

High-Grade Barium Project Creates High-Value Opportunity for Voyager Pharmaceuticals

Voyageur Pharmaceuticals Ltd. (TSXV: VM) (Voyageur) is a Canadian-based company that is focused on developing barium and iodine radio-contrast pharmaceutical suspension products for the X-ray/medical scan industry.

Currently, China has the only natural, pharmaceutical-grade barite project and only exports a fraction of the current world demand. The rest of the supply is made up of higher-cost chemically-manufactured, synthetic barium precipitate.

Voyageur is unique in that it plans to capture value from a source-to-finished product. The Company owns a 100% interest in three barium sulfate (barite) projects in British Columbia, Canada, including two properties suitable in grade and purity for the pharmaceutical barite market.

Currently, the Company is focusing on the high-grade Frances Creek project as preliminary work with SGS Canada (SGS) resulted in a gravity-separated, high-grade concentrate of 98.6% barium sulfate.

In a barium contrast suspension product, barium sulfate comprises almost 98% of the cost of the ingredients. With the Frances Creek deposit, Voyageur believes that it will have the lowest ingredient costs for barium contrast in North America and can sell any excess production into the barite market for additional cash flow.

Starting with Health Canada then Shifting to the U.S.

In late 2019, Voyageur submitted applications for product registrations to Health Canada in order to begin sales in Canada. A total of five barium sulfate suspension products were registered with Health Canada.

- SmoothX_{Ba}: A barium sulfate oral suspension used in computed tomography scans (CT) of the abdomen to view the gastrointestinal tract in adult and pediatric patients.
- HDX_{Ba}: A high-density dry barium powder that is engineered to be mixed with water to create a barium sulfate suspension for radiographic oral consumption. HDX is used during X-ray procedures to view the upper gastrointestinal tract.
- MultiXthin: A specially formulated, low density, pre-mixed barium suspension product that will be sold in a 2-liter container, similar in use and composition to the dry-powder MultiX
- MultiXthick: A specially formulated, high density, pre-mixed barium suspension product that will be sold in a 2-liter container, similar in use and composition to the dry-powder HDX.
- MultiX_{Ba}: MultiX is similar in use and composition to HDX but the barite has been ground to 1-micron size.

Unfortunately, events pertaining to COVID-19 impacted Voyageur's plans as Health Canada focused on approving products related to the pandemic. However, earlier this year, Health Canada approved and issued the product licenses for SmoothX, HDX, and MultiX. The Company is waiting for approvals for MultiXthin and MultiXthick but expects to receive them shortly.

Ramping Up Production and Marketing

In November 2020, Voyageur announced signing an agreement with Alberta Veterinarian Laboratories (AVL) for the manufacturing of barium radiographic contrast media.

AVL is a Calgary-based contract pharmaceutical manufacturing company and manufactures both human and veterinarian pharmaceuticals products.

It operates a Health Canada-approved medical testing laboratory and a Good Manufacturing Practices (GMP) pharmaceutical manufacturing facility.

As Voyageur progresses through sourcing the barite from its Frances Creek project, it acquired USP (US Pharmacopeia) barium sulfate from third-party sources for the initial product formulation and near-term sales.

AVL and Voyageur are currently working on the formulation testing for the initial barium contrast product using the procured barite.

A recent decision in the U.S. that upheld a prior ruling concluding radiographic contrast agent barium sulfate qualifies as a device rather than a drug could result in reduced cost and faster approvals for Voyageur barium products with the U.S Food & Drug Administration (FDA).

Earlier this month, Voyageur signed a marketing and product development agreement with Dash Consulting since the products are nearing roll-out in Canada and the Company is seeking U.S. FDA approval.

Dash is a consulting firm focused on the barium and iodine radiographic contrast media market and it has already begun working on preparing for the product applications globally, including in the U.S., U.K., South America, and Southeast Asian markets.

From PEA/Pre-Feasibility and Bulk Sample this Year to Mining in 2022

Voyageur is working with SGS to complete a Preliminary Economic Assessment (PEA) and Pre-Feasibility (PF) study that

it expects to complete by mid-year. As part of this process, Voyageur filed an updated NI 43-101 Technical Report on the Frances Creek project in November 2020.

Previous results from the ore testing in December 2019 indicated that the barite could be separated from the ore using gravity, eliminating the need for the use of water and a tailings pond, and resulted in high-concentrate grades of 98.6% barium sulfate.

Voyageur plans to mine a 10,000-tonne bulk sample within the next 12-months and process it through a smaller, pilot plant. The barium sulfate produced from the bulk sample could generate cash flow from product sales into the pharmaceutical market.

If the project economics are robust and meet the economic threshold to move forward, the application for the quarry permit for full production would be submitted.

To further upgrade the barite concentrate and to add value, Voyageur plans to build a 25,000 tonne-per-year plant that could sustain pharmaceutical production requirements for the next 40 years, this plant is targeting 2022 for completion.

Final Thoughts

Currently, Voyager is raising \$1.73 million as it completes a PEA and Pre-feasibility, and ramps up sales and marketing, including product roll-out and testing, and U.S. FDA and International registrations.

Earlier this month, Voyager's stock increased sharply after it received approval from Health Canada for one of its products. With a series of milestones planned for this year, expect investors' optimism will continue to move the share price higher as the opportunity comes closer to production.

Voyageur closed yesterday at \$0.16 with a Market Cap of \$14.3

million.