



## Corporate Update : Advancing the Arcadia Lithium Project

- **Strategically focused on the pathway to near term production;**
- **Revised pilot plant design to adopt greatest technical certainty by focussing on existing lower risk Feasibility Study flowsheet;**
- **Revised and optimised Feasibility Study commenced for staged development plan of 1.2Mtpa to 2.4Mtpa;**
- **Advancing various project funding opportunities including strategic investor interest;**
- **Farvic transaction to simplify corporate structure extended a year.**

African lithium developer, Prospect Resources Ltd (ASX: PSC, FRA:5E8) (**Prospect** or the **Company**) is pleased to announce a number of key developments at its Arcadia lithium project after a detailed strategic review by management and a number of external third-party experts on the pathway to near-term production.

This strategic review has concluded that an initial smaller commercial scale production facility at Arcadia utilising the existing Feasibility Study (“**FS**”) dense media separation (**DMS**) flowsheet will allow greater speed to market, higher technical certainty, significantly lower risk, and a reduced capital and operating-cost operation, when compared to inclusion of petalite flotation (in place of DMS) to increase the recovery of petalite from the ore body. It was assessed that the potential increase in petalite recovery was insufficient justification to compensate for the higher technology risk for start up operations. In line with the staged development plan, the Company has agreed to appoint an independent lithium focussed engineering firm to undertake the revised feasibility study, which will include a Front-End Engineering and Design to improve technical certainty and reduce execution risk in providing greater accuracy on equipment selection, sizing and resulting project economics.

This decision has also resulted in changes to the pilot plant design which will use the DMS flow sheet to deliver petalite product samples for glass ceramic customer qualification with greater speed and certainty than the alternative flotation flow sheet. The pilot plant remains an asset with tremendous technical benefit operating in conjunction with commercial production.

On the corporate front, the Company and Farvic Consolidated Mines Pvt Ltd (**Farvic**) have agreed to extend the final date for completion of the sale and purchase of Farvic’s interest in the Arcadia project to 31 December 2021 (refer to ASX announcement dated 3 October 2018 titled “*PSC increases ownership of the Arcadia Lithium Mine to 87%*”). The agreement increases Prospect’s ownership in the Arcadia Lithium Mine from 70% to 87%, maximising Prospect’s exposure to the economic potential of Arcadia, simplify the corporate structure, and reinforces strength of support of our project level partners.



These strategic actions enabling the pathway to near-term production have allowed the Company to advance discussions with our existing offtake partners, strategic corporate and institutional financiers as well as early-stage discussions to consider a development joint venture with a large corporate investor.

**Prospect Resources Managing Director Sam Hosack said:** *“The lithium market has shown signs of coming into balance which demands a rethink to secure best time to market. Our current focus is the revised pilot plant which adopts the greatest technical certainty to facilitate financing, delivering key objectives for customer qualification, project finance parties and investors in de-risking the Arcadia Project.”*

*“The staged development plan of 1.2Mtpa to 2.4Mtpa reduces time to production by leveraging lower capital expenditure and will enable expansion in line with market growth. This development strategy allows risks to be managed effectively. Critically, Prospect maintains the ability to go direct to nameplate capacity of 2.4Mtpa should market conditions and funding activities allow.”*

*“We are excited to extend the sale & purchase agreement with Farvic, which upon completion, gives PSC 87% equity stake in the Arcadia Project. The transaction was previously assessed as being accretive to PSC shareholders and we believe this to still be the case.”*



### Pilot Plant

Previously, the Company announced it had commenced the development of a pilot plant to produce petalite and spodumene samples. Prospect has now decided to focus the pilot plant on producing technical grade petalite samples using DMS in accordance with Arcadia's existing Feasibility Study flowsheet rather than both petalite and spodumene samples using a flotation flow sheet. The DMS flowsheet is considered the lower risk pathway to near-term production as determined through detailed analysis by management and a number of external third-party experts.

The Company notes:

- Petalite as a proportion of the Arcadia mineral endowment is significant and increasing the recovery of petalite and maximising sales into the technical market is an important strategic objective as the project progresses.
- To qualify petalite with potential customers the Company must provide samples of up to 100 tonnes per customer. Samples of this size are most economically produced in a pilot plant. By contrast, customers only require 2kg samples to qualify our spodumene products and these can be readily produced in the laboratory.
- The DMS Feasibility Study flowsheet has greater technical certainty than the flotation flowsheet.
- The pilot plant is expected to produce and ship samples in H1 CY2021.
- The flotation flowsheet is expected to be the preferred flowsheet in time, however there is limited commercial knowledge at this stage on petalite flotation, and a more detailed assessment has revealed that the metallurgical process requires complex staging, with different water regimes and significant reagent blends, some of which require very specific hazardous handling procedures. The water consumption per unit process is higher than typical flotation circuits, and water recycling potential is low. These complexities are well worth engineering out in the future, and optimisation can be reasonably expected .
- The production and export of petalite produced by the pilot plant will test the readiness of the regulatory and fiscal regime (including the Special Economic Zone) that will apply to the commercial operation. This "commercial road-test" is expected to de-risk this element of the project for lenders and investors by demonstrating sales receipts through the offtake agreement and the ability to deal freely with foreign currency receipts.
- The operation of the pilot plant will allow for the accumulation of knowledge during design, mitigating the scaling issues that peer lithium producers have experienced on account of a too rapid growth in supply.

The petalite flotation increases flowsheet risk, increases capital and operating cost against initial assessments, and would require considerable time and effort to fine tune and perfect for use in a



commercial operation. The result would be a protracted delivery pathway both for the pilot plant and funding for the first phase of a commercial operation.

The pilot plant is considered as a key asset for the company. It's operation alongside commercial operations is considered vital as it will allow for geo-metallurgical confirmation and optimisation for each ore type prior to feed into the commercial operation.

### **Staged Development and Revised Feasibility Study**

In service of a higher certainty flowsheet delivering a lower risk pathway to production, the Company has assessed advancement of the low-cost Arcadia Lithium Project in a number of stages. This development strategy allows risks to be managed progressively, reduces upfront capital, supports a reduced execution period and will be undertaken with the objective to reach the nameplate capacity of 2.4Mtpa outlined in the Feasibility Study announced on the 19 December 2019.

Using the FS detailed capital cost and operating cost data as a base, an internal assessment of a 0.6Mtpa first stage and a 1.2Mtpa first stage showed that a 1.2 Mtpa project would deliver robust economics as well as allowing for staged expansion into a growing market.

For this reason, the first stage of the project will have a capacity of 1.2Mtpa and will maximise the modularisation of equipment and provide the ability to readily scale to nameplate capacity of 2.4Mtpa. The staged development approach is motivated by reduced time to market, lower initial capital expenditure and creating shareholder value by delivering a lower risk execution plan.

Whilst the staged development plan is a focus of the Company, Prospect does have the ability to go direct to nameplate capacity of 2.4Mtpa should market conditions and funding activities allow it. The existing 2.4 Mtpa Feasibility Study delivers:

- Pre-tax NPV10 of US\$710m;
- Average annual EBITDA for the first 5 years of US\$168m;
- Life of Mine operating cost of US344 per tonne
- Pre-tax Internal Rate of Return (IRR) of 71%; and
- A 15.5 year project with average annual production of 173,000t of spodumene concentrate for the chemical market and 122,000t of petalite concentrate for the technical and chemical market.

In line with the staged development plan, the Company has agreed to appoint an independent lithium focussed engineering firm to undertake the revised feasibility study, which will include a Front-End Engineering and Design to improve technical certainty and reduce execution risk in providing greater



accuracy on equipment selection, sizing and resulting project economics. The revised feasibility process is expected to be completed early Q3 CY2021.

### **Project Funding and Offtake Discussions**

The Company is advancing discussions with strategic corporate and institutional financiers as well as early-stage discussions to consider a development joint venture with a large corporate investor.

The Company is continuing discussions with its existing offtake partners alongside a number of potential offtake partners in relation to its spodumene production profile and its staged development plan, with a key focus on meeting project financing requirements. These activities will be run in parallel with the preparation of the revised feasibility study to deliver a more certain implementation plan.

### **Corporate structure simplification – Value Accretive Farvic Transaction Extended**

The Company is pleased to have extended to 31<sup>st</sup> December 2021 the previously reached conditional agreement with Farvic Consolidated Mines Pvt Ltd (“Farvic”). As announced on 3 October 2018, the agreement is to increase its ownership in the Arcadia Lithium Mine from 70% to 87% and is significantly value accretive for the shareholders of Prospect.

Under the agreement, Farvic has agreed to transfer the shares it holds in Prospect Lithium Zimbabwe (Pvt) Ltd (“PLZ”) (holder of the Arcadia Lithium Mine) to Prospect Minerals Pte Ltd, a wholly owned subsidiary of the Company. In consideration for the transfer of shares in PLZ, the Company will issue 9,497,680 fully paid ordinary shares (94,976,800 pre consolidation) to Farvic, representing a dilution to existing Prospect shareholders of approximately 4.8%, and pay Farvic A\$1,187,210 in cash. Upon completion of the transaction, the Company’s equity interest in PLZ will increase from 70% to 87%.

Currently, Prospect ‘free carries’ the other shareholders in PLZ to production, meaning that Prospect funds 100% of the project expenditure. The outcome of this transaction is that Prospect increases its share of future revenues and profits from the Arcadia Lithium Mine by 17% to 87% without an increase in expenditure (or risk) and thus is significantly accretive to Prospect shareholders.

The shares issued to Farvic will be subject to a voluntary escrow, with 25% of the shares being released every 6 months, subject to any additional escrow imposed by ASX. The transaction has been approved by the Zimbabwe Reserve Bank as announced on 19 July 2020 and is subject to a number of conditions precedent, including the Company obtaining shareholder approval in accordance with the ASX Listing Rules.

This release was authorised by the Sam Hosack, Managing Director of Prospect Resources Ltd.

**\*ENDS\***



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**About Prospect Resources Limited (ASX:PSC, FRA:5E8)**

Prospect Resources Limited (ASX:PSC, FRA:5E8) is an ASX listed lithium company based in Perth with operations in Zimbabwe. Prospect's flagship project is the Arcadia Lithium Project located on the outskirts of Harare in Zimbabwe. The Arcadia Lithium Project represents a globally significant hard rock lithium resource and is being rapidly developed by Prospect's experienced team, focusing on near term production of high purity petalite and spodumene concentrates. Arcadia is one of the most advanced lithium projects globally, with a Definitive Feasibility Study, Offtake Partners secured and a clear pathway to production.

**About Lithium**

Lithium is a soft silvery-white metal which is highly reactive and does not occur in nature in its elemental form. In nature it occurs as compounds within hard rock deposits (such as Arcadia) and salt brines. Lithium and its chemical compounds have a wide range of industrial applications resulting in numerous chemical and technical uses. Lithium has the highest electrochemical potential of all metals, a key property in its role in lithium-ion batteries.

**Caution Regarding Forward-Looking Information**

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. All references to dollars (\$) and cents in this announcement are in United States currency, unless otherwise stated.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities. Prospect confirms that for the purposes of Listing Rule 5.19.2, all material assumptions underpinning the information continue to apply and have not materially changed