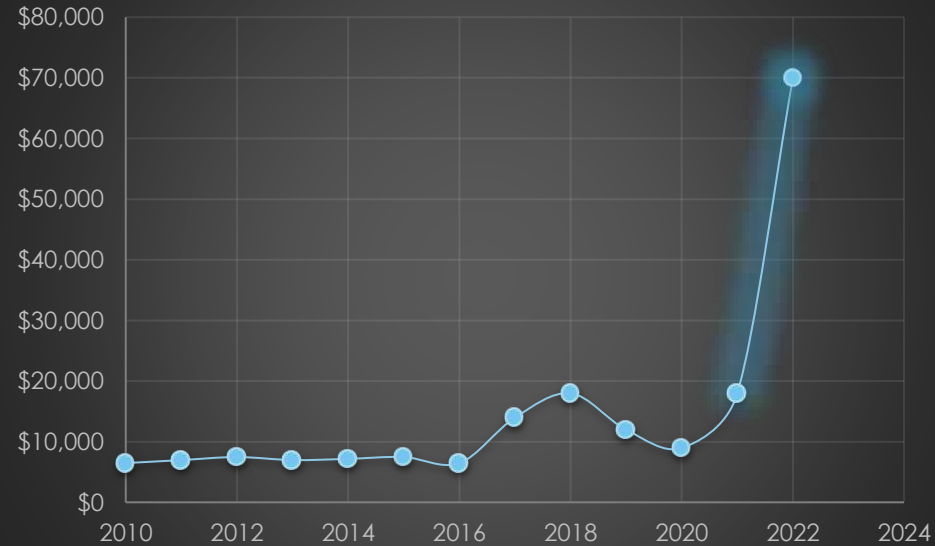
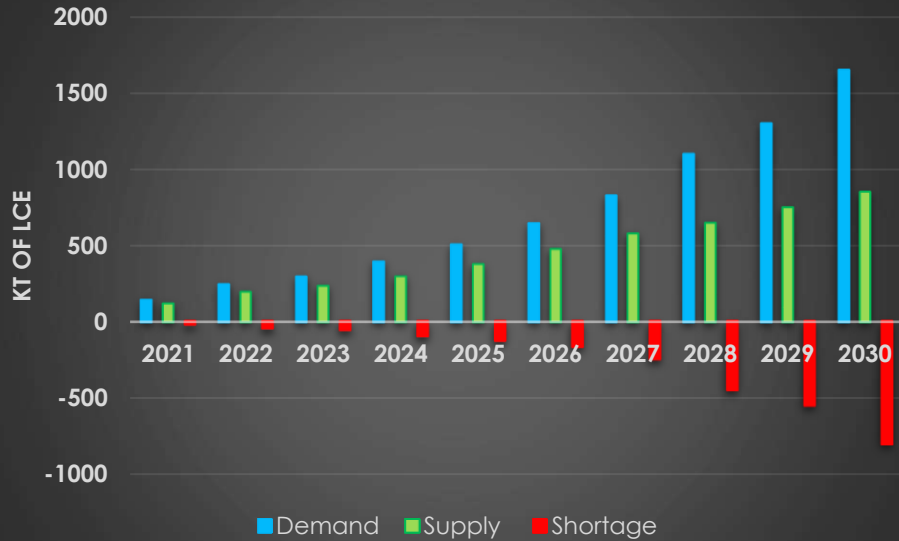




## Lithium Extraction from Unconventional Resources

Salman Safari, PhD, PEng

# LITHIUM SUPPLY GAP



Source: RK Equity

# CURRENT LITHIUM RESOURCES



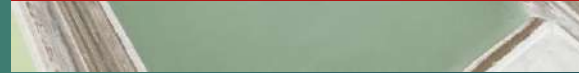
Hard Rock Mining



High OPEX  
High carbon footprint  
>80% of refining occurs in China



Evaporation Ponds



High CAPEX  
18-month processing times  
Limited to regions with dry and hot climate  
Environmentally intrusive  
Low Li recovery (<50%)  
Cutoff: >500 ppm Li

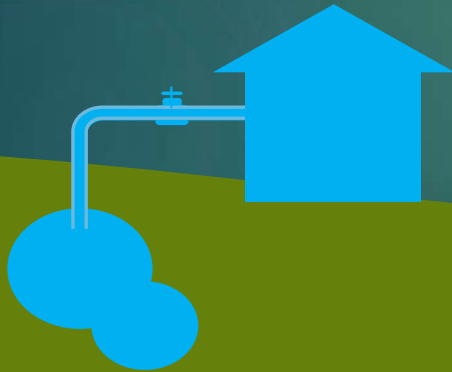
# THE OPPORTUNITY

**\$100B+ Lithium reserve in unconventional brines**

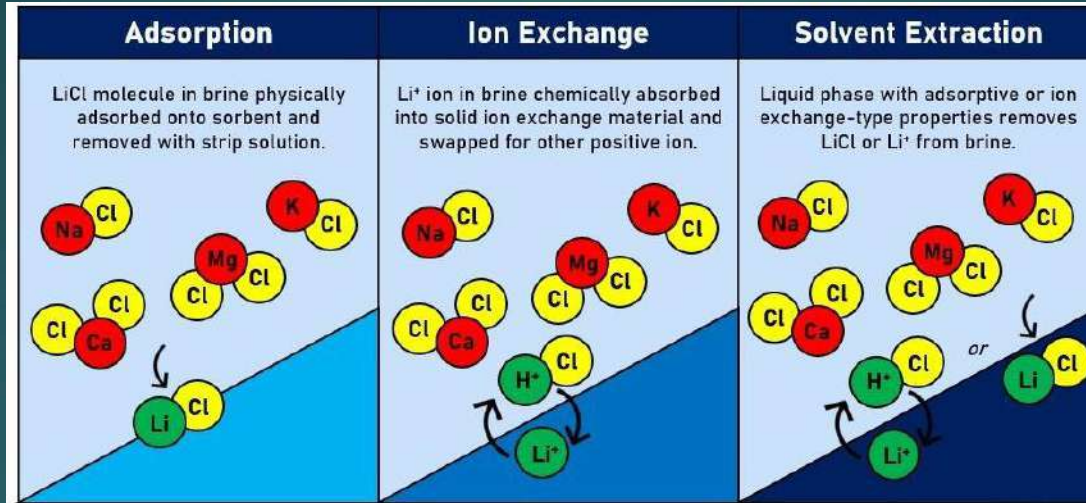
Geothermal, oilfield, etc.

Faster and less carbon intensive processes are needed

Direct lithium extraction (DLE) processes are the most promising technologies



# TECHNOLOGIES



Jade Cove Partners. 2020

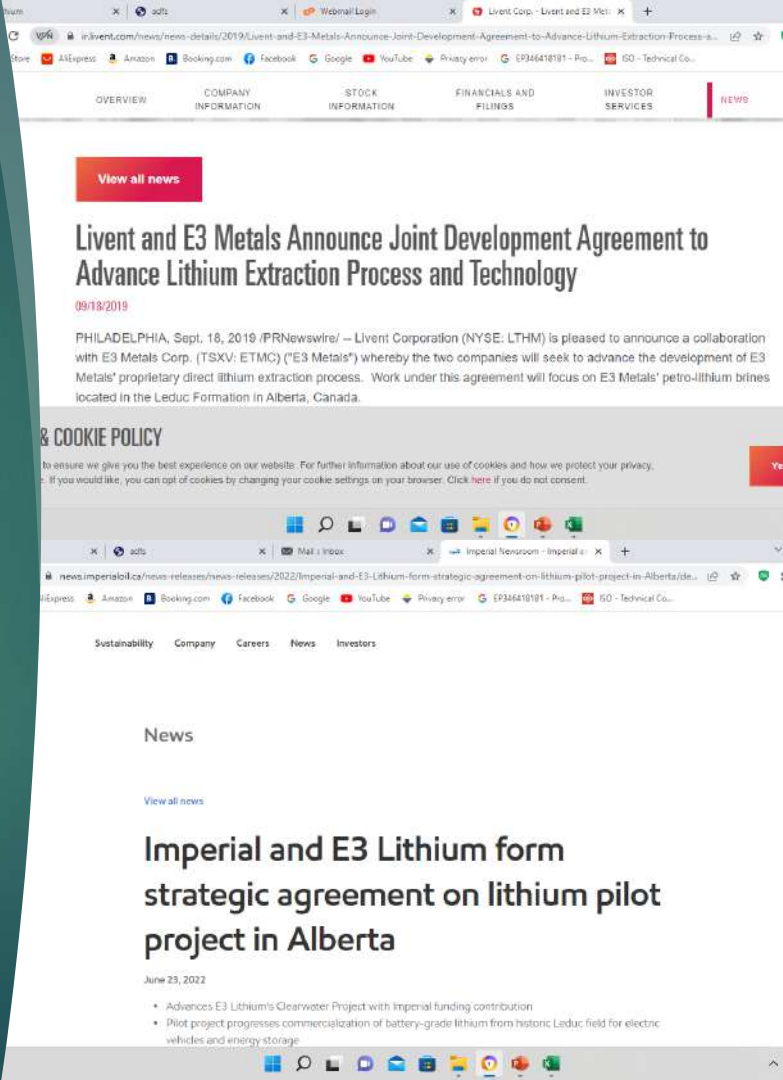
TRL9

TRL7-8

TRL6-7

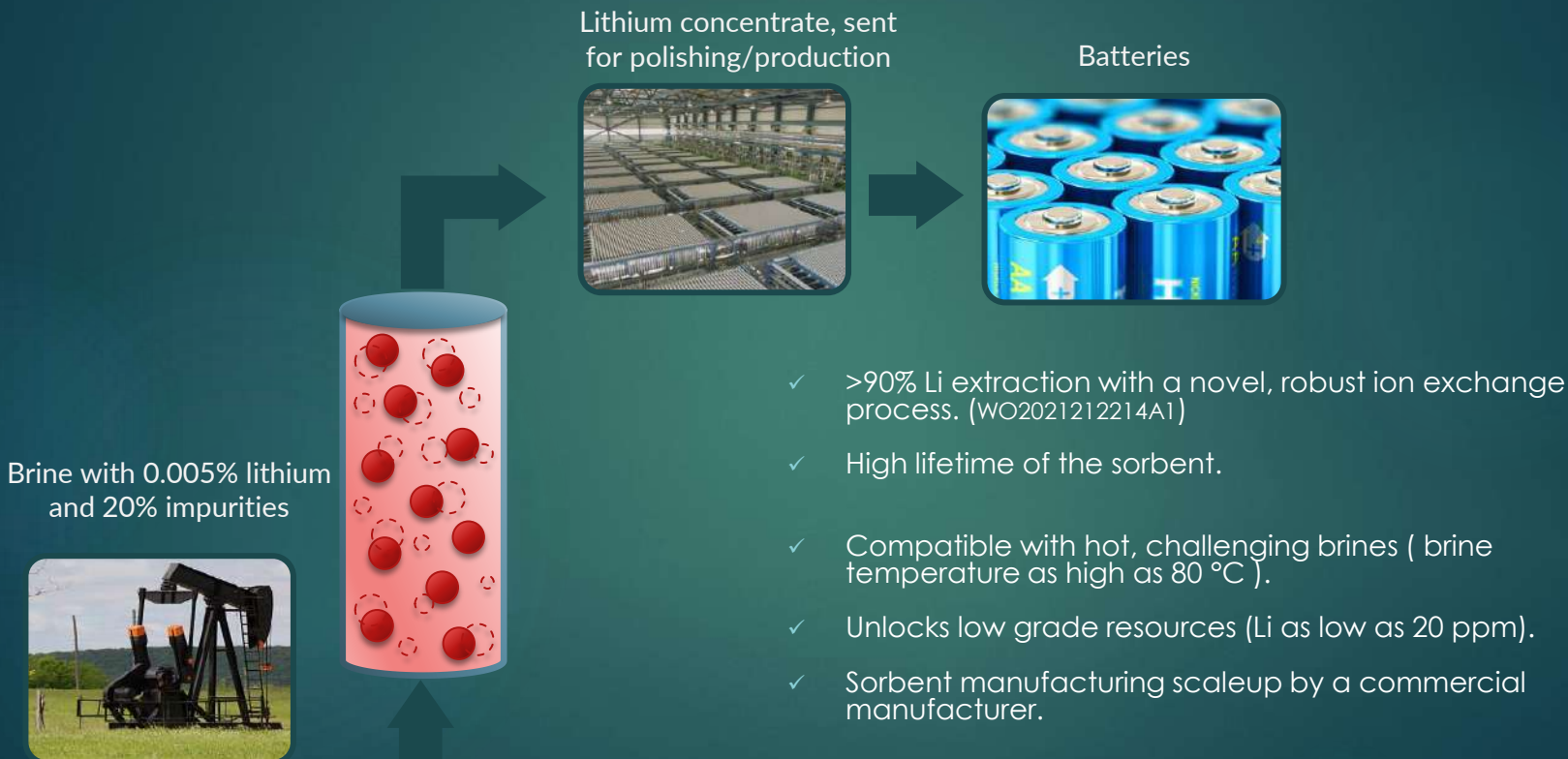
# PREVIOUS WORK

Developed the base DLE for **E3 Lithium**  
**E3** has market capitalization of **>\$150M**  
and has raised **>\$20M** to pilot the  
technology.





# Recion's process



# History and development of Recion

## RECION FOUNDED

November 2019



## LAB PILOT + NEW HIRES

100-500 L brine per day,  
contract work/June  
2022

## FIRST MODULE/ 100,000 L BRINE PER DAY

By mid 2023

## PROCESS SCALE-UP

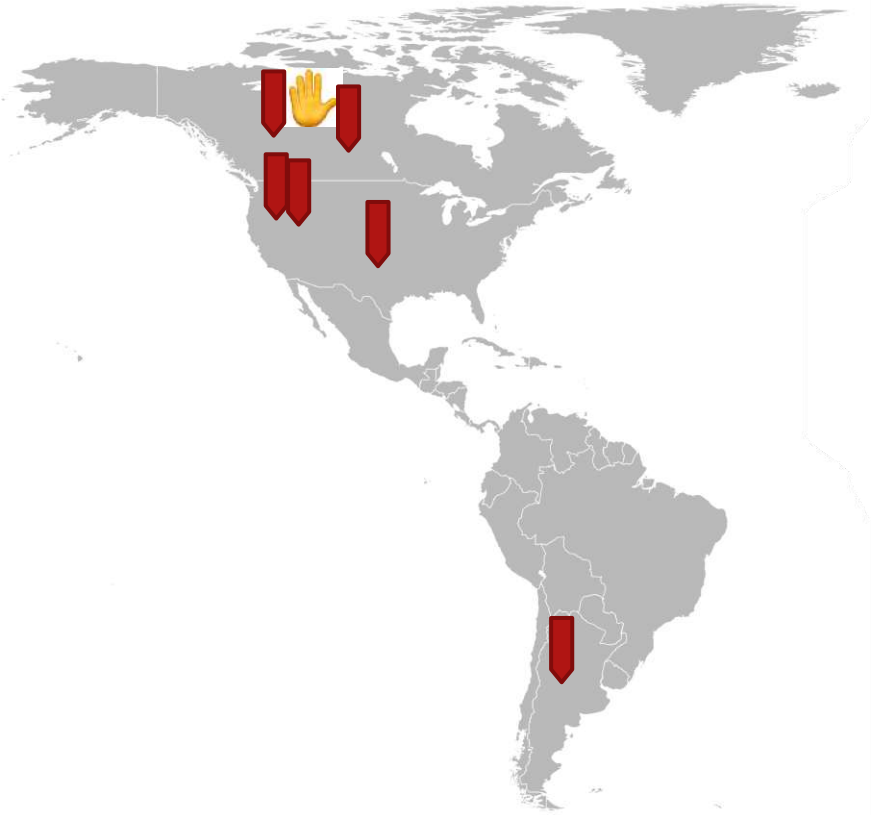
September 2020  
(1L brine per day)



## FIELD UNIT

1000-5000 L  
Brine per day  
(Expected: Sep 2022)





# Projects Highlights

Li concentration: 40-400 mg/L

# Lithium extraction from low grade brine (bench)

Li	B	Na	Mg	K	Ca
30	>80	>1,000	>50,000	>1000	>20,000

values in ppm

>90% extraction,

0.5 L brine



Li/B 62  
Li/Na 200  
Li/Mg 4157  
Li/K 300  
Li/Ca 1060

# Lithium extraction from Canadian oilfield brine (Lab pilot)

Li	B	Na	Mg	K	Ca
49	>80	>30,000	>500	>1000	>10,000

values in ppm

15 L brine

Suspended  
solids removal

Oil removal



>95% extraction

Li/B	10
Li/Na	500
Li/Mg	43
Li/K	191
Li/Ca	57

# Rezion's Competitors

	HIGHLY LI SELECTIVE	DLE SORBENT IS ROBUST	SMALL FOOTPRINT	HOT BRINE OPERATION
Lilac Solutions	✓	?	✓	?
International Battery Metals	✓	✓	?	✓
Summit Nanotech	?	?	?	✓
Rezion	✓	✓	✓	✓

# Team



**SALMAN SAFARI, PhD, PEng**

Cofounder



**DANIEL ALESSI, PhD**

Cofounder



Contact Us!

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We are looking for partnership!