JULY 2024

FRONTIER LITHIUM

NEWS from the Junction

Communicating the facts on the PAK Project

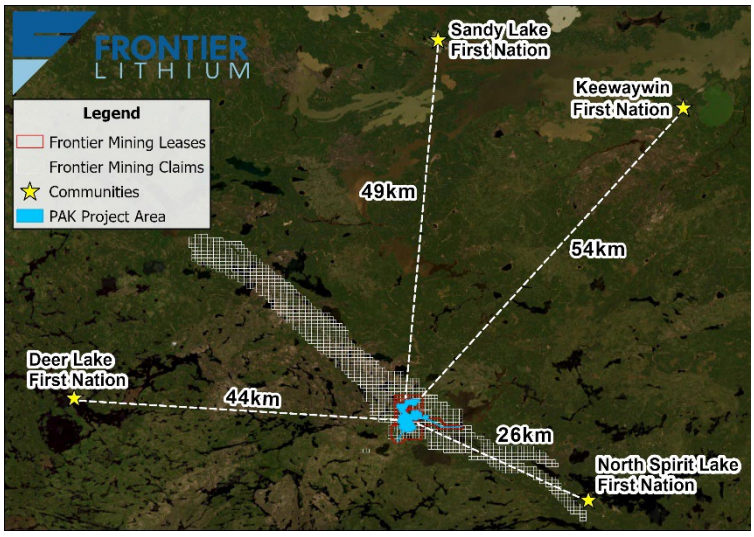
The focus for this issue of *NEWS from the Junction* is about sharing more information to answer questions we have been asked through in-person meetings, Facebook, and our website during the last six months. Frontier Lithium is committed to providing more details to help those who are interested in fully understanding the project.

Communities around the PAK Project have been taking the time to learn more about lithium mining – from speaking to us in community meetings, as well as through the internet. Some are concerned that the project proposes to mine on reserve lands and may also impact the relationship community members have with the land.

Our project is not located on reserve lands, it is located within the shared traditional land use by North Spirit First Nation, Deer Lake First Nation, Keewaywin First Nation and Sandy Lake First Nation. We are also committed to minimizing the impacts of the project on the environment.

A common misunderstanding from people is the deposit type at the PAK Project. Lithium is found in the ground and can be extracted from a brine or hard rock source.

Hard rock deposits (as seen below from the PAK Lithium Project) see the mineral spodumene host the lithium. This mineral is blasted to extract it from hard rock, then milled into a concentrate (crushed into smaller pieces, then separated from the rest of the rock). The lithium concentrate would then be shipped out of the territory for refining. This process is very similar to the way other common minerals in Ontario are mined.



The blue area shown above is the project footprint. Mining will not occur over the entire claim area.

Brine deposits find lithium within a salty liquid that is pumped from the earth and held in large pools until the liquid evaporates leaving the lithium behind. This is the mining that takes place in South America, where most of the world's lithium supply currently comes from. Several images shared online recently have shown this type of lithium mining. This will not occur in Ontario.

As with any type of mining, impacts to the land and water on the project site are to be expected. From the map above, although the area of mining claims and leases held by Frontier is large, the actual area proposed to be disturbed is only a small portion of that land area.

Frontier is designing a project that recycles and cleans impacted water, so that any fresh water taken out of the environment can be reused throughout our process. Any water that discharges to the environment will be treated and cleaned, ensuring that it meets provincial standards.

Significant environmental regulations will govern our project and ensure we are continually testing and monitoring the air, the water and the land during operations and after. This is to ensure that after mining is complete, the land will be returned to productive habitat.

Frontier Lithium visits Sandy Lake to share information and listen to feedback

Representatives from Frontier Lithium, David Ewing, Dave Brown, Garth Drever and Clara Lauziere, visited Sandy Lake on May 29 to share information on the PAK Lithium Project, all-season road, and Knox Lake Camp with the community.

Community members had the chance to listen in to a radio show and ask questions of the Frontier representatives in the morning and attend an in-person Open House at the Youth Centre in the afternoon. This event was well attended with over 60 people participating in person, signalling the importance of mining-related conversations.

The team was able to answer many questions during these events about the project. For example, one community member asked about the additional chemicals that would be used and how they would impact the environment. The team answered that activities on the PAK site would only go as far as milling to create a lithium concentrate that will be further refined outside of the territory. This means the rock taken from the earth gets crushed/processed into smaller pieces so that any material taken to the refinery off site will have a higher amount of lithium, and less waste rock (rock that doesn't contain the lithium).

Frontier representatives also were invited to attend Sandy Lake Treaty Days on June 7 and 8, 2024. Again, community members had many questions, including potential chemicals and carcinogens going into the water and affecting wildlife. Frontier responded that although some contaminants such as diesel will be used, these materials will be stored safely at the site. No chemicals such as mercury or cyanide will be used in our processes. And, as a back-up, emergency plans will be in place to ensure all material is properly captured.

Another question asked at Treaty Days was about the mine's potential effect on groundwater. Frontier responded that groundwater levels are being studied and regularly sampled, along with seasonal fluctuations and flows. Through these studies, a model will be developed to understand how best to design the mine and how to manage runoff and seepage. Any runoff or seepage will be monitored and treated, if necessary, before being reused or released offsite.

The comments and feedback from the Open House and Treaty Days were valuable for Frontier. We learned much from the community and are committed to sharing more information and listening to questions and feedback from the community.

Key things we learned were:

- Community members want **open and honest communication** and want to be informed on all details of the mine.
- **Environmental impact** is a primary concern. We need to explain in detail what those effects will be and how they will be mitigated.
- The **benefits must be real and tangible** to communities and consultation must be aimed at truly understanding the potential impacts and how to offset them.

The team is greatly looking forward to doing this all again in Keewaywin First Nation in the next few weeks!

Frontier's Evan Giles speaking with Sandy Lake First Nation community members at Treaty Days who lined up to talk.

Answering Your Questions

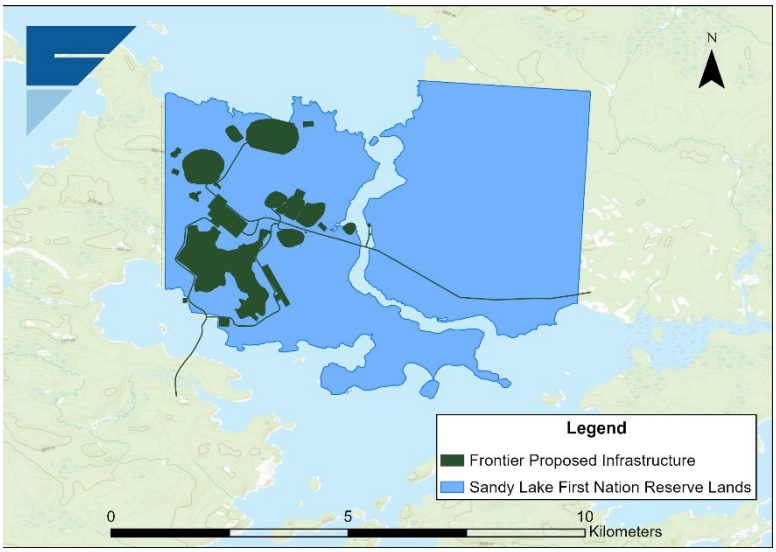
This section of the newsletter is dedicated to answering your questions.

Q1. How big is the footprint of the mine? We've heard it will take up 65 kilometres of land.

A1. While land claims held by Frontier Lithium extend 65 kilometres and cover approximately 27,000 hectares, less than 1,000 hectares of this area will be used for project infrastructure. In comparison, Sandy Lake First Nation Reserve is 4,301 hectares.

The mine will include infrastructure such as the offices, camp, warehouse, maintenance, concentrator plant complex, rock piles, PAK Open Pit, Spark Open Pit, tailings management facility, electrical distribution, effluent treatment, and an airstrip. Sizes of some of the more significant aspects are as follows:

- PAK Open Pit: 17 hectares
- Spark Open Pit: 27 hectares
- Site roads: 6.5 km of service roads, 4.4 km of haulage roads; 7.6 km of restricted service roads
- Waste rock areas: one 50 hectares, the other 54 hectares
- Stockpile areas: one five hectares, the other 8 hectares
- Transmission Line: 3.5 km from main line
- Concentrator plant (mill): 2 hectares
- Airstrip: 1 km long, 50 m wide
- Water Discharge Line: 7 km
- Landfill: 3 hectares



Size comparison of the proposed mine infrastructure to Sandy Lake First Nation Reserve lands.

Q2. What impact will a mine have on the local water system?

A2. We understand the importance of the local water system for Indigenous communities across the territory and have put the highest value on protecting our natural resource. Through our design, the plans are to focus on collecting, recycling and reusing any runoff waters from the project area to use the smallest amount of water from outside the project boundary as possible. Where waters are discharged into the environment, we are required to clean that water to meet the highest standard.

Some water (e.g., streams, lakes) located within the site will be impacted by Project works. In some areas, we may need to alter water flow and/or the direction of flow. This may affect fish and fish habitat and/or the way you use the water within the site (access/travel). Mitigating impacts and disturbance to water will be a primary area of focus for us.

The Fisheries Act requires that any alteration or destruction of fish habitat is addressed through fisheries offsetting. Fisheries offsetting is where the loss of fish and fish habitat is compensated through like for like replacement or improvement to fish habitat elsewhere. Examples of offsetting include creating new fish habitat, enhancing existing fish habitat or fish populations, and restoring damaged fish habitat. This work is something that can be done in partnership with the communities.

Q3. How can Frontier Lithium address our concerns regarding the mine's impact on animals and plants (medicines), deforestation, loss of traditions and culture, and historical traplines?

A3. Frontier has been actively studying the natural environment around the project since 2015. The purpose of these studies is to understand the status of the natural environment including wildlife, plants and water – so that once mining is done, we can restore habitat. We will be supporting communities to complete traditional knowledge studies (TEK) that provide an opportunity for members to identify those specific areas of concern. For example, plants and medicines or historic traplines. Once these are identified, Frontier will work to find ways to mitigate the impacts including through project design.

Answering Questions, cont.

Q4. How can you be sure that the environment will not be harmed without an Impact Assessment?

A4. An Impact Assessment, sometimes called an Environmental Assessment, is only triggered once a project reaches a certain size, which is why the PAK Lithium Project does not require one (it is relatively small).

This does not mean that we are not studying the environment to identify potential impacts – in fact, Frontier is undertaking comprehensive studies for an even deeper look at the project and its impacts to satisfy more detailed requirements associated with receiving permits.

Communities will still gain an understanding of the entirety of the project through Closure Plan discussions under Ontario's *Mining Act*, as well as through ongoing engagement. We believe that understanding the entire project is critical to ensuring we are being environmentally responsible!

Did You Know?

Since the mid-1900s, when environmental disasters as seen at Favorable Lake Mine occurred, the mining industry has focused on environmental protections, and become heavily regulated to ensure this does not happen again.

Now, companies must have an approved Closure Plan in place and provide the money to implement that plan to the government before construction can begin.

This ensures that any impacts made on the site will be rehabilitated to:

- Re-establish access for land users.
- Promote habitat redevelopment for local species diversity.
- Ensure the area is safe for the public and for wildlife.

Key activities that will occur during closure include:

- All project infrastructure will be removed.
- Areas that were disturbed will be rehabilitated and revegetated
- Surface drainage will be re-established.

FRONTIER IN YOUR COMMUNITY

Key people to know!

Jason Murphy, Manager of Mining

Jason has been with Frontier since June of 2018 as the company's Manager of Mining. He is primarily focused on coordinating operations at the PAK Lithium site and the Knox exploration camp and is a key contact for those in the region to know! Jason is a Professional Engineer and when he isn't at work, he enjoys outdoor activities like hunting and fishing.

*This moose was harvested in Biigtigong Nishnaabeg and Robinson-Superior Treaty territory

Evan Giles, Field Geologist

Evan joined Frontier in 2022 as a Field Geologist, working to gain a better understanding of the geology of the PAK Lithium Project. "The best part of my job is getting out into the field to enjoy all the amazing things nature has to offer!" When not in the field, Evan lives and works in Sudbury, where he obtained a geology degree from Laurentian University.