Commitment to the Future

Technologies to Diversify the Production of Battery Grade Lithium

Roskill Lithium Mine to Market Conference

February 2019

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About Lepidico

- Lepidico (ASX: LPD) is a lithium chemical company with a management team experienced in process and project development.
- Lepidico's strategic objective is to develop a sustainable business that provides above average returns, by developing a fully integrated lithium business from mine to battery grade lithium chemical production
- Lepidico is differentiated by its clean-tech process technologies, which collectively extract lithium and recover valuable by-products from the less contested lithium-mica and lithium-phosphate minerals
- Pilot Plant under construction in Perth, Australia: commissioning April 2019
- Phase 1 L-Max® Plant Project to be located in Sudbury, Canada; currently in Full Feasibility Study – Study results due Q2 2019
- Lithium-mica mine feed sources from Portugal, Australia and Canada
- Lepidico has a market capitalisation of A$60 million, and is funded into 2020 with A$8M cash at 31 December 2018 and no debt
- Zero-harm HS&E performance: no incidents since records began in July 2016

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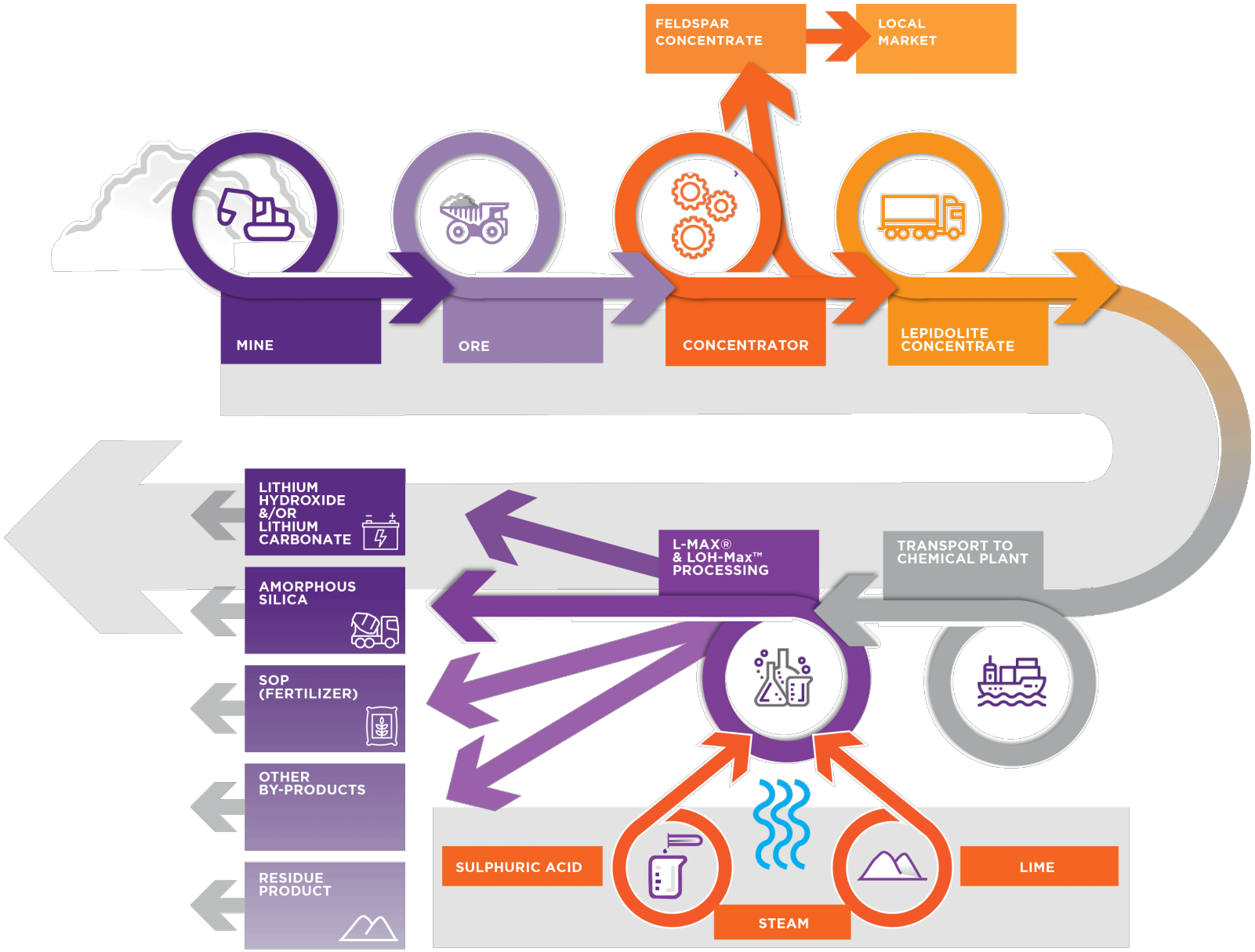
Vertically integrated lithium business



Mine and concentrator

- Low impact site with co-disposal of concentrator fines with mine waste – no tailings storage required
- Feldspar concentrate is jurisdiction and volume dependent
- Other concentrator by-product potential from tantalite and tin

Chemical plant

- Minimal emissions – steam
- Benign residue – being evaluated as a landfill remediation product with natural buffering characteristics
- Zero-waste objective

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Asset Overview

Alvarrões Lepidolite Mine, Operating

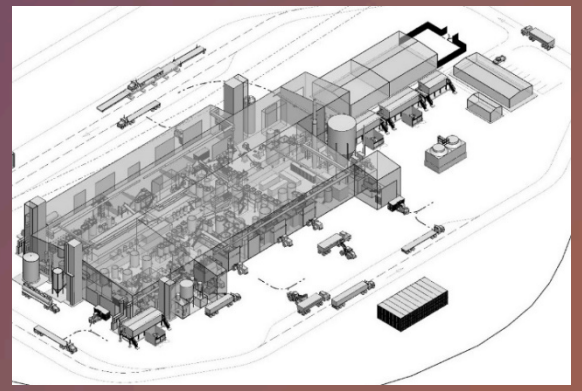
Mine expansion & concentrator development in Feasibility Study

Inferred Resource 1.5Mt @ 1.1% Li_2O
Ore offtake agreement with Grupo Mota
New Mineral Resource Q1 2019

Schematic diagram of Concentrator

Separation Rapids lithium deposit 9.6Mt @ 1.31% Li_2O
Lepidolite offtake LOI with owner Avalon Advanced Materials

Phase 1 L-Max® Plant
Sudbury, Canada
In Feasibility Study, Results due Q2 2019
Corporate Office, Toronto



Schematic diagram of Chemical plant

Mt Cattlin & L-Max® Synergy potential

Lepidico Registered Office & Technical Capability, Perth

L-Max® Pilot Plant Under construction

Youanmi JV
LPD 80% Earn-in on Youanmi Li-rights, Lepidolite rich pegmatite
Drilling completed December 2018
Results pending

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Lithium mica feed

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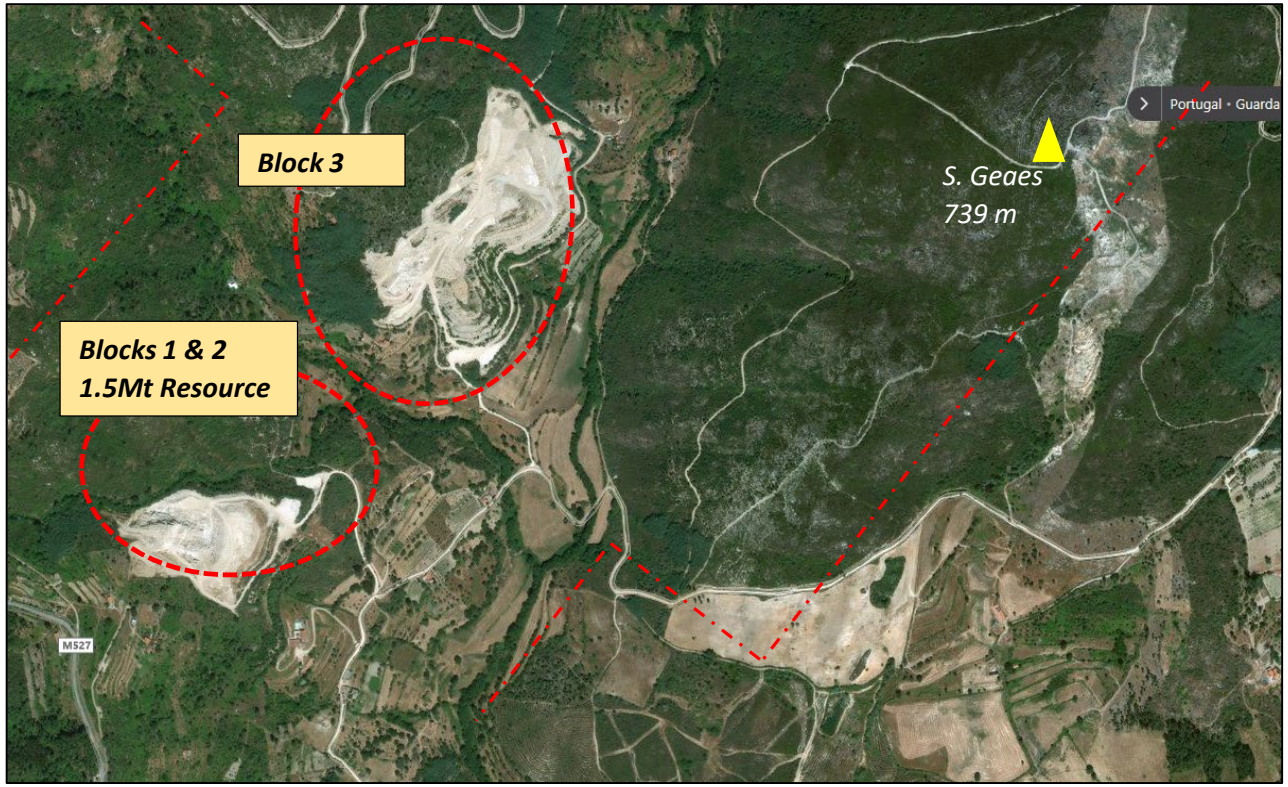
Alvarrões Lepidolite Mine



- Ore access agreement with Grupo Mota over the operating Alvarrões lepidolite mine, Portugal, which currently supplies c. 1.8% Li_2O concentrate to the ceramics industry
- Mining lease covers 634Ha
- Inferred Mineral Resource estimate: 1.5M t @ 1.1% Li_2O (December 2017)
- Drilling completed December 2018 for revised Mineral Resource estimate March 2019; two new lepidolite mineralized pegmatite sills identified
- Mining rates to increase to c. 140,000tpa of mill feed, sufficient to supply 30,000t pa of lithium mineral concentrate to the planned Phase 1 L-Max® Plant in Sudbury; 10 year feed at nominal 3.6tph throughput rate
- Concentrator to employ conventional flotation; marketable quality feldspar concentrate by-product may be produced for local ceramics use, in addition to the primary lithium mica concentrate
- Co-disposal of the modest quantities of plant fines with mine waste; negates the requirement for a tailing storage facility

- *Reference: ASX Announcement, Alvarrões Lepidolite Mine Ore Access Agreement, 9 March 2017

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Development

Pilot Plant and Phase 1 Demonstration Scale Plant

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The L-Max® Advantage

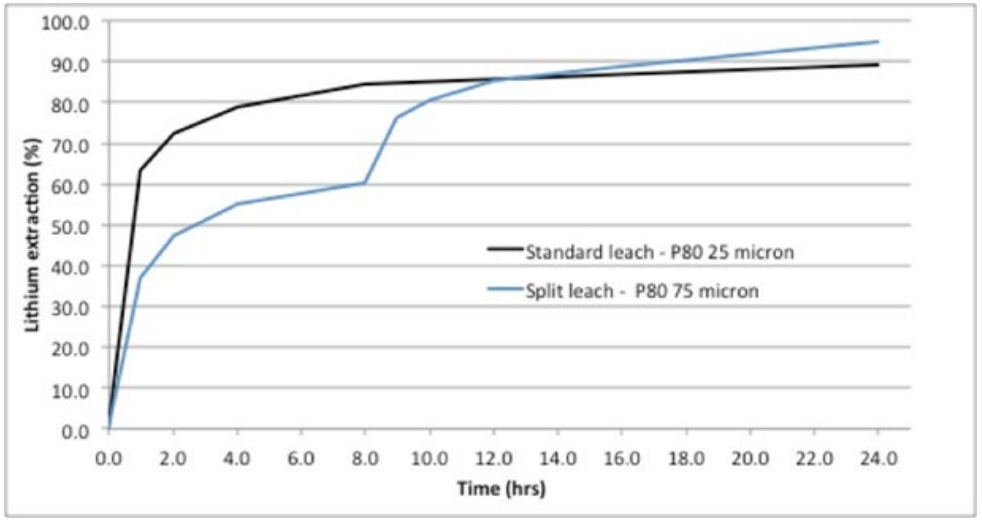
- ✓ The Australian Patent Office declared L-Max® to be “novel, inventive, industry applicable and patentable” for production of lithium carbonate
- ✓ L-Max® leaches lithium from non-conventional and relatively uncontested mineral sources; lithium micas and phosphates, and achieves high extraction rates
- ✓ L-Max® utilises common use, inexpensive reagents & is energy efficient
- ✓ L-Max® reagents and operation have straightforward occupational health and safety, and environmental characteristics
- ✓ L-Max® utilises conventional equipment and operates at atmospheric pressure and modest temperature
- ✓ By-products include potassium sulphate fertiliser (SOP), amorphous silica and potentially Cs, Rb, Ta & Sn
- ✓ Scalable technology: scoping study for a full scale plant will contemplate output of 15,000t to 25,000t pa LCE
- ✓ Compatible with other process technologies including S-Max™

Lepidolite

Zinnwaldite

Amblygonite

Improved leach kinetics using S-Max™



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Lithium Hydroxide (LiOH) – introducing LOH-Max™

Lithium chemical demand growth has shifted strongly to LiOH

LOH-Max™ delivers an industry solution to lithium hydroxide production without by-product sodium sulphate

- Strategic Metallurgy Pty Ltd, in collaboration with Lepidico, has developed a hydrometallurgical process that produces high purity LiOH from a lithium sulphate intermediate without the production of sodium sulphate.
- LOH-Max™ is compatible with the highly efficient L-Max® impurity removal stages and can replace the subsequent standard industry sodium sulphate and lithium carbonate recovery circuits
- Capital intensity and operating costs are more competitive than for production of lithium carbonate:
  - > US$10m capital benefit by elimination of sodium sulphate circuit at 5,000tpa LiOH rate
  - Potential for lithium hydroxide and/or carbonate producers to retro-fit existing plants or redesign planned plants
- Funding and offtake agreements for new lithium chemical plants in 2018 were heavily skewed towards LiOH operations
- Process residue is benign and alkaline, and is being evaluated as an environmental remediation product

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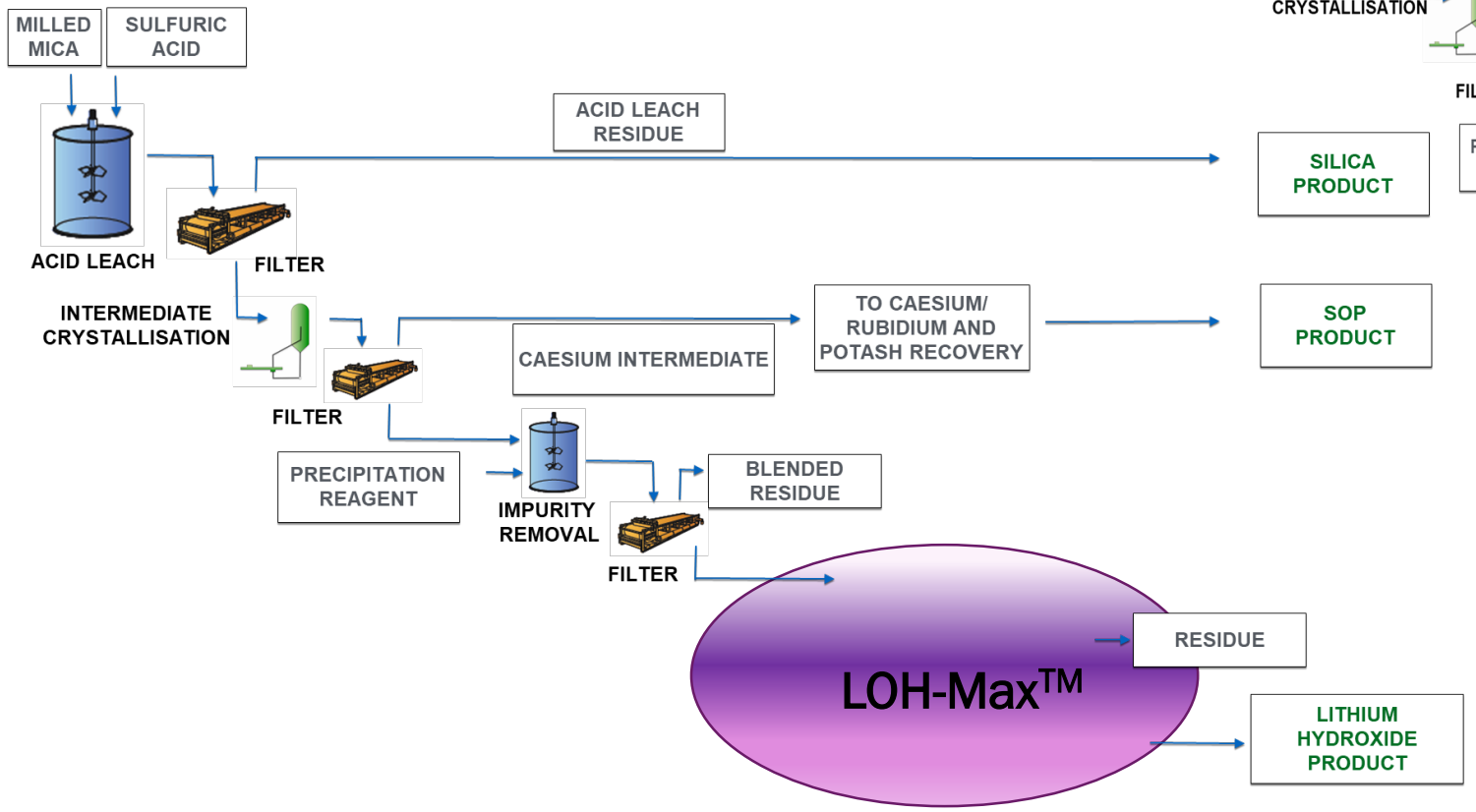
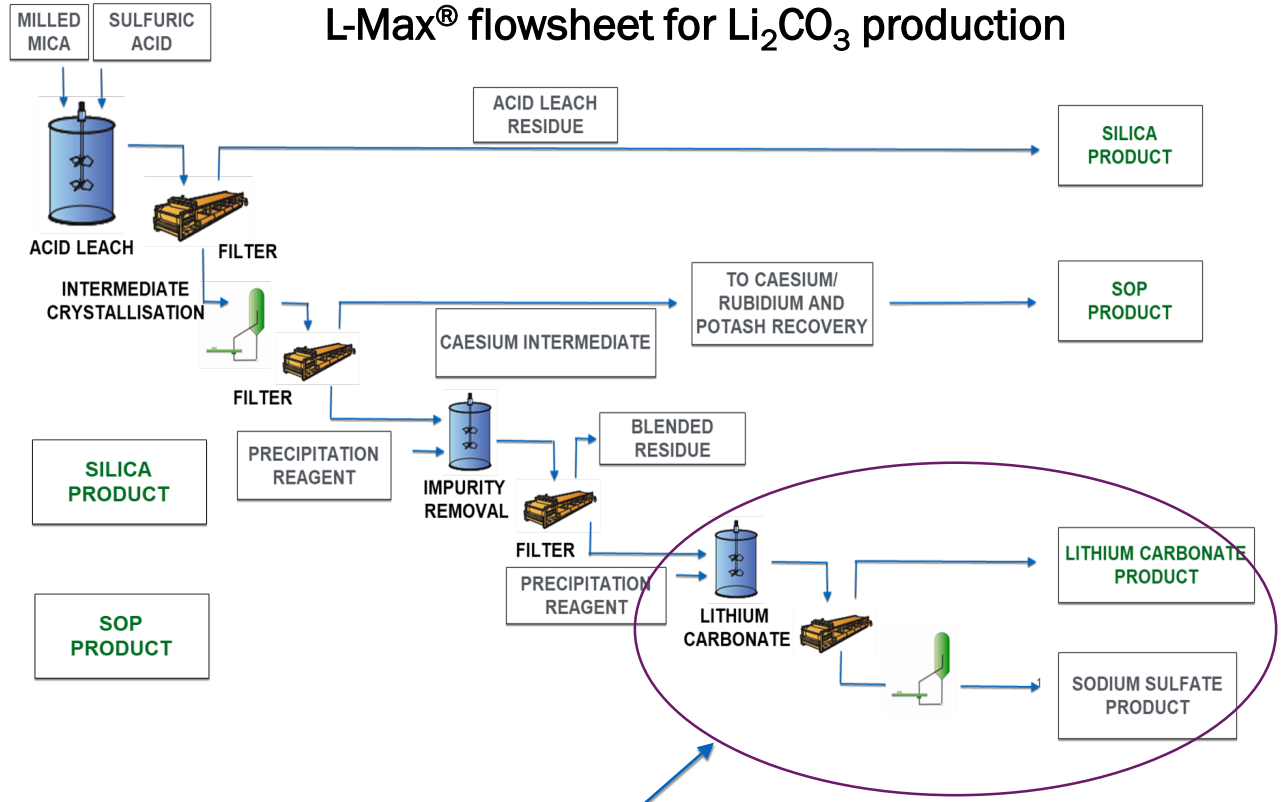
L-Max® - 100% Owned by Lepidico

New LiOH process, LOH-Max™, compatible with L-Max® flowsheet



L-Max® flowsheet for Li_2CO_3 production



Lepidico has acquired the exclusive rights to LOH-Max™

Confidentiality Agreement required to view the technology

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Pilot Plant

- Development of 15kg per hour hybrid L-Max® LOH-Max™ pilot plant on schedule and within A$3M budget
- Commissioning April 2019, operation May 2019

- Rationale for pilot plant development:
  - Demonstrate L-Max® and LOH-Max™ technical viability using like for like equipment employed to that for the Phase 1 Plant (mini-plant used laboratory equipment); expenditure eligible for R&D tax refund (43%)
  - Reduces scale-up 10-fold, down to 240 times at nominal throughput of 3.6tph for Phase 1 Plant (480 times at 6.9tph)
  - Opportunity for prospective Phase 1 Plant offtake/finance partners to due diligence processes in operation
  - Provide material for further product development of: amorphous silica (S-Max™), SOP fertilser, caesium brine and environmental remediation residue; other products may be added and assessed
  - Provide data for optimisation of Phase 1 Plant operating parameters

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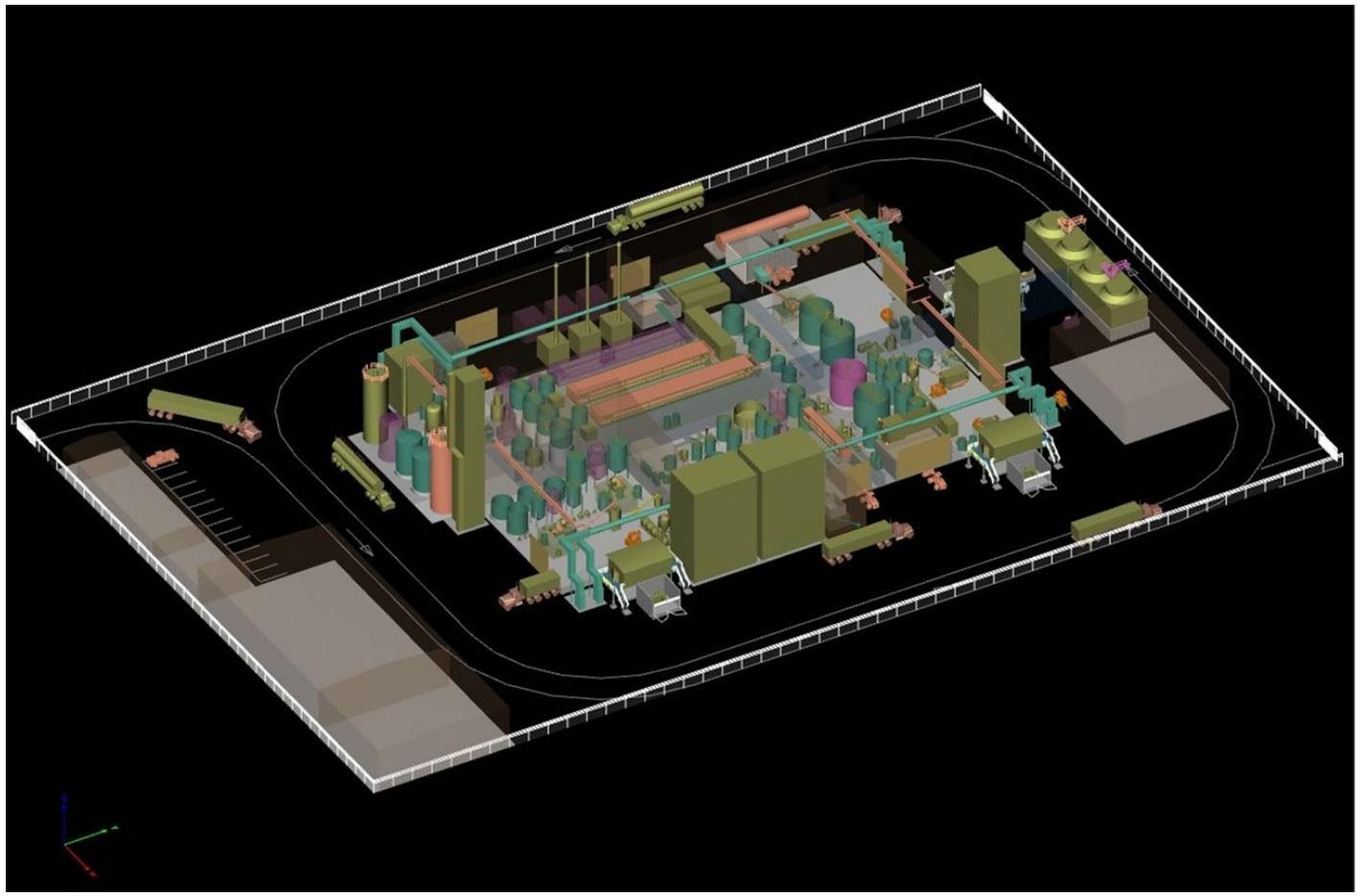
Phase 1 Plant Design – Demonstration Scale

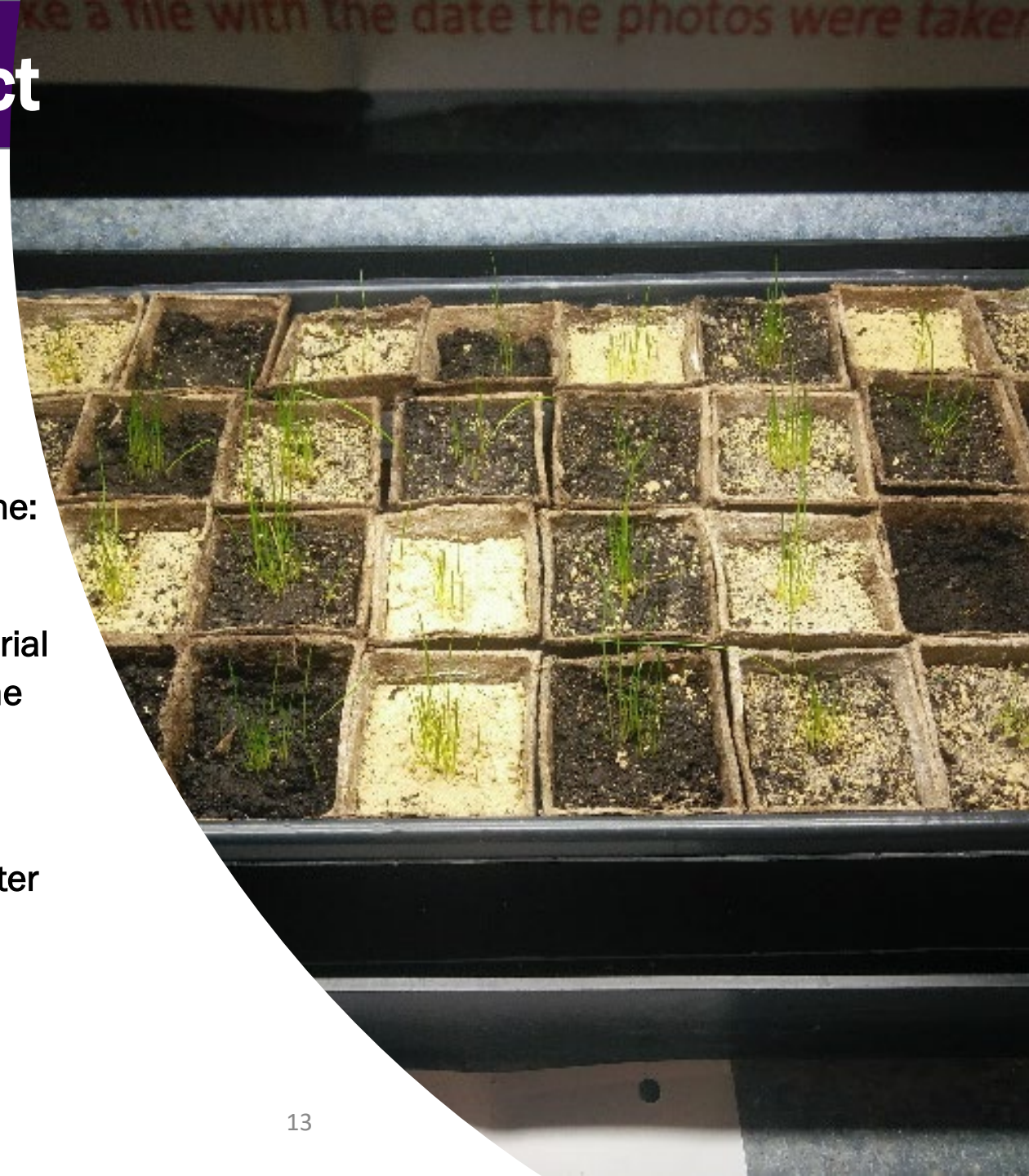


- L-Max® engineering complete December 2018; Feasibility Study complete June quarter 2019
- Incorporation of LOH-Max™ in progress
- Location: Sudbury, Canada close to established infrastructure including power, water, gas and rail
- Two alternative locations with favourable local incentives under review
- Local abundance of key reagents: sulfuric acid and lime
- Close to markets for bulk by-products: silica products and SOP fertilizer
- Throughput 3.6tph rising to 6.9tph for c. 5,000t pa lithium carbonate in production year 2
- Total site footprint 200m x 180m including laydown areas, ancillary building and parking; enclosure 6,300m^2

Phase 1 Plant residue Product

University of Waterloo completed an assessment of L-Max® residue for land reclamation purposes

- Chemical analysis using USEPA land fill testing requirements have determined that the gypsum residue is benign and alkaline: 74% moisture, gypsum 60% of solids, pH 8.5
- When blended with soil or clay (50/50) amendments the material has the potential for use as a cover in City land fill sites or in the remediation of tailings dams and mine waste facilities
- Laboratory testwork indicates the blended soil or clay residue meets Ontario standards for industrial, non-potable ground water
- Knight Piésold undertook growth trials (photo) with positive results for soil and clay blended residue
- A residue product makes L-Max® a zero-waste process



Strategy summary...

...to fast track the business to free cash flow generation, demonstrate the commercial viability of L-Max® and LOH-Max™, and become a globally significant, vertically integrated lithium chemical producer through the value chain from mine to battery grade lithium chemical.

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Competent Person Statement

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.

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