CFI
CANADA FLUORSPAR INC.

COMMUNITY NEWS

CANADA FLUORSPAR AND ST. LAWRENCE

NEWSLETTER
MARCH
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UPDATE ON CONSTRUCTION AT THE ST. LAWRENCE FLUORSPAR PROJECT

The St. Lawrence Fluorspar Project site has seen significant installations and construction advancements in recent weeks.

For milling operations, The Ball Mill has been installed and will be used in operations to help obtain specified particle size by grinding. Floatation cells were also installed, as were the same number of reagent tanks. These two types of equipment will help separate the commercially usable mineral from the unusable portion after extraction. (Please see our article on page 4 of the newsletter where our Metallurgist Melissa Baker explains froth floatation and how the process separates minerals for use)

Further progress has also been made with other key infrastructure projects. “The bypass road is ahead of schedule and the power line work is in the advanced stages,” says Frank Pitman, Construction and Infrastructure Manager for CFI. “We also have started work on the crusher pad and have erected the doors for the mine workshop, which will attach to an inflatable structure for the building itself.”

Offices have also been installed on site in preparation for the relocation of many staff from our offices on Clarke’s Pond Road.

Workers finish construction on the doors for the mine workshop. An inflatable structure from Dynamic Air Shelters will be attached to the doors for the remaining portion of the workshop.

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THE SCENES ON SITE - CFI IN PICTURES

(Left) An aerial view of bypass road construction. (Below) Progress has been made on the town bypass road and power line.

Crews work on the power line to site.

An overhead shot of recent mine progress. The offices can be seen in front of the mill building.

CFI SUPPORTS REGIONAL SCIENCE FAIR

CFI was invited to help judge the Regional Science Fair held at Pearce Junior High in Burin. Held on March 16, the event saw students from around the Burin Peninsula take part and showcase their hard work and amazing ideas.

Melissa Baker, Metallurgist and Justin Haley, Community Relations Coordinator both attended and met with students to learn about their projects.

"We had a wonderful day meeting bright students and were impressed with the level of submissions and the knowledge displayed in the presentations," said Justin. "We are excited to return next year.

CFI also donated $250 to help cover costs of the event.

In between judging, sudents were treated to some time learning about electronics such as drones and 3D printing.

CFI would like to thank Pearce Junior High for including us in the science fair and would like to congratulate them on hosting an excellent event!

CFI TAKES PART IN AY WEEK

CFI recently celebrated AY Week with Allied Youth Post 989 in St. Lawrence. Running from February 19-25, the week saw AY members conduct community involvement activities and participate in educational sessions.

Every year during AY week, students participate in the Fill 'Er Up challenge, where they find a unique item in the community and try to fill it with non-perishable food items donated by citizens of the town. The groceries are then donated to a local food bank.

This year, the St. Lawrence AY members chose a mine cart that was made for our parade float for the St. Lawrence Day Parade in August. CFI was proud to supply the cart and was inspired to get involved with staff contributing two dozen bags of food items for the drive!

The AY Post were also treated to a session provided by Barry Sparkes, Senior Geologist for the company. Barry spoke to AY members about the different careers available in mining, the duties and responsibilities of the Geology Team, and an update on mine progress.

We would like to thank Post 989 for involving us in their community activities and for showing tremendous citizenship for St. Lawrence and the Burin Peninsula!

Senior Geologist Barry Sparkes (top row, far left) conducted a session for St. Lawrence Allied Youth members. The session was one of several events held by AY members as part of AY Week activities.

CFI ATTENDS BURIN PENINSULA CHAMBER OF COMMERCE ANNUAL GENERAL MEETING

Burin Peninsula
CHAMBER OF COMMERCE

The Burin Peninsula Chamber of Commerce promotes prosperity, growth and business excellence in the region.

In February, The Burin Peninsula Chamber of Commerce (BPCC) held its AGM at the Marystown Hotel. Attending members and guests were treated to a wonderful meal and had the opportunity to hear about business outlook on the peninsula.

"CFI is proud to be doing business on the Burin Peninsula and we look froward to many years of success in the region," says Heather Clarke, Executive Assistant for CFI, who was one of two employees to attend. "We consistently look for opportunities to partner with local businesses, and our dedication to the local economy is evident in our hiring and procurement practices. Events like these held by the BPCC give us a chance to see the great work being done by people in many areas of business in the region"

At the event, Heather was sworn in as a member of the Board of Directors for the Chamber.

Mining was a focus of the event, as the guest speaker was Victor French, President, Director and COO of Puddle Pond Resources. Attendees were told of the recent developments and progress of the company.

We look forward to taking part in more BPCC initiatives in the future.

FROTH FLOTATION - AN EXPLANATION OF THE MINERAL SEPARATION PROCESS BY CFI METALLURGIST MELISSA BAKER

Froth flotation is the process by which minerals are separated based on their attraction to water, in order to upgrade the mined ore into a saleable product. To achieve efficient separation, the ore must first be ground in a ball mill to achieve a particle size suitable to the flotation process.

The discharge product from the ball mill - small particles suspended in water - is now termed "slurry". This slurry is sent through a series of cyclones that classify the particles by size, ensuring that only material of the correct size for flotation is sent to the flotation circuit.

Froth flotation works by adding substances – known as reagents - to the slurry to react with the minerals in order to chemically alter their surfaces.

The reaction alters the surface tension of different minerals in different ways, which means that by adding different reagents, some minerals will become water-loving (Hydrophyllic) and others will become water-repelling (Hydrophobic).

Most minerals are naturally water-loving, which means that the most efficient separation will typically occur by making the valuable mineral water-repelling. Once the appropriate reagents have been added, the slurry enters the flotation cells where the separation takes place. Agitators in the cells keep the slurry suspended while air is forced into the bottom of the cells.

As the bubbles rise to the surface, the now water-repelling minerals will attach to the bubbles and rise with them. This results in a froth on the surface of the flotation cell that can be scraped off and collected.

This froth is the "concentrate", as the process results in the water-loving material being left in the cell (known as "gangue" which is eventually removed as tailings), and the froth therefore contains a higher concentration of the valuable mineral. This process is repeated several times in order to reject as much gangue as possible, thus achieving a concentrate of purity sufficient for sale.

Clockwise from top left: Ball Mill installation is ongoing. The Ball Mill grinds the ore to produce a particle size suitable for flotation.

Cyclones ensure that particles of the right size get sent to the flotation cell banks.

The mill will have 11 Flotation Cell Banks. This is where the mineral will be separated from "gangue", which is the mixture of unwanted minerals and water removed from the froth flotation process.

A reagent tank holds and delivers different substances which help in the separation of the saleable mineral from the remaining materials. The reagents help to make the fluorspar repellent to water so it is easily removed by way of bubbles on top of the water in the flotation cell bank.