



SLP Lithium Project  
May 2023

1. The Model – Ontario compared to other areas - differences
2. NW Ontario Li pegmatites – where to look (and where you can't)
3. SLP rationale
4. SLP budget and work plan

# Model

**Metallogeny of Lithium Pegmatites**

Robert Linnen,  
Department of Earth Sciences,  
University of Western Ontario

*Acknowledgements: Laurisha Bynoe, Paul Kremer, Marieke Van Lichtervelde  
Don Burt, Don Davis, Carey Galeschuk, David London, Gary Pearse, David Trueman*

Western **TANCO Tantalum Mining Corporation of Canada, Ltd.** NEMASKA LITHIUM

Natural Sciences and Engineering Research Council of Canada Conseil de recherches en sciences naturelles et en génie du Canada

Class	Family	Type	Subtype
Abyssal		BERYL	beryl-columbite beryl-columbite-phosphite
Muscovite			spodumene
Rare - Element	LCT	COMPLEX (rare element)	petalite
	NYF		lepidolite
Mirolitic	NYF		amblygonite
			albite
		ALBITE-SPODUMENE	
		ALBITE	
		RARE-EARTH	allanite-monazite gadolinite

after Cerny (1991) in Simmons and Weber (2008)

All current NW Ontario examples are this type

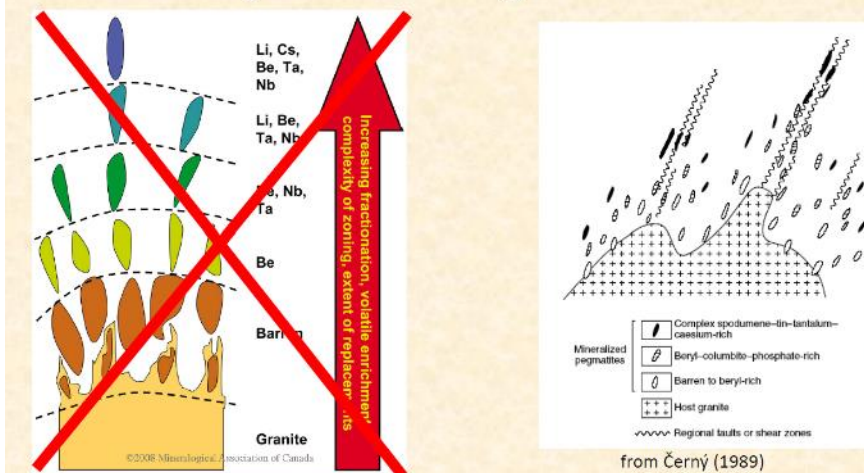
Greenbushes, Quebec Lithium  
Tanco (sqi), Big Whopper  
Wodgina  
Whabouchi, Mt. Cassiterite,  
Kings Mtn

TWO  
end-member types

This type has different setting, strong structural control in shear zones in mafic-ultramafic hosts, shallow dips

**No obvious parental magma** – unknown in NW Ontario but present in QC implies they should be present in ON

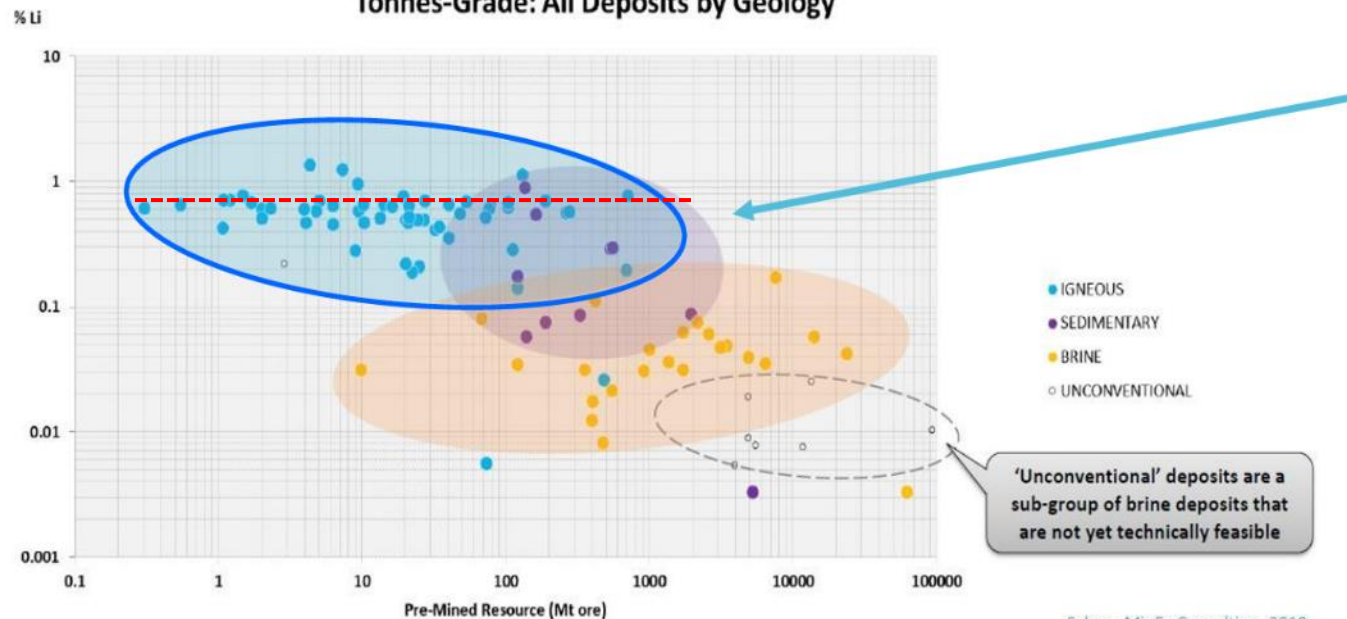
## Emplacement in Pegmatite Fields



London (2008), after Černý (1990)

Linnen ppt slide - the model of concentric zones pegmatites does not hold, requires structures.

## Tonnes-Grade: All Deposits by Geology



Large number of deposits with  $\text{Li}\% \leq 0.7\%$  (1.5%  $\text{Li}_2\text{O}$ )

The LCT pegmatites have a grade 'maximum' – this probably implies some genetic link to source partial melting. **From an exploration point of view, since the product is a concentrate – and grade is fairly predictable, distance to infrastructure is a key consideration.**

Note  $\text{Li}\% \times 2.153 = \text{Li}_2\text{O}\%$

Sykes - MinEx Consulting, 2019

# Practical Considerations for Exploration of LCTs in ON

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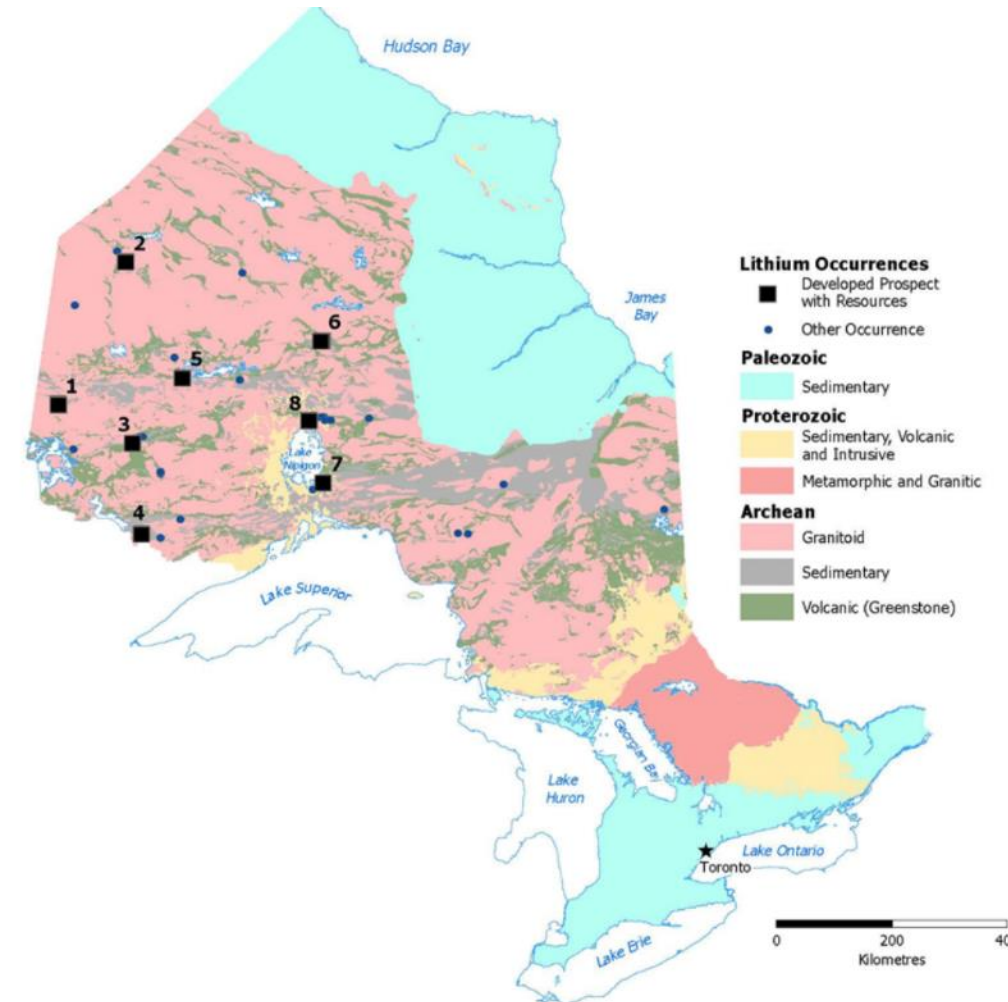
1. Related to 'fertile' peraluminous granites – 'fertile' granites have geochemical traits (requires whole rock databases, which are often lacking. They also have mineralogical traits including garnet, muscovite and a broad range of accessory minerals including beryl, tourmaline, fluorite, uranium etc. etc.). **From an exploration point of view in Ontario, outside the main deposits, mineral occurrences are the most likely, positive indicator of fertility.**
2. LCT pegmatites form fields, **most are within 10km of peraluminous granites. From an exploration point of view, small land positions in potential areas will increase risk of failure.**
3. Worldwide, most deposits are in **amphibolite** terrains
4. Mapping coverage is variable in NW Ontario. **Counter-intuitively, older and sparsely mapped regions may hold high potential for discovery if confirmation of a prospective setting can be confirmed. Simply staking the haloes of peraluminous granites is high risk.**
5. The target is volumetrically small, non-conductive and not magnetic or weakly magnetic. **Magnetic surveys might help in terms of general setting but do not help directly. Existing OGS airborne survey at SLP is thus a plus.**

# Practical Considerations for Exploration of LCTs in ON

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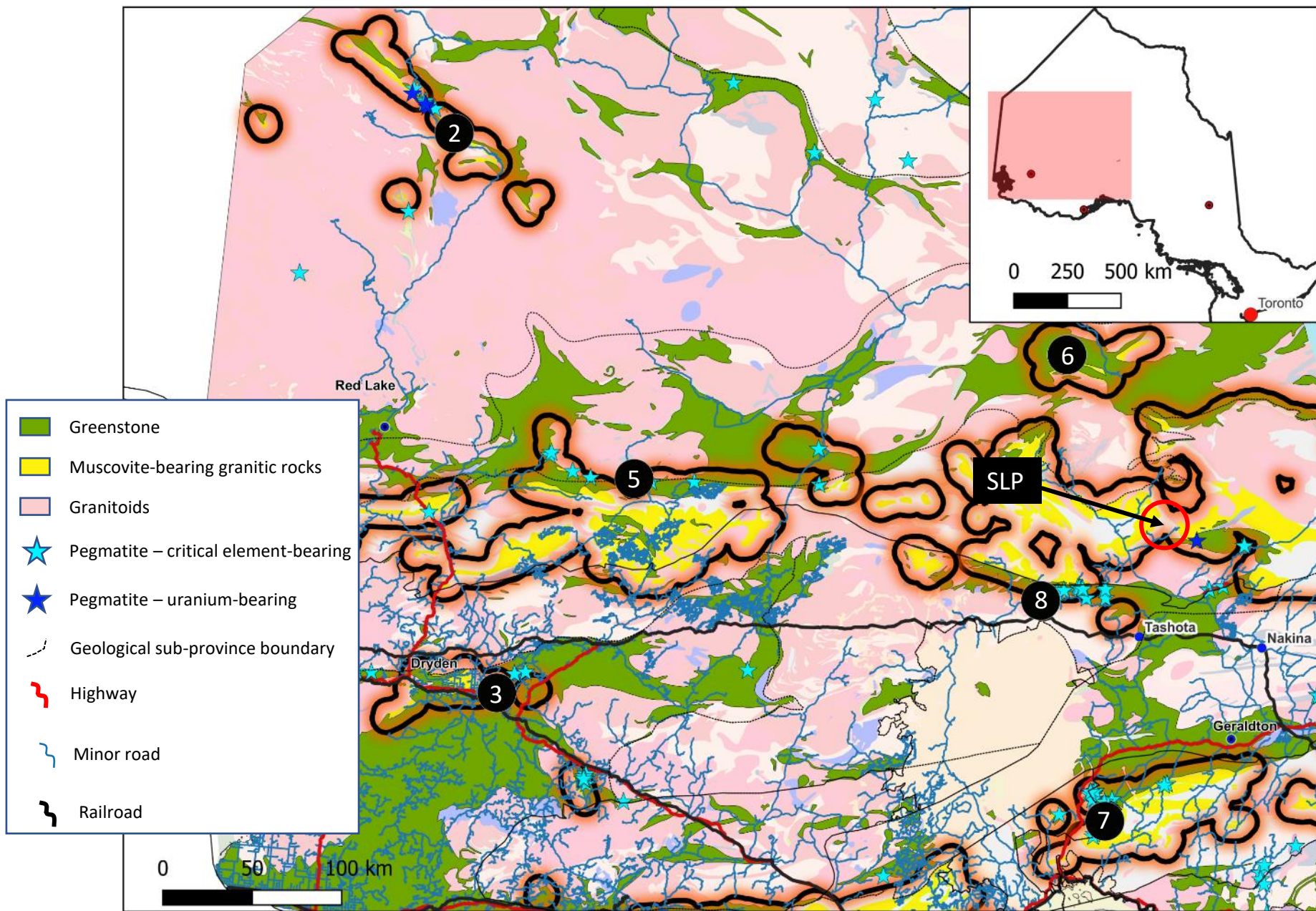
6. Mapping and mineralogy are key – **this requires reasonable outcrop.**
7. Mineralogy is complex and requires expert input, this section and SEM analysis of prospective minerals. **New technology can map Li (and other light elements) in place (LIBS).**
8. Exposing surface pegmatites provides essential information in the early stages. Sample size is key, too small for coarse grain size will increase failure risk.
9. Soils work (4-acid) but aren't cheap. Biogeochem might work – not much data. **Li deposits may have haloes and wall rock Geochem is important.**
10. A property is prospective if its in the right setting, with documented fertile minerals, close enough to infrastructure. Documented fertile pegmatites are a **plus especially if these attain decent widths.**

# All major deposits currently confined to NW Ontario



1	Big Whopper (Separation Rapids)	9.9Mt @ 1.04% Li <sub>2</sub> O	Avalon Advanced Materials
1	Big Mack		
2	Pakeagama Lake	9.3Mt @ 2.02 % Li <sub>2</sub> O 14.4Mt @ 1.4% Li <sub>2</sub> O – Ind 16.1Mt 1.37 –Inf	Frontier Lithium
2	Spark Pegmatite		Frontier Lithium
3	Mavis Lake		Frontier Lithium
4	Wisa Lake		International Lithium
5	McCombe	10.6 Mt @ 0.88 % Li <sub>2</sub> O	Green Technology Metals
6	Pollucite Dyke		Green Technology Metals
6	Rubellite Dyke		Avalon Advanced Materials
7	Nama Creek (Georgia Lake area)		
7	McVittie (Georgia Lake area)	10.6 Mt @ 0.88 % Li <sub>2</sub> O	Rock Tech Lithium
7	Jean Lake (Georgia Lake area)		
7	Aumacho (Georgia Lake area)		
7	Vegan (Georgia Lake area)		
7	Jackpot (Georgia Lake area)	9.9 Mt @ 1.04 % Li <sub>2</sub> O	Green Technology Metals
8	North Aubry (Seymour Lake)		
8	South Aubry (Seymour Lake)		





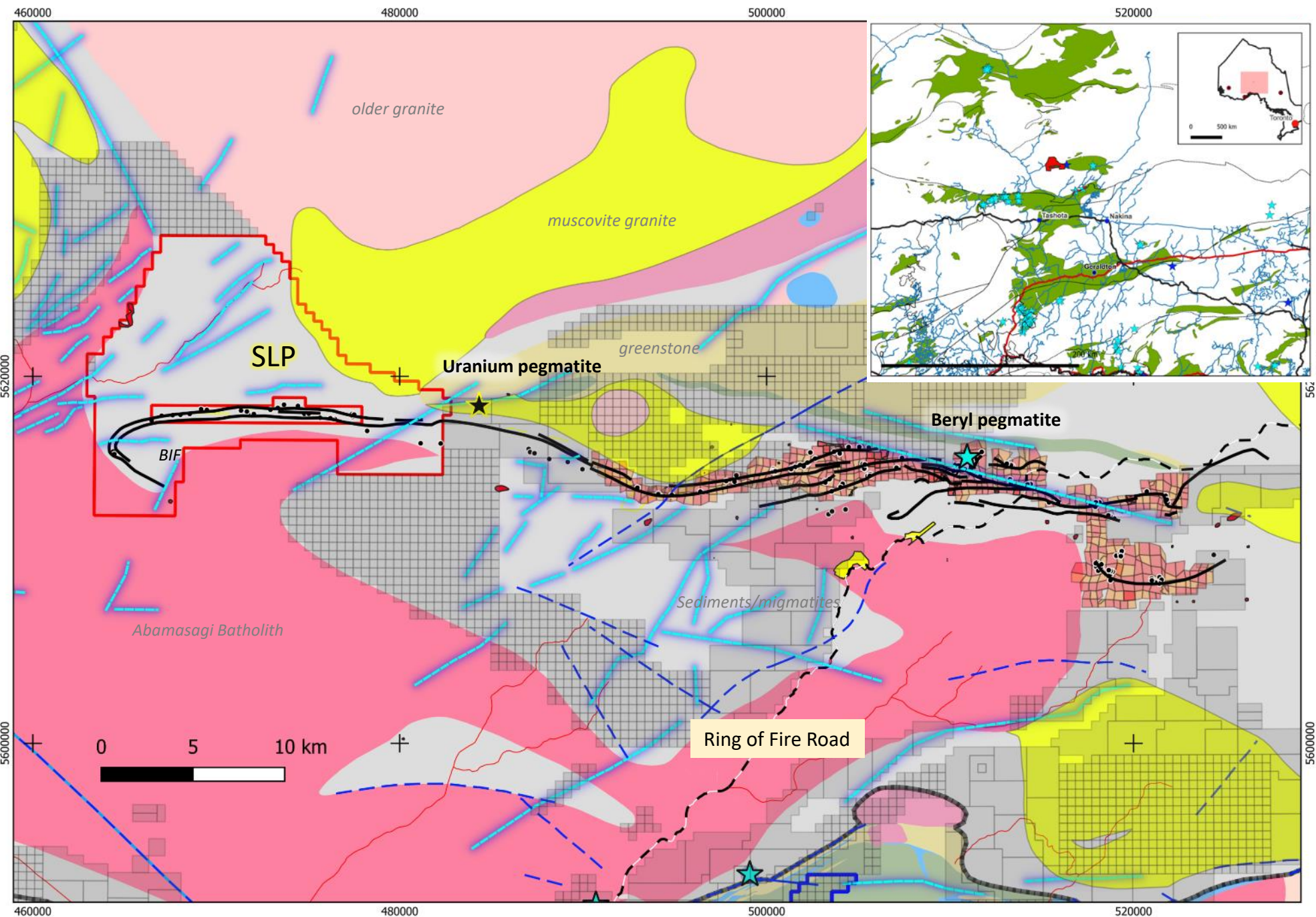
A 7.5km buffer around ms-bearing intrusive rocks encompasses all but one of the occurrences and all showings.

Note main current infrastructure. **The planned Ring of For Road will run north from Nakina close to the SLP**



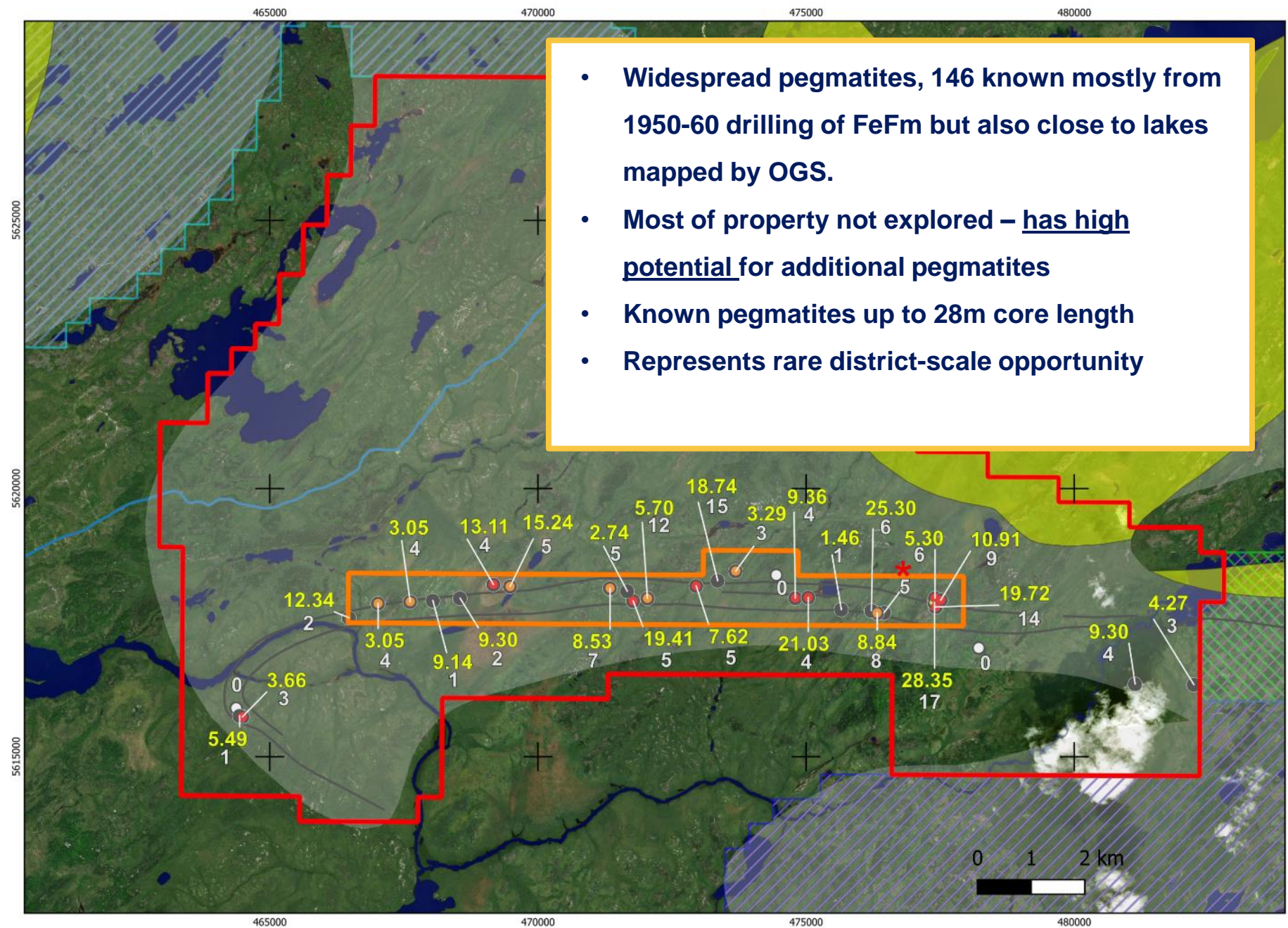


Stewart Lake Property



- 174 km<sup>2</sup> property
- Staked prior to staking rush ~900 km<sup>2</sup> staked in the region
- OGS recommended area for exploration Jan 26, 2023 based on beryl occurrence in pegmatite
- Approximately 164 drill holes 1958-1961 exploring for iron along regional iron formation. High percentage of holes intercept fertile pegmatites over entire strike length





- Widespread pegmatites, 146 known mostly from 1950-60 drilling of FeFm but also close to lakes mapped by OGS.
- Most of property not explored – has high potential for additional pegmatites
- Known pegmatites up to 28m core length
- Represents rare district-scale opportunity

- Widespread fertile pegmatites
- Multiple pegmatites in most holes
- Apparent thicknesses up to 28m
- Not assayed for rare metals

## LEGEND

28.35 Max pegmatite core length (m)  
17 Number of logged pegmatites

Garnet and Muscovite noted in pegmatites

Garnet only noted in pegmatites

Muscovite only noted in pegmatites

Pegmatite noted in drill logs  
No specific minerals noted

No pegmatite noted in drill logs

▮ Solstice 100% staked claims (175 km<sup>2</sup>)

▮ Solstice option to earn 100% (16.3 km<sup>2</sup>)

# Example Drill Log S-5 1958

46-4-102

SULMAC EXPLORATION SERVICES LIMITED

PROPERTY **Panther Mining Company** **SAMPLING RECORD** SHEET NO. **1 of 1**  
**Stewart Lake Iron**

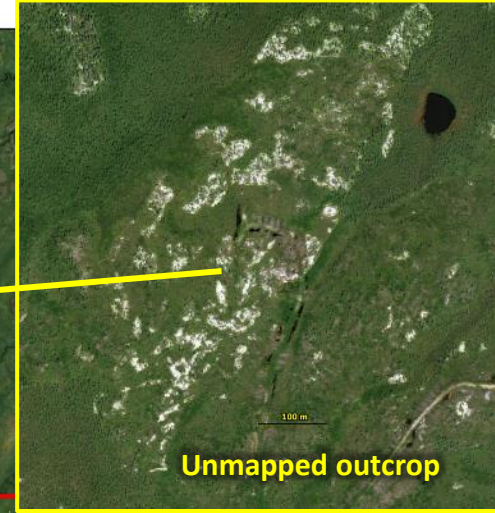
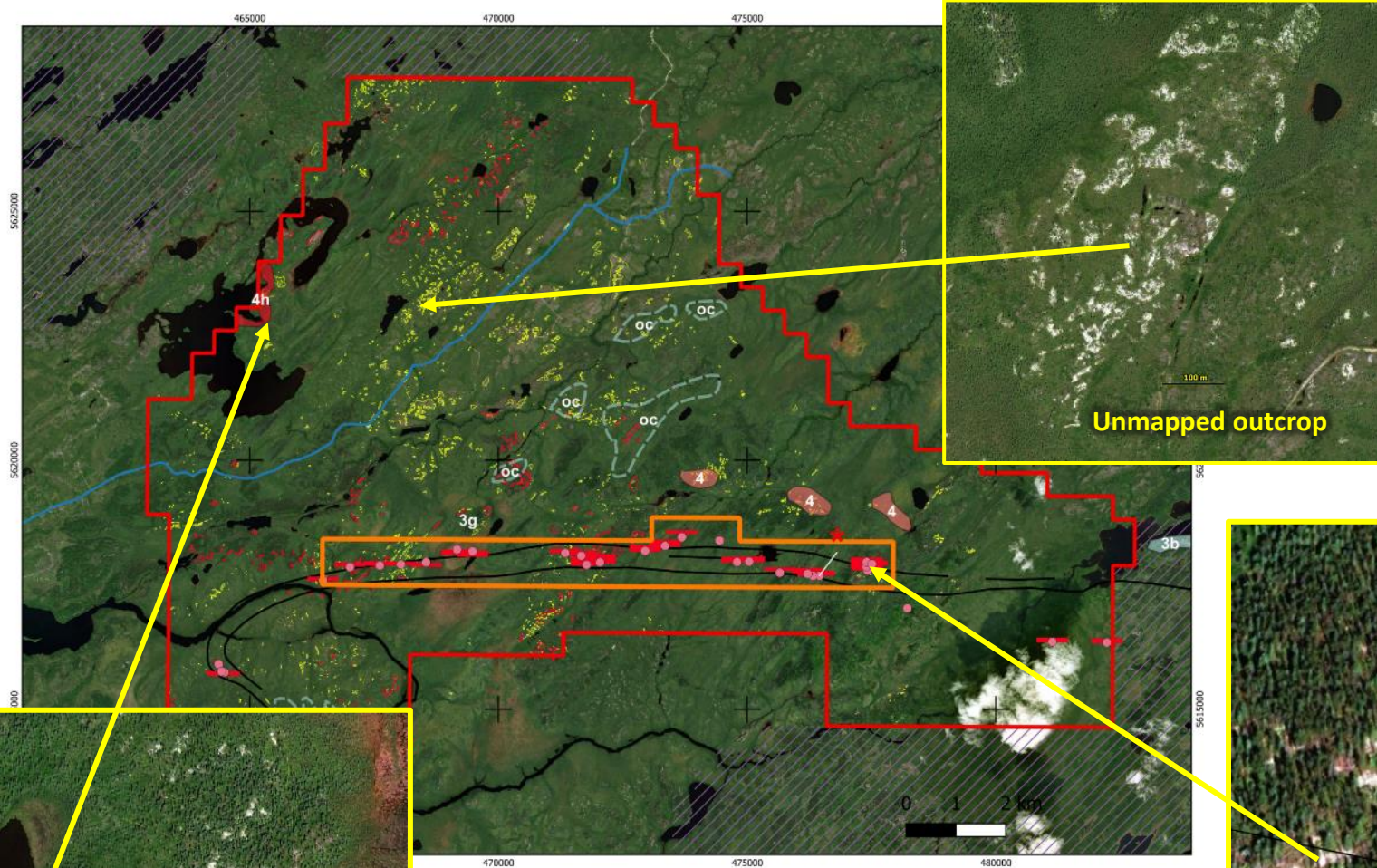
HOLE NO. **S-5** DEPTH **448.0'** ANGLE **-45N** STRIKE **Grid N.** ELEVATION **80+00 ±** CO-ORDINATES **88+75 ±**

DEPTH FEET	FORMATION	SAMPLE NO.	LENGTH FT	ANALYSIS			LENGTH FEET	PROGRESSIVE TOTALS	
				Iron %	%	%		FEET X PER CENT	
0.0	Collar								
30.0	Casing								
37.0	Granite	1685							
44.0	Granite - Peg. C.Gr. Pink Occ. specs of Mag. & Biotite								
49.7	Iron Form. M.Gr. with Granite inclusions	1686	5.22	29.22					
62.8	Granite - Peg. C.Gr. Pink								
66.9	Iron Form. F.Gr. Granite 65.0 - 66.0	1687	4.1	27.63					
74.7	Granite - Peg. C.Gr. Pink Occ. specs of Magnetite								
83.0	Iron Form. F.Gr. & Granite inclusions	1688	8.3	25.75					
93.0	Do. Granite 89.1 - 90.6	1689	10.0	25.75					
101.9	Do.	1690	3.9	25.75					
127.0	Granite-Peg. C.Gr. Pink Occ. Specs of Mag. & Biotite of Muscovite								
135.0	Iron Form. F.Gr.	1691	8.0	34.54					
143.0	Do.	1692	8.0	34.54					
151.0	Do.	1693	8.0	34.54					
155.5	Granite - Peg. C. Gr. Pink								
157.8	Iron Form. F. Gr.	1694	2.3	38.41					
173.5	Granite/Peg. C.Gr. pink occ. specs of Magnetite								
180.1	Iron Form F.Gr.	1695	6.5	33.46					
191.5	Do.	1696	10.5	33.46					

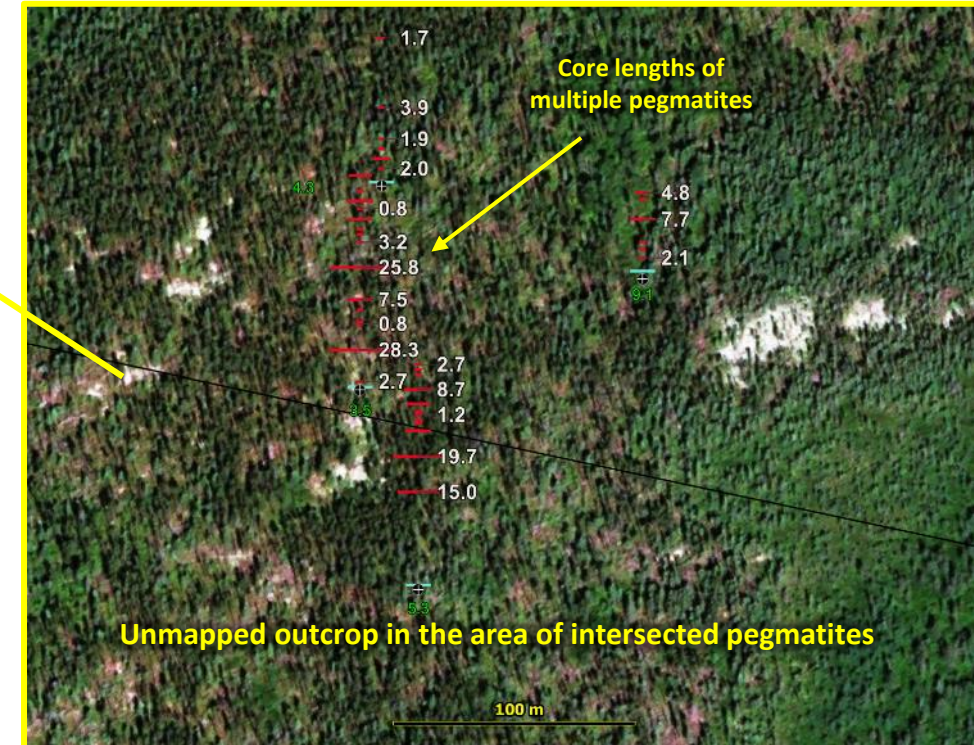
- Example drill log showing multiple pegmatite intercepts
- Log shows assays for iron in iron formation no samples of pegmatites for assay
- Of 3,731m drilled on the SLP claims below overburden 18.4% of all rock units were pegmatite
- Since drilling focused on a small part of the area, the likelihood of additional pegmatites on the SLP claims is very high.
- Pegmatites expected to form regional swarms.

Source: MNDM Ontario Drillhole Database Description (ODHD)



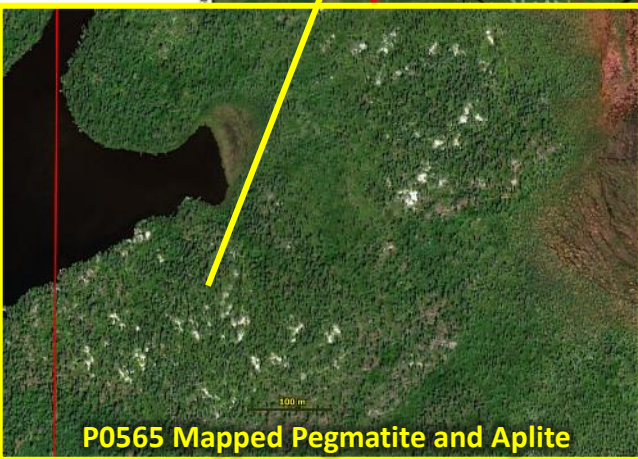


Unmapped outcrop



Core lengths of multiple pegmatites

Unmapped outcrop in the area of intersected pegmatites



P0565 Mapped Pegmatite and Aplite



# SLP – Summary

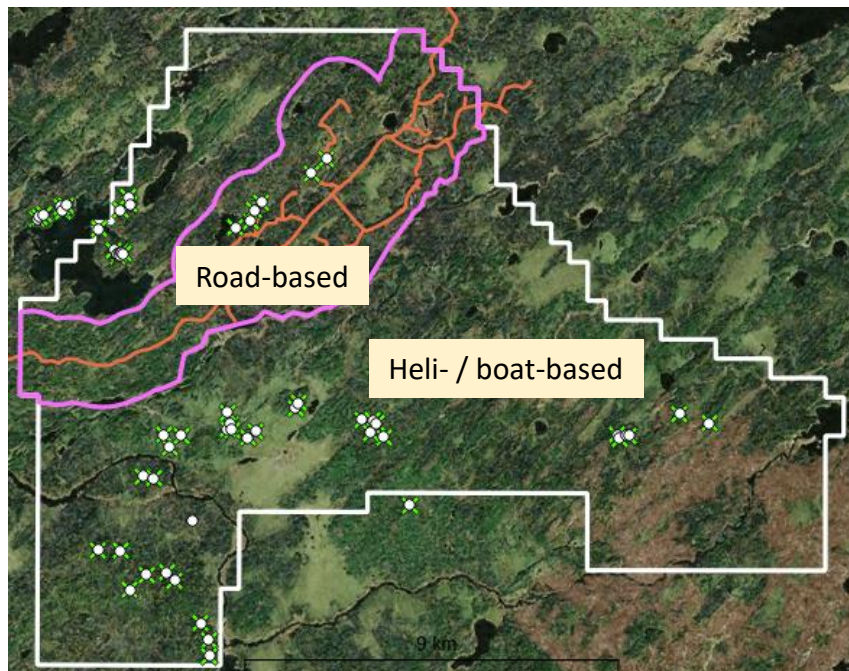
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- Situated in metamorphosed seds of the right metamorphic grade along with possible greenstone within margin of muscovite-bearing rocks
- Contains numerous pegmatites and apparent widths up to 28m
- Pegmatites are 'fertile' compositions – (tourmaline, fluorite, beryl, uranium noted to the east Anaconda logs)
- Sparsely mapped (P0565) but pegmatite/aplite noted.
- Significant outcrop including in area of the known pegmatites – largely unmapped
- Very high percentage of drilled rock in the iron formations are pegmatites (18.4%) – potential for ground ID and discovery of new pegmatites is good.
- Area recommended for exploration in 2023 by the OGS for Quetico-like occurrences – area now staked up after Solstice acquired SLP.
- Amenable to modern exploration, decent access to infrastructure (CN railroad and planned Ring of Fire road).
- **While obviously Lithium and other elements have yet to be documented, this property possesses many of the prospective features of the NW Ontario model with known, potentially thick, fertile pegmatites within a commanding land position that lies at the core of the English River Subprovince newly staked region.**

# SLP – Budget and Work Plan

## Budget & Timeline

- ~ \$400K Program
- Contracts lined up, no permits required
- ~ 1 month lead time



## Summer Prospecting Plan

- Extensive desktop work (can ID pegmatites from air photos)
- 4 teams: Prospecting (LIBS and scintillometer), Stripping, Channel Sampling
- Majority is road-based
- Extra reconnaissance: helicopter- and boat-based recon on highest-density pegmatites
- LIBS and scintillometer data instantaneous
  - Will be used to adjust plan on the fly
  - Can pinpoint need for further airborne geophysics



647 836 2694  
[info@solsticegold.com](mailto:info@solsticegold.com)

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