

### VOYAGEUR MINERALS LTD.

(TSXV: VM)

Price: March 9 \$0.08  
52-Week Range: \$0.15-\$0.035

Shares O/S: 45.00 million  
Market Cap: \$3.60 million

Average Share Volume  
50-day: 22,520  
200-day: 8,570

Year-End: November 30

Symbol: TSX-V: VM

Website:  
[www.voyageurminerals.ca](http://www.voyageurminerals.ca)

eResearch Analyst (on this report):  
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### 2017 DRILL PROGRAM AT FRANCES CREEK

Voyageur Minerals Ltd. (“Voyageur Minerals” or the “Company”) had a highly successful 2017 drill program on its Frances Creek barite property. The Company completed 25 drill-holes totaling 1230.8 metres, from which 110 samples were tested.

The main focus in 2017 was the “B Zone” because of its high-grade barite that outcrops at surface. A total of 19 drill-holes over 130 metres proved an average width of 17.5 metres with an average grade of 38.7% barium sulfate ( $\text{BaSO}_4$ ) that contains a specific gravity of 4.5. The pure barite samples within the cores showed very high grades, in the 96.5%-99.7% range.

These encouraging results prompted the Company to decide to update its December 2016 NI 43-101 Technical Report, which should be ready in Q2, to include a Mineral Resource Estimate. They also spurred the Company to embark on an aggressive 2018 drilling and geophysical work program.

### INITIAL REPORT

eResearch published its Initial Report on Voyageur Minerals Ltd. on June 12, 2017. A link to that detailed report is provided [HERE](#).

## **THE COMPANY**

Voyageur Minerals was created through a reverse take-over transaction in March 2017. The Company is a junior mining exploration company with its focus centered on advancing its three barite projects in British Columbia and its two lithium brine projects in Utah.

The barite projects include:

- (1) Frances Creek Prospect;
- (2) Jubilee Mountain Prospect; and
- (3) Pedley Mountain Prospect.

The lithium projects include:

- (1) Roberts' Rupture Project; and
- (2) Lithium King Project

## **INVESTMENT CONSIDERATIONS**

### **A. Strengths**

- The Company has a 100% interest in three barite properties in British Columbia and varied interests in two lithium brine properties in Utah.
- British Columbia and Utah are both mining-friendly jurisdictions.
- The Company is currently focused on bringing its Frances Creek barite property into production.
- At the present time, there are no producing industrial high-grade barite mines in Canada, and only one small industrial low-grade barite producer in the United States.
- The barite mineralization at Frances Creek is high density and low in contaminants. Being almost pure barite, it is industrial grade. Industrial-grade barite has a 400,000 tonnes per year market in the USA and commands a significantly higher price than drilling-grade (oil patch) barite. The Company is talking to high-grade industrial consumer companies that could possibly provide production financing.
- The Frances Creek Prospect is still in the development stage, but an existing NI 43-101-compliant Technical Report on Frances Creek is being updated to include a Mineral Resource Estimate.

### **B. Challenges**

- The Company's market cap is less than \$3,000,000, with only 45 million shares outstanding and, therefore, not suitable for institutional ownership; fairly illiquid share trading (average 8,500 per day over the last 50 days, and 22,500 over the last 200 days).
- The Company continually needs financing, and equity financing is often difficult when shares sell for less than \$0.10 each. Financing is required to continue developing the barite properties and to drill the lithium properties.
- The Company needs to firm up its deposit information at Frances Creek and publish a Mineral Resource Estimate (this is underway).
- In the course of developing a mining property, a company is required to submit applications for permits at each important stage of the development process. For instance, once a mineable resource is identified, a company applies for a bulk sample permit; after positive testing of the bulk sample, the company then applies for the mine production permit and usually conducts a feasibility study. Since the Frances Creek project has no toxic metals or leaching issues, a small foot-print, limited waste rock, no fine tailings ponds, and low water usage, the Company should be able to move quickly through the mine production permitting stage, but all of this various permit application process still takes time.
- The Company is seeking industrial companies, such as pharmaceutical and paint companies, with which to enter into off-take agreement for its barite production.

## THREE BARITE PROSPECTS

The three barite prospects comprise non-contiguous groups of mining claims, all located within a 50 km radius of Radium Hot Springs, B.C. The combined area totals approximately 1,895 hectares.

### Map 1: Location of Frances Creek, Jubilee Mountain, and Pedley Mountain Prospects



Source: Technical Report, Henkle & Associates

### NI 43-101 Technical Report

A National Instrument 43-101-compliant Technical Report was published on the three barite prospects in December 2016. A link to that report is (CTRL-CLICK) [HERE](#). The Company is now in the process of updating this Technical Report to include a Mineral Resource Estimate.

### Barite Uses

The primary uses for barite include the following:

- (1) Industrial-grade barite. Prices for bulk pharma-grade barite range from US\$500-US\$8,000 per tonne FOB China. With its very high-grade barite, the Company is focused on the higher-priced markets. At the present time, there are no producing high-grade industrial barite mines in Canada, and just one small industrial barite producer in the USA.
- (2) Drilling-grade barite. This lower-priced barite is used in the oil-field industry, and ranges in price from US\$400-US\$500 per tonne FOB Alberta. Most barite in the USA is used as a weighting agent in drilling fluids in the oil-drilling industry.

## **FRANCES CREEK PROSPECT**

### **Primary Corporate Goal: Bring Frances Creek into Production**

Voyageur Minerals is strategically focused on bringing its Frances Creek, BC barite property into production as soon as possible. At the present time, management is hopeful of achieving this in Q1/2019.

For Voyageur Minerals to put this property into production, the Company will require additional capital of between \$3,000,000 and \$12,000,000, depending upon the specific industrial market it decides to focus on. The higher amount will be required once the Company makes the decision to build a mill on site. Initially, the Company will custom mill the product for the market.

Another key consideration is the price of barite. The Company will not commence the production stage unless the associated economics make sense.

After further drilling success and a positive bulk sample, the Company initially expects to produce between 12,000 and 36,000 tonnes of barite per year and, ultimately, when all three deposits are contributing, up to 240,000 tonnes per year.

### **Attractions of the Frances Creek Prospect**

- The Frances Creek property has good road access and nearby rail accessibility and, for mine development, is located close to a reasonable supply of semi-skilled labour and associated resources (power lines, nearby towns for goods and services).
- Mining production would be primarily by open pit, which is considerably less expensive than underground.
- Its strategic location and low production costs will make Frances Creek globally cost-competitive.
- World-wide barite supply constraints, almost exclusive reliance on foreign imports, and an increasing barite demand for energy and industrial uses offer excellent opportunities for barite producers.
- Barite to be produced from Frances Creek is expected to meet both industrial-grade and chemical-grade specifications.
- The Company's high-grade barite sulfate ( $\text{BaSO}_4$ ) is 96.53% - 99.68% pure within the core, which will allow it to target the higher-priced industrial-grade market.
- The Company's high-grade barite stands at 4.3 – 4.5 s.g. (specific gravity). The minimum required s.g. for oilfield drilling-grade barite is 4.1 s.g.
- If the Company were to enter into an off-take agreement with a pharmaceutical company, start-up operations would not only require low capex but also full production could be implemented quickly, which would generate positive cash flow.

### **Objectives for Frances Creek Prospect**

- (1) Obtain financing regularly to bring the Frances Creek Prospect forward.  
<and/or>
- (2) Secure a joint-venture partner, which could be either a mining operator, or a mining financier.  
<and/or>
- (3) Engage a pharmaceutical or paint company to enter into an off-take agreement for future barite production.
- (3) Drill more holes; continue expanding known reserves; and search for deeper targets along the vertical trend.
- (4) Update the existing NI 43-101 Technical Report to include a Mineral Reserve Estimate.

- (5) Apply for the appropriate permits.
- (6) Continue working with Innovation Metals Corp. to advance barite technology.

**COMMENT:** *Innovation Metals is a private company that is developing cost-effective processing solutions for many of the high tech-focused metals, including barium. The company's goal is to provide low-cost separation and purification processes to the critical-metals industry.*

- (7) Submit an application for a 10,000 tonne bulk sample and, if the new technology is proven successful, then construct a pilot plant to process the bulk sample.
- (8) Continue exploration to find zones along the thrust fault and to depth.
- (9) Continue geophysical work to outline anomalies at depth along the fault zone and also to outline cross-faulting along trend, which is where the largest barite zones have been found.

## **THE OTHER TWO BARITE PROSPECTS**

Giving priority to the Frances Creek Prospect is Voyageur Minerals' primary objective. Meaningful activity at the Jubilee Mountain Prospect and the Pedley Mountain Prospect will come later.

## **TWO LITHIUM PROJECTS**

Voyageur Minerals has two lithium brine properties in Utah. For one property, a JV Partner is paying for and bringing it to the pre-feasibility stage for a 70% interest. The other property is drill-ready, with flowing surface brine.

### **1. Roberts' Rupture Project (the "RR Project")**

The Company has a 90% ownership interest in a 1,780-acre lithium brine project in the Paradox Basin area of Utah known as the Roberts' Rupture Project. This project consists of 89 mineral claims covering 720.3 hectares.

The Company has a joint venture agreement with Anson Resources Ltd. ("Anson Resources"), which owns the remaining 10% interest, and which will bring the project to the post-feasibility stage.

Anson Resources is a Western Australia based mining exploration company whose primary goal is to discover and develop precious metal deposits. Amongst other endeavours, Anson Resources has an interest in the Bonnie Claire Lithium Brine Project in Nevada, USA.

Anson Resources has agreed to fund the entire Roberts' Rupture project to the post-drilling phase and, as such, will earn a 70% interest. Upon earning the 70% interest, Anson Resources has the option to purchase the remaining 30% of the RR Project which, if exercised, will see Voyageur Minerals retain a 3% gross over-riding royalty.

Historical flow rates to surface have approached 50,000 barrels per day with 1,700 ppm lithium.

**COMMENT:** *High flow rates to surface and new advancements in lithium extraction technology should allow for high production with fewer wells.*

The RR Project is located only about 11 hours' drive from the Tesla Giga Factory and is accessible year-round by major sealed roads and rail.

**COMMENT:** *Anson Resources is now conducting an aggressive exploration schedule and intends to fast track the progression of the Roberts' Rupture Project. Anson Resources refers to it as its ULI Project.*

## **2. Lithium King Project (the “LK Project”)**

Voyageur Minerals has a 100% interest in the Lithium King property, comprising some 1,920 acres (776 hectares), that is located near the Bonneville Salt Flats in Utah.

Surface tests in the vicinity exhibited free-flowing brine, and indicated a maximum value of 1,200ppm lithium and an average of 215ppm lithium.

Historic lithium brine analysis comes from shallow wells in the area, with most of the wells measuring about five meters in depth. The LK Project exhibits lithium brine at surface and aquifers at depth. There are indications that the deeper brines are fault-controlled, self-enriching geothermal-flowing brines.

Two prospective oil wells that were drilled in the early 1960s did not find oil, but they did show a large salt water aquifer contained within a conglomerate formation that has high porosity. Since lithium is being carried to the surface from lower depths, the Company believes that higher grades may be found in these deeper aquifers. Thus, the Company intends to drill 600m to 900m wells into the lower high porosity aquifers.

Voyageur Minerals’ U.S. subsidiary, Voyageur Inc., is currently evaluating several other high grade lithium prospects in Utah.

## **2018 LITHIUM OBJECTIVES**

Voyageur Minerals has the following objectives for its lithium operations in 2018:

- Complete the processing evaluation
- Set up a pilot plant to process lithium brine at Lithium King
- Complete a feasibility study to fulfill the objective of reaching full production in 2019

## **CORPORATE INFORMATION**

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## ANALYST ACCREDITATION

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**Analyst Affirmation:** I, Bob Weir, hereby state that, at the time of issuance of this research report, I do not own shares of Voyageur Minerals Ltd.

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