



# Brazil Lake Lithium Project

**Champlain Mineral Ventures Ltd.**

**Lithium Springs Limited**

**[www.goldfieldsns.com](http://www.goldfieldsns.com)**

John F. Wightman, MSc., P.Eng., President & CEO

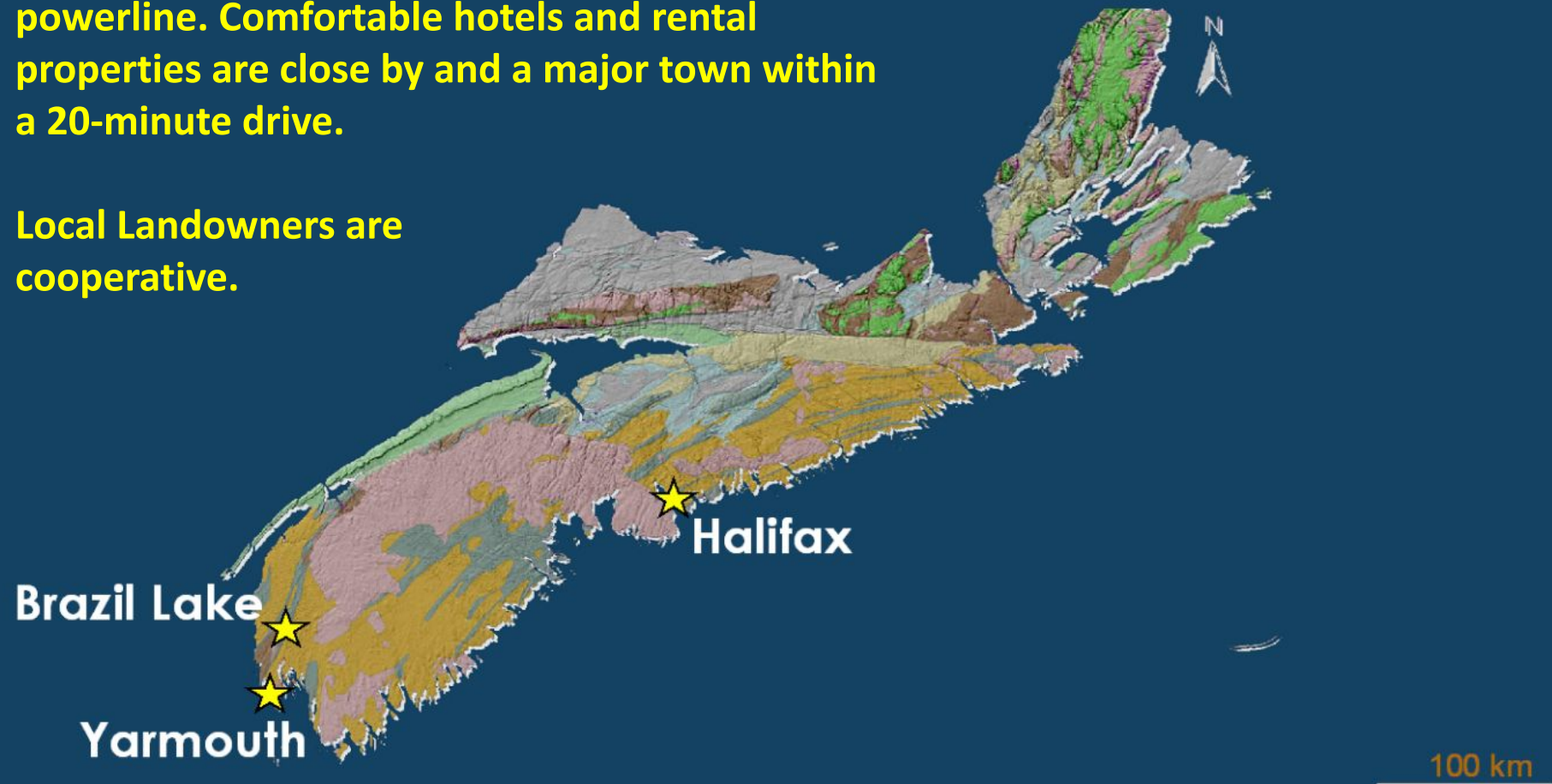
**PDAC – Atlantic Edge – Critical Minerals - 5 March 2024**

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# 300 km Southwest of Halifax

Within 800m of an excellent road serviced with a powerline. Comfortable hotels and rental properties are close by and a major town within a 20-minute drive.

Local Landowners are cooperative.



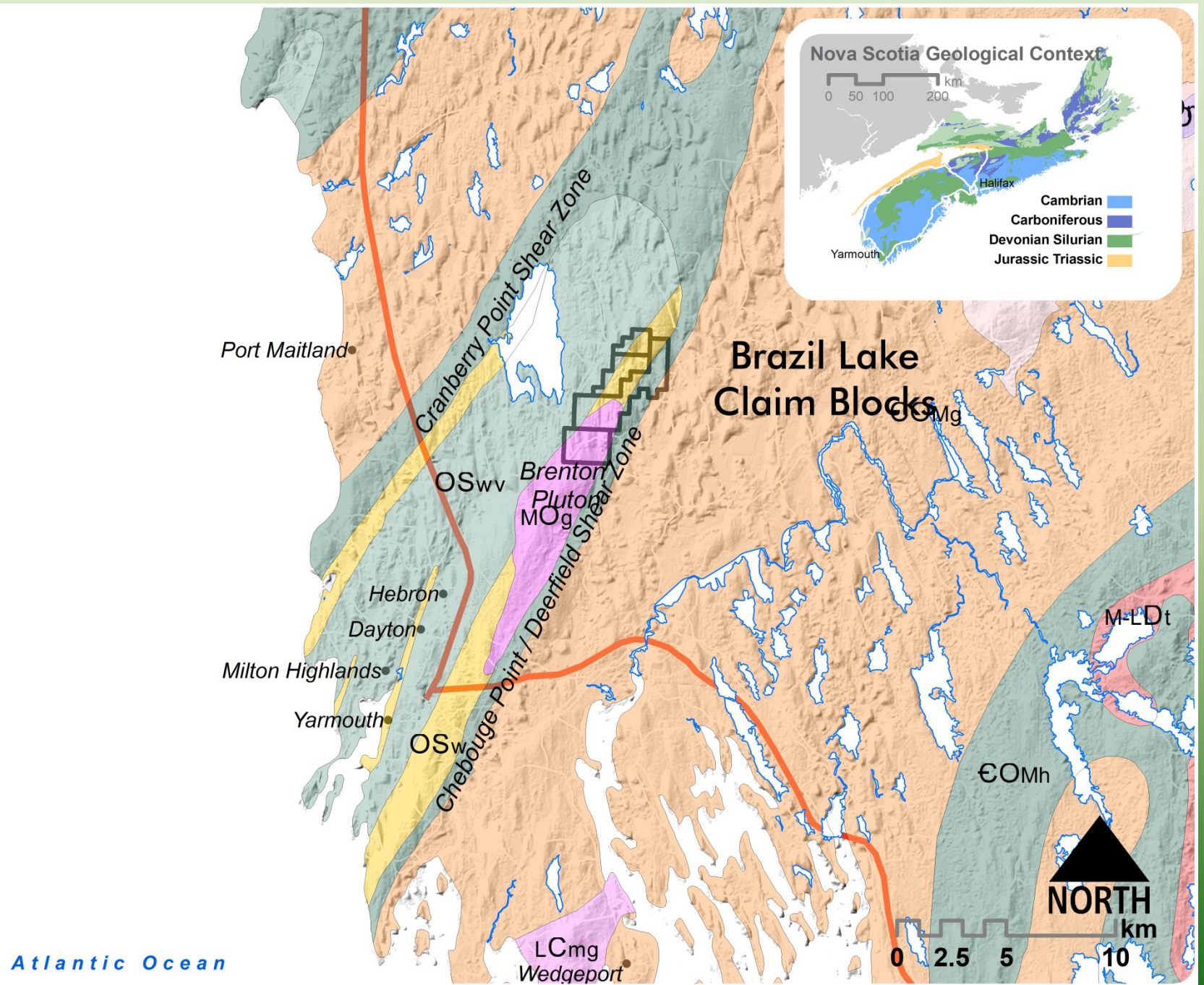
# Geology Location

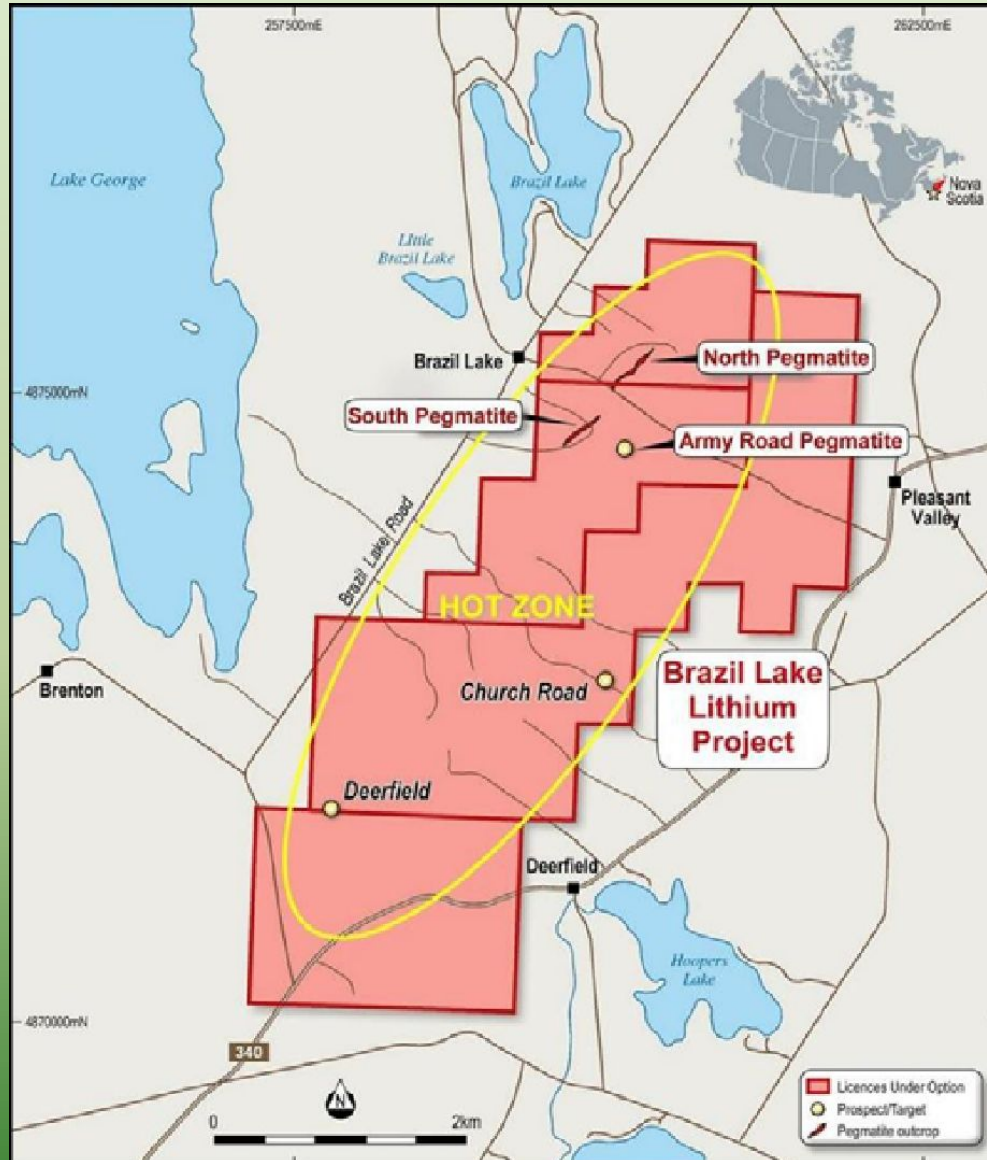
Mercator 2010  
Figure 6.2

(Modified after  
Kepple 2001)

Interpreted  
Shearzone

(Modified after  
MacDonald, 2002)





# Brazil Lake Claims

Location of the three spodumene-bearing pegmatite bodies relative to the Brazil Lake lithium project tenure

# Brazil Lake Pegmatite

## Li-Cs-Ta (LCT) Type Pegmatite

### *Important resources of:*

- **Elements:** Sn, Li, Ta, Rb, Cs
- **Minerals:** muscovite, quartz, feldspar
- **Gems:** beryl, tourmaline

### *World-Class Deposits:*

- **Tanco** (Li, Ta, Cs, Be, Rb)
- **Bikita** (Li)
- **Kamativi** (Li, Sn)
- **Greenbushes** (Ta, Nb, Li, Sn)
- **Carolinas** (Kfs)





Spodumene Zone

Silica Zone

**Mineralization is well-developed in several ore forming phases.**



**Spodumene crystals are megacrystic**



# Site Trenching – South Dike

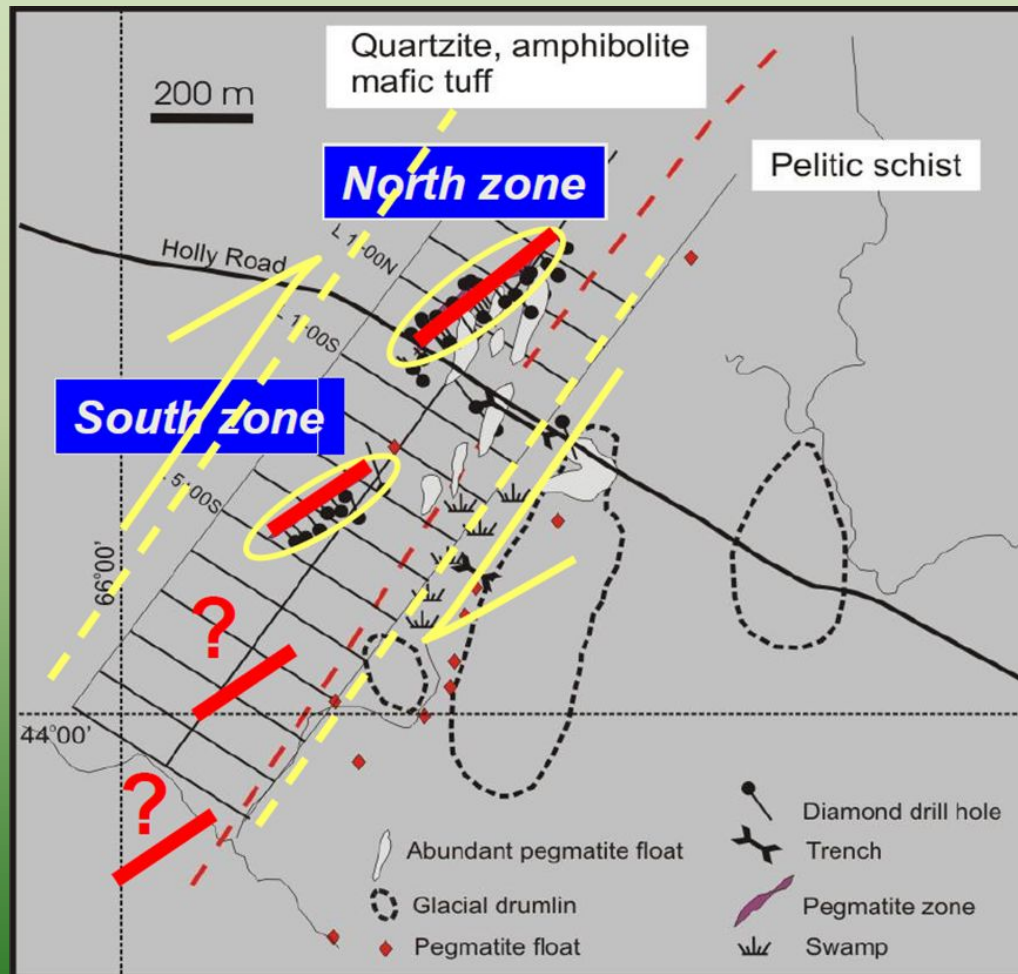




# Typical Ta Mineralization



# Brazil Lake Pegmatite Map



- Two separate lenses
- Strike oblique to bedding & dip steeply
- Extensive tourmaline alteration halo
- Contacts sharp
- Internal zonation absent
- Pegmatites deformed
- Extensional features





## South Site – Pegmatite



## Spodumene Megacryst.





# Metallurgical Testing

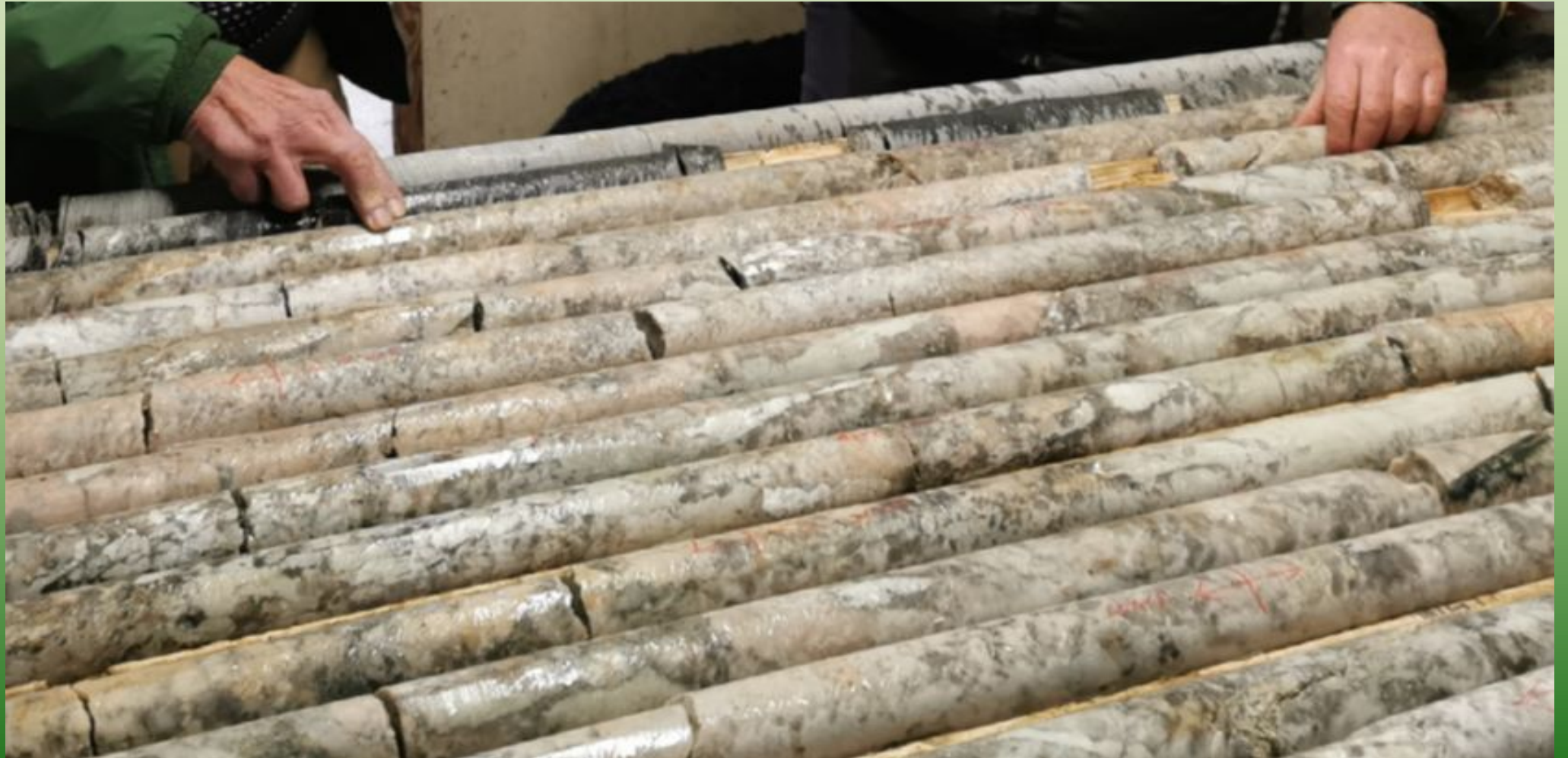
1. Champlain completed a bulk mineralogical investigation of the North Pegmatite (from drill hole BZ-02-13).
2. locally the pegmatite was made up of 16.3% spodumene, 11% microcline (potassium feldspar), 33% cleavelandite (sodium feldspar), 6% muscovite, and 34% quartz by weight.

# **Deposit Optioned to Australian Company Lithium Springs Limited - October 2022**

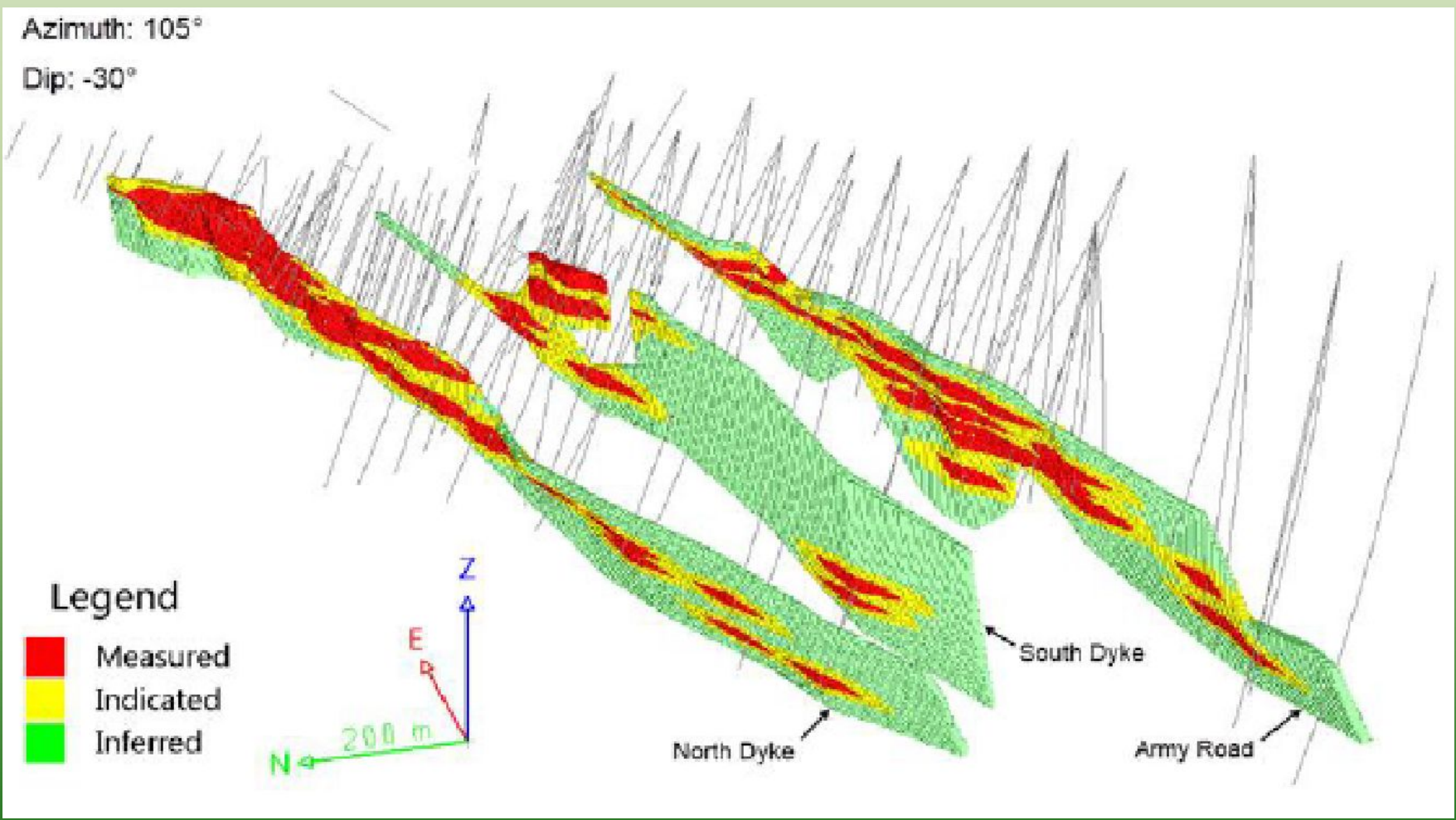
- **1. Work Completed of ~\$8 million CAD over first year.**
- **2. Focus on diamond drilling to expand resource.**
- **3. Use of new technology to find new dikes.**
- **4. Investigate disruptive processing technologies.**
- **5 Evaluate contribution of credit minerals to offset production costs (Rubidium, Beryllium, Tantalum).**
- **6. Initiate permitting studies.**
- **7. Community Consultation**



# Facilitating the energy transition through lithium and rare earth exploration



# Three mineralization domains' MRE by category (at 0.33% Li<sub>2</sub>O cutoff grade)



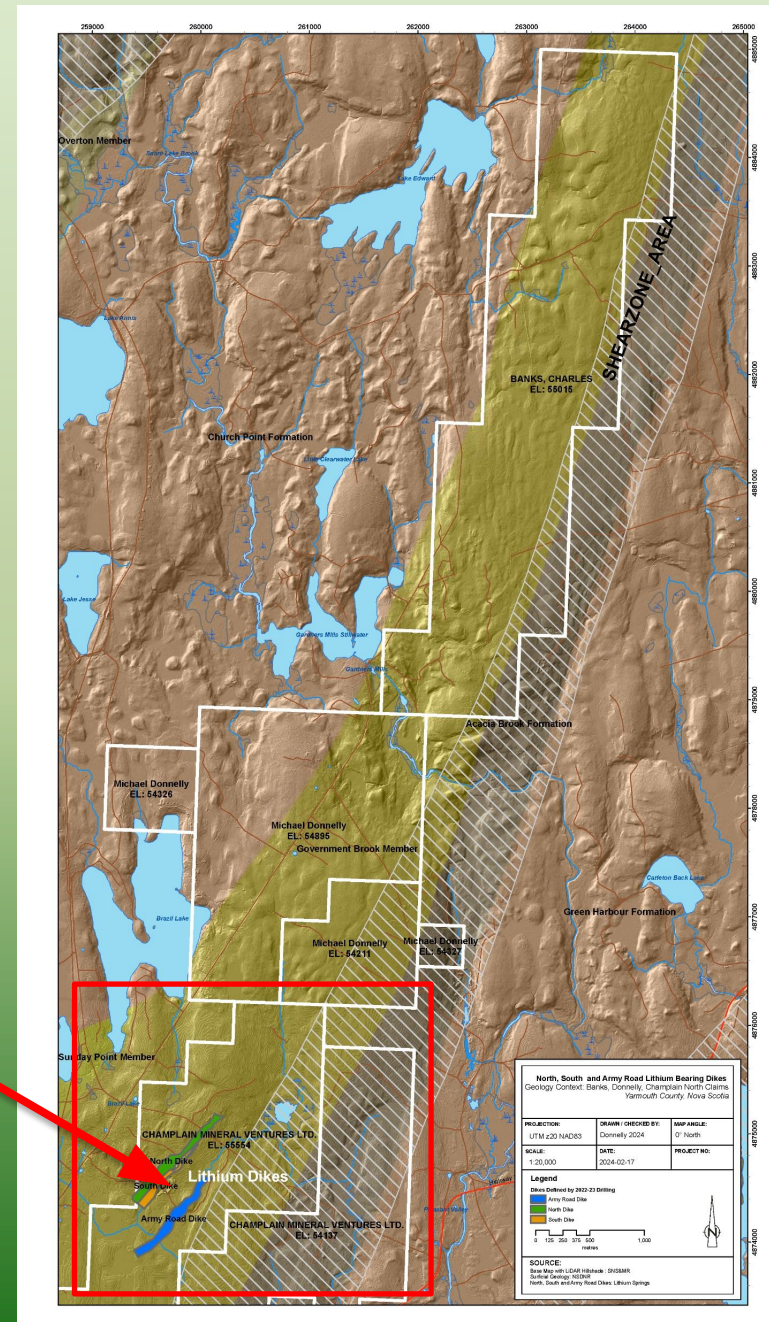
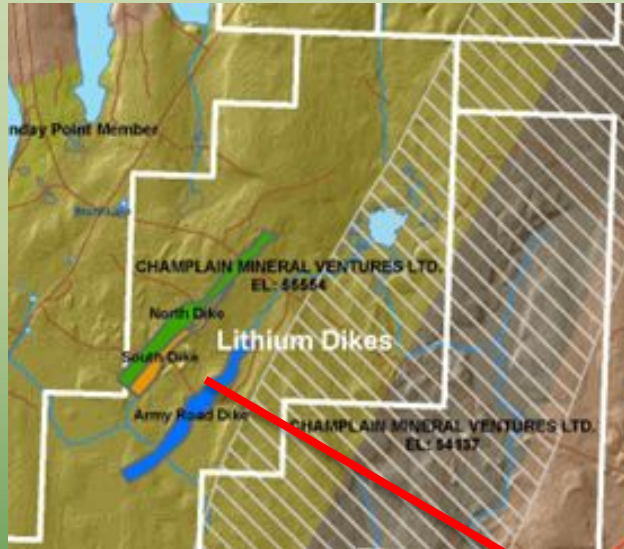
# Breakdown of Mineral Resource Estimate by classification at 0.33% Li<sub>2</sub>O cutoff grade

Domain	Measured		Indicated		Measured + Indicated		Inferred		Sub-Total	
	Tonnage	Li <sub>2</sub> O	Tonnage	Li <sub>2</sub> O	Tonnage	Li <sub>2</sub> O	Tonnage	Li <sub>2</sub> O	Tonnage	Li <sub>2</sub> O
	(kt)	(%)	(kt)	(%)	(kt)	(%)	(kt)	(%)	(kt)	(%)
North Pegmatite	1,222	1.43	927	1.45	2,149	1.44	1,188	1.11	3,337	1.32
South Pegmatite	254	1.46	361	1.45	615	1.45	1,064	0.95	1,679	1.13
Army Road Pegmatite	1,866	1.38	1,585	1.26	3,451	1.32	1,539	0.71	4,990	1.13
<b>Total</b>	<b>3,342</b>	<b>1.4</b>	<b>2,873</b>	<b>1.34</b>	<b>6,215</b>	<b>1.37</b>	<b>3,791</b>	<b>0.9</b>	<b>10,006</b>	<b>1.20</b>





# Extent of Government Brook Member relative to known dykes





# Property Potential

1. 15 km of strike available in host geologic unit.
  2. JORC MRE in August 2023 – 10.1 million/t @ 1.20 Li<sub>2</sub>O.
  3. Projections of > 20 million/t in property @ > 1.2 Li<sub>2</sub>O
  4. Developing processing with Sixth Wave Innovations to produce Lithium Carbonate - LCE (Li<sub>2</sub>CO<sub>3</sub>) @ >99.5%
1. Large land package with numerous undrilled targets.
  2. Surface rights controlled over mine site.
  3. Excellent infrastructure – road access, power grid, near - coast / seaports / large town / local workforce



# Other Critical Minerals Deposits Available for JV

Debert Lake - 65% to 75% HREE – Highest % in North America

Chasswood - >600,000,000t @ >30% Alumina

Nictaux – 1.62% Cobalt in outcrop c/w 76,143 ppb Au, 19 ppm Ag, 88 ppm Bi

Dominique – 2,520,000t @ 0.35% Tin c/w Zn, Cu, In

Wildcat – up to 4.5% Mo, >6,000m DD in 2020 - 2022

Pomeroy – up to 1% Tin, 12% Zn and 1,000 ppm In

A Lake – up to 8% Cu with 0.2% Tin

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We would welcome discussions with an experienced miner to JV and move these projects into production.



Brazil Lake Lithium Deposit

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*Thank you*