

Advancing Investment Opportunities in Gypsum Value-Added Businesses in Nova Scotia

J. P. Whiteway

Introduction

In 2014, the Minerals Development and Policy Section of the Geoscience and Mines Branch of the Nova Scotia Department of Natural Resources, working in co-operation with Nova Scotia Business Inc. (NSBI), encouraged gypsum value-added businesses by designing and executing a small-scale marketing exercise. The objective was to inform an audience of global decision-makers of the opportunities to invest in gypsum value-added businesses in Nova Scotia. The goal was to measure (gauge) the interest of decision-makers and to help determine what actions government could undertake next to fully realize the potential for the value-added business opportunities to create jobs in Nova Scotia.

This paper describes a highly targeted marketing exercise that resulted in quality contacts between five companies in Europe and South America and the two existing gypsum producers in Nova Scotia. These contacts could lead to additional exports of natural gypsum from Nova Scotia. Over the longer term, these companies could also eventually consider setting up shop in Nova Scotia to manufacture their products.

As recently as 2005 gypsum was the most valuable mineral produced in Nova Scotia. Production peaked at 8.6 million tonnes from six large quarries, making Nova Scotia the leading producer of gypsum in Canada (Whiteway, 2012). Most of that production was exported to the United States for the manufacture of gypsum wallboard.

As demand for new housing starts in the U.S. peaked at about 1.5 million units in 2008, synthetic gypsum (from coal-fired electric generating plants) began to take significant market share from natural

gypsum. Then in 2008-2009 came the Great Recession, a global economic crisis that caused new housing starts in the U.S. to plummet to less than 0.5 million units in 2009 (Satterthwaite, 2013). Demand for gypsum, both synthetic and natural, plummeted as a result. At about the same time, domestic U.S. natural gas production from ‘tight’ shale units in the western states increased dramatically. As a result, coal-fired electric generating plants begin to switch to lower cost, less polluting natural gas, therefore reducing the availability of synthetic gypsum.

These macro-economic trends negatively impacted Nova Scotia’s gypsum producers. Three large quarries were placed on care-and-maintenance as a result of the fall in demand, and the two remaining large quarries operated below capacity and began to seek additional customers (Fig. 1).

The role that the Nova Scotia government could play in advancing the industry was examined in a 2012 strategy session (Whiteway, 2012). At that session, it became apparent that the province’s gypsum producers were dependent on one end-use application for gypsum: wallboard. Four alternate uses (agricultural, architectural, absorbent and geotechnical) that could add value to Nova Scotia’s gypsum resources were identified in the strategy session. The essential elements key to the success of these businesses and the barriers to their success were analyzed in 2013 (Whiteway, 2013). In addition, a ‘Gypsum Centre of Excellence’ idea was put forward by an international gypsum consultant who is based in Nova Scotia (Ward, 2012).

To advance these ideas, there is a need to inform existing businesses that use gypsum of the advantages of sourcing natural gypsum from Nova Scotia. These advantages include highly consistent

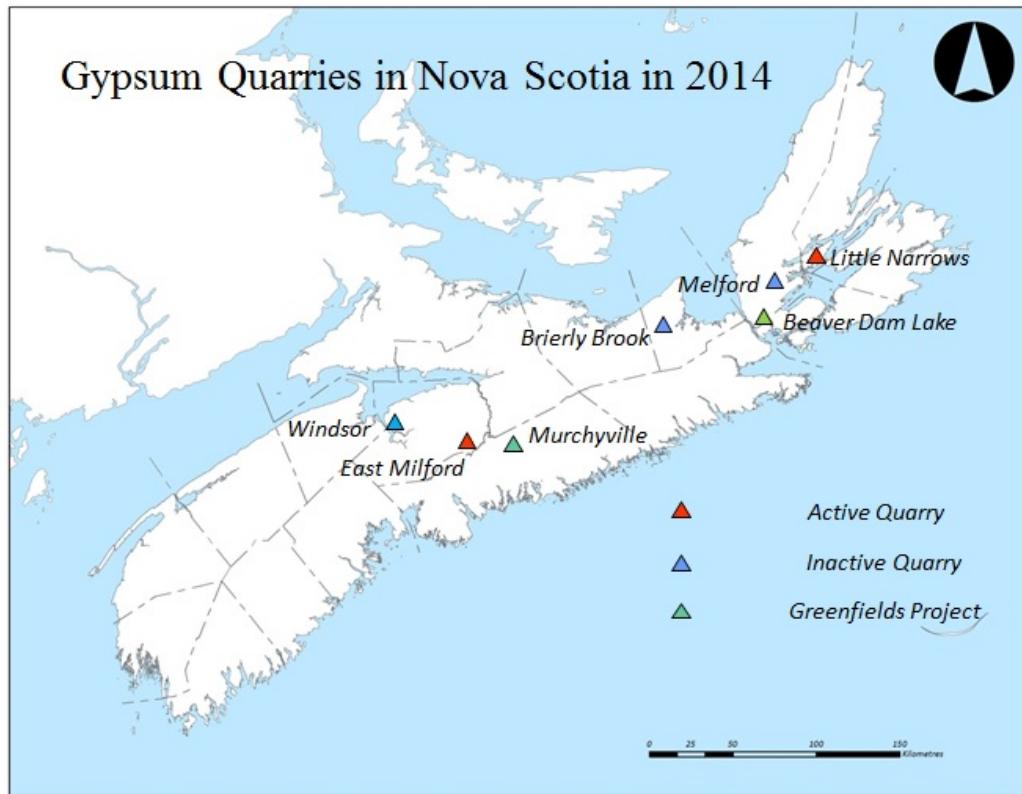


Figure 1. Location of active and inactive gypsum quarries and greenfields gypsum quarry exploration and development projects in Nova Scotia in 2014.

gypsum quality (Flumiani, 2014), large gypsum resources throughout the province, a stable mineral tenure system and access to ocean shipping.

Goals and Objectives

The objectives of the 2014 initiative were to generate an awareness of Nova Scotia's gypsum resources, place senior executives into contact with the producers of gypsum in Nova Scotia so that they could negotiate potential supply contracts, and get the attention of gypsum consultants who can point gypsum end-users (other than wallboard) to the opportunities of setting up a business in Nova Scotia.

Method

Identification of Target Audience

The global gypsum industry consists mainly of a small number of very large, international wallboard and cement manufacturing companies. These

companies are distributed around the world in close proximity to urban centres where demand for wallboard and cement is high and where gypsum is easily sourced. However, the global gypsum industry also includes many small- to medium-sized businesses that use gypsum for applications such as agricultural additives, architectural products (plasters, floor screeds, etc.), absorbent products and ground control products (Global Industry Analysts Inc., 2012). All of these companies send senior managers to an annual conference and tradeshow organized by Pro Global Media Ltd., a U.K.-based company.

This annual conference, called the Global Gypsum Conference and Tradeshow, attracts a group of about 300 senior managers of gypsum businesses in 120 countries (McCaffrey, 2014). The author attended the 2013 conference in Toronto in order to get a feel for the type of presentations given and whether the attendees constituted an audience Nova Scotia wanted to target (Whiteway, 2013). The conference organizer, Dr. Robert McCaffrey, who

has many years of experience in the gypsum industry, was receptive to the idea of a presentation on gypsum in Nova Scotia to his conference audience in 2014.

This audience of decision-makers could therefore be targeted with a simple but comprehensive presentation. For maximum impact, the presentation was linked with a trade-show booth where interested parties could meet face-to-face with provincial representatives, obtain more detailed information and explore a path toward sourcing gypsum from Nova Scotia.

Funding for the presenter to travel to the 2014 conference in Berlin, Germany, was provided from the budget of Mineral Development and Policy, and funding for the booth in the Trade Show portion of the conference was provided by Nova Scotia Business Inc. (NSBI). Two representatives of NSBI attended the conference to staff the booth.

How the Message was Delivered to the Audience

A 20-minute slide presentation was made at the Global Gypsum Conference to clearly invite interested parties in the audience to visit a Nova Scotia-branded trade-show booth for additional, detailed information, which included technical details on our deposits and operations and contact information for quarry operators.

A concise summary of the geology, mining and shipping of gypsum from Nova Scotia was compiled. This information was packaged into a technical paper and into a slide presentation (Whiteway 2014) and speaker's notes. Three key messages were developed to attract interest:

- There are two large (more than 1 million tonne per year) gypsum quarries operating in Nova Scotia at present, each with its own dedicated ship-loading facility capable of loading ships up to 35 000 tonnes;
- There are two large gypsum quarries in Nova Scotia that are presently on care-and-maintenance that could be re-started on relatively short notice should prices and demand justify; and

- There are numerous opportunities and competitive advantages for companies that add value to gypsum to set up shop in Nova Scotia.

In addition, a gypsum landing page was created on the Department of Natural Resources website. This page provides links to all of the gypsum-related information available on the site.

The trade-show booth featured a map of all gypsum showings in the province (Adams, 1991), and high-quality aerial photos of the operating gypsum quarries and those on care-and-maintenance were presented on a TV monitor. These photos clearly showed the ship-loading facilities associated with each quarry.

Memory sticks containing all of the geological information for the gypsum showings in the province, gypsum mining tax laws and the contact information for key players in the industry were prepared and 100 copies made to hand out to people who visited the booth.

Results

The 20-minute presentation was made to the conference audience after lunch on the second day of the conference (Whiteway 2014). Several listeners visited the trade-show booth immediately after the presentation to gather additional information and to ask questions.

All 100 memory sticks containing detailed information were handed out from the trade booth and there were nine unique visits to the gypsum landing page on the Department of Natural Resources website (<http://novascotia.ca/natr/meb/mineral-resources/reports/dnr-reports-gypsum.asp>).

NSBI collected business cards and followed up with contacts about two weeks after the conference to introduce contacts to quarry operators in the province and to offer to send gypsum samples to them for analysis. NSBI has advised that six high-quality contacts were made (Dooks, pers. comm., 2014). Some expressed an interest in receiving samples to determine if gypsum quality matched their specific needs, and others expressed an interest in coming to Nova Scotia to visit the

quarries and ship-loading facilities. One of the major business concerns expressed is to ensure that quarries can deliver the desired quantities of gypsum at a consistent quality over an extended period of time.

In addition, the author made contact with three international gypsum consultants who expressed interest in providing information on value-added opportunities beyond those already identified.

A spin-off benefit of attending the conference is the opportunity to collect information about trends and advances in the gypsum industry. In Europe, for example, there has been a major turnaround of energy production. Renewable resources (wind, photovoltaics, hydro and biomass) are projected to represent an increasing share of the electric-generating capacity (up to 56% by 2030) (Alwast, 2014); therefore, the availability of synthetic gypsum from coal-fired electric generating plants in Germany is expected to decline by 40% from 2012 to 2030. Concerned about the reduced availability of synthetic gypsum, manufacturers are therefore looking at the economics of shipping natural gypsum from sources such as Nova Scotia to Germany.

One large European wallboard-manufacturing company, Knauf, has delineated and bulk-sampled a large gypsum resource at Murchyville in Halifax County. That project has been fully permitted and could potentially be developed into an operating quarry within a relatively short period of time.

Discussion

Specifically targeting key decision-makers with messages that align with their strategic imperatives is a direct and cost-effective way to advance the business of gypsum quarrying in Nova Scotia. Doing some basic market research and working co-operatively with other government departments that have the same goals of advancing economic development can achieve significant results.

Since the Global Gypsum Conference and Trade Show is an international gathering, language could have been a serious challenge. However, even though the conference was held in Germany and

attendees were from 120 different countries, language proved not to be a problem as nearly all attendees understood and could communicate in English.

Even though this conference moves each year from Europe, Asia and the Americas it is worth considering it as a means of communicating key promotional messages about mineral development and mineral value-added opportunities in Nova Scotia.

Conclusion

One of the strategic goals of the Geoscience and Mines Branch is to “support the sustainable development of the province’s geological resources in order to attract investment, create high-value jobs, and grow the economy” (Nova Scotia Department of Natural Resources, 2012). One of the actions that the Branch is undertaking to achieve this goal is to identify and promote innovative uses and secondary processing of Nova Scotia’s mineral resources. The marketing exercise described here is aligned with this strategic goal.

Decision-makers within companies that use natural gypsum need up-to-date, quality information in order to decide where to source their raw materials. Large, international companies that operate quarries in many jurisdictions, including Nova Scotia, do not necessarily seek customers specifically for their Nova Scotia quarries even though there is demand for natural gypsum in geographically dispersed areas and diverse markets. In addition, there is very little information in the public domain about the current operating situation of Nova Scotia’s two active gypsum quarries. Therefore, there is a need to meet face-to-face with gypsum end-users and to inform them of the geological and engineering details of operating gypsum quarries in Nova Scotia today. By answering their questions and supplying them with the contact information of the managers of the operating facilities, business relationships can be advanced.

This paper described an inexpensive, highly targeted marketing exercise that resulted in quality contacts between five companies in Europe and South America and two gypsum producers in Nova



Figure 2. Gypsum value-added proposition: How the unique engineering properties of gypsum adds value to end-use products, or in this example, how the value of gypsum products increases as the level of calcining increases.

Scotia. These contacts could lead to additional exports of natural gypsum from Nova Scotia. In the longer term, those companies could also eventually consider setting up shop in Nova Scotia to manufacture their products.

Recommendations

As a result of this work, it is recommended that the next steps in the strategy to advance the responsible development and use of gypsum in Nova Scotia be to

- commission a consultant's report on non-wallboard end-use applications that could form the basis of small to medium-sized businesses to supply local markets and export products to larger, near-by markets;
- commission a full economic assessment by qualified consultants of the six value-added business propositions identified in the 2012 strategy session;
- commission engineering research projects that investigate innovative new gypsum end-use applications based on the unique properties of

gypsum, perhaps within the concept of a Gypsum Centre of Excellence as proposed (Ward, 2012) (Fig. 2); and

- continue to work in co-operation with other government departments and agencies to use targeted marketing exercises to communicate information and facilitate connections between businesses in order to advance the responsible use of the province's mineral resources.

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