



First Lithium Minerals

BRINE EXPLORATION PROJECT IN NORTHERN CHILE

CSE: FLM | OTC: FLMCF | FSE: X28

January 2024

Disclaimer

Cautionary Statements

Information set forth in this presentation contains forward-looking statements that are based on assumptions as of the date of this presentation. These statements reflect management's current estimates, beliefs, intentions and expectations. They are not guarantees of future performance. Words such as “expects”, “anticipates”, “targets”, “goals”, “projects”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “continues”, “may”, variations of such words, and similar expressions and references to future periods, are intended to identify such forward-looking statements. First Lithium Minerals Corp. (“First Lithium” or the “Company”) cautions that all forward-looking statements are inherently uncertain, and that actual performance may be affected by a number of material factors, many of which are beyond First Lithium's control. Such factors include, among other things: risks and uncertainties relating to metal prices, changes in planned work resulting from weather, logistical, technical or other factors, the possibility that results of work will not fulfill expectations and realize the perceived potential of First Lithium's mineral properties, uncertainties involved in the interpretation of drilling results and other tests, the possibility that required permits may not be obtained in a timely manner or at all, risk of accidents, equipment breakdowns or other unanticipated difficulties or interruptions, the possibility of cost overruns or unanticipated expenses in work programs, the risk of environmental contamination or damage resulting from the exploration operations, the need to comply with environmental and governmental regulations and the lack of availability of necessary capital, which may not be available to First Lithium on terms acceptable to it, or at all. First Lithium is subject to the specific risks inherent in the mining business as well as general economic and business conditions. Accordingly, actual and future events, conditions and results may differ materially from the estimates, beliefs, intentions and expectations expressed or implied in the forward-looking information. Except as required under applicable securities legislation, First Lithium undertakes no obligation to publicly update or revise forward-looking information. First Lithium does not intend, and does not assume any obligation, to update these forward-looking statements, except as required under applicable securities legislation.

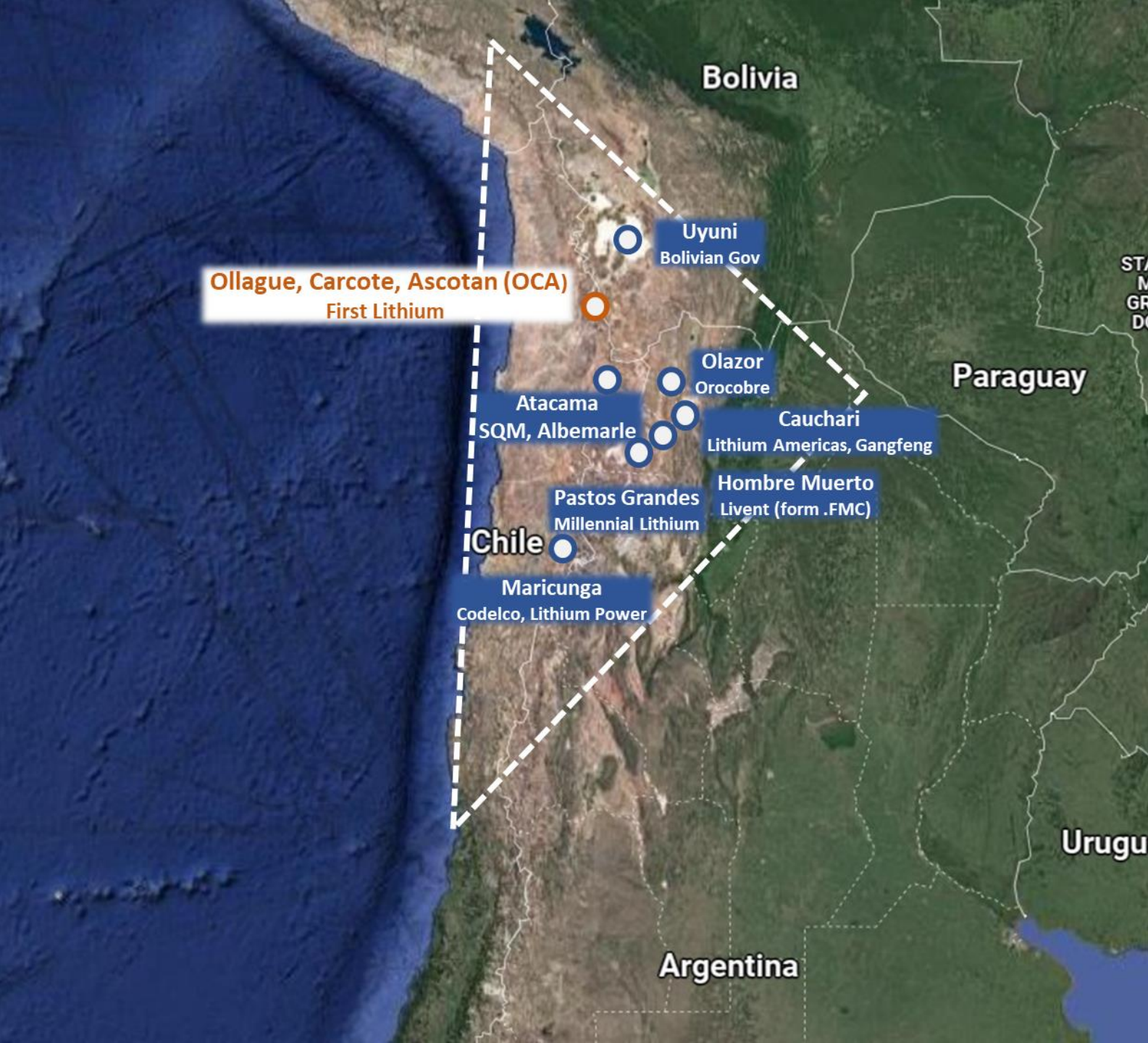
The Corporate Presentation contains information which was accurate at the time of posting but may be superseded by subsequent disclosures.

For more information on First Lithium, readers should refer to First Lithium's website at www.firstlithium.ca.

Historical Results – This presentation contains historical exploration results. The Company has not verified historical results, unless stated otherwise, and there is a risk that any future confirmation work and exploration may produce results that substantially differ from the historical results. The Company considers these historical results relevant to assess the mineralization and economic potential of the properties.

Qualified Person

The content of this presentation has been reviewed and approved by Aldo Moreno Salinas, the Qualified Person, as defined by National Instrument 43-101. Mr. Moreno is a Public Registered Person for Reserves and Resources N° 328 in Chile and is also registered in the Colegio de Geólogos de Chile under N° 437.



First Lithium Minerals Corp. (CSE: FLM | OTC: FLMCF | FSE: X28) is a Canadian exploration and development company with the OCA brine project in the Antofagasta Region of northern Chile and pegmatite exploration properties in northwestern Ontario, Canada

Salars Ollague, Carcote, Ascotan: 9,000ha of exploration concessions. 100% ownership

Hydrogeologic setting of the Andean plateau (“lithium triangle”)

Excellent infrastructure:

- Powerlines, geothermal powerplant - 70km
- Major continental railroad (The Ferrocarril de Antofagasta a Bolivia) and highway - onsite
- Major commodities export seaport Tocopilla - 350km
- Experienced labor, City of Calama and Chuquicamata open-pit copper mine - 200km

43-101 Technical Report OCA Prospect (2019)

Successful completion of property-wide TEM geophysical surveys 47 line-km (December 2022)

Pronounced geophysical anomalies and highly conductive zones up to 400m from Magneto Telluric (MT) geophysical survey (March 2023)

Advancing to inaugural exploration and resource drilling program in H1/24

100% owned exploration properties of 5,924 ha of mining claims in northwestern Ontario, Canada

Corporate Profile

CSE: FLM

Shares outstanding 91.2 million

Share price \$0.09

Market capitalization (Dec 29, 2023) \$8.206 MM

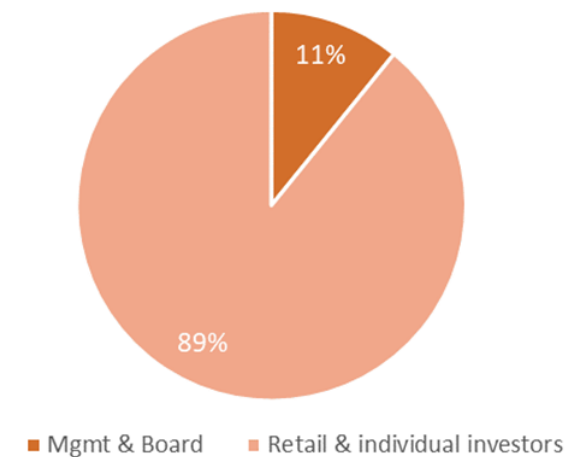
Q3/23 Cash \$3.1 MM

No Debt

Warrants 904,260 (@ \$0.25, expiry July 28, 2024)



Shareholder Ownership



Rob Saltsman | President, CEO and Director

Mr. Saltsman has 25 years of experience in venture capital and public investments and is the Founder of First Lithium Minerals Corp., a company he founded in 2017. He served as the CEO of Compel Capital Inc. and RMM Ventures Inc., and as Vice President of Georgian Capital Corp. where he focused on investing and consulting services in private equity. He is currently a President and Managing Partner of Paige Capital Inc., a venture capital investment company, and is a founding partner of South America Finance Corp SAS, a private merchant banking group in Colombia.

Claude Ayache | CFO

Mr. Ayache is a bilingual CPA, CMA with over 35 years of experience, more than half of which was served at the CFO/CEO level of publicly reporting companies in Canada and the US. He has also served on the board of several private companies and non-profit organizations.

Aldo Moreno | VP Exploration

Mr. Moreno is a seasoned geologist with 40 years of experience in exploration and evaluation of metallic and non-metallic mineral deposits and worked with several mining projects in Chile, Argentina, Bolivia, Peru, Ecuador, Brazil, Colombia, Venezuela, Cuba, Honduras, Mexico, and the United States. Mr. Moreno has a degree in geology from Universidad de Chile, is a member of the Chilean Professional Association of Geologists No. 437 and registered in the Public Records of Competent Persons No. 328.

Peter Espig | Director

Mr. Espig has been the President and CEO of Nicola Mining Inc. since 2013. The former Goldman Sachs banker and Olympus Capital Partners executive founded TriAsia Capital, a private equity and consulting firm focused on raising capital for mid-sized companies and pre-initial public offering investment in 2006. Mr. Espig is a founding director of Promontory Therapeutics, a private biopharmaceutical company, and has been a board member since November 2010. He is an independent director of Element 29 (TSX.V: ECU) and is an independent director of NAVCO Pharmaceuticals Inc. (formerly, BMGB Capital Corp.) (TSXV). Mr. Espig is a pioneer of SPACs, having completed two mega transactions with a combined value of greater than US\$1.0 BN and served as a board member of Star Bulk Carriers (NASDAQ: SBLK) from 2006 to 2013. Mr. Espig received his MBA from Colombia Business School, where he was a Chazen International Scholar.

Ernest Mast | Director

Mr. Mast is the former President & CEO of Primero Mining Corp. and Minera Panama S.A., a subsidiary of Inmet Mining Corp., which was subsequently acquired by First Quantum Minerals for \$5.1 B. He received an MBA from Universidad Catolica de Chile and holds a Master's degree in Mining & Metallurgical Engineering. He is fluent in Spanish and worked as a Technical Director of Noranda Chile's operation and Lomas Bayas Copper Mine.

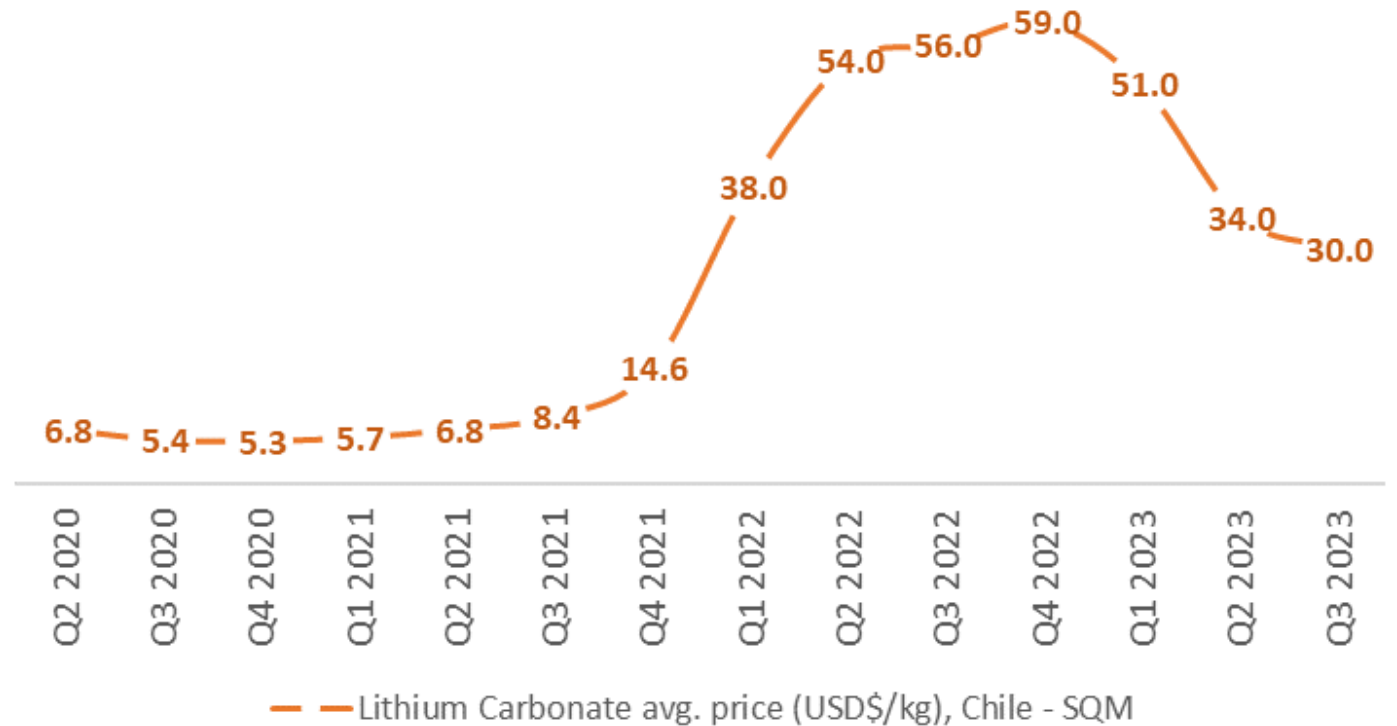
Management and Board

Lithium Price

Regional destocking in Asia suppressed prices in 2023

Strong lithium demand is expected to sustain long term price as supply is not expected to catch up

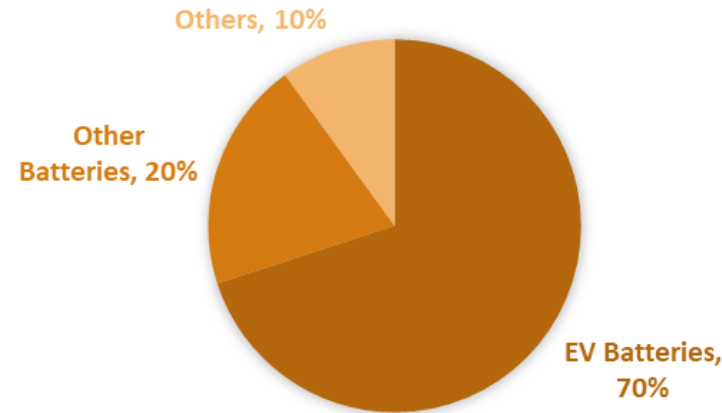
While off the multi-year highs, Chile lithium carbonate producer contract prices remain elevated



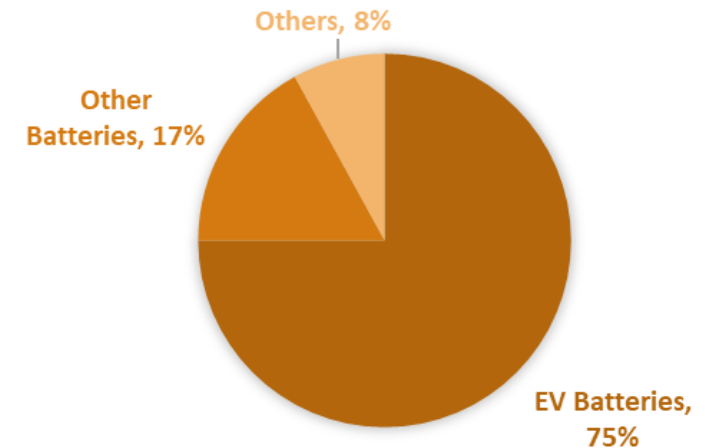
Lithium Demand

Lithium demand is expected to continue be driven by EV, consumer electronics, grid, and mobility

LITHIUM CHEMICAL DEMAND (2022)
~760 KMT



LITHIUM CHEMICAL DEMAND (E2025)
~1,500 KMT



Lithium Supply

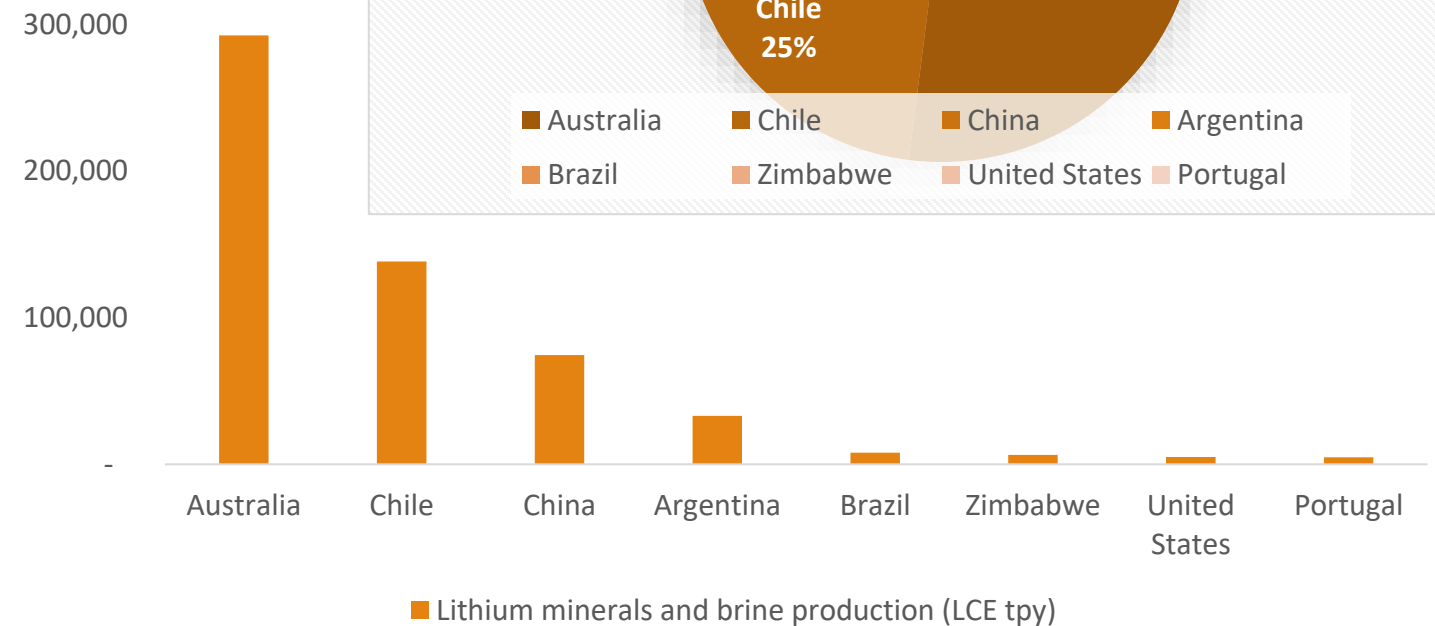
Supply shortage in the future

Global lithium production ~ 635,000 tpy LCE

Inelastic nature of supply

Time to bring new capacity online

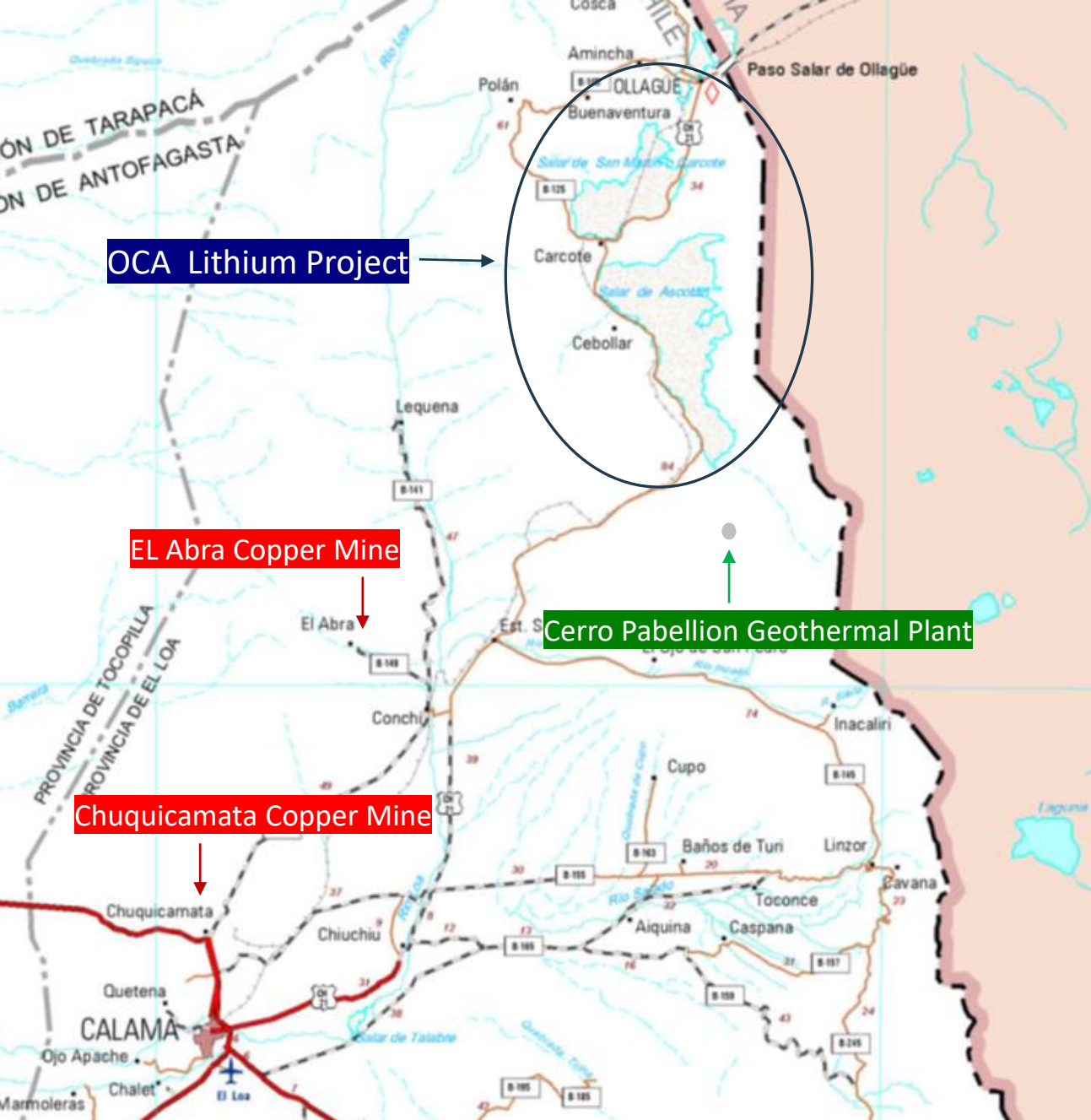
Widening supply-demand gap by 2025





Salars
Ollague | Carcote | Ascotan

OCA Project

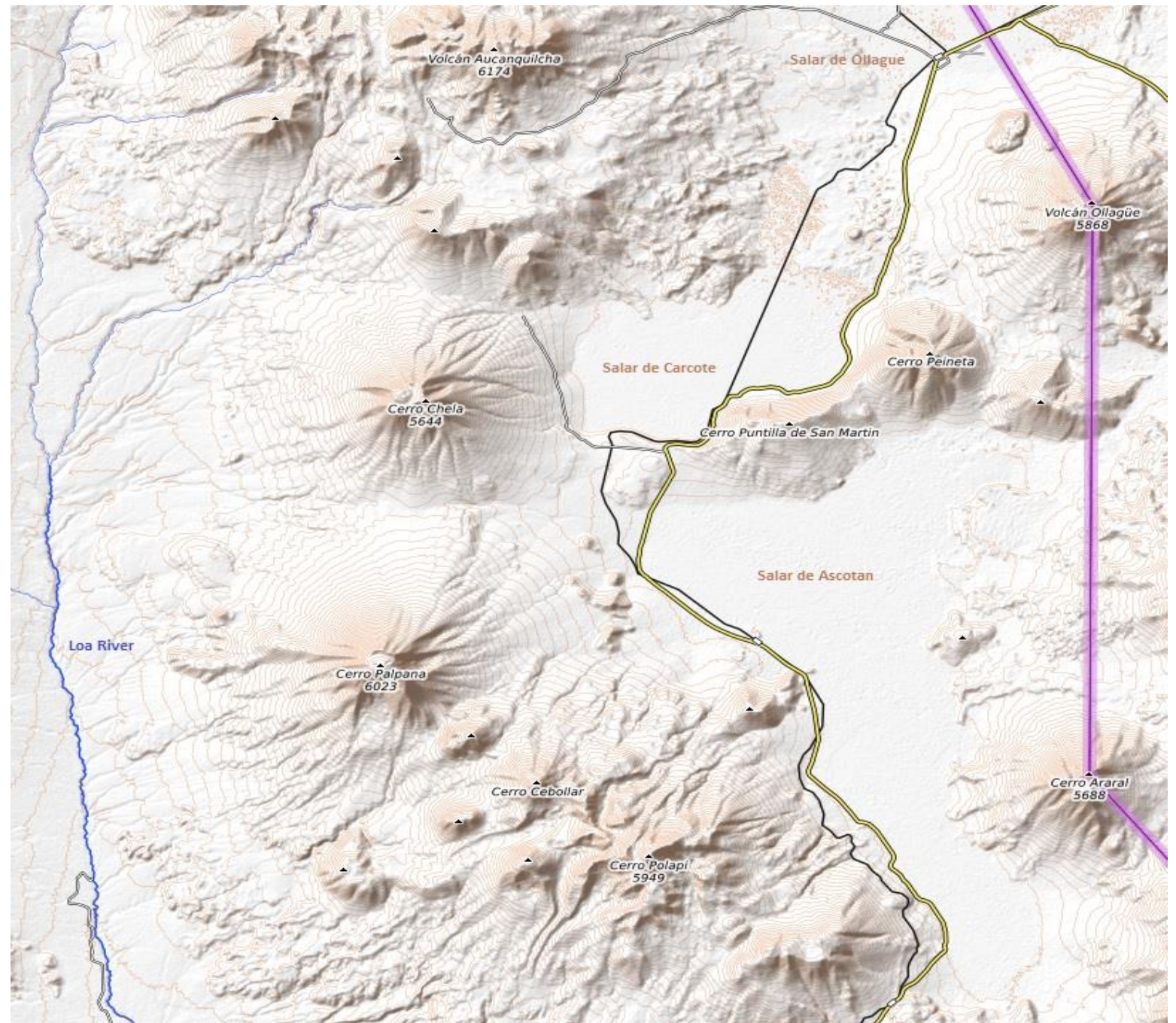


Project Location and Infrastructure

- The mineral exploration concessions that form the OCA Prospect located in the salars of Ollague, Carcote, and Ascotan, within the hydrogeologic settings of the Andean plateau bordering Bolivia
- The OCA Prospect is accessed from the town of Ollague, Chile via Highway 21 that connects Ollague with the city of Calama (200km)
- The town of Ollague is at an elevation of 3,700 meters above sea level and is the closest to the OCA Prospect
- The railway (The Ferrocarril de Antofagasta a Bolivia, "FCAB") that passes through Ollague forms the major transportation corridor between the port city of Antofagasta, Chile and the capital city of Bolivia, La Paz
- Historically, primary traffic on the railway has been minerals such as lead-zinc concentrates, nitrates, and copper.
- Cerro Pabellon Geothermal Power Plant located approximately 70km south of the OCA prospect
- Operating copper mines in the area

Topography of Salars

Topography is mainly formed by Loa River, volcanic chain, and endorheic basins of salars de Ascotan, Carcote, and Ollague

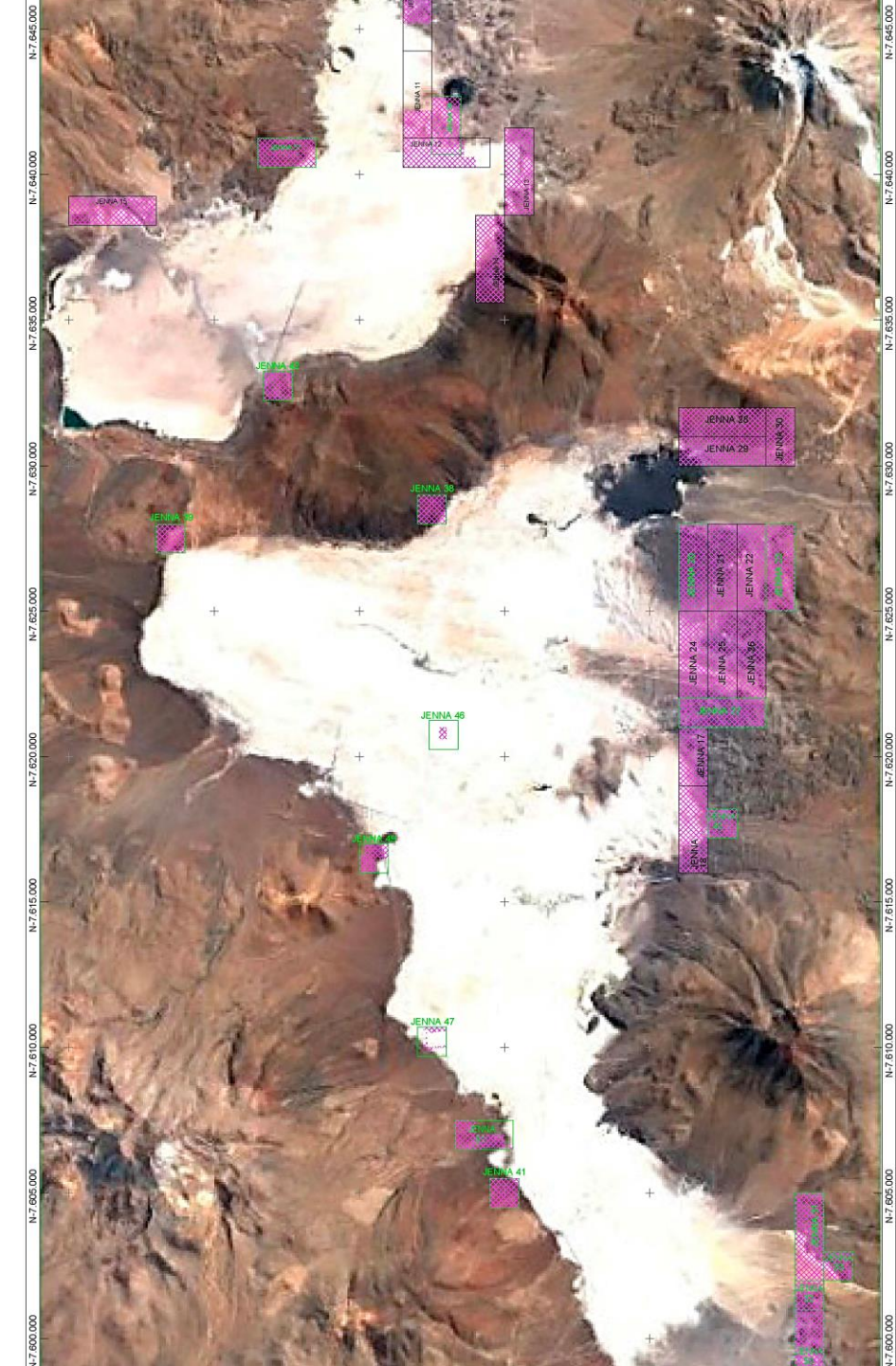


Source: 43-101 Technical Reports on The OCA Prospect, Comuna De Ollague, Province of El Loa, Region of Antofagasta Chile (Nov 2019), Company Reports

Ollague, Carcote, Ascotan Salars Project (OCA)

- The OCA Prospect is located in Ollague, Carcote and Ascotan Salars, Antofagasta Region; the eastern part of the Atacama Desert
- Topography is mainly formed by Loa River, volcanic chain, and endorheic basins of salars de Ascotán, Carcote and Ollague
- The upper basin of Loa River is flanked on both sides by two longitudinal mountain ranges; the western flank is constituted by the Sierra del Medio with an approximate altitude of 4,500 meters
- The eastern flank the continental divide formed by the Andes including: the Paruma de Portezuelo mountain (5,582 meters above sea level), the Ollagüe volcano (5,868 meters asl), the Ascotán mountain (5,187 meters asl) and the Toconce mountain (5,411 meters asl)
- Prospect is composed of 40 mining exploration concessions covering a total area of approx. 9,000 hectares
- Climate is arid, with average annual precipitation 0.60 – 0.85 mm
- Historical exploration in the area for borates, sodium chloride and potassium
- Existing commercial production of borates

Source: 43-101 Technical Reports on The OCA Prospect, Comuna De Ollague, Province of El Loa, Region of Antofagasta Chile (Nov 2019), Company Reports

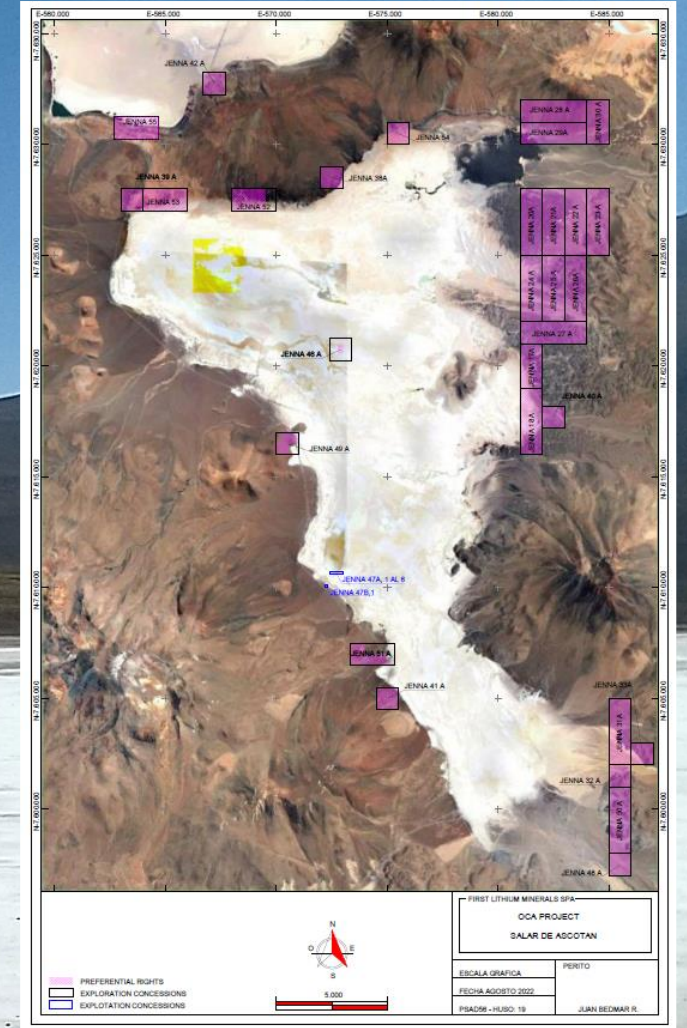
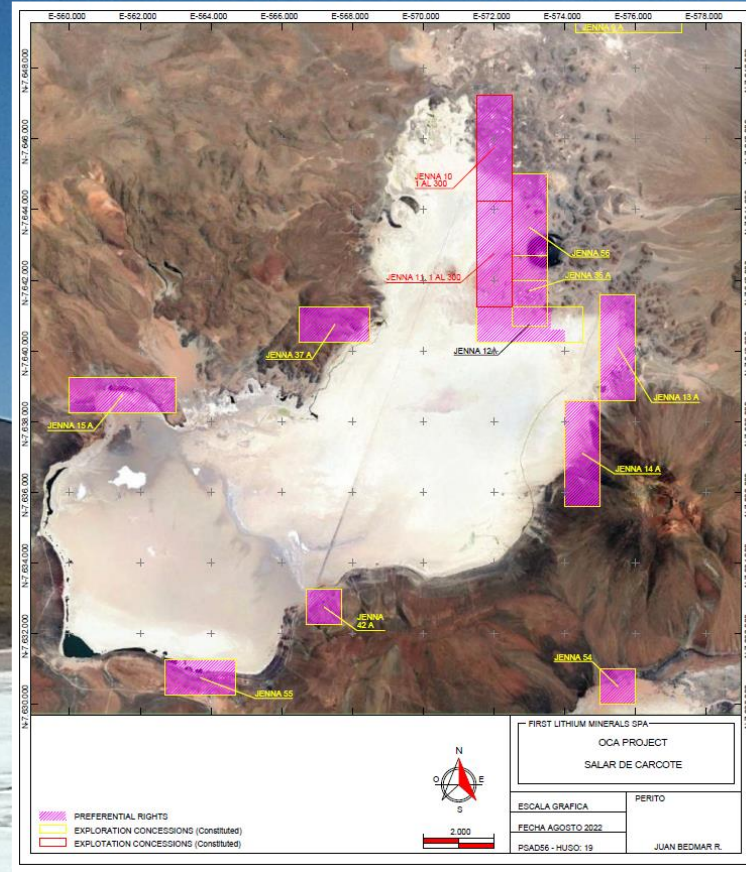
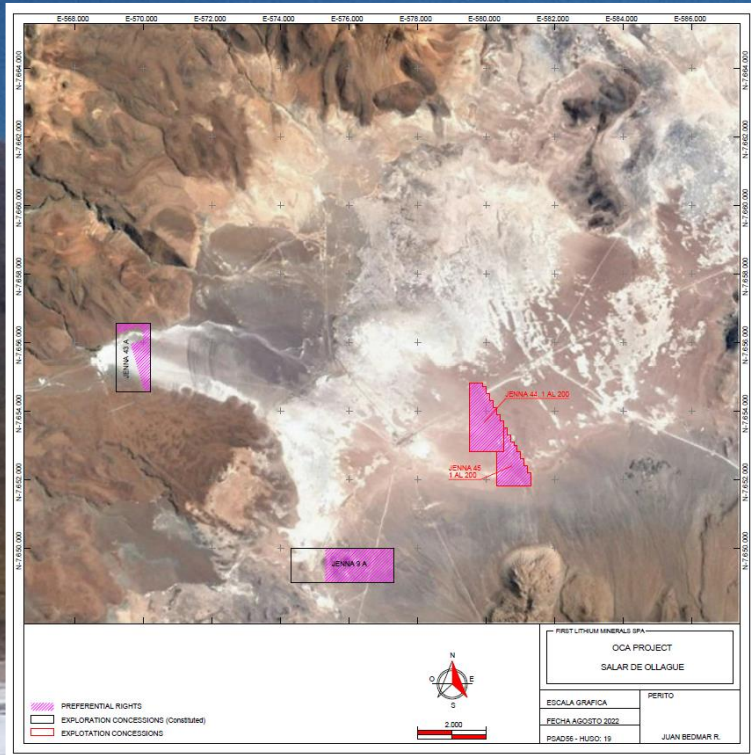


Mineralization

Mineralization in the OCA Project is primarily represented by three different fractions:

- ❑ Liquid, represented mainly by chloride and sulfate brines
- ❑ Dendritic material, consisting of sand, silt and clay intercalated in the salar sediments
- ❑ Various precipitated salt compounds resulting from salts reaching respective solubility and concentration limits





Ollague Carcote Ascotan

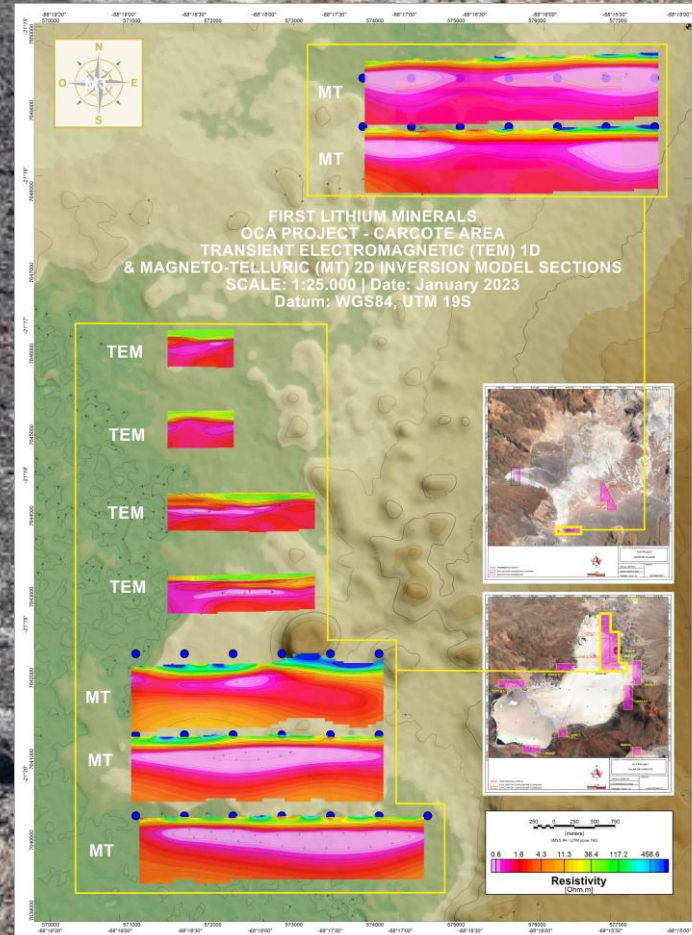
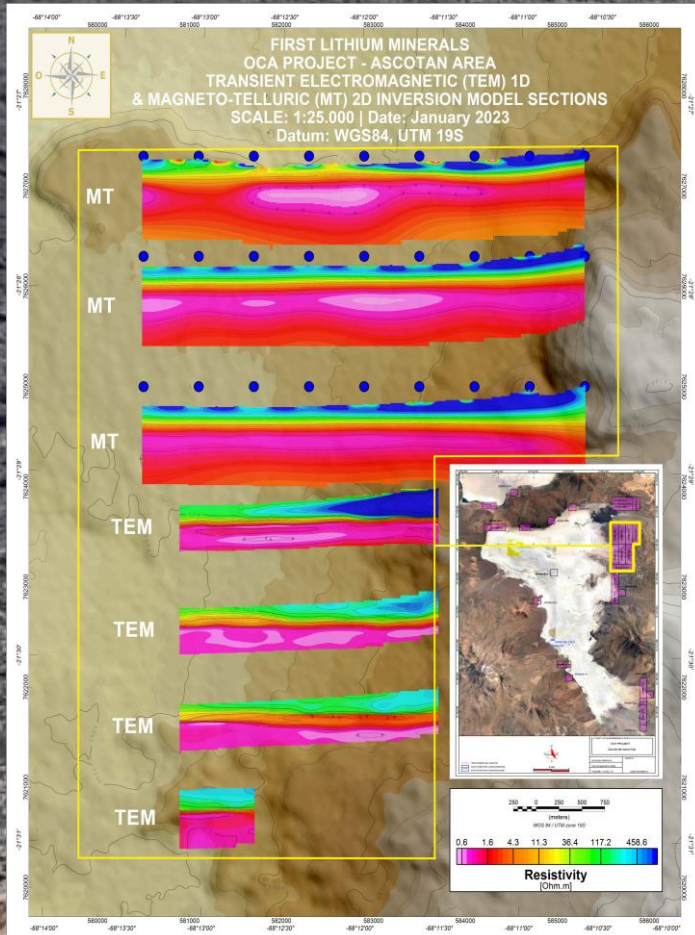
Hydrogeology

- The Salars of Ollague, Carcote and Ascotan correspond to continental saline deposits or Salars saturated with brines
- The basin collects water from temporary streams in a catchment area of approximately 6,000 km²
- Lithium (Li), potash (K), boron (B), sodium (Na) and magnesium (Mg), among others, are leached and transported from rocks in the catchment, and then accumulated and concentrated by evaporation in the Salars
- Geology and hydrogeology extensively studied and investigated by SQM, Codelco and Chilean Geological Surveying
 - Salar de Ollague: 187 km² (basin area), 31 km² (surface area in Chile)
 - Salar de Carcote : 561 km² (basin area), 108 km² (surface area)
 - Salar de Ascotan: 1,757 km² (basin area), 243 km² (surface area)
- All three Salars are terminal lakes with sediments intermixed with salt compounds, undersurface brine, and a surface crust composed primarily of gypsum and halite
- Groundwater of the Salars show characteristics of a typical brine observable a few meters below the surface



OCA Exploration Program

TEM and MT Geophysics



Completed extensive property-wide Transient Electromagnetic (TEM) geophysical surveys (December 2022)

TEM contiguously spaced stations along 28 profiles for a total of 47.8 line-km

Highly conductive zones across concessions up to 400m at less than 1.0 Ohm-m beneath the surface at 100-200m

Defined two target areas with resistivity less than 0.2 Ohm-m at Carcote (approx. 1,275 ha) and Ascotan (approx. 1,775 ha)

Magneto-Telluric (MT) surveying identified pronounced geophysical anomalies and high conductivity up to 400m zones typically indicative of brine mineralization (March 2023)

Surface Brine and Brackish Water Sampling Program

15 brine and brackish water samples collected directly off the surface in the salar at depths of up to 0.3 meter and in the alluvium surrounding the salar surface

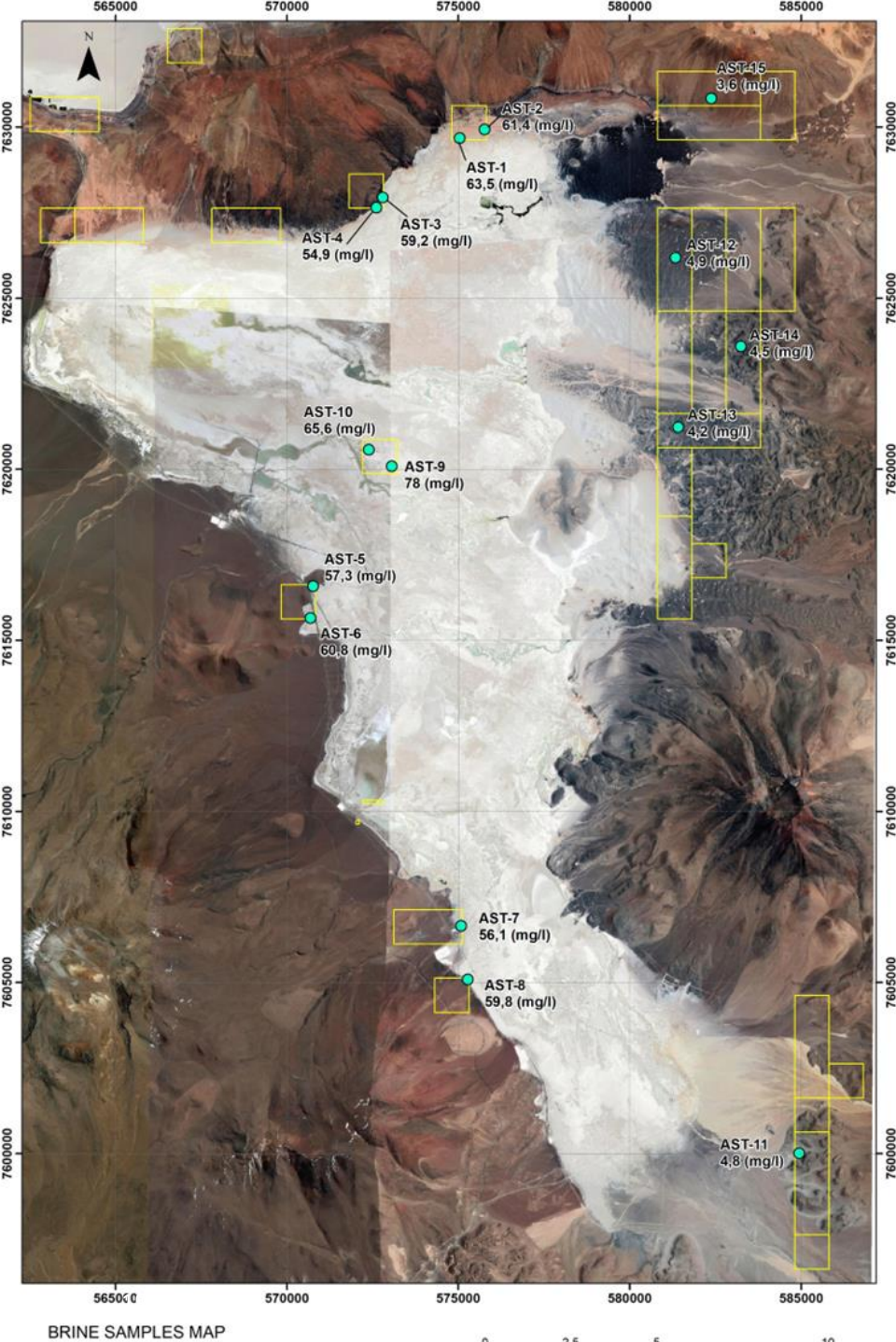
Assays of the complete sample set range from trace to 78 Li (mg/l), with the average of 42.6 Li (mg/l) and median of 57.3 Li (mg/l)

Number	Coordinates UTM		Element					
Sample	East	North	B	Ca	Li	K	Na	Mg
	(m)	(m)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
AST-1	575,042	7,629,681	169.3	1,901.9	63.5	1,445.0	15,148.6	999.7
AST-2	575,765	7,629,933	166.9	1,926.5	61.4	1,454.5	14,222.4	1,007.8
AST-3	572,797	7,627,938	162.4	1,908.8	59.2	1,440.2	15,047.0	1,001.3
AST-4	572,609	7,627,646	148.5	1,788.1	54.9	1,355.9	12,865.6	964.3
AST-5	570,767	7,616,586	155.2	1,975.7	57.3	1,482.1	15,818.2	1,022.7
AST-6	570,693	7,615,647	170.3	2,153.1	60.8	1,597.4	18,454.4	1,099.3
AST-7	575,087	7,606,651	158.8	2,014.9	56.1	1,503.3	15,418.0	1,036.0
AST-8	575,278	7,605,089	171.2	2,033.4	59.8	1,532.2	14,884.9	1,043.6
AST-9	573,064	7,620,083	225.8	2,465.9	78.0	1,832.6	17,668.6	1,237.8
AST-10	572,392	7,620,570	187.4	1,989.6	65.6	1,510.4	16,353.8	1,017.7
AST-11	584,941	7,600,005	143.4	86.5	4.8	102.5	2,488.2	31.1
AST-12	581,340	7,626,179	146.9	108.8	4.9	112.2	2,624.5	34.3
AST-13	581,416	7,621,226	125.0	83.8	4.2	93.4	2,197.9	28.0
AST-14	583,239	7,623,593	134.4	89.5	4.5	101.8	2,380.7	29.8
AST-15	582,382	7,630,840	107.4	56.4	3.6	79.1	1,862.7	22.7
Average			158.2	1,372.2	42.6	1,042.8	11,162.4	705.1
Median			158.8	1,908.8	57.3	1,445.0	14,884.9	1,001.3

Surface brine and brackish water samples. OCA Project, Salar de Ascotan. August 2023

Salar de Ascotan Surface Brine and Brackish Water Sample Locations

- Highs of 78 Li mg/l at surface brine and brackish water samples validate Salar de Ascotan as a strong exploration target and potential future resource
- Salar de Ascotan mineralization is expected to exhibit typical hydrogeological conditions of the salars in northern Chile where deeper brine enrichment is encountered at depth





OCA Project Exploration Program

Q1/24 – Q2/24

- ❑ Property-wide TEM geophysical surveys 47 line-km – completed Q4/22
- ❑ Magneto-Telluric (MT) geophysics - completed Q1/23
- ❑ Drill target definition – completed Q2/23
- ❑ Surface brine geochemical sampling program – completed Q3/23
- ❑ Community engagement and social licensing – ongoing
- ❑ Drilling permits – ongoing / est. Q1/24
- ❑ Exploration drilling to test brine units' depth, controls and continuity of geochemical composition – est. Q1/24-Q2/24
- ❑ Porosity and permeability analysis – est.Q2/24



LSL | Lidstone

Northwestern Ontario

LCT Pegmatite Dikes and Ni-Cu-PGE Exploration Projects

LSL

Lithium exploration prospect

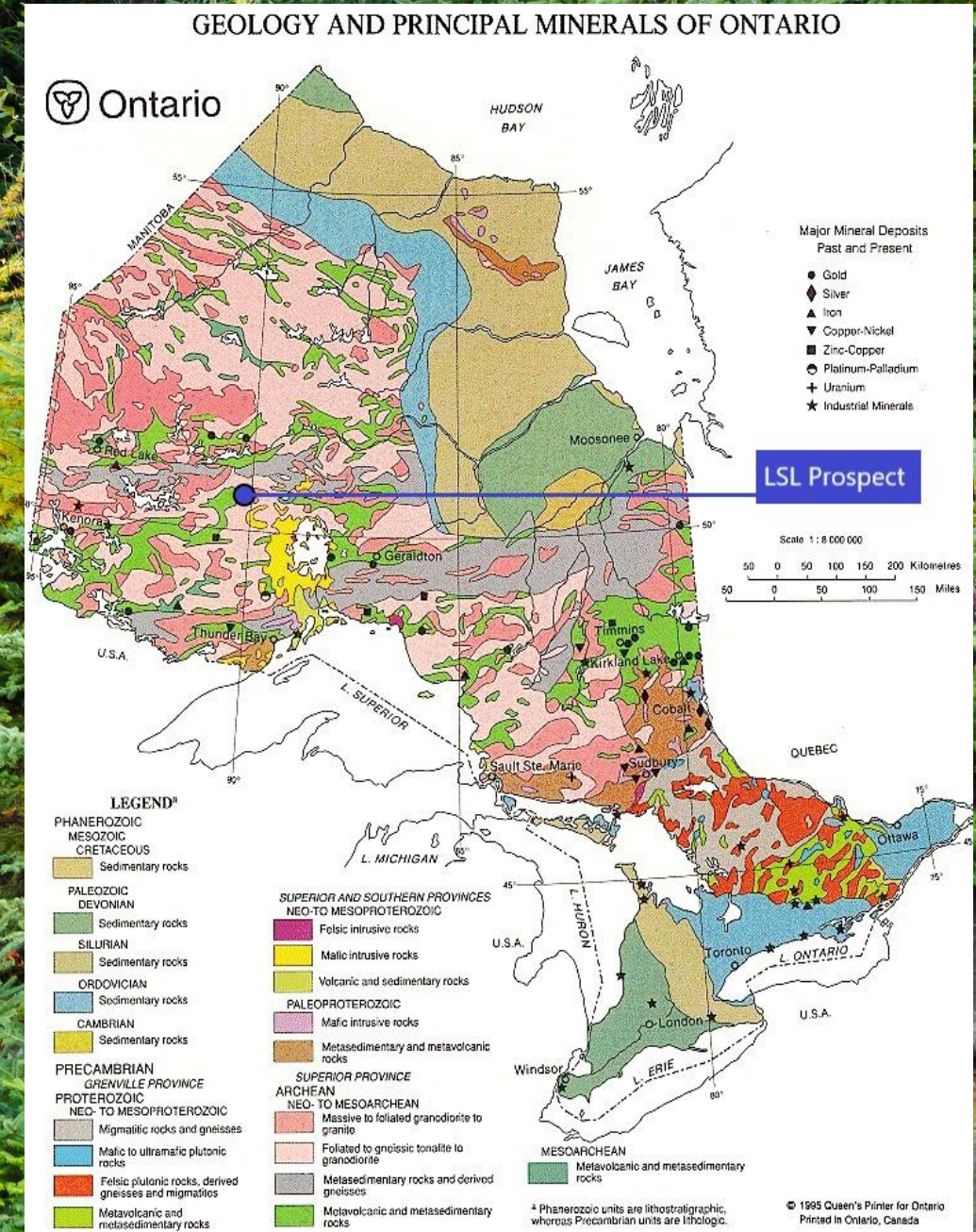
LSL prospect is located in the Patricia Mining Division, 160 km northeast of Sioux Lookout, Ontario, with a highway, logging road, and on foot access

The prospect consists of wholly-owned 191 mining claims covering 3,913 ha. No royalties.

Three claims groups: LSL Main, Solitude, and Hillside; lie within Archean rocks of the English River subprovince of the Superior province

The subprovince can be broadly divided into a northern supracrustal, metasedimentary domain and a southern granitoid intrusive and gneissic regimes

Historical work included mapping, airborne gamma ray spectrometry survey, line cutting, and core drilling



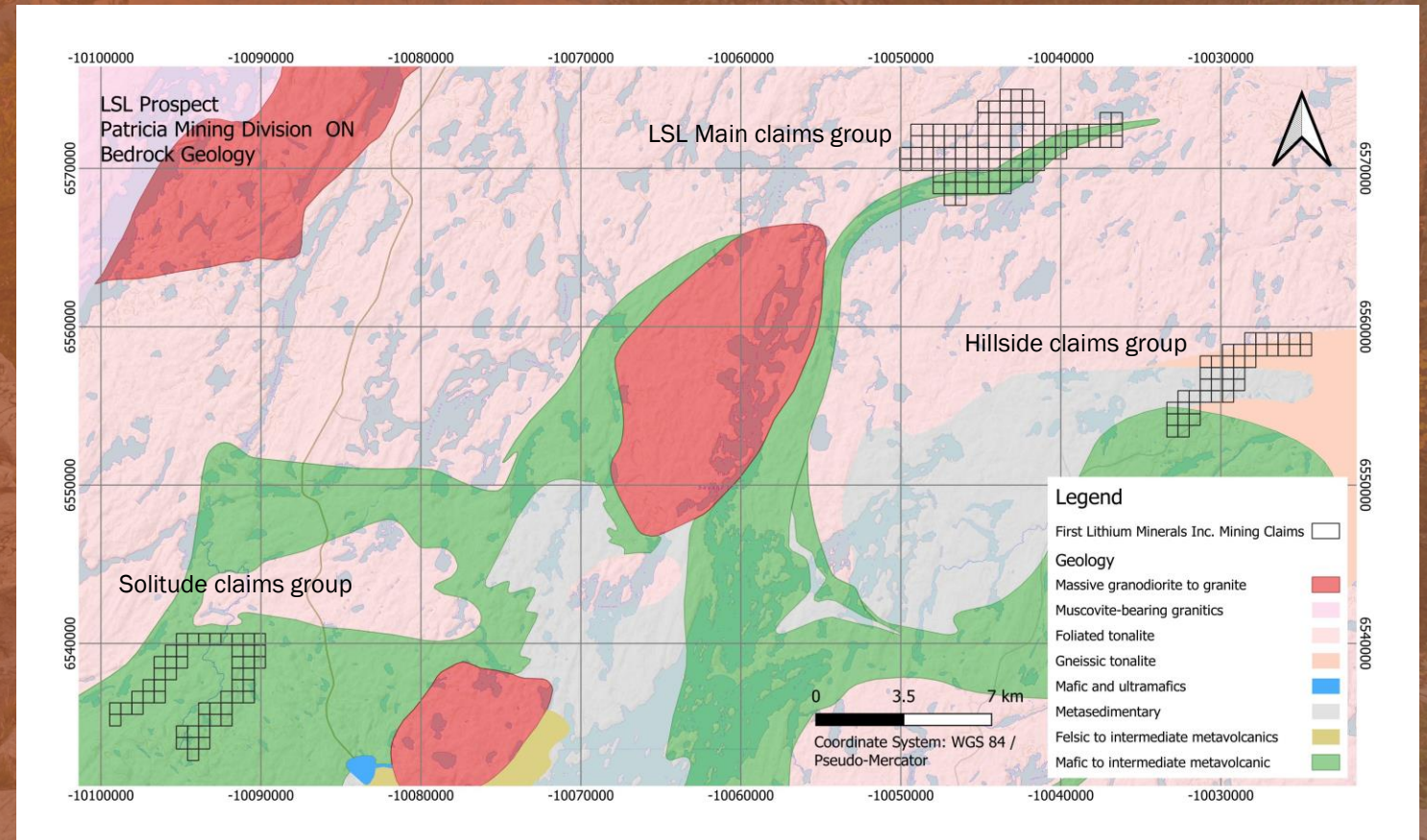
Prospect Geology

The area is underlain by the northeastern extension of the Savant Lake greenstones

The greenstone rocks are approximately 1-1.5 km wide in the vicinity of the pegmatites

The greenstone section is bounded to the north and south by tonalities and granites to the southwest

Historical exploration identified outcrops of pegmatitic quartz-feldspar-muscovite-leucogranite



Historical Exploration

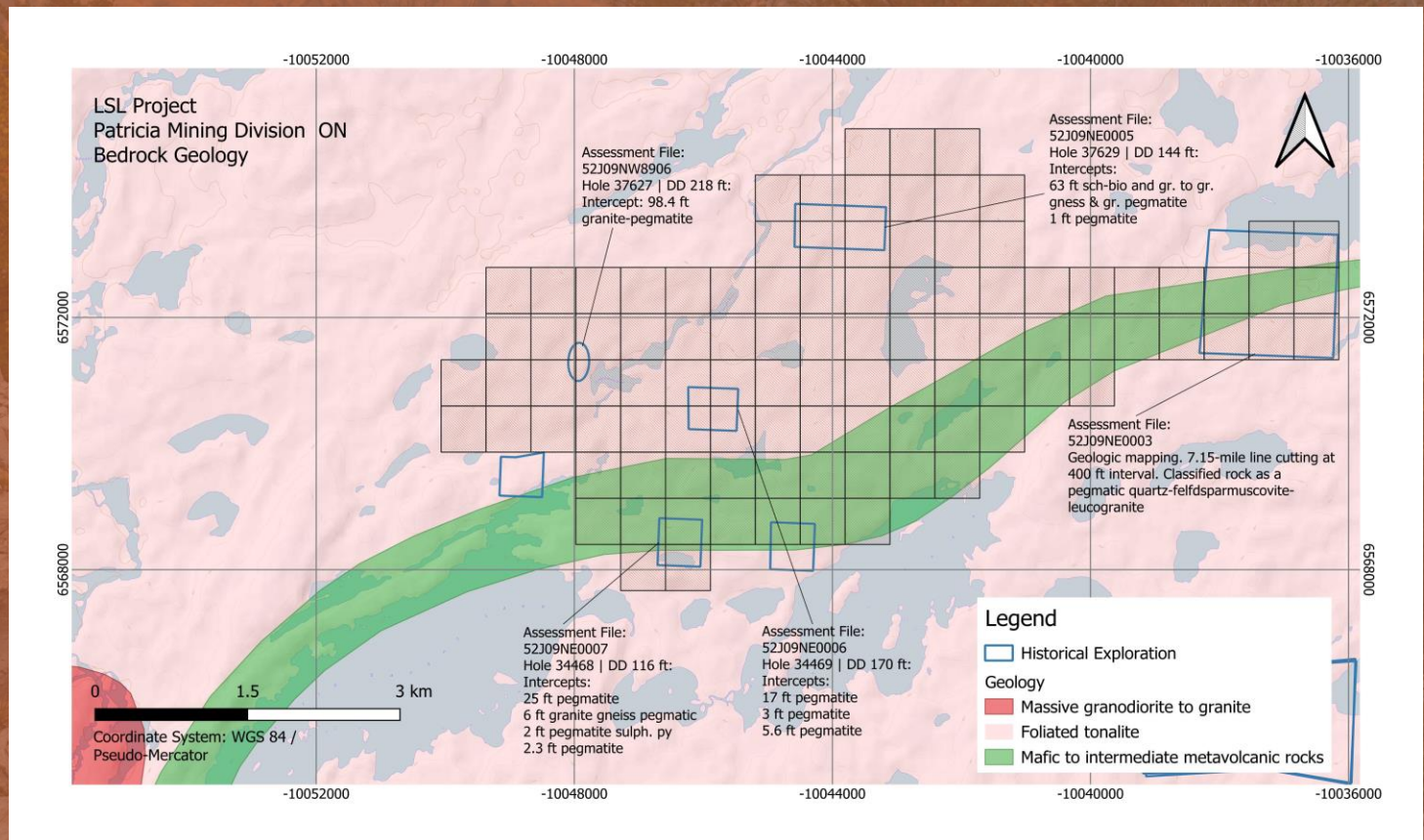
The prospect area consists of multiple successful exploration activities:

Geologic mapping and 7.15-mile line cutting identified pegmatic rocks (Ref:Urangesellschaft Canada Ltd., 1977)

Diamond drilling (Source: Assessment File 52J09NW8906, Ontario Geological Survey). The International Nickel Co. of Canada Ltd., 1967-1968:

- DD 218 ft, intercepted 98.4 ft of granite- pegmatite
- DD 116 ft , intercepted multiple pegmatite zones of 25 ft, 2 ft, 6 ft, 2 ft , and 2 ft
- DD 170 ft, intercepted multiple pegmatite zones of 17 ft, 3 ft and 5.6 ft
- DD 144 ft, intercepted multiple pegmatite zones incl. 63 ft of granite-pegmatite

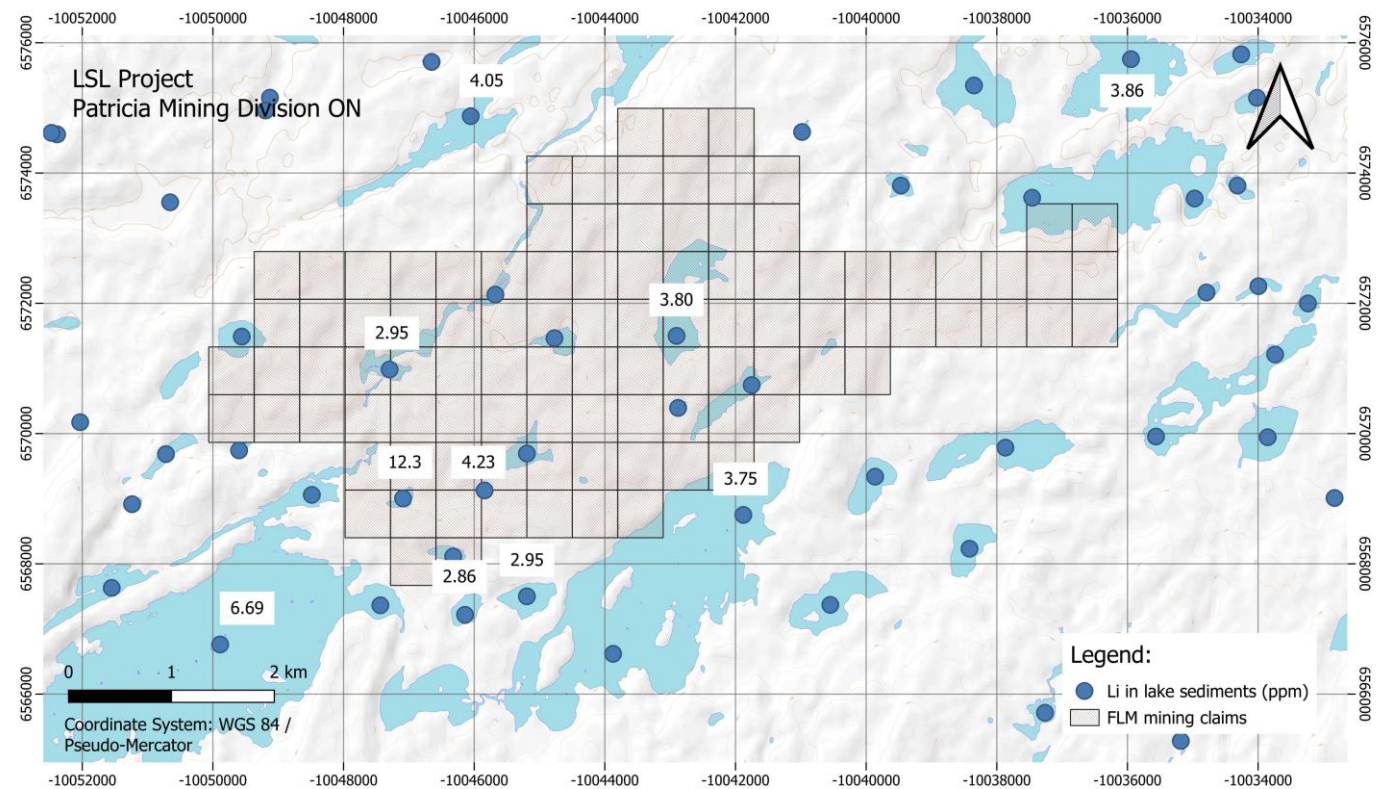
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Geochemistry (Li)

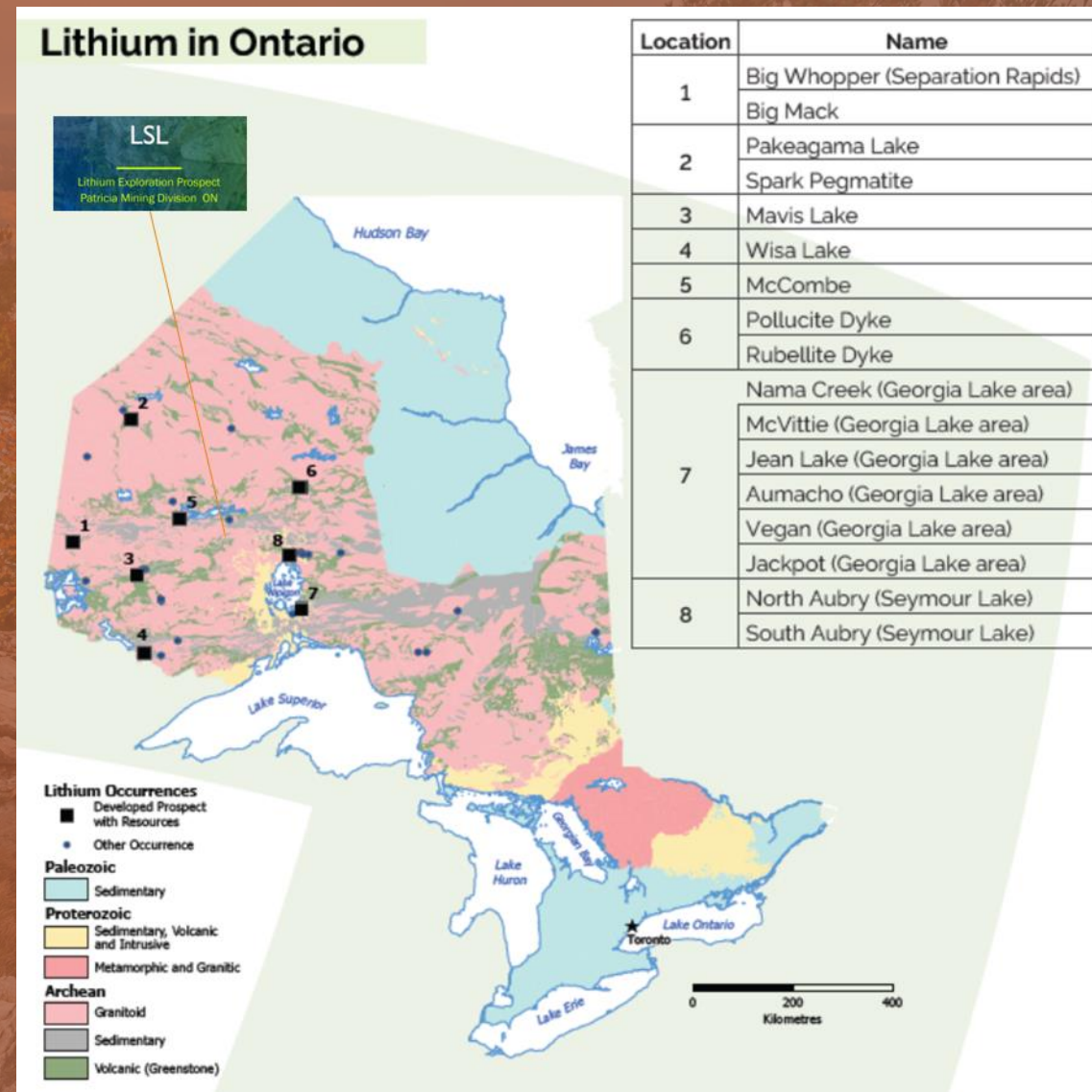
The prospect area shows anomalous lake geochemistry clusters with Li grades as high as 12.3 ppm (Source: Company reports; Ontario Geological Survey)

Relevant pathfinder elements Cs and Ta are present in sediment samples and can indicate coincident geochemical anomalies that could hold Li-Cs-Ta (LCT) pegmatite mineralization



Lithium Deposits in Ontario

LSL prospect location in relation to discovered lithium deposits in Ontario



Lidstone

Nickel-Copper-PGE and Lithium-Cesium-Tantalum pegmatite dikes exploration project

The property is located approximately 120 km northeast of the town of Armstrong, Ontario, which is approximately 270 km directly north of the City of Thunder Bay along highway 527

Network of logging roads allows the property access from the west via a truck and from the east via a truck and on foot (approx. 1.5km)

99 mining claims covering 2,011 ha

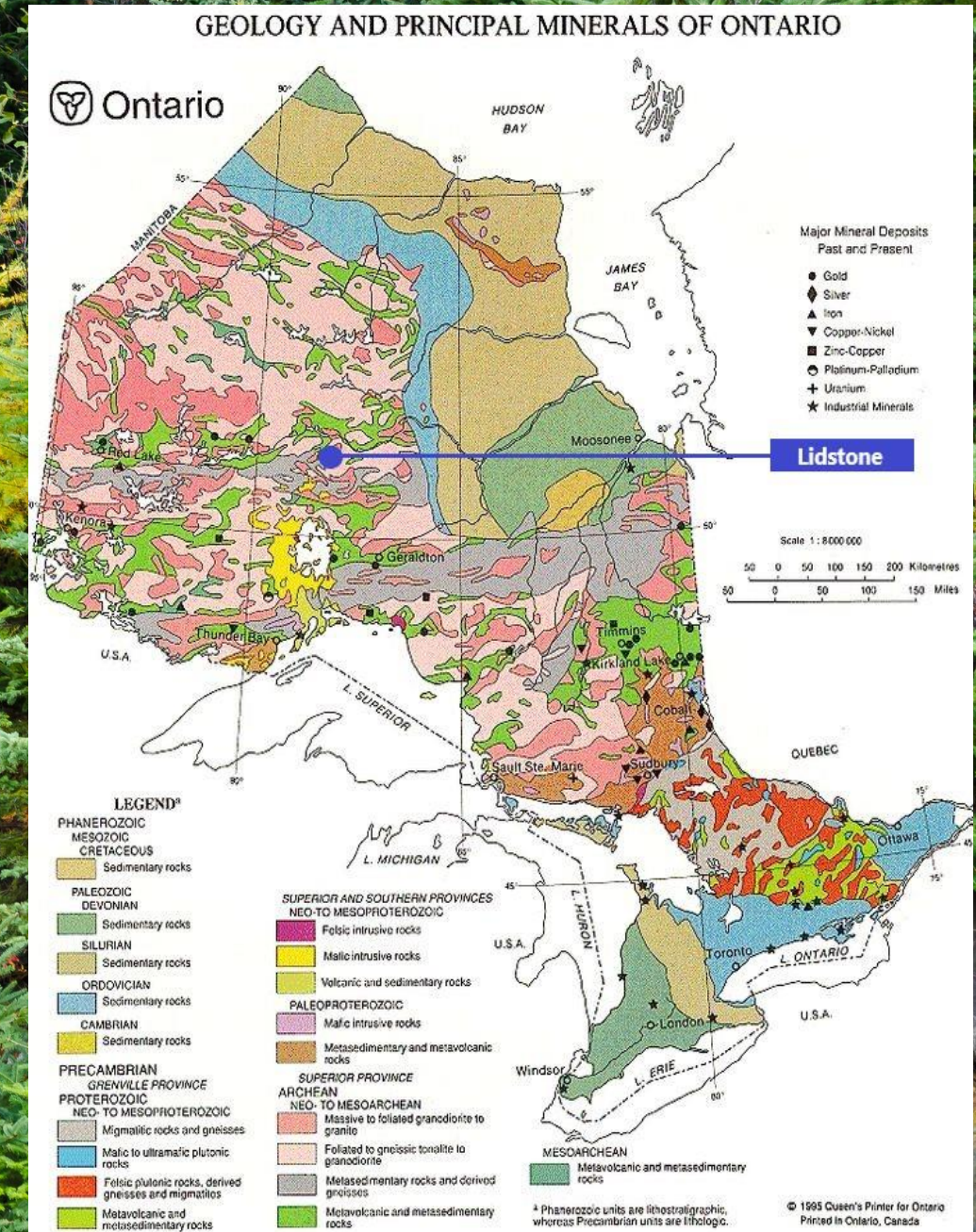
100% owned

No royalties

Directly on strike of the primary geological control structures of English River Subprovince

Historical exploration in the area (2004, 2006 and 2008) showed prospectivity of Ni-Cu-PGE group

27



Prospect Geology

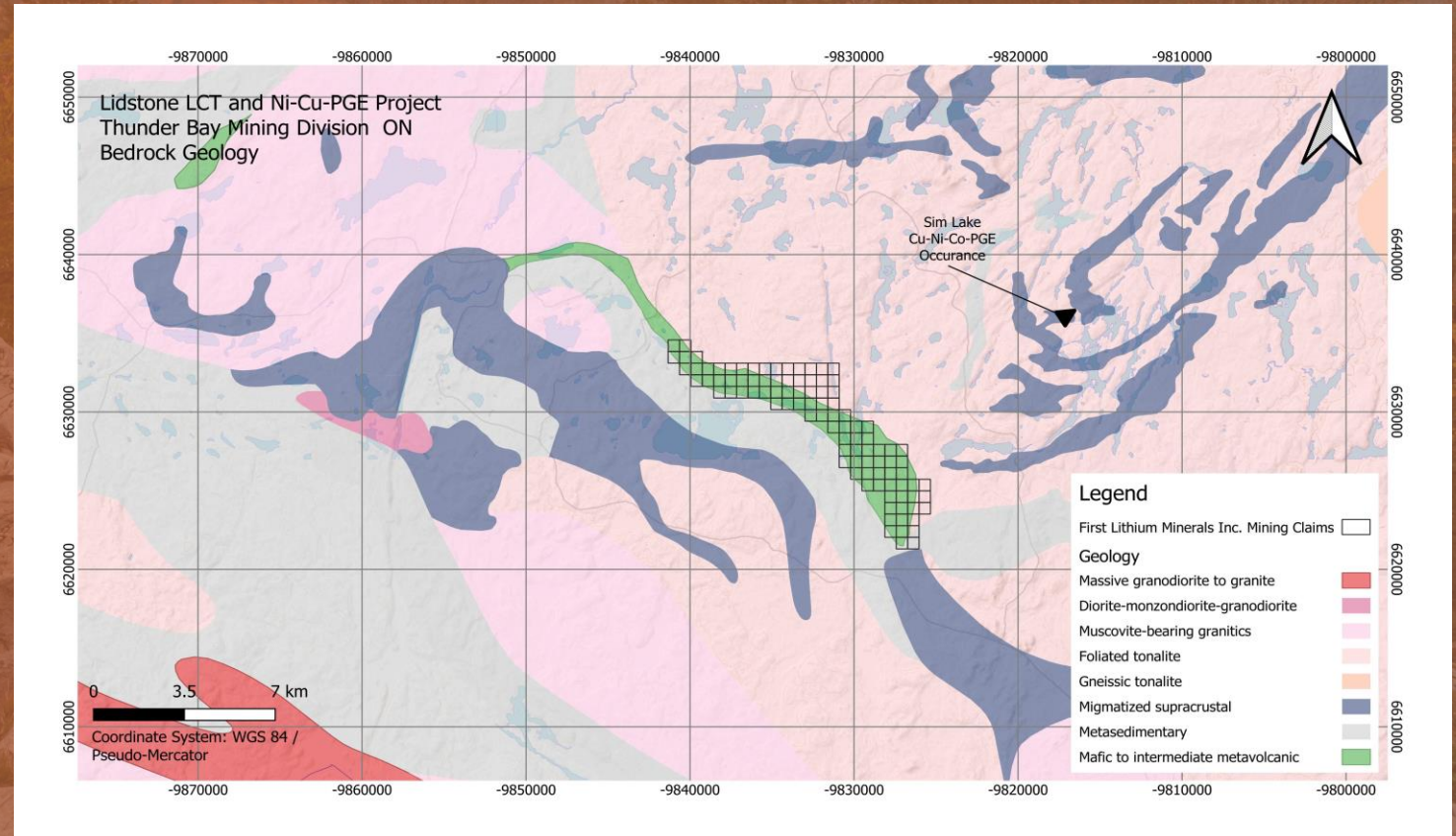
Mineral deposit types known to occur within the English River sub province include the formation of extensive Fe formation of wacke-turbidite association, RE pegmatites subprovince boundary zones, Cu-Ni-Co-PGM sulfides in meta-ultramafic pods, and polymetallic VMS within the greenstone enclaves

Immediately to the north-east of Lidstone prospect is the documented Sim Lake Occurrence, which hosts a two-phase, 350m x 800m mafic-ultramafic intrusive bearing disseminated and net-textured Cu-Ni-Co-PGM-sulphide mineralization

Historical exploration described the intrusion as mineralized gabbroic core surrounded by an outer zone of mineralized pyroxenite, suggesting that the intrusion is layered.

Historical surface sampling ran as high as 1.95% Ni and 1.72% Cu (Source: OGS, June 2006, "Diamond Drill Report on the Sim Lake Property")

This style of geology and mineralization is the target of the proposed exploration for the Lidstone property



Geophysics

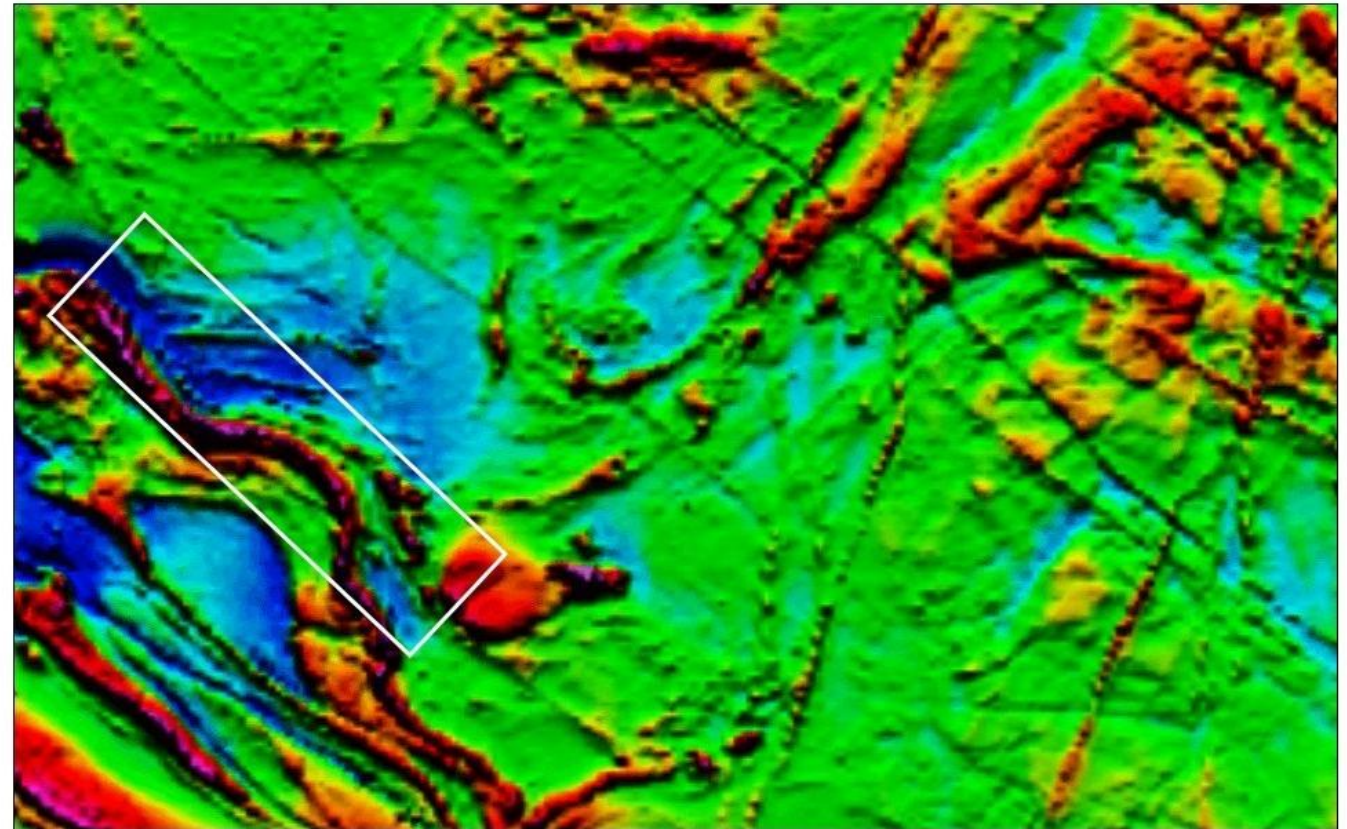
The prospect area consist of coincident magnetic abrupt highs and lows and zones of high electromagnetic (EM) conductance

Multiple areas of interest suggests historical work overlooked a significant exploration opportunity in the prospect area

The area shows shear strike that extends north-west through the central part of the prospect with the magnetic high defining the mafic and tonalite units which show high potential magnetic / iron signatures that can be part of a catalyst for Ni-Cu-PGE deposition

Magnetic data in combination with lithology from historical drilling demonstrates potential scale and prospectivity for a near surface mineralization

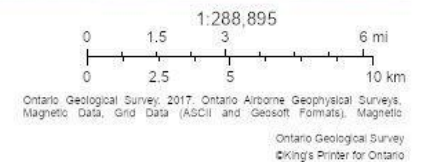
Ontario High Resolution Aeromagnetic Residual Magnetic Intensity



11/21/2023



- Prospect area mining claims



Geophysics – cont'd

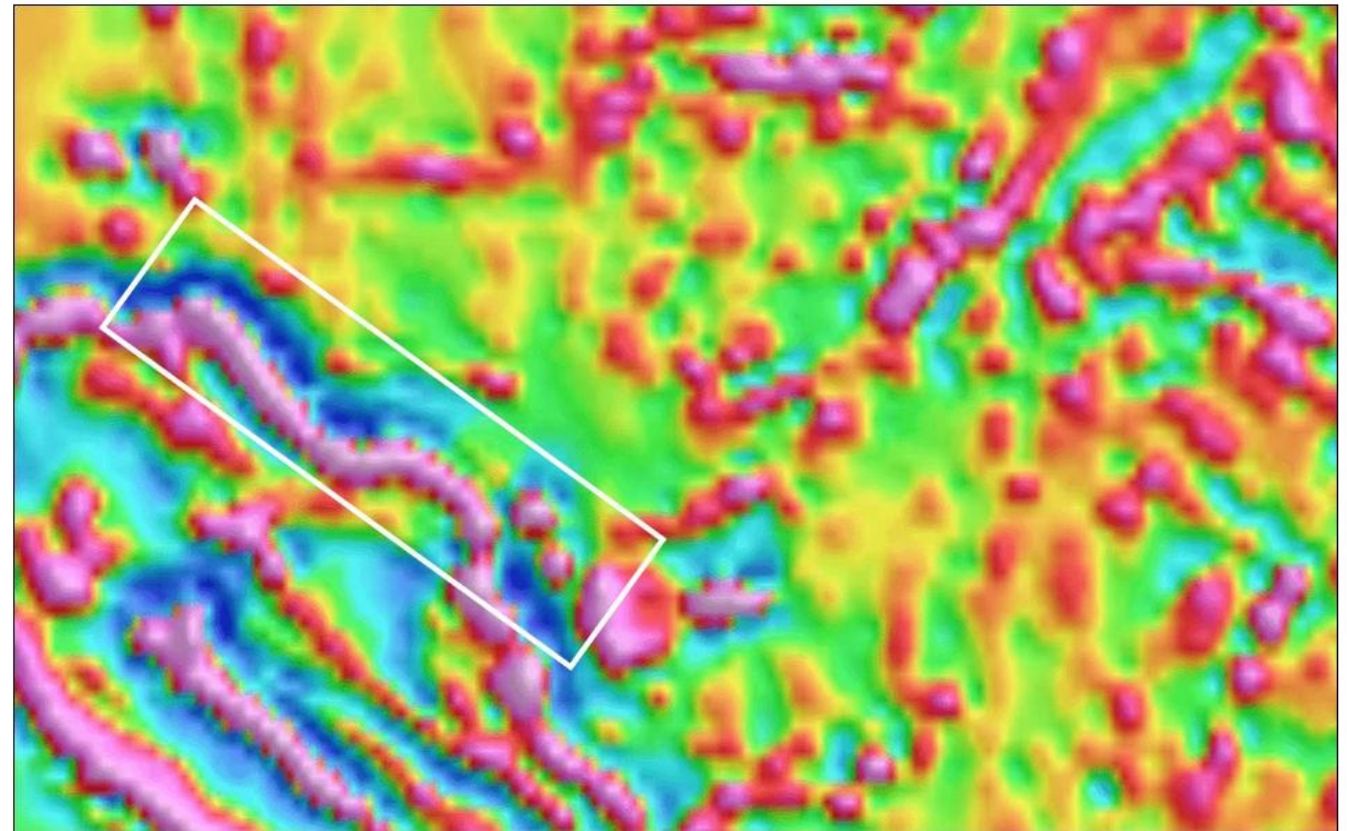
Vertical magnetic gradient anomalies show extension along the claims area within the northwest - southeast directions (strike zone)

Noticeably the abrupt changes of high and low vertical magnetic gradient could potentially exhibit sulfide mineralization associated with an intrusive body of the greenstone unit

Since vertical gradient anomalies arising from near sources are typically enhanced vs. those arising from deeper or more distant sources, the strike zone could be indicative of a potential near surface mineralization in the area

Interpolation of anomalous residual magnetic intensity and vertical magnetic gradient warrant a field geophysical survey to more precisely delineate the zones of anomalies and/or potential drilling targets

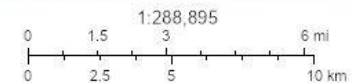
Ontario Vertical Magnetic Gradient



11/21/2023



- Prospect area mining claims



Ontario Geological Survey, 2003. Single Master Gravity and Aeromagnetic Data for Ontario, ASCII, Excel and Access formats. Geophysical Data Set.

Ontario Geological Survey
King's Printer for Ontario

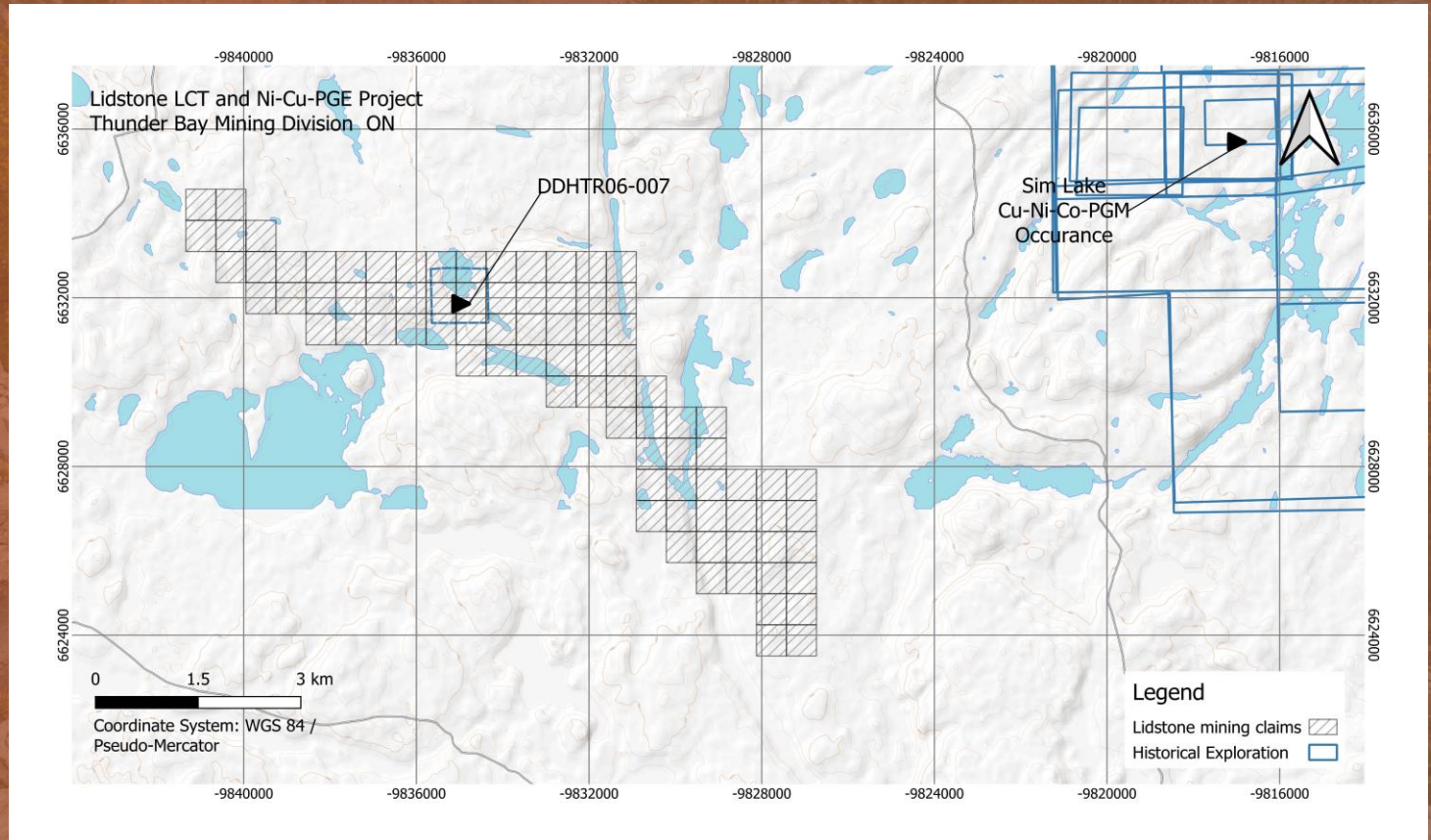
Historical Exploration

The prospect area has very little exploration. However, adjacent to the prospect is a known Ni-Cu-PGE occurrence (Sim Lake property) that saw some exploration between 1960-2006 including geophysics and geochemical surveys and core drilling

Sim Lake property is primarily composed of granitic rocks ranging from granite to granodiorite to quartz diorite in composition, with quartz-feldspar-biotite and/or quartz-feldspar-hornblende gneisses

Superior Canadian Resources Inc. conducted an 8-hole 1,564.8-meter drilling program in the spring of 2006

SouthernEra Diamonds drilled core hole DDHTR06-007 to depth of 200m in 2006 on the northern portion of the prospect claims. Mineralization showed biotite gneiss/amphibolite with minor disseminated pyrite/pyrrhotite/chalcopyrite



Caution: Historical Results – this presentation contains historical exploration results. The Company has not verified historical results, unless stated otherwise, and there is a risk that any future confirmation work and exploration may produce results that substantially differ from the historical results. The Company considers these historical results relevant to assess the mineralization potential of the properties.

Historical Drilling

Assessment file/technical report:

20000002847

DDH-TR06-007 cross section file report

As biotite could be considered as an exploration pathfinder for magmatic Ni-Cu-PGE sulfide deposits associated with mafic igneous units of quartz diorite offset dykes and their host rocks. Noticeable intercepts include:

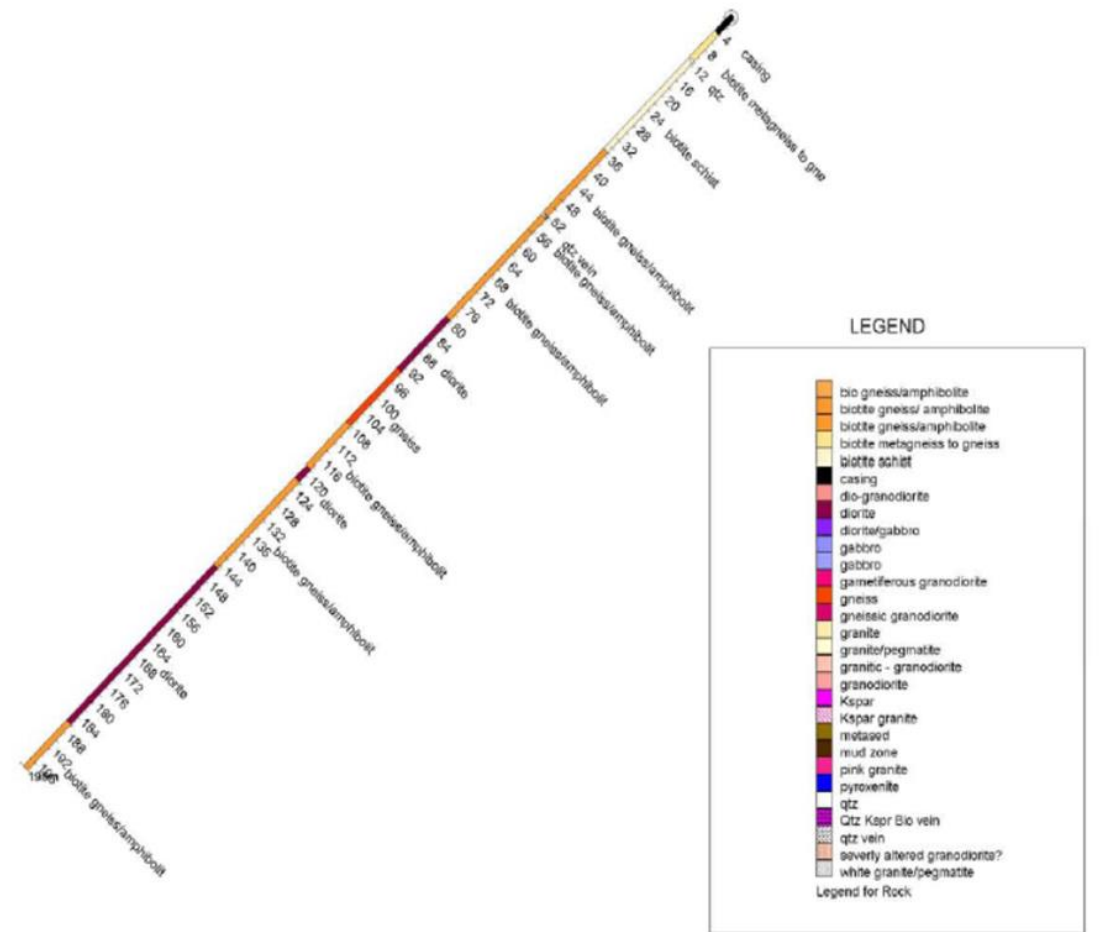
- 36-80m biotite
- 80-92m diorite
- 106-144 biotite incl. 120-124 diorite
- 145-194m diorite
- 201m EOH

(Ref. Ontario Geological Survey)

Caution: Historical Results – this presentation contains historical exploration results. The Company has not verified historical results, unless stated otherwise, and there is a risk that any future confirmation work and exploration may produce results that substantially differ from the historical results. The Company considers these historical results relevant to assess the mineralization and economic potential of the properties.

Appendix 19-5

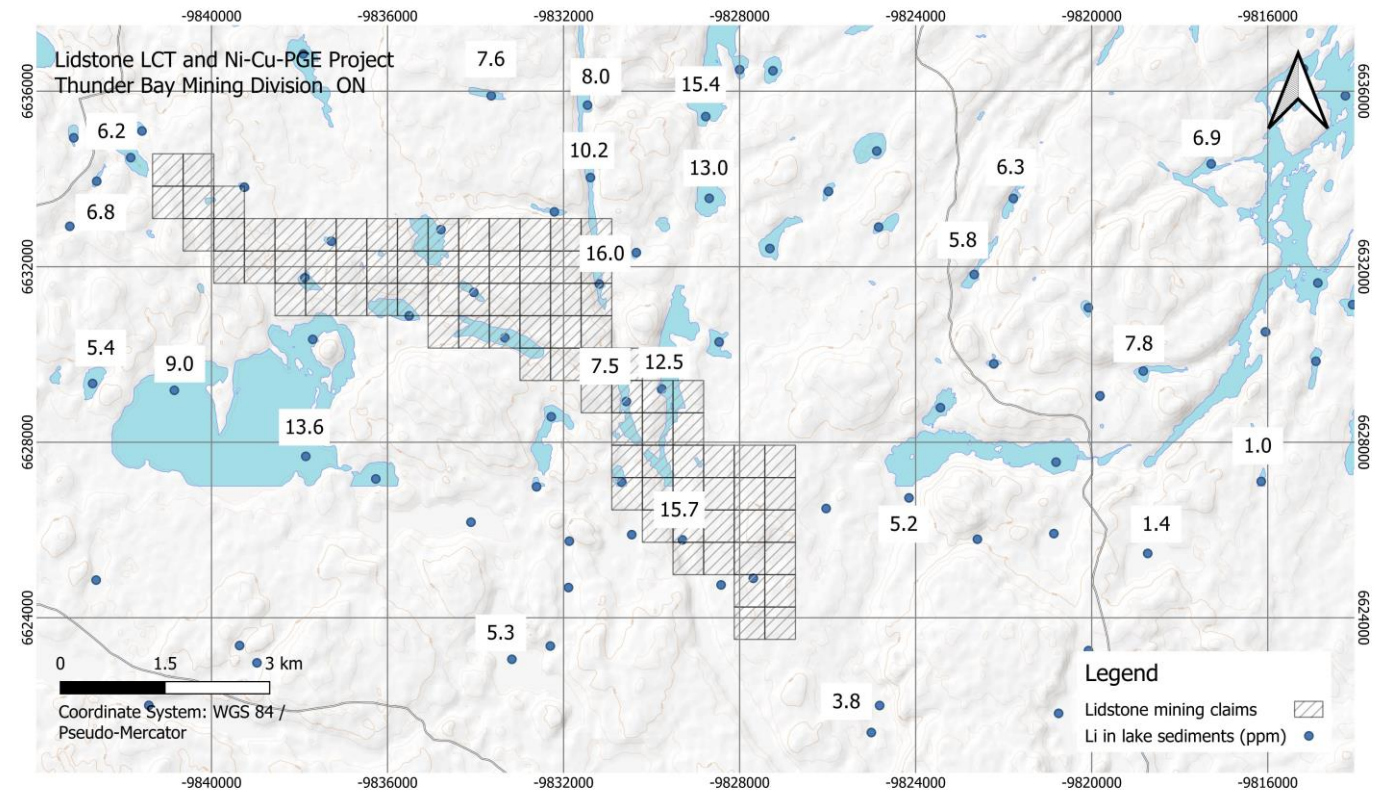
DDH-TR06-007
Target 183



Geochemistry (Li)

The prospect area shows anomalous lake geochemistry clusters with Li grades as high as 16.0 ppm (Source: Company reports; Ontario Geological Survey)

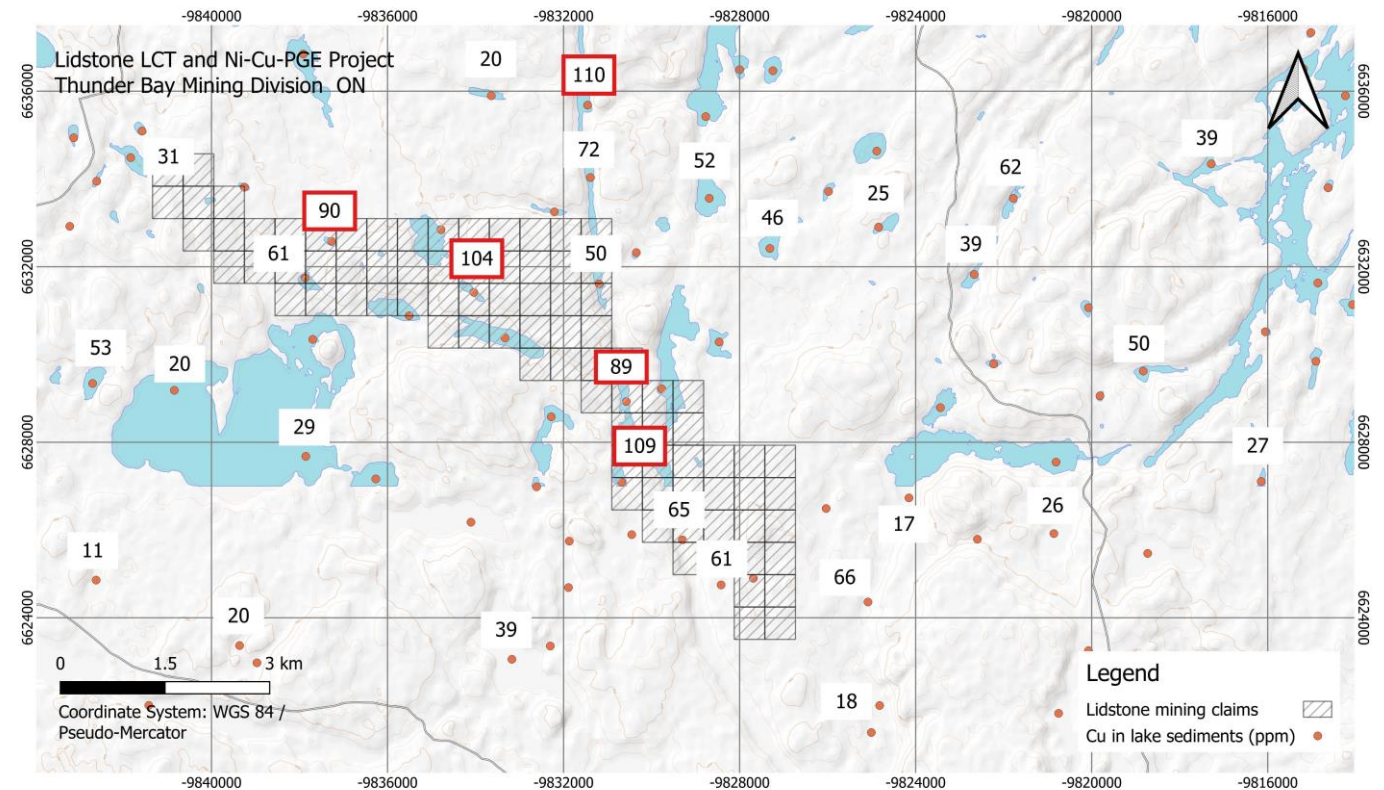
Relevant pathfinder elements Cs and Ta are present in sediment samples and can indicate coincident geochemical anomalies that could hold Li-Cs-Ta (LCT) pegmatite mineralization



Geochemistry (Cu)

The prospect area shows lake geochemistry clusters with Cu grades as high as 109 ppm (Source: Company reports; Ontario Geological Survey)

Concentration of Cu grades anomalies in the central sections of the property could be indicative of geochemical fingerprints that can reflect widespread hydrothermal alteration



Ontario Critical Minerals Projects

Lidstone Project location in relation to the main critical minerals exploration projects in northwestern Ontario





LSL and Lidstone Exploration Program

**Reconnaissance exploration Q2/24 – Q3/24
field season**

- ☐ Geologic mapping
- ☐ Geophysical survey
- ☐ Rock and soil sample geochemical survey
- ☐ Line cutting
- ☐ Drill target definition

Contact us

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