



ASX: **CXO** ANNOUNCEMENT

2nd August 2018

Improved Recovery of High Grade Lithium in New Results Strongly Positive for Finniss Economics

HIGHLIGHTS

- Improving Recoveries of High Grade Lithium Concentrate in new metallurgical results are expected to be strongly positive for the upcoming Feasibility Study;
- Recent metallurgical testwork shows a strong improvement in the assumptions utilised in the PFS, with up to 79% lithium recovery at a grade of 5.5% Li₂O;
- Overall mass yield of up to 27% of head feed;
- Gravity only plant to be designed to deliver optimal yield;
- Further test work demonstrates a DMS circuit can easily produce a 6.1% Li₂O concentrate at good recoveries of 69%;
- Testwork continuing to optimise recoveries and design in Feasibility Study.

Emerging Northern Territory lithium developer, Core Exploration Ltd (ASX: CXO) (“Core” or the “Company”) is pleased to announce a strongly positive update on metallurgical results achieved since the release of the Pre-Feasibility Study (PFS), which are expected to further enhance the robust economics demonstrated by the PFS.

Recent metallurgical test work on core from the Grants deposit has delivered outstanding results and supports the business case for saleable concentrate from a simple DMS plant designed to use a gravity only circuit.

High grade 5.5% lithium concentrate was produced at an elevated recovery of 79% in new metallurgical testwork for the design of a simple gravity separation plant using industry standard Dense Media Separation (DMS).



These new results significantly improve on the results of the preliminary testwork conducted in 2017 that were utilised in the recent PFS assumptions, based on producing a 5.0% Li₂O concentrate at 76% recovery (see *Table 1*).

	PFS	New Results	
Size	P100 -6.3mm +0.5mm	P100 -5.6mm +0.5mm	
Concentrate Grade (Li ₂ O)	5.0%	5.5%	6.1%
Recovery	76%	79%	69%

Table 1. Comparison of new improved results with previous PFS results (ASX 25/06/2018).

6.1% Li₂O concentrate was also produced at good commercial recoveries of 69% using DMS at the same sizing in the recent testwork. Ongoing testwork will be further refined over coming months with the aim of optimisation of the production of higher concentrate grades to be considered in the Feasibility Study later this year.

Commenting on the successes of the metallurgical testwork, Core’s Managing Director Stephen Biggins said “Core’s metallurgical test work completed to date shows that Core can produce high quality, spodumene concentrates with good recoveries through a simple, low capital cost DMS processing circuit, therefore avoiding the much higher capex requirements of a large flotation circuit.

The high-grade lithium concentrate produced by Core is showing to be of excellent quality with low iron and low in other impurities being premium characteristics for customers.

These new improved grades and recoveries in the recent testwork are likely to have a significantly positive affect on economics of the project and will be considered by Feasibility Study numbers that is underway and scheduled for completion later in the year.”

Positive Metallurgical Testwork Results

The new metallurgical testwork was conducted on a composite sample from an additional five HQ ½ core diamond holes spatially distributed within the Grants Lithium Deposit located near Darwin in the Northern Territory.

The sample, which had a head grade of 1.69% Li₂O and 0.57% Fe₂O₃, was crushed to 5.6mm and screened at 0.5mm. The -5.6 +0.5mm fraction, which represented 83.7% of the mass and contained 86.9% of the lithium, was processed through two stages of 100mm DMS cyclone at Specific Gravity (SG) cut points of 2.9 and 2.7.

The primary stage, which cut at 2.7 SG, rejected 52.9% of the total mass which contained 5.3% of the total lithium. The second stage DMS, which processed the sink fraction from the



primary stage, was operated in a standard configuration at a cut point of 2.9 SG and produced a concentrate of 5.5% Li₂O in 27 % of the overall mass and at a lithium recovery of 79%.

The quality of the concentrate was excellent, with low content of key impurities. The iron (Fe₂O₃) was less than 0.71%, and combined alkalis (Na₂O + K₂O) were less than 3%.



Figure 1. DMS Test work

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Competent Persons Statements

Metallurgy

The information in this release that relates to metallurgy and metallurgical test work has been reviewed by Mr Noel O'Brien, FAusIMM, MBA, B. Met Eng. Mr O'Brien is not an employee of the company but is employed as a contract consultant. Mr O'Brien is a Fellow of the Australasian Institute of Mining and Metallurgy, he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent person as defined in the 2012 edition of the "Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Mr O'Brien consents to the inclusion in this report of the contained technical information in the form and context as it appears.

Core confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the announcements "Grants Lithium Resource Upgrade" dated 8 May 2018 and "Maiden Resource Estimate at BP33" dated 23 May 2018 continue to apply and have not materially changed. The Mineral Resources underpinning the production target have been prepared by a Competent Person in accordance with the requirements of the JORC code.

Core confirms that all material assumptions underpinning production target and forecast financial information derived from the product target announced on 25 June 2018 continue to apply and have not materially changed. Any impact of changes to PFS assumptions will be provided in the upcoming Feasibility Study.