**What, in your opinion, is the most interesting aspect of this artifact?**

Industrial artifacts, those used and operated in the support of industry, are not entirely common in museum collections in North America. These types of objects, which are invaluable on the job site, are usually disassembled and repurposed or scrapped when they cease to work. Rarely do they make their way to museums. This alone, the fact that this artifact exists in a national collection, is an incredibly interesting aspect of its story.

This extraction shovel was built by Bucyrus-Erie in the 1920s. Bucyrus was an American company that specialized in manufacturing surface and underground mining equipment in the United States. An interesting tidbit about this company is that it provided the majority of the steam shovels used to dig the Panama Canal in the early 1900s. Over the 20th century, Bucyrus merged with and acquired a variety of companies which allowed it to maintain its presence, and strong sales, in the industry. In 2010, it was acquired by Caterpillar, one of the world’s largest manufacturers of construction-equipment.

Our records suggest that this artifact was used at dolomite mine in Haley Station, north of Renfrew. This location is interesting for a few reasons. The mine, and its first associated plant, were built by Dominion Magnesium Limited, in order to meet the high demand for magnesium that arose during the Second World War. In fact, Canadian chemist Lloyd Montgomery Pidgeon, in collaboration with the National Research Council, developed a process of recovering magnesium from raw materials, such as dolomite, that was tested at these sites. Light Alloys Limited, a subsidiary of Dominion Magnesium, took over operation of these sites in the early 1950s. It was eventually renamed Haley Industries, and this company worked in support of Canada’s new, post-war aerospace industry through the manufacture of lightweight metal castings. Haley Industries was also a contributor to the Avro Arrow aircraft project.

Les artefacts industriels, ceux qui sont utilisés à l'appui de l'industrie, ne se trouve pas souvent dans les collections des musées en Amérique du Nord. Ces types d'objets sont généralement démontés et réutilisés ou mis au rebut lorsqu'ils cessent de fonctionner. Ils se rendent rarement dans les musées. Cela seul, le fait que cet artefact existe dans une collection nationale, est un aspect incroyablement intéressant de son histoire.

Cette pelle d'extraction a été construite par Bucyrus-Erie dans les années 1920. Bucyrus était une companie américaine spécialisée dans la fabrication d'équipements miniers à ciel ouvert et souterrains aux États-Unis. Une information intéressante à propos de cette companie est qu'elle a fourni la majorité des pelles à vapeur utilisées pour creuser le canal de Panama au début des années 1900. Au cours du 20ème siècle, Bucyrus a fusionné avec et acquis une variété d'entreprises qui lui ont permis de maintenir sa présence et ses fortes ventes dans l'industrie. En 2010, Bucyrus a été acquise par Caterpillar, l'un des plus grands fabricants mondiaux d'équipements de construction.

Nos dossiers suggèrent que cet artefact a été utilisé à la mine de dolomite à Haley Station, au nord de Renfrew. Cet endroit est intéressant pour plusieurs raisons. La mine, et sa première usine, ont été construites par Dominion Magnesium Limited, afin de répondre à la forte demande de magnésium pendant la Seconde Guerre mondiale. En fait, le chimiste canadien Lloyd Montgomery Pidgeon, en collaboration avec le Conseil national de recherches, a mis au point un procédé de récupération du magnésium à partir de matières premières, comme la dolomite, qui a été testé sur ces sites. Light Alloys Limited, une filiale de Dominion Magnesium, a repris l'exploitation de ces sites au début des années 1950. Renomee Haley Industries, cette entreprise a soutenu l'industrie aérospatiale canadienne d'après-guerre en fabriquant des pièces moulées en métal léger. Haley Industries a également contribué au projet d'Avro Arrow.

**If you had no information surrounding its temporal context, how would you approximate the time period and typical use of this artifact?**

This artifact is visually striking, in an impressive, industrial kind of way. What I typically look for when I’m trying to assess the date or time period of an artifact is to see if it has a manufacturers plate or any kind of stamp or marking. These are usually good starting places as they often contain details like a manufacture date, a model name, and even patents, all of which can be very helpful clues. In the absence of those, the material of an artifact and how it is assembled can also provide some clues as to when, and even where, a piece is from. What I find so striking and intriguing about this artifact is imaging how it use to work and what sounds it once created. The large chain tracks made of metal plates, the rotating metal frame with wooden doors and tin roof housing the steam boiler and gears, and the powerful shovel… It must have had such presence.

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Cet artefact est visuellement saisissant, d'une manière impressionnante et industrielle. Ce que je recherche généralement lorsque j'essaie d'évaluer la date ou la période d'un artefact, c'est de voir s'il a une plaque du fabricant ou tout type de tampon ou de marquage. Ce sont généralement de bons points de départ car ils contiennent souvent des détails comme une date de fabrication, un nom de modèle et même des brevets, qui peuvent tous être des indices très utiles. En l'absence de ceux-ci, le matériau d'un artefact et la façon dont il est assemblé peuvent également fournir des indices sur la date et même la provenance d'une pièce. Ce que je trouve si frappant et intrigant à propos de cet artefact, c'est l'imagerie de son fonctionnement et des sons qu'il a créés une fois. Les larges chaînes de chenilles faites de plaques de métal, la charpente métallique tournante avec portes en bois et toit en tôle abritant la chaudière à vapeur et les engrenages, et la puissante pelle… Elle devait avoir une telle prestance.

The dolomite deposit and plant of Dominion Magnesium, Limited, is situated on the east half of lot 20, concession V, Ross township. The history of the steps leading to the production of magnesium metal from dolomite by the "Pidgeon process" in Canada, and descriptions of the process have been published in several technical journals.2 In 1937, A.G.L. McNaughton, as director of the National Research Council of Canada, assigned L.M. Pidgeon to the problem of recovering magnesium metal from Canadian sources of raw materials. In March, 1941, Dominion Magnesium, Limited, was formed with funds supplied by Bobjo Mines, Limited, Moneta Porcupine Mines, Limited, and Ventures, Limited, through Robert J. Jowsey, Walter K. Segsworth, and Thayer Lindsley to further investigate and develop the process. Dominion Magnesium, Limited, built a pilot-plant, which successfully produced the metal by October, 1941. Construction of the main plant, which was financed by the Canadian Government, near Haley Station in Renfrew county, 14 miles north of Renfrew, was started in February, 1942. The first magnesium ingot was poured in August of that year, and full production attained in February, 1943. The plant capacity was 15 tons of magnesium ingot metal per day. Production in 1943 amounted to 7,153,974 pounds of magnesium. (ARV53)

Production and Trade Dominion Magnesium, Limited, Haleys, Ontario, which began production in August, J942, is the only producer of magnesium in Canada. The plant is operated by a private company under supervision of Wartime Metals Corporation, a Crown company. Production in 1944 amounted to 5,290 tons valued at $2,575,695, compared with 3,577 tons valued at $2,074,652 in 1943. No data are available for publication on exports and imports -0f magnesium, but most of the production is exported. The three magnesium foundries in Canada are located at Toronto, Montreal, and at Renfrew, Ontario. They are operated respectively by Aluminum Company of Canada, Limited, Robert Mitchell Company, Limited, and Light Alloys, Limited. A plant for the making of magnesium powder is operated at Trail, British Columbia, by Consolidated Mining and Smelting Company of Canada, Limited.

Light Alloys Limited, a subsidiary of Dominion Magnesium Limited at

Haley's, operates the only extrusion plant in Canada and the largest foundry. The

company produces Orenda jet-engine castings and a wide variety of shapes

finished and assembled for industrial and household use. The sales value of its

main product, aircraft-engine castings, was 20 per cent lower in 1957 that in

1956, representing a reduction of 23 per cent in pounds of castings. Another

subsidiary company, Aerometal Products and Design Limited, opened a new

fabricating plant at Toronto in November 1956 to handle an increasing demand

for its products. Four smaller foundries in Ontario, one in Quebec and one in

British Columbia also fabricate wrought magnesium products.

https://emrlibrary.gov.yk.ca/ebooks/canadian-mineral-industry/1957.pdf

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