

6 March 2024

## Zinc of Ireland acquires 1380km<sup>2</sup> Lithium Exploration Project in the prolific Superior Province, Manitoba, Canada.

### HIGHLIGHTS:

- ZMI has, through its 100% owned subsidiary Avignon Resources Pty Ltd (ARPL) Canada, been granted:
  - Seven Mining Claims (MCs) covering 1792 Ha, 40km west of the Tanco LCT (lithium, caesium, tantalum) Mine, which has been in operation for over 50 years<sup>1</sup>
  - Six Mineral Exploration Licences (MELs)
  - An additional four MEL areas are currently under application

Following up of known LCT pegmatites and additional new target generation is currently underway which is aimed at identifying outcropping pegmatites as well as delineating structural and lithological regimes suitable to their emplacement. Field exploration is scheduled to commence in May 2024 with geology teams to conduct ground truthing, mapping and sampling of Priority 1 targets in order to delineate targets for drill testing.

- The Superior LCT Project (SLCTP) is focussed on six separate areas within the Archean aged western portion of the Lake Superior Craton in eastern MB, an area of known pegmatite endowment that has received unprecedented attention from exploration companies in recent months, including a subsidiary of Fortescue Metals Group (ASX:FMG).
- The newly acquired project areas are largely unexplored in terms of lithium exploration but occur within close proximity of operating mines (Tanco), along strike from known LCT occurrences in western Ontario, (e.g. projects within the so-called *Electric Avenue*) or immediately along strike and contiguous from known LCT resources, as is the case at God's Lake where Vision Lithium (TSX:VLI) have previously referred to an estimated historical (non-compliant informal *'resource'*) of 9.4MT @ 1.2% Li<sub>2</sub>O<sup>2</sup> First Nations engagement has commenced, and local consulting groups engaged.

1. <https://tancomine.com>

2. (refer TSX:VLI announcement dated 18 February 2021, [www.visionlithium.com](http://www.visionlithium.com)).

Contact Us





Zinc of Ireland NL (ASX:“ZMI” or the “Company”) are pleased to announce that it’s subsidiary Avignon Resources Pty Ltd (Canada) has been awarded six Mineral Exploration Licences and seven Mining Claims in Manitoba (Figures 1a and 1b); and that target generation and First Nations engagement have commenced with a view to the deployment of field teams to Priority One target areas during the 2024 Canadian field season beginning in May.

ZMI’s Chairman, Peter Huljich, commented:

*“Our entry into lithium exploration in Manitoba is an exciting milestone for the Company. We have put together a conceptually sound package of LCT exploration ground in a Tier One jurisdiction that has seen little or no previous lithium exploration. The overall exploration potential of Manitoba is immense and we feel that, despite some obvious exceptions, that the province’s overall lithium exploration potential has flown underneath the radar while LCT discoveries have been occurring at pace, and in some cases along strike, within the same rocks in Ontario. The amount of new applications for fertile LCT exploration ground is now gathering pace, so we believe that our timing couldn’t be better’.*

*Our first pass target generation will involve a lot of satellite data interpretation. We have sizeable areas to explore for LCT targets so appropriate expertise has been brought in to help us progress. We are confident that we have put together a skilled team that can leverage this opportunity and we look forward to putting teams in the field and ground truthing targets for follow up drilling later in the year.*

*We also look forward to meeting and creating partnerships with the traditional owners in each of the areas we intend to explore and we have commenced that engagement process.”*

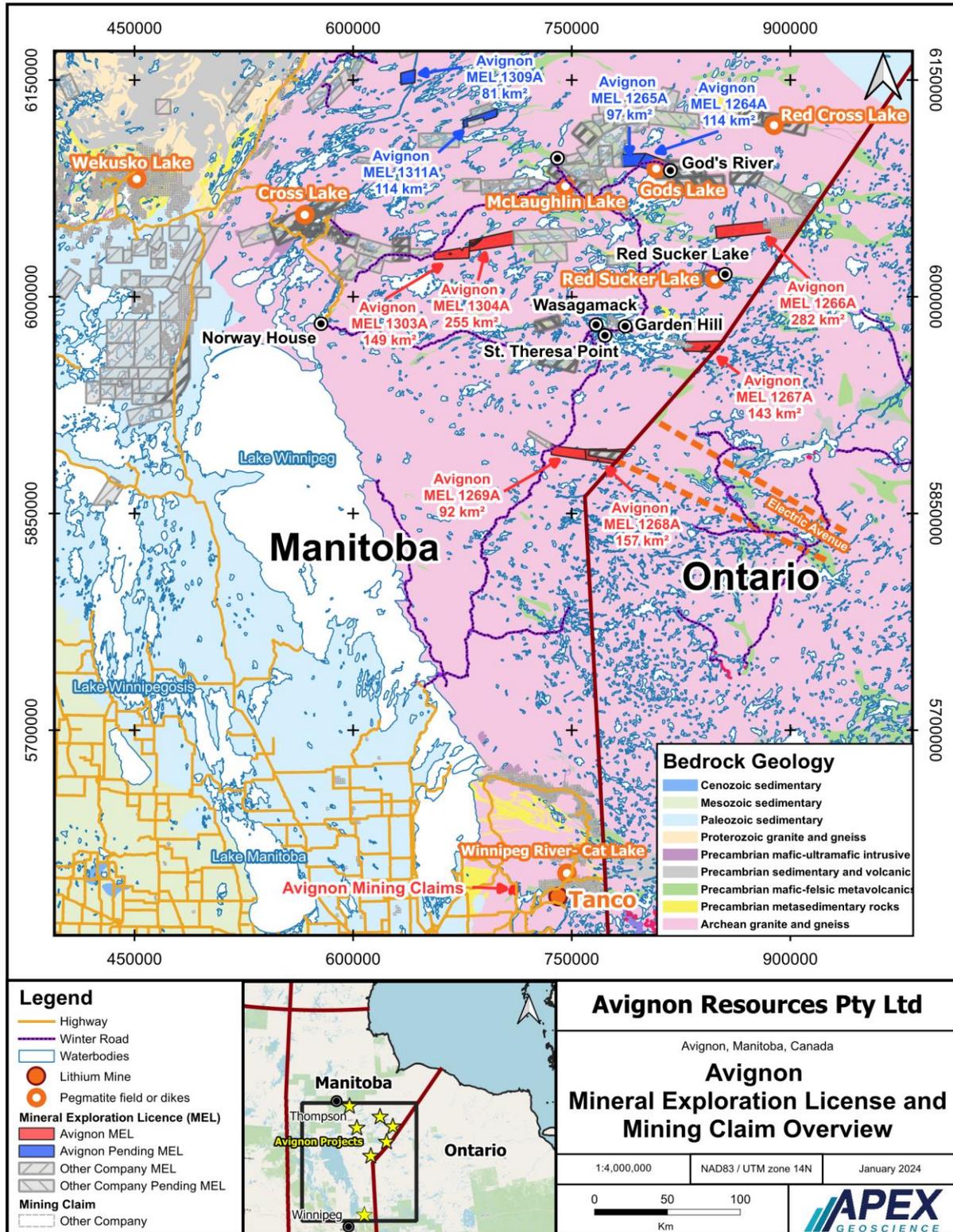


Figure 1a. ARPL Mineral Dispositions, Manitoba February 2024.

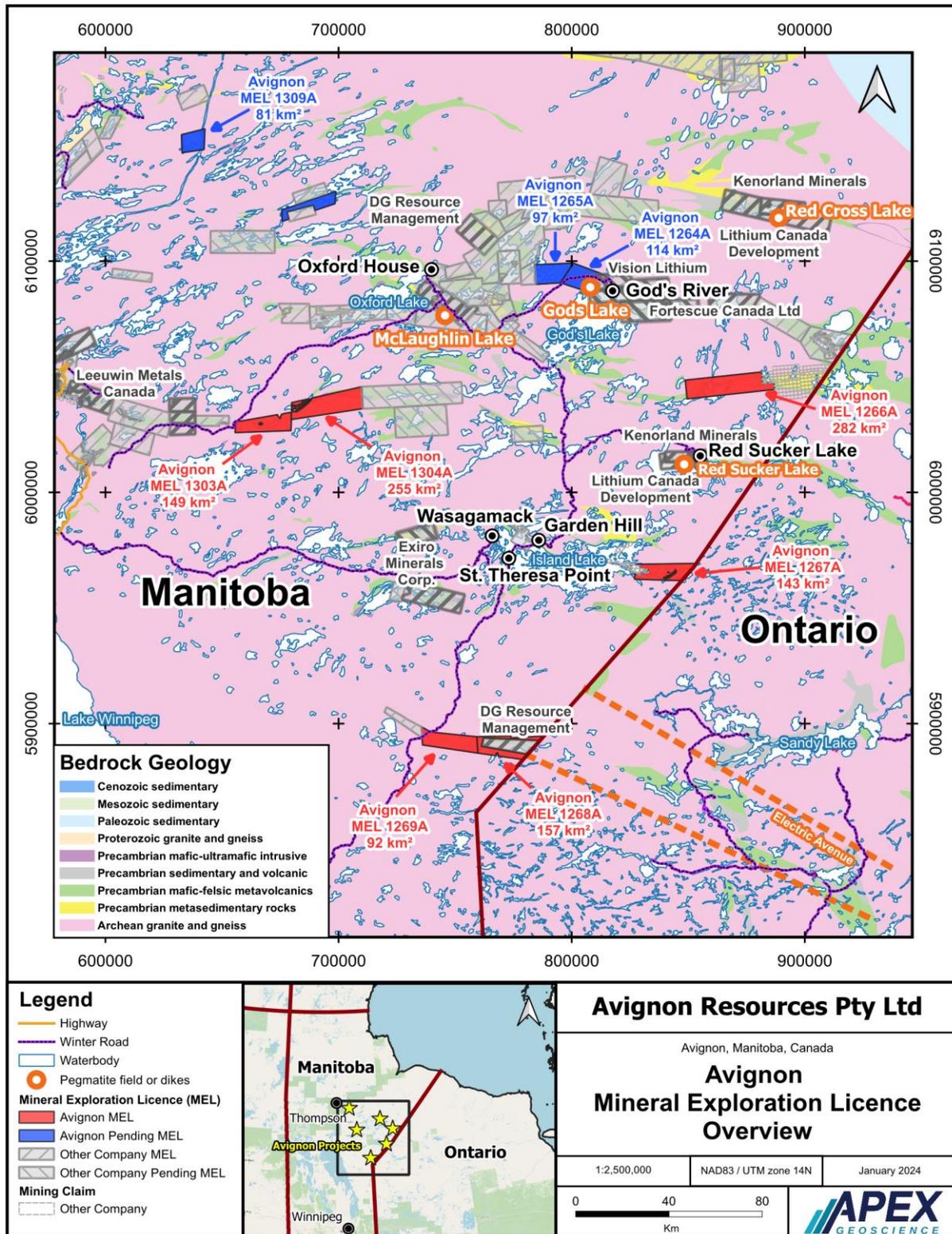


Figure 1b. ARPL Mineral Dispositions, Manitoba February 2024.

Manitoba mineral dispositions held 100% by Avignon Resources Pty Ltd											
DISPOSITION NUMBER	DISPOSITION NAME	DISPOSITION LEASE TYPE	AREA (HA)	AREA (KM2)	PART OF NTS SHEETS	STATUS	ISSUED	GOOD TO	TERM EXPIRY	GEOLOGICAL SETTING	LOGISTICS AND ACCESS
1264A	Gods Lake North 1 (Kapuskykamak Lake)	Mineral Exploration Licence	11620	116	53L15, 53L16	Pending				Greenstone belt flanked by granitoids; near Godsliith Li pegmatite (Vision Lithium)	Gods River airport; Gods River lodge; helicopter access
1265A	Gods Lake North 2	Mineral Exploration Licence	9803	98	53L16	Pending					
1266A	Makataysipi (Sharpe Lake)	Mineral Exploration Licence	28181	282	53K05, 53K06	Active	2023-12-19	2024-12-19	2025-03-19	Greenstone belt flanked by granitoids along regional suture (subprovince boundary)	Red Sucker Lake airport
1267A	Island Lake (Weesakachak)	Mineral Exploration Licence	14784	148	53E09, 53E16, 53F12, 53F13	Active	2023-12-19	2024-12-19	2025-03-19	Greenstone belt flanked by granitoids	Island Lake airports and communities
1268A	Hudwin Lake 1	Mineral Exploration Licence	15656	157	53E03	Active	2023-12-19	2024-12-19	2025-03-19	Greenstone belt flanked by granitoids; Gorman-Azure lakes pegmatite; along-strike of "electric avenue" in Ontario	Island Lake airports; Cobham River lodge
1269A	Hudwin Lake 2	Mineral Exploration Licence	9224	92	53E02, 53E03	Active	2023-12-19	2024-12-19	2025-03-19		
1303A	Robinson Lake (Hayes River 1)	Mineral Exploration Licence	14927	149	63I07, 63I08	Active	2024-01-23	2025-01-23	2025-04-23	Greenstone belt flanked by granitoids near regional suture (subprovince boundary)	Road access to Cross Lake and Norway House; Moisson Lake lodge
1304A	Logan-Milton lakes (Hayes River 2)	Mineral Exploration Licence	25585	256	63I08, 53L05, 53L12	Active	2024-01-23	2025-01-23	2025-04-23		
1309A	Hunting Lake (Nelson River)	Mineral Exploration Licence	8135	81	63P07, 63P10	Pending				Greenstone belt flanked by granitoids; pegmatite drill intercepts	Float plane or helicopter access from Thompson; nearby rail and power lines
1311A	Utik Lake	Mineral Exploration Licence	8693	87	63P01, 53M04, 53M05	Pending				Greenstone belt flanked by granitoids; regional structures and mapped pegmatites	Air strip and lodge on Utik Lake; boat, float plane and/or helicopter access
SV14616 to SV14622	TCGF04, -06, -07, -08, -09, -16, -17	Mining Claims	1651	17	62I08NE	Active	2023-10-05	2025-10-05	2025-12-04	West extension of Bird River pegmatite belt; near Lucky No. 3 pegmatites	Road and hydro access; nearby town of Lac du Bonnet

Table 1. ARPL Mineral Dispositions, Manitoba January 2024.

## Geological Setting

Avignon's MEL applications are located within the western Superior Province (Figure 2). The Superior Province is comprised of an assemblage of neo-Archaean aged granite-greenstone basement units which extend from central Manitoba, through central Ontario to Quebec in the east, and to northern Minnesota in the south.

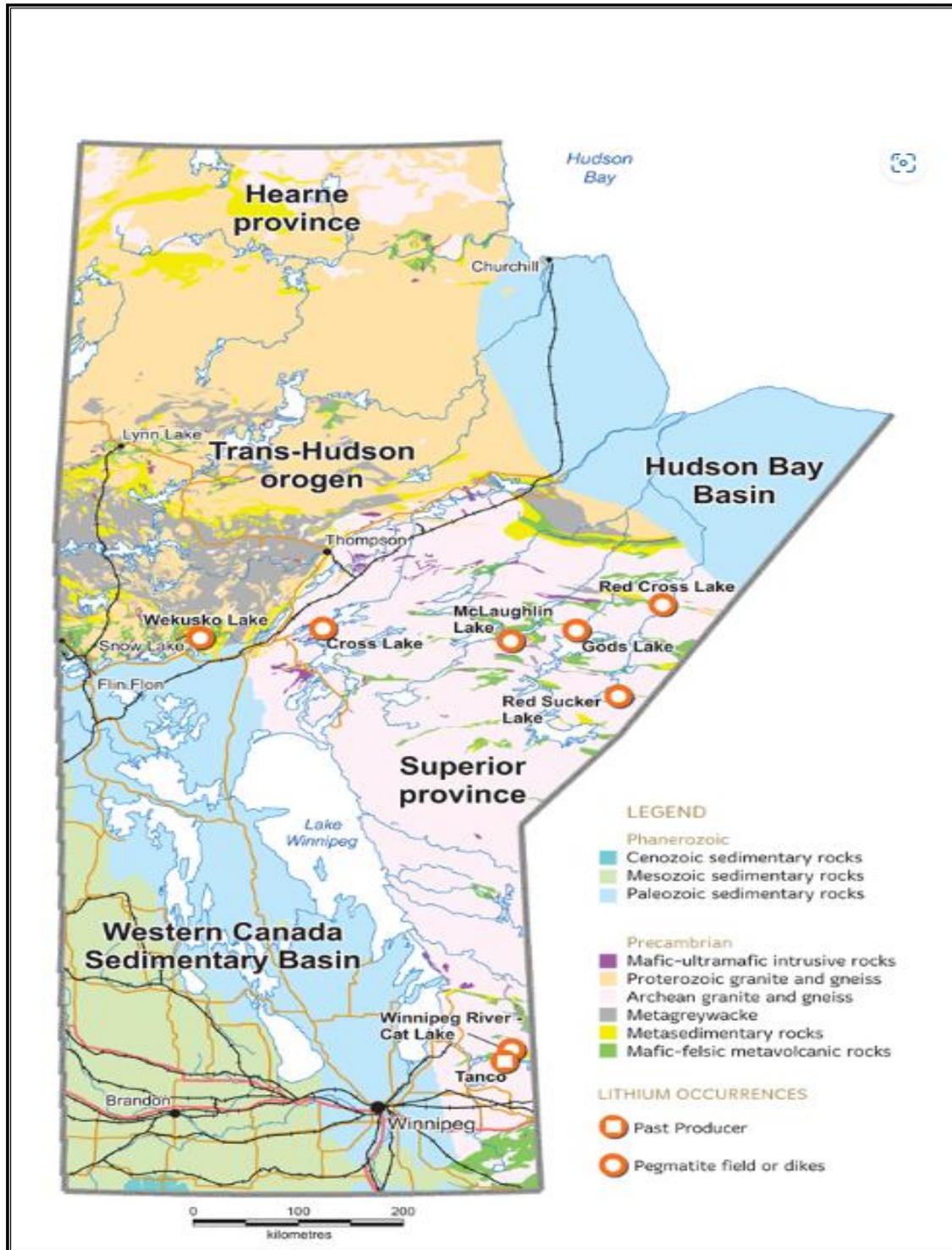


Figure 2. Geological map of Manitoba<sup>3</sup>

Geochronological programmes suggest that three fault bounded terranes divide the northern Superior Province.

These terranes (Figure 3.) are described<sup>2</sup>, from south to north as the Munro Lake, Oxford Lake-Stull Lake and Northern Superior:

1. The **Munro Lake terrane** (Molson Domain) comprises mainly plutonic rocks intruded between 2.84 and 2.72 Ga. The isotopic signature of these plutonic rocks shows that they have recycled older crust, probably Mesoarchean granitoid basement and <2.86 Ga platformal sediments and komatiites of the reworked margin of the North Caribou terrane (Island Lake and Berens River domains). For this reason, the Munro Lake terrane is suggested to be a product of recycling of the older North Caribou margin and continental growth on its north margin.
2. The **Oxford Lake-Stull Lake terrane** (Gods Lake Domain) consists of 2.83 Ga submarine, depleted tholeiitic basalts, formed in a predominantly juvenile oceanic environment, and an isotopically juvenile, 2.73 Ga continental margin arc. The continental margin arc is interpreted to have been formed during crustal accretion and thrusting of the Oxford Lake-Stull Lake terrane over the Munro Lake terrane prior to 2.73 Ga.
3. The **Northern Superior superterrane** (Northern Superior and part of Pikwitonei Domains, also includes the Orr Lake and Split Lake blocks), on the north side of the northwest-trending North Kenyon fault, comprises mainly 2.84-2.71 Ga plutonic rocks that have much older isotopic ages and contain inherited zircons as old as 3.57 Ga. Docking of this reworked Paleoproterozoic crust with the Oxford Lake - Stull Lake terrane resulted in continued 2.73-2.72 Ga arc volcanism.

Eruption of synorogenic <2.71 Ga alkaline and shoshonitic lavas and subsequent deposition of continental sediments with a vast range of detrital zircons that mimic the regional ages from all three terranes (3.6 to 2.71 Ga), reflect amalgamation of the three terranes during a ca. 2.7 Ga orogenic event.

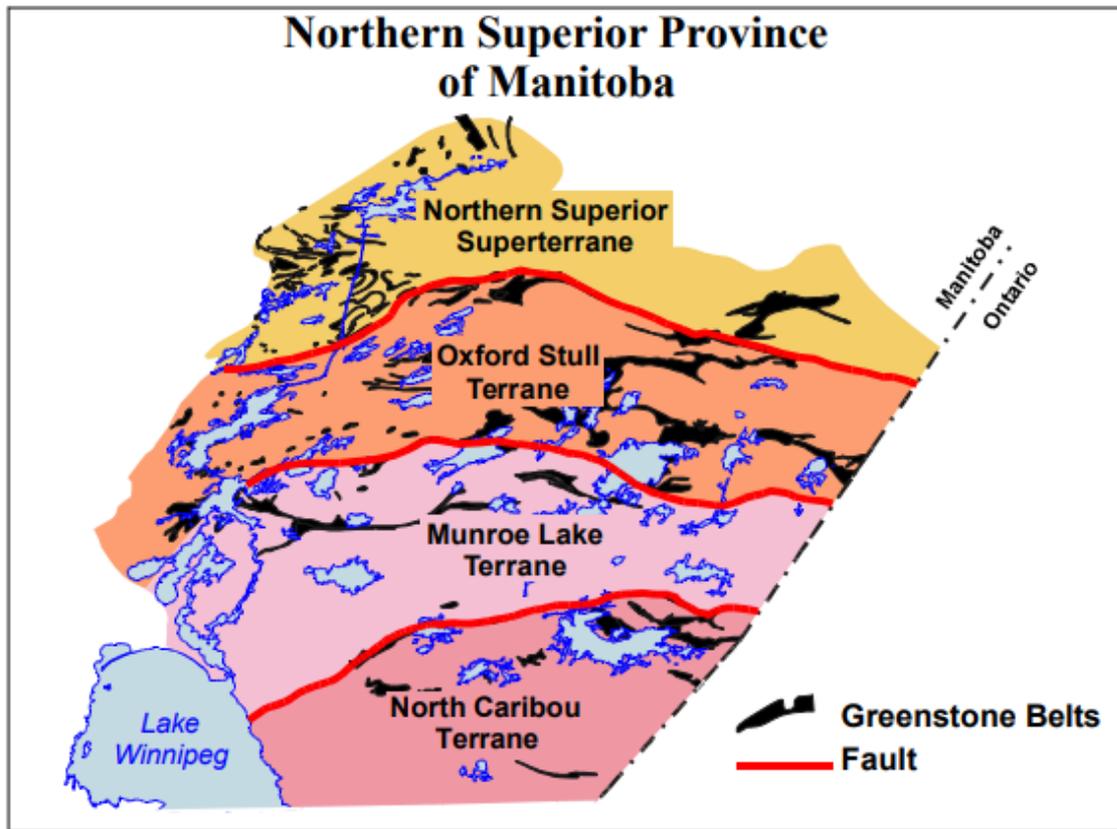


Figure 3. Northern Superior Province of Manitoba<sup>3</sup>

3. (Superior Craton description and maps courtesy of MB Department of Economic Development, Investment, Trade and Natural Resources website)

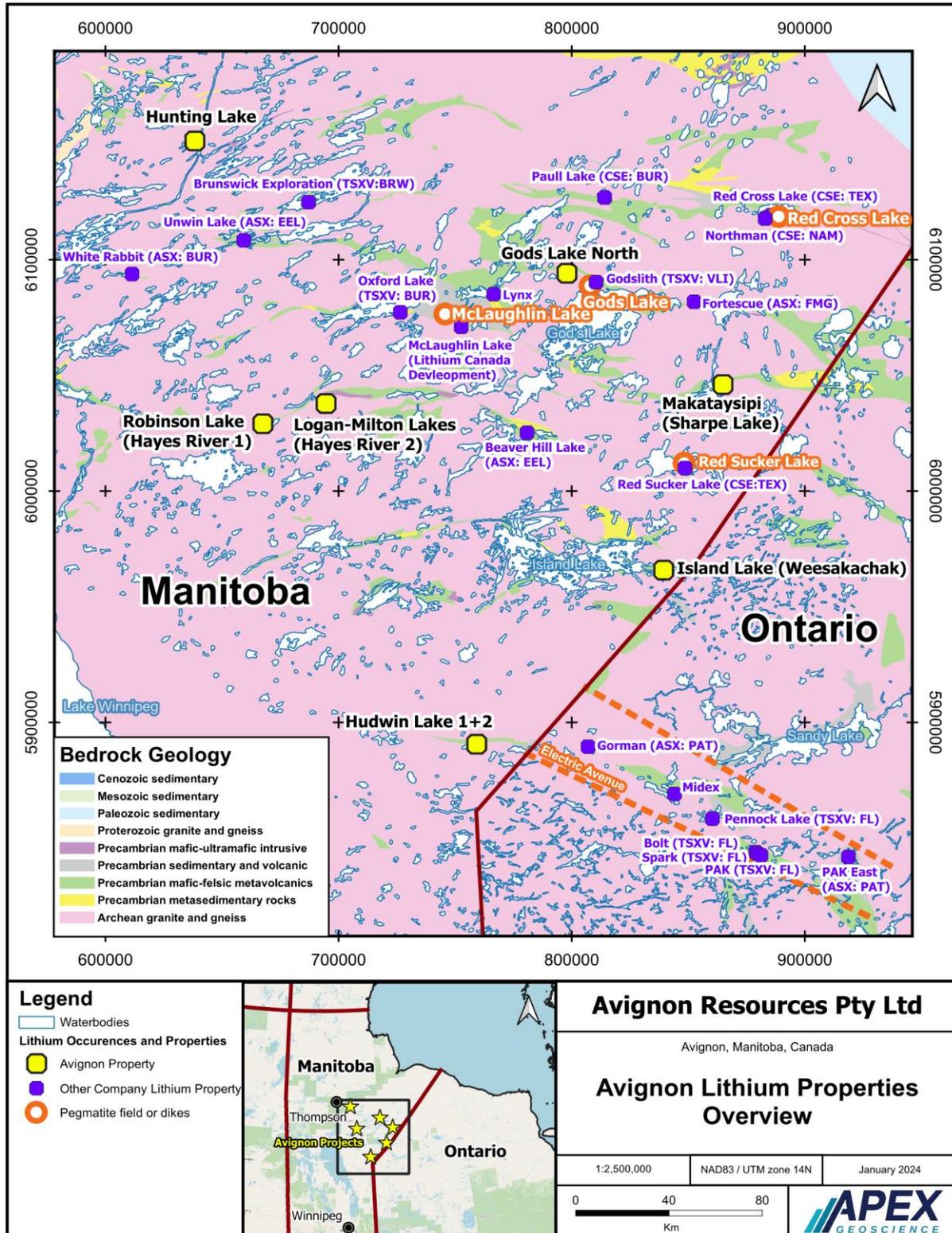


Figure 4 ARPL Mineral Dispositions proximal to known lithium projects, Manitoba February 2024.

Avignon's MELs (six granted applications and three pending) cover a combined area of approximately 1,380km<sup>2</sup> which are located within four distinct areas (refer Figures 1a and 1b).

The Company has in each case focused on an exploration rationale that prioritizes:

- The encapsulation of supracrustal greenstone units and associated greenstone/granite contacts along, or adjacent to, interpreted subterranean boundaries or other deep-seated structures.
- Areas that have had little or no previous LCT focussed exploration.
- Proximity to known specific Li resources or occurrences (eg Tanco, Godslith) within broader pegmatite fields.
- Access suitable for conducting reconnaissance or grassroots exploration.

## Hudwin Lake Project (two MELs: granted)

The Hudwin Lake Project (Figure 5) is comprised of two MELs covering a combined area of 249km<sup>2</sup>.

The project MELs hosts east-west to west-northwest trending Proterozoic supracrustal greenstone units within Archean granites and granodiorites.

Hudwin Lake is located along strike from the so called '*electric avenue*' lithium exploration corridor in northwest Ontario where Frontier Lithium (TSX.V:FL) have completed a PFS for their PAK Project citing a pre-tax NPV of USD\$2.6 billion<sup>4</sup> and also hosts Patriot Lithium's (ASX:PAT) Gorman Project where PAT has identified numerous pegmatite outcrops within a 200m wide corridor ([www.patriot-lithium.com](http://www.patriot-lithium.com) refer Investor Presentation, dated November 2023). Previous exploration appears limited to early stage geochemical surveys targeting base metals along the granite-greenstone assemblages and airborne geophysical prospecting targeting uranium.

4. ([www.frontierlithium.com/news](http://www.frontierlithium.com/news); refer company announcement dated 31 May 2023,)

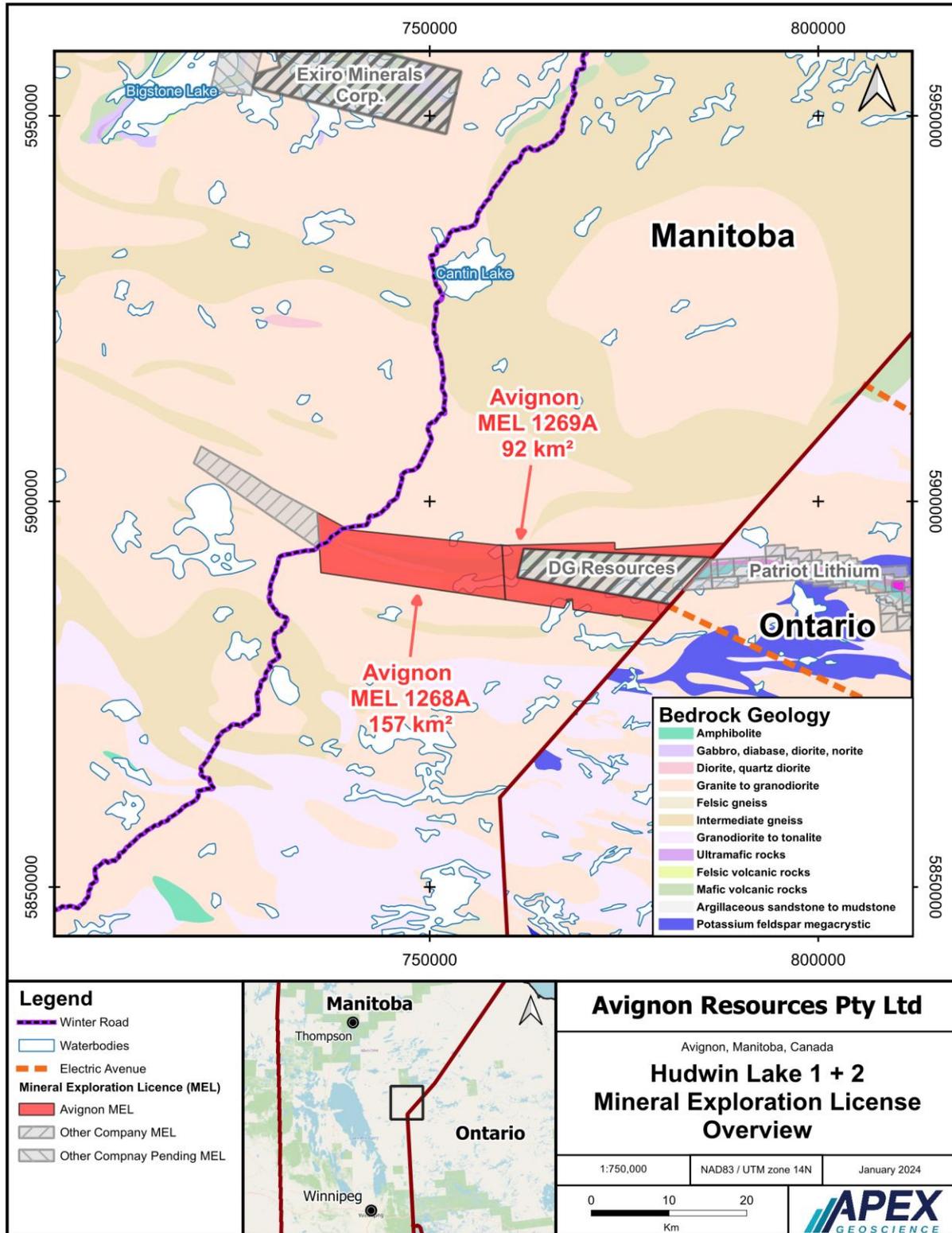


Figure 5. ARPL Mineral Dispositions, Hudwin Lake, Manitoba February 2024.

## Island Lake Project (one MEL: granted)

The Island Lake (Weesakachak) Project MEL (Figure 6) covers an area of 249km<sup>2</sup>.

The Island Lake MEL is underlain by Lower Hayes River Group lithologies of the Superior Province which are locally expressed as dark green, massive to schistose mafic volcanic units with subordinate interbedded metasediments.

Historical exploration at Island Lake is limited to early-stage geochemical surveys, and both airborne and ground geophysical surveys targeting gold and base metals. The MEL area is considered prospective for shear hosted Au mineralization within volcanics with a number of high-grade occurrences recorded along strike to the west (eg Highrock Island, Gold Island and others)<sup>5</sup>.

Access to the project will be reliant on airport infrastructure hosted by Island Lake communities.

5. (refer N.R. Newson, 1996, Geological Survey of Manitoba Assessment File 94480)

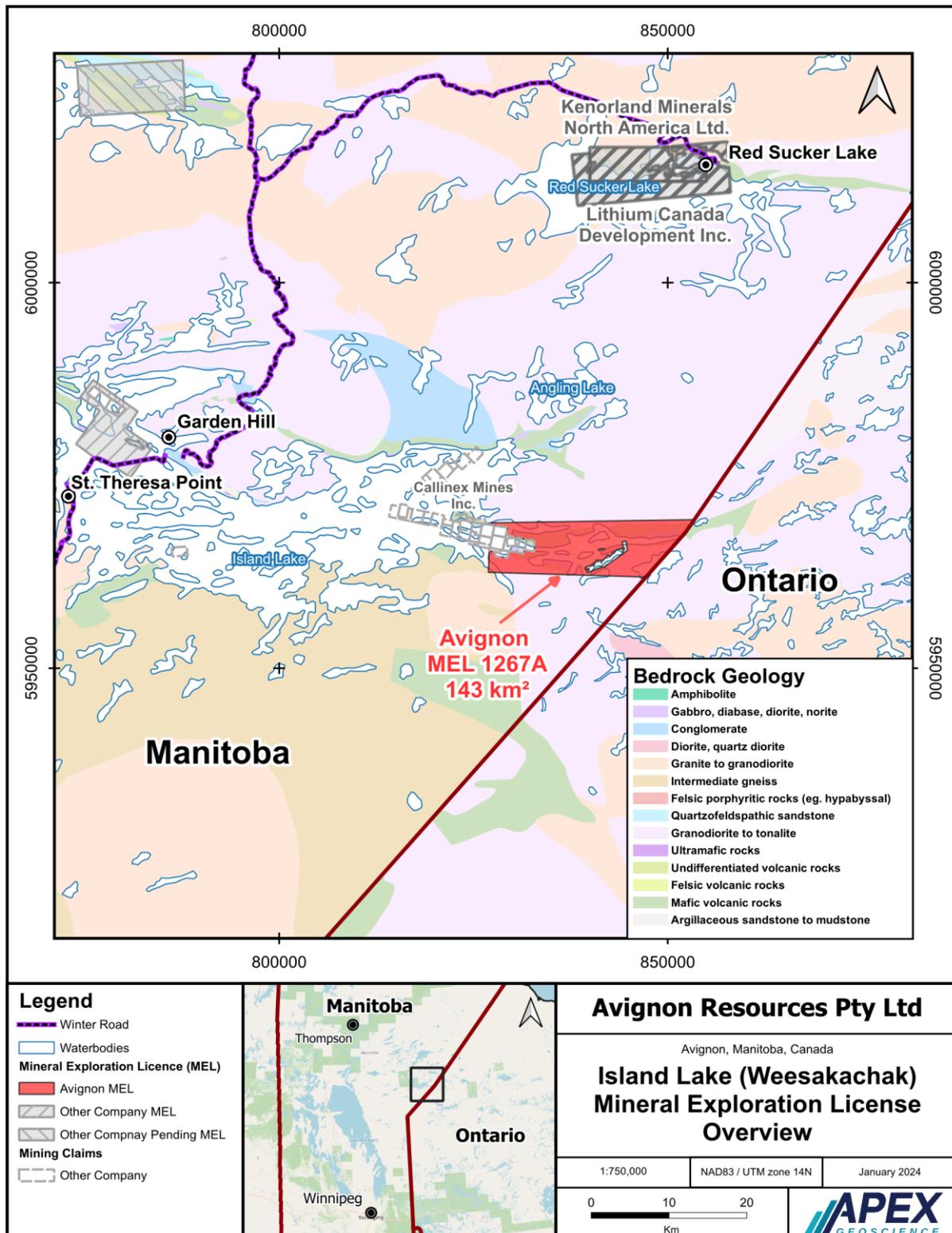


Figure 6. ARPL Mineral Dispositions, Island Lake, Manitoba February 2024.

## Makataysipi Project (one MEL: granted)

The Makataysipi (Sharpe Lake) Project MEL (Figure 7) is located 550km northeast of Winnipeg and hosts supracrustal greenstones of the Sharpe Lake greenstone belt. The Sharpe Lake greenstone belt is flanked by granitoids along the boundary of the Oxford Lake and Munro Lake sub provinces of the western Superior Province. The Sharpe Lake greenstone belt has been described as a series of mafic to intermediate metavolcanics with minor interbeds. The Stull Lake-Wunnummin Fault Zone is interpreted to run along the Sharpe Lake greenstone belt within the MEL .

The Project covers an area of 282km<sup>2</sup>.

Historical exploration at the Makataysipi project has focused on limited litho-geochemical sampling, geological mapping and airborne geophysical surveys<sup>6</sup>.

ZMI anticipate that access to the project will be via Red Sucker Lake airport.

6. (e.g Geological Survey of Manitoba Assessment File 74312, Gossan Resources Ltd, Company Report, J.C. Pedersen, 2005,).

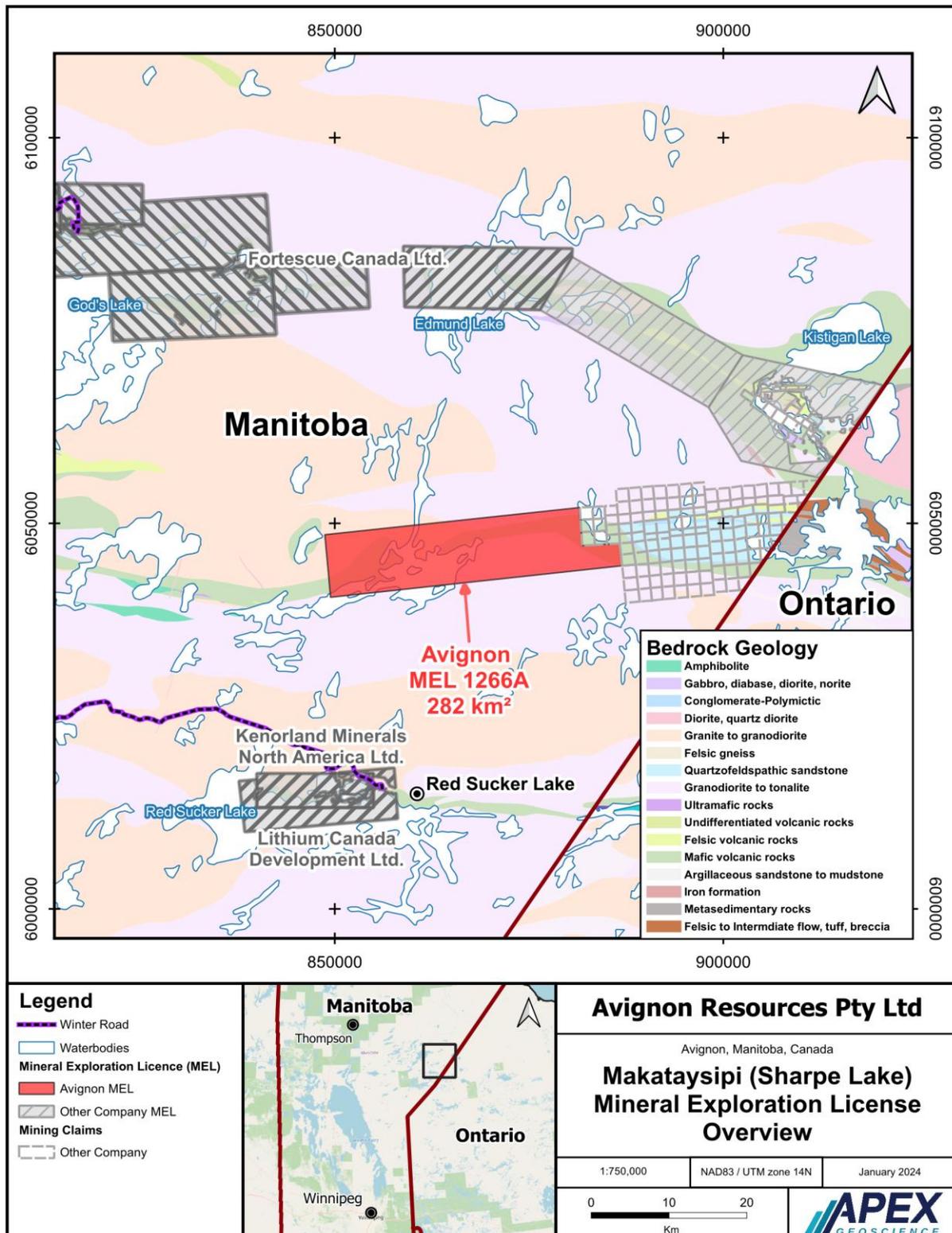


Figure 7. ARPL Mineral Dispositions, Makataysipi Lake, Manitoba February 2024.

## God's Lake North Project (two MELs: applications pending)

The God's Lake North Project (Figure 8) consists of two contiguous MEL applications, centred approximately 25km northwest of God's River, Manitoba. The applications cover a combined area of approximately 211km<sup>2</sup>.

The applications are underlain by supracrustal greenstone belts flanked by granitoids along strike from the Godslith pegmatite (Vision Lithium). Vision Lithium have described the Godslith pegmatite as: "a rare metal spodumene pegmatite" having "a drill indicated strike length of approximately 2.3km". The lithium bearing mineralization has been the subject of historical (and informal) resource estimates and is further described on the Company's website<sup>7</sup>.

Historical exploration within the outline of the God's Lake applications is dominated by regional scale geophysical surveys targeting diamonds and base metals. Only two historical drill holes are recorded.

ZMI anticipate that access to the project will be via God's River Airport and/or God's River Lodge utilizing helicopters and winter roads. The Company has commenced engagement with the God's Lake First Nation and Manto Sipi First Nation traditional owners.

7. (refer: <https://visionlithium.com/godslith>).

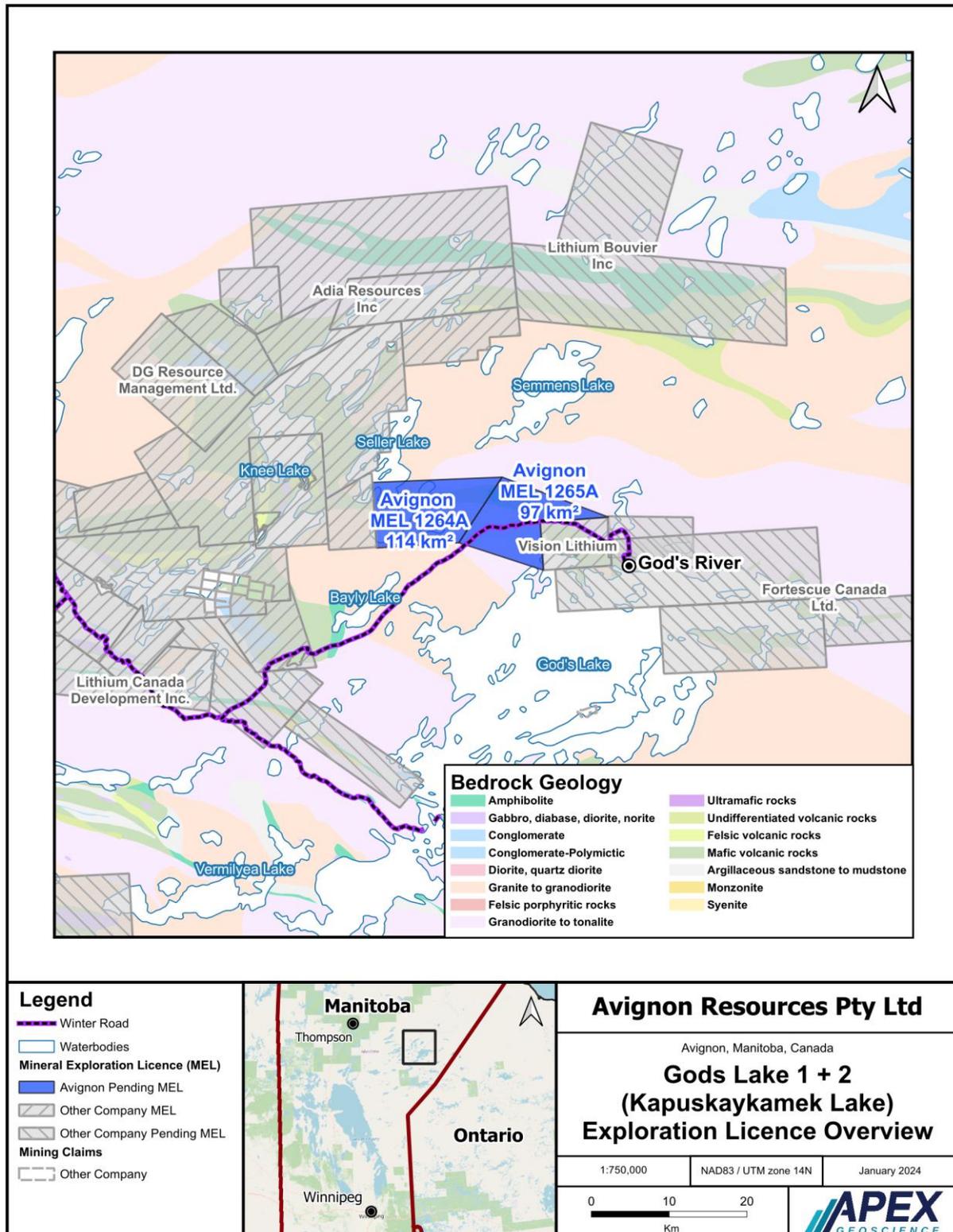


Figure 8. ARPL Mineral Dispositions, God's Lake, Manitoba February 2024.

## Hayes River Project, Robinson and Logan Lakes (two MELs: granted).

The Hayes River Project (Figure 9) is comprised of two contiguous MEL applications covering an area of 404km<sup>2</sup>.

The applications are underlain by a portion of a near continuous linear belt of supracrustal greenstones between Cross Lake to the west and Goose Lake to the east, at the southern margin of the God's Lake Domain where it is in contact with granitoid rocks of the Molson Lake Domain<sup>8</sup>.

Historical exploration within the outline of the Hayes River applications is dominated by regional scale geophysical surveys base metals and diamonds. A limited number of historical drillholes targeting base metals are recorded in the area.

Access is via road access to Norway House and Cross Lake or via floatplane to Molson Lodge.

8. (refer: Geological Survey of Manitoba Assessment File 92963, Catherine E Enterprises Ltd, Company Report, George Gale, 2012)

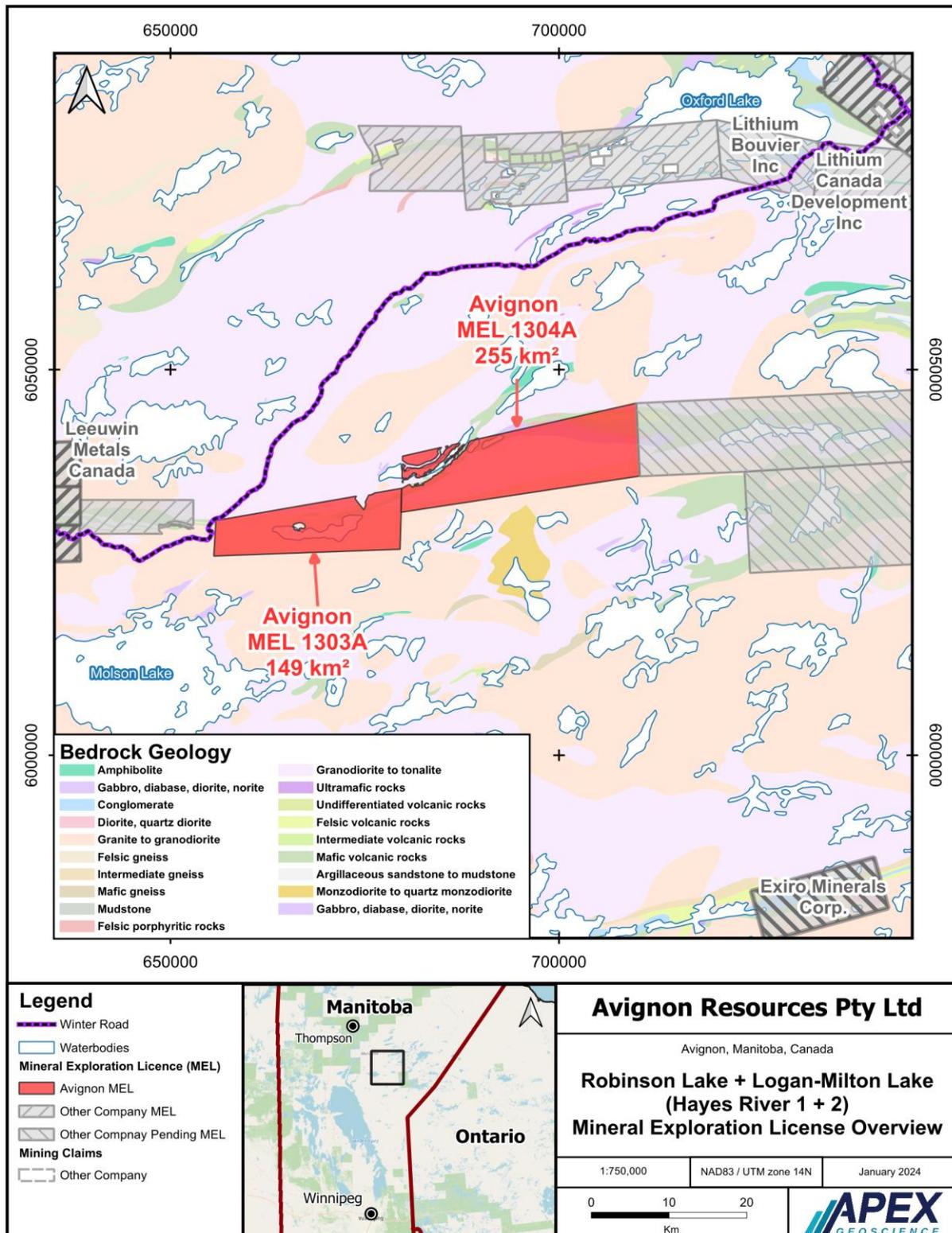


Figure 9. ARPL Mineral Dispositions, Hayes River, Manitoba February 2024.

## Hunting Lake (one MEL: pending).

The Hunting Lake MEL Hayes River Project (Figure 10) is comprised a single MEL application covering an area of 81km<sup>2</sup>.

The application is underlain by a portion folded supracrustal greenstones between Hunting Lake and Midnight Lake. Historical exploration within the outline of the Hunting Lake application is highlighted by regional scale geophysical and till geochemical surveys for base metals and diamonds while a limited number of historical drillholes targeting base metals are also recorded in the area.

Access is expected to be via floatplane to Hunting Lake and Nelson River

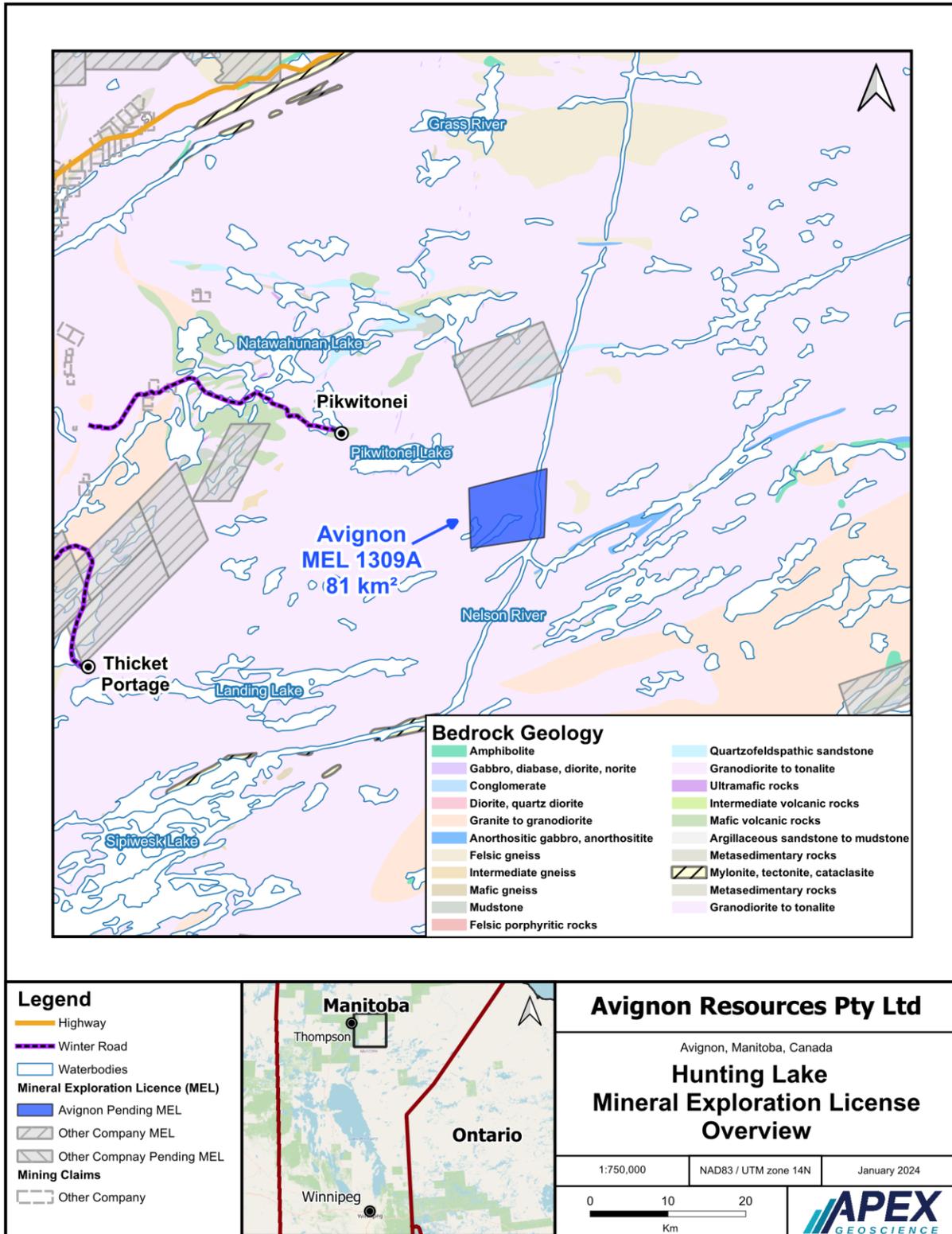


Figure 10. ARPL Mineral Dispositions, Hunting Lake, Manitoba February 2024.

## Utik Lake (one MEL: pending).

The Utik Lake area is underlain by the Archean Utik Lake greenstone belt. The belt is up to 12km wide and consists of east to northeast trending panels of mafic metavolcanic and intrusive rocks separated by metasedimentary sequences. The metavolcanic rocks are similar to those found within the Hayes River Group while the area also contains felsic to intermediate rocks associated with the Oxford Lake Group.

The Utik Lake greenstone belt has been subjected to upper greenschist facies metamorphism increasing locally to amphibolite facies adjacent to bounding plutonic rocks.

Utik Lake's geological setting and mineral potential have historically attracted exploration interest, particularly in relation to gold and volcanogenic massive sulphide deposits<sup>9</sup>. Notably, Westmin Exploration Ltd.<sup>10</sup> examined previously identified volcanogenic massive sulphide and gold occurrences in the Utik Lake mafic metavolcanic rocks in the mid to late 1980s. Project access is expected to incorporate existing infrastructure including an airstrip and Lodge at Utik Lake as well as the employment of boat, float plane and/or helicopters.

9. Böhm, C.O., Kremer, P.D. and Syme, E.C. 2007: Nature, evolution and gold potential of the Utik Lake greenstone belt, Manitoba (parts of NTS 53M4, 5, 63P1, 8): preliminary field results; in Report of Activities 2007, Manitoba Science, Technology, Energy and Mines, Manitoba Geological Survey, p. 98–113.

10. Manitoba Assessment Files 94560, 94563, 94342.

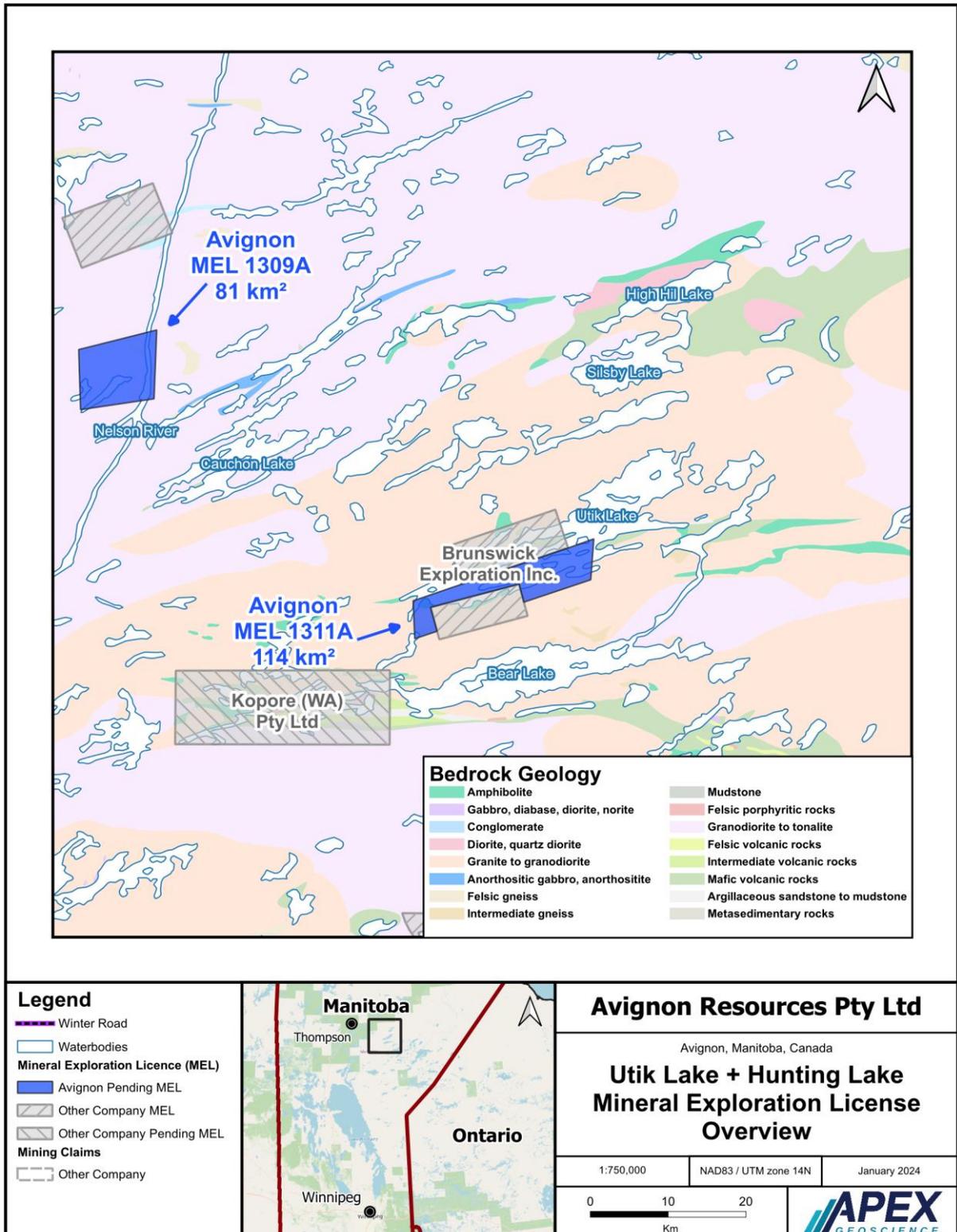


Figure 11. ARPL Mineral Dispositions, Utik Lake, Manitoba February 2024.

## Lac du Bonnet Project (seven Mining Claims: granted)

The Lac du Bonnet Project (Figure 12) is comprised of seven Mining Claims (17km<sup>2</sup> in total) located within 40km of the Tanco (Bernic Lake) LCT pegmatite deposit, a current producer of lithium, tantalum and caesium by underground mining.

The Archean Bird River Greenstone Belt encompasses the Lac du Bonnet granite which is considered a probable parent for pegmatites and pegmatitic granites located around its periphery. The Tanco deposit is hosted within pegmatitic sills close to a protrusion of the Lac du Bonnet granite.

Regional magnetic datasets indicate west-northwest features which host both the Tanco deposit and Avignon's Mining Claims and which coincide with structures that bound metasedimentary and metavolcanic packages along the Bird River Greenstone Belt.

Avignon's Mining Claims lie along the western extension of the Bird River Greenstone Belt, in a less explored and poorly mapped area of the Lac du Bonnet granite boundary, with undifferentiated metasedimentary, metavolcanic rocks and gneiss units along a regional structural trend containing the Tanco deposit to the east.

The project is easily accessible by road.

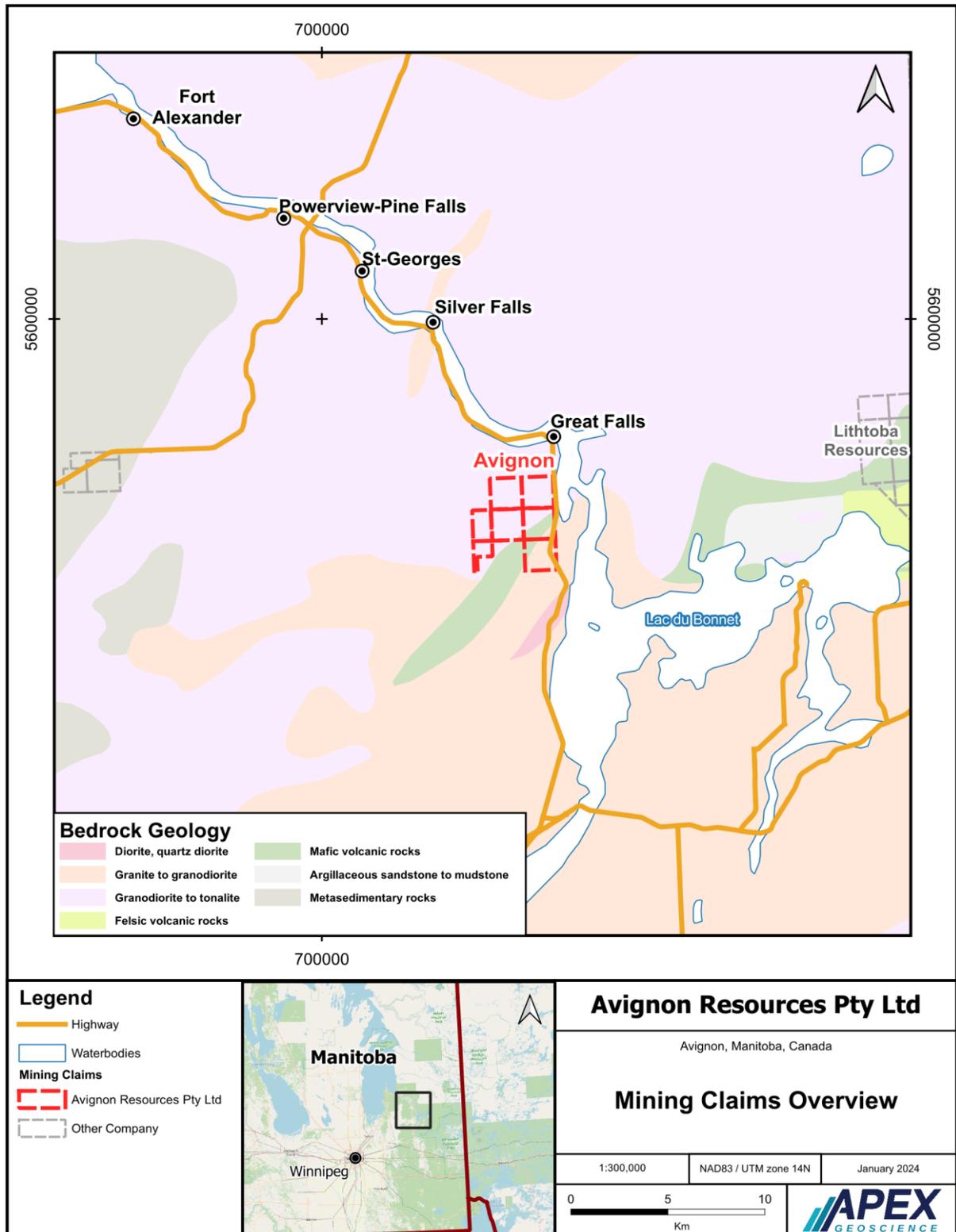


Figure 12. ARPL Mineral Dispositions, Lac du Bonnet, Manitoba February 2024.



## Next Steps-Proposed Work Programme

The proposed Q1/Q2 2024 work programme is based on the following key components:

- January-February: First Nations engagement and desktop historical data compilation
- February-March: satellite data interpretation and target generation
- March April: Logistical Planning
- May-June: Field visit. Ground truthing of priority one targets.

The Company anticipates follow-up mapping and sampling and/or scout drilling of any significant LCT discoveries in Q3.

This announcement was authorised for release by the Board of the Company.

**Peter Huljich**

Non Executive Chairman  
Zinc of Ireland NL

## Appendix 1 – Lithium Market

Lithium has seen a steep decline in recent times; however, the supply & demand expectations remain robust for the foreseeable future as electric vehicle (EV) and other demand is set to increase.

### Growth in global EV sales drive long-term demand for lithium

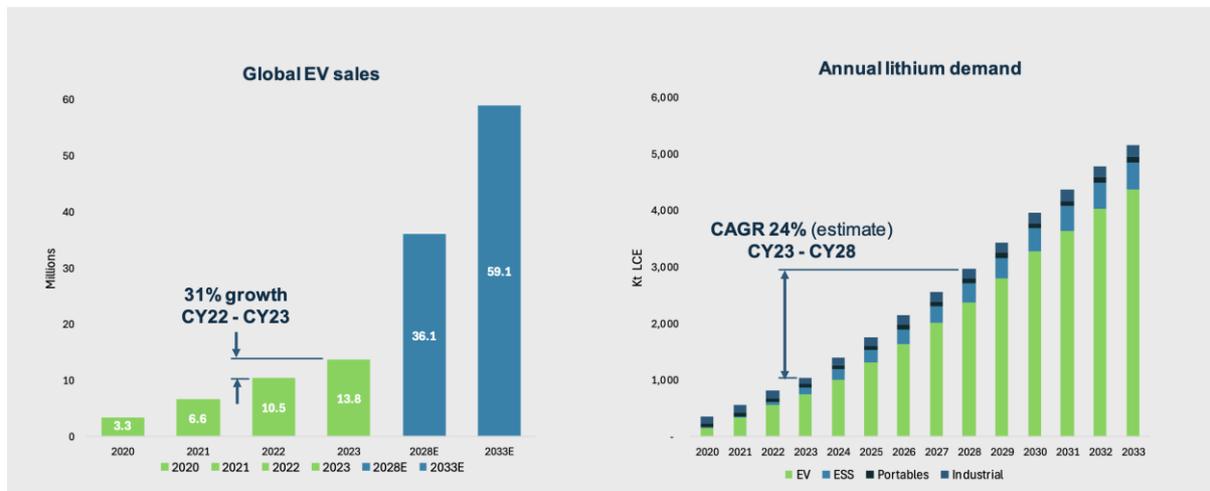
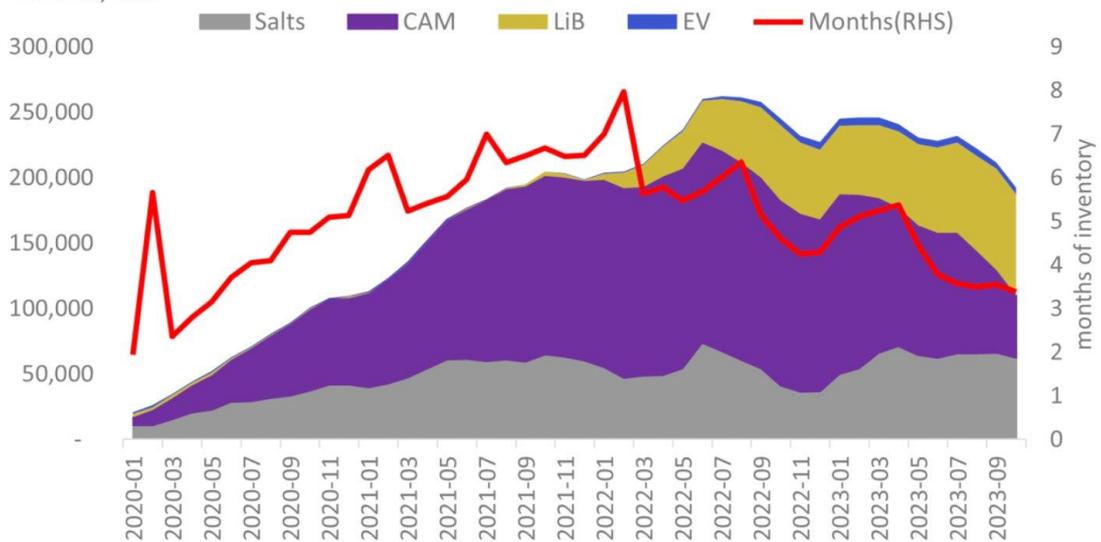


Figure X – Forecasted lithium Demand . Source ASX:PLS release (24<sup>th</sup> Jan 2024)

### Implied lithium inventory within China's supply chain tonnes, LCE



Source: Fastmarkets

Figure XX – Shows falling inventories within China's supply chain. Source: Fastmarkets