Samples were then delivered via road freight to Dorfner-Anzaplan laboratories in Germany.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews of sampling techniques have been carried out, due to the early stage nature of the project.

## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<p>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.</p>	<p>The Lusidakota tenements and interests, to which Dakota has 100% rights (subject to grant of application areas), comprise:</p> <p>(a) granted exploration licence MNPPP04612 (Sepeda Project);</p> <p>(b) exploration licence applications MNPPP0274, MNPPP0275, MNPPP0393, MNPPP0394, MNPPP0395, MNPPP0396, MNPPP0407, MNPPP0424, MNPPP0427, MNPPP0426, MNPPP0430, MNPPP0431;</p> <p>Tenement application MNPPP0395 is awaiting a decision on a proposed hydroelectric dam development. All tenement applications are subject to some degree of overlap, which Dakota understands will be resolved by public tender. The granted tenement MNPPP04612 is in good standing.</p>
Exploration done by other parties	<p>Acknowledgment and appraisal of exploration by other parties.</p>	<p>Historical, open-source academic literature from Dakota's three districts in Portugal refer to historical rock-chip, bulk samples, diamond drilling and surface channel sampling. These consist of: Martins, T, Lima, A, and Noronha, F, 2007. Locality No.1 – An Overview of the Barroso-Alvão Aplite-Pegmatite Field. Granitic Pegmatites: the state of the art – International Symposium. Field Trip Book; Lima, A and Noronha, F, 1999. Exploration for Lithium Deposits in the Barroso-Alvão Area, Northern Portugal. Mineral Deposits: Processes to Processing. Stanley et al (eds) 1999 Balkema, Rotterdam, ISBN 90 5809 068.; Charoy, B, Lhote, F, and Dusauroy, Y, 1992. The Crystal Chemistry of Spodumene in Some Granitic; Lima, A, 2000. Estrutura, mineralogia e génese dos filões aplitopegmatíticos com espodumena da região do Barroso-Alvão. Dissertation – Universidade do Porto; Lopes Nunes, J E, and Leal Gomes, C, 1994. The Crystal Chemistry of Spodumene in Some Granitic Aplite-Pegmatite Bodies of Northern Portugal. The Canadian Mineralogist. Vol. 32, pp 223-226. and Moura, S, Leal Gomes, C, and Lopes Nunes, J, 2010. The LCT-NYF signatures in rare-metal Variscan aplite-pegmatites from NW Portugal. Revista Electronica de Ciencias da Terra Geosciences On-line Journal ISSN 1645-0388, Vol 20, No 8. Dakota does not warrant that the work completed could be referred to as "industry standard", but is indicative of petalite and spodumene-hosted, potentially economic lithium mineralisation</p>
Geology	<p>Deposit type, geological setting and style of mineralisation.</p>	<p>The Barroso- Alvão aplite-pegmatite field, located in the "Galacia-Tras-os-Montes" geotectonic zone, is characterised by the presence of dozens of pegmatite and aplite-pegmatite dykes and sills of granitic composition. The Pegmatitic dykes are typically intruded in the granitic rocks of the region, whilst the aplite-pegmatite dykes are hosted by low- to medium-grade strongly deformed metasedimentary rocks of Silurian age. The Sepeda Project, to the north of the Barroso-Alvão region, contains a swarm of multiple WNW-striking, lithium-bearing pegmatites of the LCT (Lithium-Caesium-Tantalum) type, within a pegmatite swarm area known as "Carvalhais". The main swarm area has recently been mapped to 3,000m long by 1,000m wide at its widest point. Some of the pegmatites do not outcrop and are visible only in historic underground workings. It is thought that the pegmatites form a folded system of mineralised pegmatite dykes. Lithium mineralisation grading up to 2.8% Li<sub>2</sub>O was noted in petalite and spodumene samples at surface, which has now been confirmed through three phases of drilling.</p>

Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<p>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:</p> <ul style="list-style-type: none"> <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>	Not applicable as this field relates to drilling, and this report deals with metallurgical testwork results only.
<b>Data aggregation methods</b>	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <p>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>Not applicable as this field relates to drilling, and this report deals with metallurgical testwork results only.</p> <p>Aggregation issues are not material in this type of deposit. No metal equivalent values were used.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</p>	Not applicable as this field relates to drilling, and this report deals with metallurgical testwork results only.
<b>Diagrams</b>	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 flow sheet diagram of the metallurgical testwork is included in the main body of text
<b>Balanced reporting</b>	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.	All relevant results have been reported.
<b>Other substantive exploration data</b>	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.	All meaningful and material data has been reported.
<b>Further work</b>	<p>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</p>	Phase four drilling, to produce 20 tonnes of material for a pilot metallurgical processing testwork programme to be used in a feasibility study later in the year, has commenced.