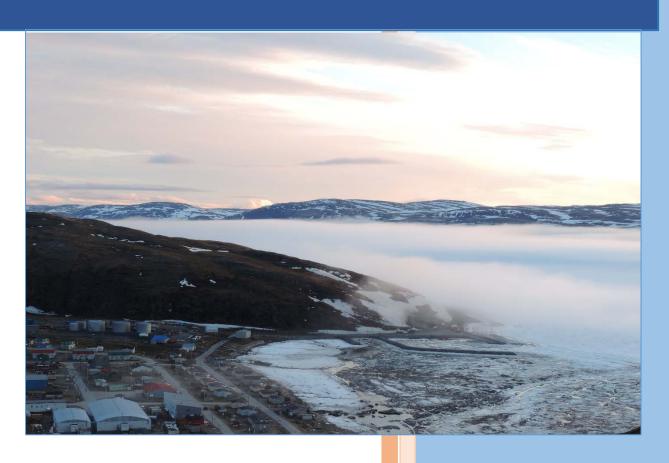
# Seeking Closure: Legacies of the Asbestos Hill mine in Nunavik

Jeanette Carney, Memorial University of Newfoundland











Association universitaire canadienne d'études nordiques



Social Sciences and Humanities Research Council of Canada Conseil de recherches en sciences humaines du Canada



Masters Thesis Report



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## **Executive Summary**

This is a report of the Master's thesis "Asbestos Hill: Inuit Experiences with Nunavik's First Mine" by Memorial University of Newfoundland student, Jeanette Carney, completed in October 2016. This study explores the history and past and present experiences of Nunavimmiut with Asbestos Hill (1972-1984), the region's first mine. More specifically, this research sought to answer the three following questions, "What is the history of the Asbestos Hill mine?", "What were the experiences of Inuit mine workers?", and "What were the impacts and legacies of Asbestos Hill?". To answer these questions, the student used oral history and archival methods, conducting interviews with community members and past Inuit mine workers in Salluit and Kangiqsujuaq in the summer of 2015, and searching through archival documents. Findings are based on interview data, with documents providing technical information and the larger political context of the time.

This study provides the first research into the past Asbestos Hill mine in Nunavik (northern Québec). The research's major findings include:

#### Operational:

- The Asbestos Hill mine was the first Fly-in Fly-out operation in Canada, with employees working three months on and two weeks off. The mine employed 400 men, most of whom were French Canadians from the Thetford Mines region in southern Québec, with only 10-40 Inuit working at one time.
- The mine operated ten months out of year due to the harsh climate and short shipping season. However, with a production of 1 500 000 tonnes of fibre/year, twice the amount of southern mines, it was the Société Asbestos Limitée's (mine owner) highest producing mine.

#### **Inuit Work Experience:**

- Overall, interviewed past Inuit mine workers remember their time at the mine as an adventure where they were able to gain work skills, interact with non-Inuit, and live in a "wild west" type of environment with alcohol and drugs brought up on weekly flights from Montreal.
- The closure of the mine in 1984 had little immediate impact on Inuit workers and the nearby Inuit communities of Salluit and Kangiqsujuaq. At that time, Nunavik was experiencing an increase in jobs through the James Bay and Northern Québec Agreement, the development of the nearby Raglan mine, and the Northern Québec Inuit Association, thus providing other employment after the mine.

#### Legacies:

- Today, negative environmental, social, and health legacies of the mine remain and continue to affect the region and to shape Inuit perceptions of mining. Asbestos Hill introduced the two Inuit communities to alcohol and drugs, creating a problem that continues to this day.
- The mine failed to adequately remediate the mine site, leaving behind large tailing ponds, equipment, and other debris. Almost forty years after closure, the remediation has yet to be fully completed.
- Most importantly, the Société Asbestos Limitée knowingly endangered Inuit and non-Inuit mine
  workers' health and lives by failing to provide proper safety precautions and equipment in their
  asbestos mine. Employees worked in extremely unsafe conditions, with certain areas of the mine
  experiencing levels of asbestos fibres in the air that were 145 times the federal government's limit.
  Today, after many former Inuit mine workers have died of cancer, many of their family members and
  friends have attributed their deaths to their exposure to asbestos fibres.

This research has brought to light many areas that require further study:

- A study must be done to understand the current and future health conditions of former Inuit mine workers' (and the community members') resulting from their exposure to asbestos fibres.
- Research should be conducted on the environmental status of the Asbestos Hill mine site,
   Deception Bay area, and the area between these two locations. This study should also assess the health of marine and terrestrial wildlife, with respect to their contact with Asbestos Hill.



#### Introduction

Over the past century, the Canadian North has experienced an economic, social, and environmental transformation due to mineral development projects. These new developments have contributed to the rapid modernization of First Nations and Inuit peoples. Research has shown that past mines in the North continue to play a role in northern communities, shaping their identities and leaving behind negative environmental and socio-cultural legacies<sup>1,2</sup>. As of yet, little research has been undertaken on the impacts of mining in Nunavik (northern Québec) and this study is the first to be conducted on the Asbestos Hill mine (1972-1984), Nunavik's first mine. This report is a summary of the masters' thesis "Asbestos Hill: Inuit Experiences with Nunavik's First Mine," completed in October 2016 at Memorial University. The thesis used oral history and archival research methods to examine past Inuit mine workers' experiences at the mine, the communities of Salluit and Kangiqsujuaq's encounters with this industrial operation, and the legacies it left behind.



<sup>&</sup>lt;sup>1</sup> Rodon and Lévesque, 2015

<sup>&</sup>lt;sup>2</sup> Keeling and Sandlos, 2015

## Methodology

The **main goal** of this study was to document the history of the Asbestos Hill mine by recording and analyzing Inuit of Salluit and Kangiqsujuaq's past and present experiences with the mine and its legacies. **Academically**, this project meant to fill a knowledge gap on the historical impacts of mining in Nunavik. In terms of **local** benefits, this research provides a historical record (archival and oral histories) of the mine and of Inuit experiences. This record of local knowledge and experience could help community and policy makers access the potential benefits and impacts of current and future mineral development.

#### **Objectives**

- 1. To describe the cultural and socio-economic experiences of local Inuit with the construction, operation, and closure of Asbestos Hill, between the 1960s and 2015.
- **2.** To determine any social, cultural, economic and environmental changes to the livelihoods of Inuit as a result of the mine.
- 3. To identify and describe changes to community identities through historical mining activities.
- **4.** To investigate how past experiences influence current perceptions of mineral exploration and development in Nunavik.

#### Interviews

Interviews ranged from fifteen minutes to two hours in length. They were recorded and transcribed, with recordings and transcriptions given to the Northern Village offices and to the Avataq Cultural Institute.

16 participants were interviewed:

- 11 in Salluit (May-June 2015)
- 5 in Kangiqsujuaq (July 2015)



**Figure 1**: Interviewee, Mark Tertiluk in Kangiqsujuaq (Credit: Jeanette Carney).

#### **Archives**

Archival information was accessed from the Kativik Environmental Advisory Committee (KEAC), the *Musée minéralogique minéralogique de Thetford Mines*, the Avataq Cultural Institute, Library and Archives Canada, and the *Montréal Gazette* and the *Québec Chronicle* archives through Google Newspapers. It is important to note that throughout my extensive archival search I was unable to locate any records of the Société Asbestos Limitée. It is probable that the records were returned to the mine company. Although I was able to find important information through online records and museum sources, scant archival findings forced me to base this research largely on interview data.

## **Funding and Support**

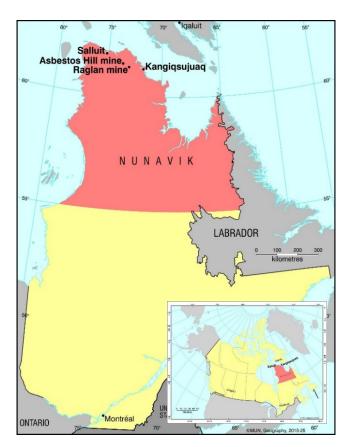
This research was part of a larger project by the Knowledge Network on Environment Impact Assessment and Social Impact of Mining in the Canadian Eastern Arctic and Subarctic (Eeyou Istchee, Nunavik and Nunavut), led by Dr. Thierry Rodon at Laval University. The network's activities were funded by a Social Sciences and Humanities Research Council Partnership Development Grant. I also received scholarship and research travel support from: the Social Sciences and Humanities Research Council, Memorial University, the Association of Canadian Universities, the Royal Canadian Geographical Society, Dr. Alan G. Macpherson, and the Northern Scientific Training Program.

## **Findings**

### **History**

Inuit have inhabited Nunavik, the northernmost region of Québec, for almost 800 years.<sup>3</sup> This environment shaped Inuit culture, as they adapted to the cold climate and limited vegetation by becoming huntergatherers, living nomadically. <sup>4</sup> Their traditional activities involve freshwater fishing, berry picking, and hunting for marine mammals.<sup>5</sup> The sharing of country food and knowledge is crucial to Inuit culture. However, with the arrival of Europeans in the 17th century, Inuit ways of life began to transform.

Over the past two hundred years, Inuit have experienced many changes through interactions with outsiders. The first large scale interaction was in 1830 with the arrival of the Hudson Bay Company (HBC), which came to trade European goods for Arctic fox furs. Then, in the early 1900s, the Revillon Frères Company built trading posts, which later became the communities of Salluit (Sugluk) and Kangiqsujuaq (Wakeham Bay). The second change came in the



**Figure 2:** Locations of Salluit and Kangiqsujuaq, and the sites of the past Asbestos Hill mine and the current Raglan mine (Credit: Charlie Conway, 2015).

1930s and '50s, when Roman Catholic and Anglican missionaries built missions where Inuit gathered to

<sup>4</sup> Barger, 1979

<sup>&</sup>lt;sup>3</sup> NTA, 2010

<sup>&</sup>lt;sup>5</sup> Poirier and Brooke, 2000

<sup>&</sup>lt;sup>6</sup> Vick-Westgate, 2002

<sup>&</sup>lt;sup>7</sup> Croteau, 2010

trade. The third factor was the growing presence of the federal government between 1950 to 1970, as it began advancing its modernization agenda.<sup>8</sup> It provided welfare and childcare payments and constructed houses, bringing many Inuit to adopt sedentary lifestyles. Finally, in the late 1960s, the federal government built day-schools and nursing stations.

In the '40s and '50s, part of the federal government's agenda involved bringing mining to the Arctic. The government encouraged intensive mineral exploration in the Ungava Trough, a mineral-rich geological zone in northern Nunavik. Over twenty companies explored the area, discovering the following deposits in Nunavik: Asbestos Hill (asbestos), Raglan (nickel), and Katinniq (nickel).<sup>9</sup>

Until the early 1960s, the federal government administered programs and aid to Inuit of northern Québec. However, this changed in the 1960s, as the Government of Québec fought for administrative control of its provincial North. Increasing economic opportunities in resources led the provincial government to view Inuit as "perhaps the only permanent labor force available for the much desired economic development." Consequently, this government wanted to "integrate the Eskimos into the development of their own economy, so that they can profit from it rather than watch other people exploit it." Eventually, in 1964, the federal and Québec governments began to share administrative responsibilities.

#### The Asbestos Hill mine

In 1957, Murray Watts's exploration company discovered the Asbestos Hill deposit. This deposit was formed in the Canadian Shield, around 1.6 to 2 million years ago as volcanic magma arose, causing a geological shuffle that altered the rock (chlorite schist). This process caused chrysotile asbestos to crystalize in transverse fibers in multiple narrow gaps, creating some of Canada's best asbestos, with a usable yield of 18-20% (compared to 3-10% in southern Québec).

In the 1960s, the Société Asbestos Limitée (SAL) purchased this deposit from the Murray Mining Company. At this time, Salluit (population: 400 Inuit), situated on the southern shore of Sugluk Bay and Kangiqsujuaq (population: 250 Inuit), 10 km from the Hudson Straight, were reliant on the fur trade and government payments. During the mine's construction, few Nunavik Inuit were hired, as the Company had recruited former Inuit workers from the Rankin Inlet nickel mine in Nunavut (then part of the Northwest Territories).

By the end of its operations, the SAL built an open-pit asbestos mine that was 2 000 feet long and 15 feet wide and up to 780 feet deep (figure 3). The average annual production was 1 550 000 tonnes of asbestos fibre, which was partially processed on-site, then shipped to the company's finishing mill in Nordenham, Germany.<sup>13</sup> The on-site mill had a processing capacity of 6 600 tonnes of ore per day, which was then transported 68 km by truck to a warehouse next to the port at Deception Bay. Measuring 760 feet long, 305

<sup>&</sup>lt;sup>8</sup> Rodon, 2014

<sup>9</sup> Duhaime et al., 2005

<sup>&</sup>lt;sup>10</sup> Pape, 1964

<sup>&</sup>lt;sup>11</sup> Ibid., 1964

<sup>&</sup>lt;sup>12</sup> Bonesteel, 2006

<sup>13</sup> Musée minéralogique, 2011

<sup>&</sup>lt;sup>14</sup> OPDQ, 1984





**Figure 3:** The open-pit Asbestos Hill mine in 1975 (Credit: Louis Mercier Fonds/Avatag Cultural Institute).

**Figure 4:** Inside the asbestos holding facility (Credit: Peter Johnston, 2013).

feet wide, with a height of 155 feet, and holding up to 225 000 tonnes of fibre, this holding facility held the Guinness World Record for the largest warehouse in the world (Figure 5). The mine's remote nature and the harsh climate shortened the shipping season, requiring a large amount of storage space. Mined and semi-processed fibre had to be stored for eight months before being shipped.

#### **Facts on Asbestos Hill's Operation**

- Asbestos Hill ran for 10 months between February to the end of November, with only 30 employees staying between December and January<sup>11</sup>
- It was a fly-in fly-out operation with workers signing contracts to work three months on (seven days a
  week, 10-12 hours/day) with a two-week unpaid vacation at home. <sup>11</sup> Some workers could choose to work
  six to nine months at a time.
- Qallunaat workers would fly to Purtuniq on a direct jet flight from Montreal. These Nordair planes came twice a week with southern workers, food, and supplies.
- Inuit travelled to the mine by snowmobile in winter and by Peterhead boat in late summer and early fall. In perfect weather conditions, travel to Asbestos Hill took between four to six hours by snowmobile.

## **Inuit Work Experiences**

Few Inuit worked at the Asbestos Hill mine, with only an estimated 10 to 40 Inuit working at one time (out of 400 mine workers). The turnover rate of Inuit employees was likely to be much higher than the mine's average, which was 10-15% per month<sup>15</sup>. While working at the mine site or at the Deception Bay port, Inuit workers were so busy that they were unable to see their families or hunt and fish.

<sup>&</sup>lt;sup>15</sup> Musée minéralogique, 2011

The mine's schedule was difficult for its workers because they went months without seeing their friends and family, with only limited contact with home through a radio system in the mine's later years. Most former Inuit mine workers said that even if the work schedule was long, they adjusted to it quickly as they were young and happy to be keeping busy. The regular schedule and the new experience of the mine lifestyle and interactions with non-Inuit people made work at the Asbestos Hill mine an interesting adventure for many. It was harder for workers who had wives and children at home.



Figure 5: Inuit mine workers leaving the Asbestos Hill mine (Deception Bay port) by boat to travel to Salluit in 1978 (Credit: Gérard Grégoire, Centre d'archives de la Région de Thetford, Musée minéralogique et minier de Thetford mines Collection).



Figure 6: Inuit mine workers travelling by snowmobile to the Asbestos Hill mine from Kangiqsujuaq in 1978 (Credit: Louis Mercier Fonds/Avataq Cultural Institute).

When starting work at the Asbestos Hill mine, most Inuit workers began as labourers working odd jobs, then moved up to become electrician helpers, mechanics, heavy equipment operators, and so on. With the exception of one interviewee, Inuit Purtuniq mine workers received informal, on-the-job training. Due to linguistic barriers, with lower-level workers speaking only French and management speaking primarily English, unilingual and bilingual (Inuktitut-English) Inuit workers at the Asbestos Hill mine developed their job skills by watching non-Inuit workers and repeating what they did.

For Inuit men working at the mine, their training and work experience at the Asbestos Hill mine was their first opportunity to gain experience in mining and to learn important work skills. During interviews it became apparent that the work of former Inuit Asbestos Hill workers at the mine strengthened their sense of pride as Inuit and increased their confidence in the mining sector, as they became skilled workers, able to successfully operate machinery or fulfill other tasks. The work experience, training opportunities, and economic benefits of working at the mine encouraged other Inuit to work in the mining sector following the closure of the Asbestos Hill mine. Overall, interviewees appreciated their work experience at the mine and remember their employm ent with the Société Asbestos Limitée as positive and exciting.



#### Life at the Mine

The Asbestos Hill mine had a lively atmosphere with activities that provided new and exciting experiences for Inuit workers. The mine site had a camp to house employees, a cafeteria, a bar, and activities to entertain workers (Figure 7). Workers were fed, housed, and provided with medical services. The Hudson Bay

Company even set up a post at the mine to sell pop and chips, and some clothing and other items. Workers were housed in 14 ATCO bunkhouses (16 rooms in each) near the Asbestos Hill pit. <sup>16</sup>

Asbestos Hill, a place of great diversity of people and activities, allowed Inuit workers to experience a touch of the South. Former Inuit mine workers remember the mine's food as exceptional; as one commented: "we had

"[A] youngster when he first starts working [he] learns how to be labourer, right? Like anyone else have, and that's what happened to me. I first became labourer and got promoted to [be an electrician]"

- Mark Kadjulik interview, June 2015

good food, especially chicken legs because they are so tasty, even today."<sup>17</sup> Recreational activities included "a pool [table], table tennis," and a movie theatre. <sup>18</sup> Past Inuit mine workers remember working side-by-side with *Qallunaat* and being treated the same. This feeling was reinforced by a sense of camaraderie gained through time spent with *Qallunaat* after work hours (Figure 7). Inuit workers recall being appreciated for their dedication to their work, their ability to learn quickly, and their skills. Despite language barriers, former workers remember working and living in a positive environment and getting along with non-Inuit workers. Many interviewees even kept in contact with *Qallunaat* workers for many years after the mine shut down.

"[The Société Asbestos Limitée] treated us very, very good. They treated us like everybody else. Everybody was treated equally"

- Jimmy Angutigirk interview, June 2015

During the mine's operation, workers often drank alcohol together at the mine's bar. The company-run bar sold liquor, beer, and wine to workers and to travelling Inuit. Access to alcohol and drugs led some interviewees to describe the scene at the Asbestos Hill mine as the "Wild West," where rumours of mafia involvement in the mine operation ran

rampant. Many interviewees discussed incidents linked to workers gambling and prostitution. Aloupa Kulula, the son of a former Asbestos Hill mine worker and resident of Kangiqsujuaq, stated: "I heard [that] there was all the time alcohol, gambling, and some prostitution. They used to send prostitutes to the mine [from] down South." Stories about the mafia and other accounts of daily life at the Purtuniq mine shape the former worker's and community members' collective memory of the mine.

Today, Asbestos Hill is remembered by Inuit as a mine operating in a "lawless" time, where illegal activities took place. Southern workers brought drugs (marijuana and cocaine) when they were flown to the site on

<sup>17</sup> Kadjulik interview, December 2010

<sup>&</sup>lt;sup>16</sup> Cummins, 1983

<sup>&</sup>lt;sup>18</sup> Kakkiniq Naluiyuk interview, June 2015

<sup>&</sup>lt;sup>19</sup> Aloupa Kulula interview, July 2015

the company plane and sold them at the mine. Many interviewees suspect that the Italian mafia of Montreal was involved in this trafficking of drugs.

The drugs and alcohol sold at the mine made their way to Salluit and Kangiqsujuaq. Some Inuit mine workers carried these substances home with them on their vacations and community members would travel to the mine on their snowmobiles to purchase drugs and alcohol. Direct flights from Montreal to Asbestos Hill allowed easy shipping of drugs and alcohol. The construction and operation of the mine meant that the residents of Kangiqsujuaq and Salluit were some of the first Inuit in Nunavik to purchase drugs and alcohol and to witness their introduction to communities in such large quantities.<sup>20</sup> Many interviewees from both Salluit and Kangiqsujuaq pointed to the introduction of drugs and alcohol into their communities as one of the biggest catalysts for cultural, lifestyle, and community change.

## **Impacts and Legacies**

#### **Mine Closure**

In October 1983, the Société Asbestos Limitée (SAL), at that time owned by the Government of Québec, sent its last asbestos shipment from its port at Deception Bay to its processing plant in Nordenham, Germany.<sup>21</sup> The anti-asbestos campaigns of the 1970s and '80s and the growing awareness of the negative health impacts of asbestos had led dev eloped countries to lower their imports of the fiber, as they discussed the possibility of a total ban.<sup>22</sup> To deal with these developments, which decreased in Québec's asbestos

sales, the SAL halted asbestos production at Asbestos Hill, keeping its southern Québec mines, which were easier to operate and ran year-round, running at full capacity.<sup>23</sup>

One year later, in 1984, the Asbestos Hill mine was officially shut down. Unlike other northern mine closures at that time, such as the Rankin Nickel mine in Nunavut, which devastated Inuit people and communities due to the loss of the region's sole economic driver, the closure of Asbestos Hill had little immediate impact on Inuit workers and nearby re sidents.<sup>24</sup> By the time the mine had closed, many of its Inuit workers had already left their jobs due to familial commitments



**Figure 7:** Inuit worker buying beer at the bar in the cafeteria at the Asbestos Hill mine in 1978 (Credit: Claude Samson, Centre d'archives de la région de Thetford – Fonds Journal Liaison, 2016).

<sup>&</sup>lt;sup>20</sup> Duff, 1973

<sup>&</sup>lt;sup>21</sup> Musée Minéralogique, 2011

<sup>&</sup>lt;sup>22</sup> Vallières, 1988, p. 343

<sup>&</sup>lt;sup>23</sup> Cinq-Mars and Ouellette, 1999, p. 67-68

<sup>&</sup>lt;sup>24</sup> Cater and Keeling, 2013

and mine work schedule challenges. Purtuniq's fly-in fly out schedule had made long-term work difficult for Inuit and *Qallunaat* workers alike, leading many to quit their jobs and return to their communities.

While *Qallunaat* workers were upset and unsettled by the closure of Asbestos Hill, Inuit workers recalled being unconcerned. Willie Keatainak, a former mine worker from Salluit, discussed this aspect of the closure, saying: "[Prior] to the closure [any] operation [...], certain people [get] nervous. They probably are afraid that they aren't gonna have any more jobs and no more income and they get scared easy, but not

"...the Asbestos Hill mine had one of the highest levels of asbestos fibres in the air, with some areas testing **145 times** over the limit of asbestos air content."

with us Inuit though. We adapt to changes quite easily."<sup>25</sup> Inuit workers adapted relatively quickly due to the creation of new regional economic opportunities, which resulted from the James Bay and Northern Québec Agreement (JBNQA) of 1971and the Northern Québec Inuit Association (NQIA). Consequently, the communities of Salluit and Kangiqsujuaq were able to better absorb the loss of the mine and the employment it had provided.

#### Health

Today's two remaining community health and social issues associated with Asbestos Hill are concerns about health impacts from the exposure to asbestos fibre and issues of substance abuse. However, the focus of this health section will be on the impacts and perceived effects of asbestos to these Inuit communities, whereas the effects of the mine's introduction of alcohol and drugs will be discussed in the "social" section on page 16.

Occupational exposure to asbestos can lead to many illnesses, which can ultimately result in prolonged sickness and even death. It is extremely dangerous to work with or around asbestos without proper safety equipment and precautions taken. <sup>26</sup> Yet the Québec government historically denied the impacts of asbestos, due to the important contribution of asbestos mining to the province's economy and its role as a large employer. <sup>27</sup> It was only during the operation of Asbestos Hill in the 1970s and '80s that the Canadian public was becoming aware of the impacts of asbestos. However, despite being unionized, this information did not reach Nunavimmiut, and miners were not given safety training or warning about its impacts. <sup>28</sup> Due to the mine's remote location, union representatives could not regularly visit and inspect the mine, leaving mine workers less educated or, in the case of Inuit, not educated at all, on the impacts of asbestos.

Meanwhile, in its initial years of operation, the Asbestos Hill mine had one of the highest levels of asbestos fibres in the air, with some areas testing **145 times** over the limit for airborne asbestos.<sup>29</sup> A newspaper

<sup>&</sup>lt;sup>25</sup> Willie Keatainak interview, May 2015

<sup>&</sup>lt;sup>26</sup> Van Horssen, 2016

<sup>&</sup>lt;sup>27</sup> Ibid.

<sup>&</sup>lt;sup>28</sup> Saunders, 1976

<sup>&</sup>lt;sup>29</sup> Gordon, 1975

article published in the *Montreal Gazette* on June 9, 1975, three years after the start of mining production, cited a study conducted in 1974 by the Confederation of National Trade Unions (CNTU), which found that mine workers were working in unsafe conditions, with dangerous levels of asbestos fibres in the air.<sup>30</sup> Certain areas tested measured up to 726.7 fibres per cubic centimeter, which is well above the international permissible limit of 5 fibres per cubic centimeter. In one area, there was too much asbestos dust to be measured by government instruments.

In its final report, the CNTU put forward recommendations to decrease asbestos fibre concentrations in the air.<sup>31</sup> The following year, on May 13, 1976, the Government of Québec's Standing Committee on Natural Resources and Land and Forests discussed the report's findings.<sup>32</sup> The committee noted that the plans authorized by the government showed the installation of air filtering systems within the mine's facilities. However, these systems were never installed and, as a result, the levels of asbestos fibres in the air were extremely high. Finally, the committee decided that it would forward the CNTU's report to the Société Asbestos Limitée as soon as possible.<sup>33</sup> It is likely that the mine's isolation affected the ability of the union to ensure that regulations and work safety practices were upheld. The CNTU may not have been able to re-assess the state of the dust levels at Asbestos Hill following this report.

Inuit working at the mine did not know that exposure to asbestos fibres could be harmful to their health because the Société Asbestos Limitée (SAL) and the Government of Québec did not inform its workers of this possibility or of precautionary work measures. The Company and the government put profit before human health, and therefore endangered thousands of people's lives. That said, some Inuit working at the mine remember *Qallunaat* workers' wearing masks and taking other safety precautions because they were made aware of the hazards of asbestos exposure through southern radio and newspapers. During a 2010 interview on TNI radio with host Putulik Ilisituk, Mark Kadjulik discussed the safety measures taken by a *Qallunaat* co-worker:

MK: [There] was a lot of dust [in the warehouse] and it was hard to breathe [...].

PI: Did anyone ever talk about the health hazards of the asbestos?

MK: No one talked about it, but my co-worker was no fool and he already knew the problems with asbestos. He made his own mask out of cloth and I did the same thing as the company did not provide us with masks when we worked in that warehouse.

- Mark Kadjulik, interview by P. Ilisituk, December 16, 2010

Even after the mine closure, governments and the SAL did not inform community members and past Inuit workers of the potential health problems incurred by working at the asbestos mine. Residents of Salluit and Kangiqsujuaq only began to understand the potential health impacts in the late '80s and '90s due to the spread of mass media throughout the Canadian north.<sup>34</sup>

Today, many past Asbestos Hill mine workers of Salluit and Kangiqsujuaq are deceased, mostly due to

<sup>30</sup> Gordon, 1975

<sup>31</sup> Ibid.

<sup>32</sup> Government of Québec, 1976

<sup>33</sup> Ibid.

<sup>34</sup> CBC, 2016



various cancers or heart problems. Many of those still living worry about their health. The community of Kangiqsujuaq expressed much more concern about the implications of asbestos exposure, as only two of their past mine workers are still alive today. During meetings with the Kangiqsujuaq community council, their main concern involved further research on the impacts of asbestos and appropriate compensation for the loss of their community members. Yaaka Yaaka discussed the health impacts of asbestos on the community of Kangiqsujuaq:

[Of all the] people who were handling the processed asbestos, [...] two in town are still alive, the rest have all died [from] cancer. [...] Back then we didn't have any [...] proper healthcare. We only had this little nursing station [...]. [They were] flown out of here to go down to Kuujjuaq or Montreal for proper diagnosis because we didn't have those equipment here. It was way too late. [They] were just sent back home to die. [That] was a very common thing for people, especially [those] who worked at Asbestos Hill.

- Yaaka Yaaka inteview, July 2015

The lack of medical diagnostic equipment and doctors in the communities of Salluit and Kangiqsujuaq made early diagnosis of health problems, including those potentially linked to asbestos exposure, nearly impossible.

Interviewees in Salluit and Kangiqsujuaq and the Kangiqsujuaq community council attributed most deaths of past mine workers to asbestos. The communities discussed the possibility of compensation for the perceived asbestos-caused illnesses and deaths of family and friends. However, many interviewees recognized the factors that make compensation claims difficult, such as a lack of medical evidence and the absence of past mine workers to make the claims. Into the '80s and '90s, Inuit in Salluit and Kangiqsujuaq had limited access to medical professionals and advanced medical equipment. Furthermore, medical professionals were unilingual and in most cases required an Inuit translator, making medical assessments difficult<sup>35</sup>. Yaaka Yaaka voiced these concerns, saying: "[In] one family there might be one to three people who were [...] affected or died because of [...] ailments [caused] by exposure to asbestos, but [...] there's scant little in the way of evidence. There's no records of these things. All we can do is [...] come to our own conclusions"<sup>36</sup>. Inuit are left wondering if their family and friends who worked at Asbestos Hill died due to their work at the mine and the lack of awareness of these issues.

[Our history with asbestos mining is] something that needs to be learned or made known. [Those] of us who were left behind by our parents or uncles, [people] who worked up there, have always been left to wonder why [their family member died at such a] young age. [...] One of the hazards of living in the North, you get exposed to asbestos.

- Yaaka Yaaka interview, July 2015

In Salluit and Kangiqsujuaq, the history of the Asbestos Hill mine is very rarely discussed, with many of the younger population unaware of the region's first mine. Many interviewees and the community council of Kangiqsujuaq, specified the communities' need for information gathering and sharing to non-Inuit and Inuit alike.

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<sup>35</sup> Pernet, 2014; Haché, 2009

<sup>36</sup> Yaaka Yaaka interview, July 2015

Today, family members, friends of past Inuit Asbestos Hill mine workers, and the workers themselves are left feeling wronged and exploited by the Société Asbestos Limitée and the Government of Québec. Not only did both parties keep Asbestos Hill mine workers in the dark about the negative health impacts of exposure to asbestos—for which they had scientific proof during the operation of the mine—but both the

government and the SAL failed to acknowledge these issues and inform the communities after the mine's closure. Consequently, residents of Salluit and Kangiqsujuaq have found it difficult to trust subsequent companies that explored and mined in their region, such as Falconbridge. A few interviewees discussed the communities' desire to never again have a mining company treat them the way the Société Asbestos Limitée did.

[Those] mountains of bad stuff, [Falconbridge] didn't clean that. They clean the houses, all the stuff, looks like nobody was there, only you know that [it] held that dust of asbestos. [They] have to clean that. Every time wind they blow away to the land, to animal.

- Mark Tertiluk interview, July 2015

#### **Environmental**

The environmental effects of mining have particularly significant impacts on Inuit due to their interconnected relationship with the land, its animals, and vegetation. Inuit see humans, animals, and the environment as intrinsically linked to one another, with each affecting and relying on the other.<sup>37</sup> As hunters and active participants in community country food sharing, Nunavimmiut put a great deal of importance on the well-being of the environment and of wildlife as it is directly linked to their cultural and personal identity.<sup>38</sup>

During the operation of the Asbestos Hill mine, residents of Salluit and Kangiqsujuaq expressed concerns about the movement of asbestos fibres and dust between the mine site and the port at Deception Bay, roughly 50 kilometers away. Interviewed former Inuit mine workers remember a layer of asbestos fibre covering the area between the mine site and Deception Bay (around 70 square kilometers). This area is important to Salluit, as many of its residents have cabins around the bay and the area surrounding it are their hunting and fishing grounds. During the mine's operation and after its closure, residents of Salluit and Kangiqsujuaq formally expressed concerns about this asbestos dust covering Inuit hunting, fishing, and trapping areas to the Kativik Environmental Advisory Committee and to Makivik.

After the mine's closure, Sallumiut reported increasing cases of deformed or diseased fish and other animals, which they associated with the contamination from asbestos dust.<sup>42</sup> As a result, they avoided certain species and animals, particularly fish, but also caribou from the mine area and Deception Bay and

<sup>&</sup>lt;sup>37</sup> Poirier and Brooke, 2000; Laugrand et al., 2014

<sup>&</sup>lt;sup>38</sup> Poirier and Brooke, 2000; Natcher, 2009

<sup>&</sup>lt;sup>39</sup> Paul Okituk interview, June 2015; Poirier and Brooke, 2000

<sup>40</sup> Poirier and Brooke, 2000

<sup>&</sup>lt;sup>41</sup> KEAC, 1984

<sup>&</sup>lt;sup>42</sup> Poirier and Brooke, 2000

sent in fish samples to the Nunavik Research Centre.<sup>43</sup> Falconbridge's partial clean-up from 1994 to 2004 did little to appease growing concerns of residents and today many continue to question the effectiveness of the remediation and are dissatisfied with the clean-up.<sup>44</sup>

Interviewees continue to express frustration and resentment towards Nunavik's first mining project, which was constructed, operated, and closed without community consultation or consent. Many discussed wanting to learn from past mistakes to ensure that future mining projects have fewer impacts on the environment and on wildlife. Others expressed their desire to see some sort of compensation for the negative impacts incurred during the construction and operation of the Asbestos Hill mine, as well as for the continued effects on the environment and wildlife.<sup>45</sup>

#### Social

The introduction of mining to northern Indigenous communities greatly affects their social and cultural dynamics. Studies have shown that the transition process from a traditional lifestyle to a modern wage economy, as often occurs with the arrival of mining in Arctic Canada, contributes to social and public health problems, such as violence, alcoholism, and suicide. Although mining had and continues to have an impact on the communities of Salluit and Kangiqsujuaq, the biggest social impact of the Purtuniq mine to those communities was the introduction of drugs and alcohol. Prior to Asbestos Hill, Inuit of these communities had little access to alcohol, mostly in the form of home-made beer or moonshine, and no access to drugs. The mine introduced the neighbouring communities and Inuit workers to drugs and gave them access to a wider variety and a larger amount of alcohol, Interviewees pointed to the mine as the catalyst for drug and alcohol problems within Salluit and Kangiqsujuaq, with one stating that "the culture, the drug culture began with the Asbestos Corporation and it's not stopped since" Rollowing the mine's closure, nearby residents maintained their access to alcohol, ordering it through the mail.

The introduction of drugs and alcohol altered the dynamics of communities and proved extremely disruptive for those who suffered from substance abuse and their families. Some interviewees saw this introduction as an assault on Inuit culture, as it affected community health and individual well-being.<sup>49</sup> In small northern communities, these impacts are felt more strongly because of limited social support programs and other factors that affect the community's ability to cope.<sup>50</sup> Since the closure of the Asbestos Hill mine, drug and alcohol use and abuse in these two communities remain a problem.

<sup>&</sup>lt;sup>43</sup> Poirier and Brooke, 2000; Mark Kadjulik interview, December 2010

<sup>&</sup>lt;sup>44</sup> Lanari et al., 1999

<sup>&</sup>lt;sup>45</sup> Qalingo Angutigirk interview, December 2010

<sup>46</sup> Buell, 2006; Angell and Parkins, 2011; Gibson and Klinck, 2005

<sup>&</sup>lt;sup>47</sup> Willie Keatainak interview, May 2015; Putulik Ilisituk interview, June 2015

<sup>&</sup>lt;sup>48</sup> Paul Okituk interview, June 2015

<sup>49</sup> Yaaka Yaaka interview, July 2015

<sup>&</sup>lt;sup>50</sup> Gibson and Klinck, 2005; Blais, 2015



#### Cultural

Cultural traditions and practices are integral to the wellbeing of Inuit communities. Throughout interviews with Inuit residents of Salluit and Kangiqsujuaq and former Inuit Asbestos Hill mine workers, it was clear that Inuit culture is vital. A former Inuit Asbestos Hill worker described the importance of culture when he said, "Even if you try and change me, you can't change me. It's [our] culture, the way we live, it's too precious. It's in us."<sup>51</sup>

The arrival of the mine accelerated the rate of change and modernization in Salluit and Kangiqsujuaq, which had serious implications for local Inuit culture. As Asbestos Hill was being built, Inuit were beginning to attend local federal day schools and the residential school in Churchill, Manitoba. The federal government built houses and provided child and welfare payments to Inuit who settled into these permanent settlements. Major changes were taking place, which affected the Inuit way of life and culture.

The construction and operation of the mine was the first large-scale introduction to wage-labour for Salluit and Kangiqsujuaq. By creating jobs, the mine led Inuit to join the wage labour economy and to adopt a sedentary lifestyle. Instead of continuing traditional practices of hunting and trapping, many Inuit men were working at the mine, making it impossible for them to pass along traditional knowledge or continue subsistence practices during that time. As a result, both communities were missing some of their hunters for extended periods of time. The following is the account of the son of a former Inuit mine worker:

The experience that my family went through because of my father going to the [Asbestos Hill] mine was really a bad [because] of the separation [of] six months [when my father] was working there.

- Aloupa Kulula interview, July 2015

Asbestos Hill contributed to cultural transformations of Inuit of Salluit and Kangiqsujuaq. That being said, it is the modernization agenda of the federal government that laid the groundwork for changes to the Inuit way of life by moving them into villages and providing mandatory formal education. The introduction mining to the region simply increased the rapidity of modernization by providing access to wage employment and drugs and alcohol to Inuit workers. Today, Inuit of Salluit and Kangiqsujuaq are considered modern huntergatherers, living semi-subsistence lifestyles as 'weekend warriors' whereby they work steady, scheduled jobs and hunt and fish on their days off and on weekends. <sup>52</sup> Cultural values and practices continue to guide Inuit of these communities, but they have diversified their methods of subsistence by integrating *Qallunaat* technologies and adopting a cash income economy.

#### **Economic**

The Société Asbestos Limitée did not seek to stimulate the economy of Nunavik through its mine, as the vast majority of its labour and all of its infrastructure were imported, and mined asbestos was exported. The

<sup>&</sup>lt;sup>51</sup> Willie Keatainak interview, May 2015

<sup>&</sup>lt;sup>52</sup> Poirier and Brooke, 2000

Company's priority was profit rather than the creation of Inuit employment. The mine failed to substantively expand or diversify the local economies of Salluit and Kangiqsujuaq. The fly-in fly-out structure of the operation and the absence of an Impact and Benefit Agreement made long-term local benefits of the mine minimal at best. As a result, the Purtuniq mine only created economic benefits through direct employment for a select few Inuit of Nunavik, most of whom were from Salluit and Kangiqsujuaq. Nearby Inuit only benefitted if they had friends or relatives share the profits from their work at the mine or through the sale of their art to non-Inuit mine workers. The mine's lack of economic and other benefits to the communities of Salluit and Kangiqsujuaq heavily influenced their desire to negotiate the first Impact and Benefit Agreement between a mining company and an Indigenous community in Canada. Local Inuit residents refused to be uninvolved in the mining process, such as was the case with Asbestos Hill, and thus arranged a more participatory relationship with the owner of the Raglan mine.

## Where do we go from here?

Despite the mine being closed for over thirty-three years and numerous requests from the Northern Villages of Salluit and Kangiqsujuaq and the Kativik Environmental Advisory Committee, the site environmental restoration remains a work in progress. As a result, the first necessary step to be undertaken immediately is the full remediation of the Asbestos Hill mine site, the Deception Bay area, and the land in between.

In terms of future research, this study has brought to light some issues that remain to be examined. Both communities of Salluit and Kangiqsujuaq identified the two following critical research needs regarding human and environmental health:

- 1. With growing concerns over the negative health impacts of asbestos, communities are requesting a study be done to understand the current and future health conditions of former Inuit Asbestos Hill mine workers' (and the community members') as a result of their exposure to asbestos fibres.
- 2. Research to be conducted on the **environmental status of the Asbestos Hill mine site**, **Deception Bay area**, and the area between these two locations. This study should also assess the health of marine and terrestrial wildlife, with respect to their contact with Asbestos Hill.

In terms of academic-driven research needs, I have found three other areas that would benefit from further studies:

- 1. Subsequent research on Asbestos Hill should focus on the mine's **FI/FO** aspect, examining the non-Inuit, long-distance commuters' experience. Understanding the stories of these workers at the first fly-in fly-out operation in Canada would fill a gap within the story of FI/FO work and shed more light on the Asbestos Hill story.
- 2. An assessment should be conducted on the **perceptions of mining of older versus younger generations**. A future study comparing the different perspectives of the "Asbestos Hill" generation to those of the "Raglan" and "Nunavik Nickel" generation may show differing perspectives on the future of mining.

3. There remains a significant gap within the literature surrounding the historical impacts of mineral activities in the Canadian north. In Nunavik and in northern Canada, the impacts and experiences of Indigenous peoples with past mineral exploration are largely unknown and unstudied. A better knowledge of these impacts could help prepare Inuit and Northern governments for the growth of exploration.

#### Conclusion

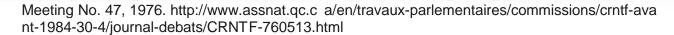
Nunavimmiut encounters with past mining are complex, as they evolve over time with the shaping, reshaping, and loss of memories, and as local Inuit continue to deal with the environmental and health legacies left behind by the mine. Today, within the communities of Salluit and Kangiqsujuaq, the history and legacies of the Asbestos Hill mine have largely been overshadowed by current mining operations. As younger generations have only known the Raglan and Nunavik Nickel mines, Asbestos Hill's history lives on in the memories and stories of former Inuit mine workers and older residents, and in the landscape, where tailings, equipment, and structures remain. For many Inuit I spoke with, the region's first mine represents the destructive power of mineral development, but also, the crucial initial participation of Indigenous peoples with resource development. In particular, Inuit of Salluit and Kangiqsujuaq discussed the exciting mining life and work experience, as well as the potentially long-term damage to the environment and to wildlife and human health.

As Inuit encounters with Asbestos Hill continued past its closure, the legacies of the mine combined with the experience during its operation to create a negative overall experience. Economically, the nearby communities had few short and long-term benefits. Instead, the mine mainly caused social problems within the communities, as it was the catalyst for the continued drug and alcohol problems. The largest impacts came after the mine's closure, as the effects came out of the woodwork. The environmental contamination and legacies left behind by the Société Asbestos Limitée (SAL) caused much worry for nearby Inuit with the negative impacts to wildlife, a crucial part of Inuit's livelihood and culture. Furthermore, as information on the impacts of asbestos exposure to health spread through the media, Inuit became aware that the SAL had endangered their long-term health by failing to inform its workers of the negative impacts of asbestos exposure. These negative environmental and health impacts shaped Inuit perceptions of mining in Nunavik, leaving a legacy of environmental destruction and concerns over Inuit residents' and workers' health.

In the end, this research has shown that memory is powerful, as negative experiences of Inuit with the Asbestos Hill mine heavily influenced the negotiations of the Raglan Impact and Benefit Agreement, the first of its kind in Canada. Although the mine closed over thirty years ago, older generations of local Inuit continue to remember the region's first mine, often comparing it to current mining operations (Raglan and Nunavik Nickel). Inuit who experienced the Asbestos Hill mine state that it is crucial that remember the past, so that similar mistakes are not made in the future. Today, Inuit of Salluit and Kangiqsujuaq view the region's first mine as a cautionary tale, showing what can happen when Inuit are not involved in the mining or remediation processes.

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