

# **Sq̓mbakwè K'ego2̓ (Where there's mineral wealth)**

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## **The experiences of the Tłıchq̓ with Giant Mine**

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### **Prepared For**

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**TWO WORLDS**  
CONSULTING



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## PHOTO CREDITS

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## MAP CREDITS

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The maps produced as part of the Giant Mine Tłıchq Knowledge Project were developed from base maps provided by Tłıchq Government and added to by Tłıchq Elders. The additions to maps by Tłıchq Elders was guided by researchers Madelaine Pasquayak, Georgina Chocolate, and Adrienne Murphy.

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## Chapter One: INTRODUCTION

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Chapter One outlines the Giant Mine Tłıchq Knowledge Project and its methodology; it also provides background about Giant Mine and context about Tłıchq life during the period of 1930 to 2004 (after the mine closed). Chapter Two describes Tłıchq experiences related to Giant Mine and industrial changes to the land as shared by participating Elders.

The Giant Mine Tłıchq Knowledge Project was initiated by Violet Camsell-Blondin, Manager, Land Regulation, Department of Culture and Land Protection (DCLP), Tłıchq Government. Violet wanted to record the Tłıchq experience with the development of mining in Sq̓mbak'è. The Tłıchq Government received funding from Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) to complete a report on Tłıchq experience related to Giant Mine.

Once funding was secured, responsibility for the project was transferred to Tyanna Steinwand, Manager, Research, DCLP, as the project focused on gathering Tłıchq Elders' personal knowledge and experience. Tyanna negotiated that a portion of the funding would be used to train Community Researchers who could support Tłıchq research with Elders now and in the future.

The original intent was to gather specific information about where Tłıchq lived and harvested the resources on which they thrived—a study similar to one by the Yellowknives in Dettah and N'dilo. However, Tłıchq Elders interviewed wanted to share the environmental and lifestyle changes they experienced with the development of Giant Mine and other nearby mines, such as Con Mine. In doing so, they wove together their awareness of the cumulative impact of mining.

The shared experiences of Tłıchq Elders revealed their understanding of how they and their relatives—many of whom live in Dettah and N'dilo—were and continue to be affected by Giant Mine. They also shared how the infrastructure—particularly the roads and the growing urban environment of Sq̓mbak'è—associated with the mines impacted their lives.

It is interesting to note that in 1948, Sq̓mbak'è had a population of 4,000; it had electricity from two hydro facilities—Bluefish Lake and Snare River—as well as piped and trucked water. This same type of infrastructure was unavailable to any nearby Indigenous settlements, including N'dilo.

It is significant that the Giant and Con mines, as well as the associated Snare Hydro Facility Bluefish Lake Dam are within the bounds of M̓qwhì Gogha Dè N̓łtìèè, the traditional territory of the Tłıchq as agreed during signing of Treaty 11 in 1921. The Snare Hydro Facility and its transmission line are largely within boundary of Wek'èezhì. Both boundaries are defined in the Tłıchq Land Claim and Self-Government Agreement of 2005.

## Methodology

CIRNAC funding was available by the spring of 2021 however research was delayed until 2022 due to the COVID-19 pandemic. Both the Tłıchq Government (TG) and the Government of the Northwest Territories (GNWT) had rigorous guidelines to protect against the spread of COVID-19. While the GNWT lifted many restrictions in 2021, the TG took into consideration the small population and overcrowded homes and maintained restrictions to protect the elderly and very young community members.

Despite difficulties, research was completed between December 2021 and March 2023. Two community researchers completed three days of training in April 2022. Both individuals were competent with audio recording equipment. Training individuals to document places and associated information on maps was more difficult given the insistence of both the TG and community researchers to maintain safe distances to prevent the spread of COVID-19 to the Elders being interviewed. Additional community researchers were trained over a two-week period in June 2022. Eleven students started Level One (of four levels); seven of the students participated in on-the-land projects. The students attended a cumulative impact monitoring session during which they evaluated the methods used by both Indigenous Knowledge researchers and scientists. They also took photography, learned a theory of knowledge systems, and interviewed Elders in meeting rooms and on the land. To date, three students have received their Level One certificate.

Madelaine (Chocolate) Pasquayak, the community Tłıchq researcher, ensured that appropriate Elders were interviewed about their personal knowledge of the impacts of Giant Mine. Between April and August 2022, she also transcribed the interviews into English and oversaw the mapping of place names.

Rita Wetrade—who was raised at Whq̄s̄ı̄wek̄q̄ (Blackduck Camp) and lived there for much of her life—suggested Elders to interview. Georgina Chocolate assisted Madelaine when she visited Elders' homes. Madelaine focused on the research discussion, while Georgina focused on documenting map information. Finally, Marjorie Black verified Madelaine's English translation.

## Interviews

At the onset of the project, a questionnaire was developed with a focus on Giant Mine contaminants—as recommended by the TG and CIRNAC (see [Appendix A](#)).

Madelaine chose to interview Tłıchq Elders in a manner closer to their own knowledge system, and followed the information and perspectives Elders chose to share; she emphasized that their time was respected and limited. Madelaine did not constrain what Elders chose to share; they shared what they thought was important to explain about mining development in Sòq̓mbak'è and their experiences. Therefore, as is the case in all social science research, the questionnaire served as a guide for topics to discuss during the interviews. All Elders signed consent forms prior to participating.<sup>1</sup>

## Mapping

Mapping was done using base maps and data provided by the Tłıchq Government's (TG) Department of Culture and Land Protection (DCLP). Elders located and named places, and Madelaine Pasquayak used the "Tłıchq Placenames, Indicators of Knowing Mqwhì Gogha Dè Njłtłèè" report after the interviews were finished.

The finished maps are included in [Appendix B](#).

## Participating Elders

During the time frame of the study—between 1930 and 2004—the interviewed Elders were children when Giant Mine started and seniors by the time it closed. Their life stories speak to their experiences as children; what they learned from parents, grandparents, and those who have gone before; and what they faced during the heyday of Giant Mine.

The primary timeframe for sharing experience is the late 1940s to early 1960s. The biographies for each Elder interviewed are in [Table 1](#).

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<sup>1</sup> Elders were allowed to freely provide or withdraw consent at any point during any interview, and they could choose to end their interview at will.

**Table 1: Tłıchq Elders who Participated in Interviews**

Elder Charlie Apples—who was raised and lived with his grandfather at K'eàgotì (Hislop Lake)—frequently travelled, hunted, and trapped throughout much of the land. His grandfather suggested the family move to Tideè (Great Slave Lake), but Charlie moved back to his mother's family when his grandfather died, making Whq̄s̄iwekq̄q̄ (Blackduck Camp) his home base. Charlie learned much about that area till he married and moved to Behchokq̄. When his wife died, he continued to live there with his children.



Elder Annie Apples describes living in Behchokq̄ and Kwekàateèl̄l̄ with her family. She enjoyed eating fish and all kinds of meat. Her aunts taught her how to sew, cook, make clothing, and work on hides that she inspected carefully before using. After she married her husband Harry, they moved to Whq̄s̄iwekq̄q̄ (Blackduck Camp) with their baby. They lived with her in-laws, and she learned how to work efficiently with her mother-in-law. She travelled, by dogteam, to Rayrock Uranium Mine where the pollution turned trees around Kwet̄l̄2àa to wood.<sup>2</sup> The people she met in the area taught her to carefully observe all meat and plants she used.



Elder Rosa Huskey now resides in Behchokq̄ with her family. When Rosa was young, her mother died and she lived with her father, brother, and two sisters who went to residential school. She travelled on Tideè by dogteam to ʔenq̄q̄da (Trout Rock) with her father and brother. When they returned to Behchokq̄, Rosa married Philip Huskey and they moved to Rayrock Uranium Mine at Kwet̄l̄2àa. They lived there for a time when her daughter Mabel was still small. They again moved to Whq̄s̄iwekq̄q̄ when she had two boys who were close in age.



Elder Alice Sangris Widfladt was raised by her grandparents and lived in Nd̄l̄q̄, where she was intimately involved in hearing about, observing, and experiencing the impacts of Giant Mine on her family, neighbours, and other Dene, as well as plants, animals, and water.



<sup>2</sup> See Legat et al, 2015



Madelaine (Chocolate) Pasquayak was raised on the land between Gamètì and Behchokò but currently lives in Yellowknife. She chooses not to eat fish, meat, or berries harvested around Yellowknife because Elders, like those she interviewed, have always taught us to observe the health of the land we live on. Even before reclamation began, she would say, “we knew the area to be tainted with arsenic and pollutants from both Giant and Con mines”.



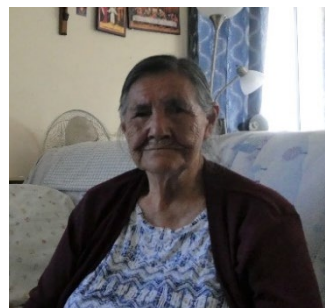
Elder Moise Rabesca lived most of his life around Whq̓s̓iwekòq̓ on Tideè. Moise’s father built a cabin at Whq̓s̓iwekòq̓ not long after Francis Blackduck senior built his log house. Along with his father, Moise travelled the land hunting, trapping, and fishing with the men who lived at or nearby. Moise now lives at Dehk’e (Frank Channel). When he was a young man, there was still no road to Sq̓mbak’e.



Elder Rosa Mantla currently lives in Behchokò with her family. When her late husband Harry was alive, they often travelled north of Hàèl̓l̓ (Marian Village) with their family. As a young girl, Rosa lived in Gamètì with her family. It was there that she learned much of the skills and knowledge required for thriving on the land. She is one of the few women left who recalled living alone on the land when she started her menstrual cycle. This was a time when she had to learn all the skills of becoming a woman possessing all the skills required to live in a family setting or alone.



Elder Dora Migwi lived at Whq̓s̓iwekòq̓ (Blackduck Camp) but was raised around K’eàgotì (Hislop Lake), and later moved to Tideè (Great Slave Lake) with her family. Dora is familiar with places like K’itsì (Whitebeach Point), ʔenòq̓da (Trout Rock), ʔenìt̓l̓ (Stagg River), N̓hs̓ì (Old Fort Rae), and T̓l̓keèdeè (Boundary Creek). Dora learned all the skills of cleaning and observing the health of fish and meat from her mom and aunts as a young girl. She also learned to sew and work on hides to make clothing for her family. When she married, she travelled the land with her husband and children.



Elder Celine Tatzia lived mostly on the land when she was a young girl. She recalled growing up on Semìtì (Faber Lake) and thriving on what the land had to offer. She enjoyed country food and when she married, she travelled the land with her husband. She learned the skill of sewing and making handicrafts when she saw the need for it for her family. Like other Tł̓chq̓ women she learned to observe the health of animals by inspecting meat and hides.



Elder Edward (Eddie) Rabesca lives in Behchokò with his family. When he was a young boy, he lived at Whq̓sìwekòò (Blackduck Camp) with his family who had a cabin. He enjoyed eating healthy foods from the land that his father, brothers, and uncles brought home. Eddie made many trips with his father trapping muskrat and beaver by dogteam in winter and canoe in the summer. He learned to understand the health of animals by inspecting their fur as well as their meat. He recalls going to ʔenòòda (Trout Rock) and Sqòmbak'e (Yellowknife). When Eddie married, he took on the business of delivering water to all the homes in Behchokò for many years. He is retired today, but he still enjoys hunting, fishing, and going to Whq̓sìwekòò on weekends.



Elder Michel Louis Rabesca resides in Behchokò with his wife and family. As a young man, Michel loved to travel the land with his father and uncle. He went all the way to Sqòmbak'e with his uncle, ʔewidq̓, by dogteam. Michel Louis settled in Behchokò after he married his wife, Bernadette. To support his family, he worked as bus driver for Chief Jimmy Bruneau School in Edzo for many years. His work did not stop Michel from harvesting the land and inspecting the health of animals just as his father had.



## Giant Mine and Sòmbak'è (Yellowknife)

The story of Giant Mine is also the story of Yellowknife and the arrival of mining. Today, Giant Mine is recognized as having been part of “Sòmbak'è” or the City of Yellowknife. However, Sòmbak'è means so much more to the Tłıchq. More broadly translated, “sòmba” means “money or mineral wealth” and “k'e” means “place of”. According to Madelaine, when the Tłıchq spoke of Sòmbak'è, the distinction was not always made between the place of Yellowknife or the broader influence of mineral wealth in the area. The Tłıchq fully recognized that multiple mines started in the area post-World War II had a profound effect on the region and their lives. With mining, Sòmbak'è became a centre of commerce.



In 1948, Giant Mine began production, and with it came other economic development to the region. The first Snare Hydro project was a direct result of Giant Mine's growing energy needs; this same energy source would eventually power the City of Yellowknife (Johnson and Haist 2007). Mining in Yellowknife also drove the building of Highway 3—completed in 1960—from the Alberta border to the City of Yellowknife ([Table 2](#)).



The establishment of Giant Mine and the other mines in the Yellowknife area did not immediately change Tłıchq life. Tłıchq Elders spoke about life continuing much as their parents and elders had lived it. All the Elders spoke of living in or visiting Whqsiwekòq (Blackduck Camp) midway between Sòmbak'è and Behchokq. Elders also talked about still travelling by dogteam or canoe to go to Sòmbak'è or north from Behchokq before the

construction of Highway 3. Once the highway was built, it was quickly adopted as a travel route. Camps were also set up for life closer to the highway despite dust concerns.

Elders noted that soon after Giant Mine was built and in production, they began seeing and hearing about changes to the health of wildlife and habitat around Yellowknife and became aware of things being unsafe.

**Table 2: Tłıchq and Giant Mine Timeline**

Date	Giant Mine and Related Activity	Tłıchq Life
Time immemorial		Tłıchq living in Mōwhì Gogha Dè Nìtāèè
1896	Prospectors discover gold in Yellowknife area.	Tłıchq traditional life continues plus fur trading at Fort Rae trading post.
1900		Yellowknives sign Treaty 8.
1921		Tłıchq sign Treaty 11.
1923		Liza Crookedhand of the YK Dene finds gold while blueberry picking. Traditional life includes fur trading at Fort Rae and Marian Lake.
1935	Bush plane flights make the area accessible; Gold Rush begins.  Five potential gold mines identified in Yellowknife area.	Trips to Yellowknife for supplies. Temporary occasional jobs at the mines such as logging for construction and labour.
1936		Faraud Hospital opens in Behchokò (Rae).
1938	Con Mine begins production and. is the Only mine to operate during WWII because of labour shortage.	Behchokò trading post closes (1937)
1939–1945	World War II; gold mining slows down because of labour shortage from the war	
1947	Giant Mine is constructed. Giant Mine begins construction of hydro dam on the Snare River, 90 miles west of Yellowknife, and hydro line to Yellowknife.	Traditional life with trips to Yellowknife for supplies and trading. Temporary jobs at the mines such as logging for construction and labour.
1948	Giant Mine begins gold production and first gold bar poured. Snare Hydro starts operating and is connected to the Yellowknife power grid supplying the entire region.	
1951–1960; 1954–present	Federal Industrial Health Laboratory monitors arsenic contamination of Yellowknife water and vegetables. Arsenic control measures start and continue to present day.	Tłıchq living near Yellowknife start commenting on food quality and change locations of fishing and berry picking.

Date	Giant Mine and Related Activity	Tłıchq Life
1958–1960	Federal government offers mine training for Dene because of labour shortage.	Very limited uptake of Indigenous Peoples in the mining workforce.
1960	Hwy 3 gravel road construction to Yellowknife completed.	Tłıchq supplied labour and tree clearing during construction of Hwy 3; Tłıchq became concerned with dust from the road.
1967	Yellowknife created as the capital of the NWT.	
1973–1976	Snare Hydro dam is upgraded; expansion of Snare Hydro facilities.	
1974		Faraud Hospital closed in Behchok̓
1948–2004	General mining operations. Expansion in the 1970s including Snare Hydro. Ownership changes hands several times. Governments offer rotational work options and training in ongoing promotion of Indigenous involvement in mining projects.	In 1968, only 14 Indigenous people were employed at Giant Mine in a workforce of 410. Con Mine had 9 in a workforce of 225. Across the NWT, the percentage of Indigenous peoples in mining jobs in 1968, 1974 and 1978 respectively was 4.5%, 6.7% and 5.3%.
1996		Dogrib Power Corporation buys interest in Snare-Cascades hydro project for first 100% Indigenous-owned hydroelectric development in Canada.
1999	Royal Oak Mines Ltd., owner of Giant Mine since 1990, files for bankruptcy. Indian and Northern Affairs sells Giant Mine rights —with environmental liabilities severed—to Miramar Mining. Ore processed at Con. Mill closes at Giant Mine, shutting down the roaster and ending arsenic trioxide production.	
2020	Closure and Reclamation Plan for Giant Mine approved and implementation starts.	Tłıchq participate in the hearings for the closure and remediation planning of the site.
2021–2022	Tłıchq traditional knowledge and historical relationship work starts.	Tłıchq Government and Elders document Tłıchq experience with mining in Yellowknife.
2022–present	Site remediation will continue for the next decade.	Tłıchq Government and Tłıchq involved in employment and economic opportunities.



In 2004 Giant Mine ceased all mining activities. The governments of Canada and the Northwest Territories assumed management and operation of Giant Mine and began to focus on contaminant containment. After 2005, care and maintenance, closure studies, and urgent works began. Remediation planning began in earnest in 2007, and the Closure and Reclamation Plan (INAC and GNWT 2010) achieved regulatory approval in 2020 (CIRNAC n.d.). The focus of the plan was to clean up and contain contamination related to Giant Mine's fifty-seven-year operation with emphasis on the protection of the environment and human health and safety. Activities began in 2021 and are anticipated to continue until 2035.

The overall closure goals were to

- minimize public and worker health and safety risks;
- minimize the release of contaminants from the site into the environment;
- remediate the Site in a way than inspires public trust; and
- implement an approach that is cost-effective and robust over the long term.

Since the preparation of the Closure and Reclamation Plan, socio-economic opportunities have emerged and been added to the goals above to be achieved during closure. Unlike the years of operation, Yellowknives and Tłıchq are active business partners in the economic spinoff from closure. The Giant Mine Remediation Project (GMRP) developed a socio-economic strategy that commits to implementing actions that will maximize social and economic opportunities for Northerners and local Indigenous peoples through procurement, employment, and local capacity building. In support of this commitment, the GMRP established a Socio-Economic (SE) Working Group with representatives from multiple levels of government and Indigenous partners. The Socio-Economic Advisory Body was also established to provide strategic advice to the SE Working Group and act as senior government champions for the implementation of the SE Working Group's approach (CIRNAC, 2022).

Some of the benefits of Giant Mine remediation outlined in the socio-economic strategy include (CIRNAC, 2022)

- training,
- employment,
- procurement, and
- other supporting actions.

With a budget of \$4.38 billion, the socio-economic opportunities are substantial (CIRNAC n.d.).

## Contamination at the Giant Mine Site

Giant Mine is one of the most contaminated sites in Canada (Auditor General Canada, 2012). Concerns about, and reports of, arsenic poisoning date to the 1950s. The 1951 arsenic poisoning and subsequent death of a two-year-old Ndlıq child resulted in the installation of a Cold Cottrell Electrostatic Precipitator to remove a lot of the toxic arsenic trioxide waste. In 1955, arsenic releases were further reduced by adding a second "scrubber" to the roasting process (CIRNAC, 2018). Historical emissions caused large-scale contamination of the surrounding soils and waters, which can still be detected today (Auditor General Canada, 2012 and subsequent studies). Runoff from the rain, and movement of contaminated surface soils from the wind, continue the contamination from Giant Mine. The Closure and Reclamation Plan calls for the permanent storage arsenic trioxide dust in frozen underground storage areas so that it does not dissolve into water and pollute nearby waterways. The Closure and Reclamation Plan also includes the clean-up of the mine site surface to improve the stability of the surface soils and prevent further spreading of arsenic and other toxins. Native plants will be used to return the mine site to a more natural taiga shield ecozone. The former mine site will then be opened to the public.

Security against contamination continues to be a focal point. A human health and environmental risk assessment (HHERA) was completed to document the current levels of contamination. The HHERA looked at the health effects to nearby human and ecological receptors in Yellowknife, Ndlıq, and T'ehdaà (Dettah), on Latham Island, and along Ingraham Trail. Tłıchq communities were not directly included in this assessment given the distance from Giant Mine though Tłıchq people in Yellowknife may have been part of the study. The HHERA focused on arsenic, but also considered other contaminants and different situations, such as people who swim in the nearby lakes, the safety of the drinking water, the safety of eating country foods, the health of resident and migratory wildlife, among many other things (Canada North Environmental Services, 2018).

The HHERA concluded that while there continues to be arsenic contamination in and around Giant Mine, people who live near Giant Mine have the same health risk as getting an X-ray (Canada North Environmental Services, 2018).

Overall, the HHERA included 140 samples of country foods, which were measured for contamination. Some of these samples were taken over 100 km away, towards Tłıchq territory. The results showed that, in general, the further away the country food was harvested from Giant Mine, the lower the level of contamination (Canada North Environmental Services, 2018). Some country foods—such as rabbit, ptarmigan, grouse, and mushrooms—had higher levels of arsenic contamination, while other country foods—such as rat root, whitefish, and beaver—had low levels of contamination. All tested country foods were at background safe levels when they were collected at least 50 km from Giant Mine (Canada North Environmental Services, 2018).

Finally, there are several other studies that are continuing or were put in place to monitor the safety of Giant Mine work:

- The Yellowknife Health Effects Monitoring Program (YKHEMP) will monitor resident health and wellbeing over time. Current results of the YKHEMP study show that people's health is not at risk, based on arsenic levels seen in the Yellowknife area (YKHEMP n.d.).
- The Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP) is an ongoing, rotating program that visits Tłıchq communities for fish, water, and sediment testing using both Traditional Knowledge and science.
- A long-term monitoring program to measure the amount of arsenic in water to make sure it is not leaching from the underground storage areas, with results made public.



## Chapter Two: TŁIČHǫ EXPERIENCE

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*"There's nowhere on this land that  
our feet did not walk"*  
Elder Sizi Rabesca

*"The land is our home"*  
Elder Romie Wetrade

Elder Sizi Rabesca knew where to walk and what it was like to walk the land. When he made up his mind to visit the community of Dèlǫ (Deline) on Sahti (Great Bear Lake), he chose to walk the distance from Behchokǫ. He made the journey with the same determination that his gotso (ancestors) travelled the land, by walking. In this way the people came to know the land, through experience.

What other proof is necessary to support Elder Romie Wetrade's statement, *"This is my land."*



## Tłıchq Experience of Giant Mine

For countless generations Tłıchq people have travelled, hunted, and harvested the entire area that became the Giant Mine and the land and waters around it. The earth was known as "*de gogòò*" or "*when the land was new*". That is, everything was still in a "*new state*", and nothing had happened yet in the Tłıchq region to spoil that "*newness*" to the land, the water, vegetation, or animals. Elders' knowledge of this land is intimate, having used its resources for survival, travelling on foot, by canoe, dogteams, motorboat, snowmobile, and later by plane. They know the traditional trails and routes between communities. Elders' observations are refined by their knowledge of what they needed to live: where the animals go, where berries and other plants flourish, where to find the best fishing.

For each essential part of life, it is as Elder Charlie Apples states:



*"Where there is caribou, that is where they will go in winter. They go after it! They will live all year on caribou."* He is referring to both men and women: *"When they go to hunt, women will pack their babies after their husbands. The women worked hard too."* Of course, women cut and dried meat and fish, made clothing from caribou hide, and babiche. They picked berries, collected wood, and had many other tasks.

When mining became common in the NWT, Tłıchq people continued to travel the land, and were acutely aware of the mining's impacts on the land, water, air, animals, plants, and trails throughout Mqwhì Gogha Dè Nı́t'èè. Mining, and in particular Giant Mine profoundly changed the Tłıchq way of life. For example, barrenland caribou came less often near Sqòmbak'e; they typically pass much further north and/or east. Elder Eddie Rabesca said that K'itsi used to be a good place to hunt woodland caribou, before the road to Sqòmbak'e was built.

Every aspect of Tłıchq life was impacted.

*"From the time we were small at eight or ten years old, we spoke our language very well,"* Elder Alice Sangris Widfladt said. *"Not English! Nothing! Only Dene! After we moved here [Ndilo, adjacent to Yellowknife], nothing! Only English and when we translate, I didn't know how."*



All this is reflected in Elders' experiences described in interviews done between April and August 2022 by researcher Madelaine (Chocolate) Pasquayak.

Madelaine has worked with Elders since she was a child living on the land with her parents. She understands the language, place names, and Elders' observations. Madelaine has visited many of the places Elders spoke about and was able to work with them to mark locations on maps. They were able to show the areas they avoided and where they traveled to harvest safe, healthy resources for their families. As a Tłıchq citizen herself, Madelaine has much firsthand knowledge of the issues described by Elders she interviewed.

## INÈ GODI (Past History)

As Madelaine explained:

*The stories of the past tell how Tłıchq people lived and traveled throughout Mq̄whi Gogha Dè Nı̄tł'èè, the land we call home; no community or camp was specifically identified or recognized as 'one's home'. Rather our ancestors were in continual pursuit of the animals and plants they learned to depend upon for sustenance. This was their purpose for travel, to know, to harvest with respect, and to use. With bows and arrows, and spears made from birch and spruce trees, animals were killed by hunters who were both strong and agile. Caribou were trapped by ingenious 'caribou fences' using trees and people, then killed. Willows bunched together were used to net fish along the shorelines. Snares were braided with babiche to catch rabbits, grouse, and ptarmigan. The wisdom of thriving on the land knew no bounds. Our ancestors used all that was available on the land to thrive. - Madelaine (Chocolate) Pasquayak*

Despite the great love and respect that Tłıchq have for the land, Tłıchq people were powerless to resist the many changes introduced by non-Indigenous people. One significant change was the speed of travelling on water when nine horsepower outboard motors were introduced.



Along with that was the introduction of food from Europe and southern Canada. Elder Annie Apples states that she did not go to Sq̄mbak'e until after the road was built, because her family lived very well in the bush. However, like other Tłıchq, she had already been introduced to such things as tea, sugar, flour, baking powder, lard, oats, and other goods that came with the fur trade.

Through time tools and clothing became much desired goods, along with such items as sewing machines, traps, hammers, and ice picks to keep fishing holes open. These became much sought-after items when their uses were realized; furs were the currency. Traders played a major role in changing the lifestyles of Tłıchq people. As time went on, barges were used to bring in supplies, gas, and even some fresh produce.



These changes accelerated as Sq̓mbak'e grew, was linked to southern Canada by road, and became a "city." Giant Mine and other mines fuelled this growth.

### SQ̓MBAKWE GOŁİİ (Mineral Wealth)

Mining within Mq̓whì Gogha Dè Nı̄t'èè was initially embraced by the Tłıchq with the belief that it would bring prosperity and additional comfort to their lives. And as Madelaine explained,

*No one thought there would be dangers and negative impacts on the lives of Tłıchq and other Dene people. Mining became a threat beyond the imagination of our ancestors. They believed all people respected the land. Mining posed no real danger until the negative impacts were realized, and then it felt too late to undo the damages. We had to adapt to the effects and pollution of mining and associated infrastructure left behind. - Madelaine (Chocolate) Pasquayak*

The Government of Canada oversaw all aspects of mining and permitting land use. Tłıchq had no power against development; nevertheless, Madelaine stresses that Tłıchq leaders and many families discussed their major concerns over the past 70 years as the impacts of mine development intensified:

- What can be done to mitigate and lessen harm to the land, animals, vegetation, waters, fish, fowl, and human lives?
- What can we do to lessen pollution to the land and waters that we rely upon to sustain us?
- How can we tell what is a healthy animal when what makes them sick now is different than in the past?
- How healthy are the fish we eat from the lakes that were fished in the past?

These and many other questions were raised when it became evident that the land, animals, water, and fish were impacted after Con Mine began operating in 1938 (it closed from 1943 to 1946), followed by Giant Mine in 1948. Environmental protection in the early days was primitive



at best and large quantities of dangerous contaminants, particularly arsenic and sulphur dioxide, were released.<sup>3</sup>

Tłıchq̓ people worried, along with friends and family living around Sq̓mbak'e (Yellowknife), about the damage to the land and water, and about the loss of habitat and areas for traditional harvesting. Madelaine heard these worries and warnings shared especially with those with friends and family in Ndilq̓. There were stories of precautions and places to avoid.

Similar concerns emerged after the Rayrock Uranium Mine replaced the harvesting area known as Kwetł̓q̓. Only when Rayrock was subsequently shut down did Tłıchq̓ realize the damages it had created.

*"Our fathers that worked there are no longer with us," stated Elder Michel Louis Rabesca. "We don't know what happened to them all, but we know what happened to at least half of them. They had cancer."*

Giant Mine was in operation until 2004. Elders spoke of their relatives visiting Sq̓mbak'e to purchase items, eat, and visit with family and friends even before the all-season gravel road between Behchok̓ and Sq̓mbak'e was completed in 1960. Places around the North Arm where people lived for periods of time are basically just around the corner from Sq̓mbak'e when traveling by boat or dogsled.

Elder Moise Rabesca recalls the smokestacks at Giant Mine, like big stovepipes, where smoke billowed out from poisons burning, making "rock smells," and being told not to collect ts'ıwa2oh (spruce branches) around there. People could no longer make broth with it, he stated. *"They are spoiling water all around us and because they use poison to do their business, it's like we are powerless to say anything."* He remembers people living near Sq̓mbak'e asking him for fish when he lived out on the North Arm, because they could not eat the fish where they lived.<sup>4</sup>

Even at Whq̓siwekq̓ (Blackduck Camp), the quality of fish has changed, according to Elder Eddie Rabesca, *"When our fathers used to fish, we used to eat good fish. But today...some fish are good and some are not. There is a change, it is true."* Elder

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<sup>3</sup> Highly toxic, water-soluble arsenic trioxide was a byproduct of refining gold at Giant Mine. Much of this arsenic was released unfiltered until 1951, when a Cottrell "scrubber" reduced airborne emissions to 7,400 kg/day. A second scrubber cut arsenic emissions to 2,900 kg/day in 1956. In 1958, a baghouse filtration system reduced airborne arsenic emissions further, subsequently ranging from 52 kg/day to 300 kg/day. The remaining filtered arsenic trioxide was pumped underground for storage. <https://rcaanc-cirnac.gc.ca/eng/1100100027388/1617821149343>

<sup>4</sup> Testing of Yellowknife Bay water by the Department of National Health and Welfare in 1967 revealed "alarming" and "excessive" levels of dissolved arsenic in the water supply, rendering it "unsuitable for human consumption." An underwater pipeline was recommended to supply water from the mouth of Yellowknife River, above Giant Mine. The new water supply system began operation in 1969.

<https://www.dropbox.com/sh/47dvrp331uclclj/AAB1Zc7s9M7tif8j4UM6WXHqa?dl=0&preview=1967+06+23+REPOR+T+AS+SURVEY+OF+YK+BAY+DEPARTMENT+OF+NATIONAL+HEALTH+%26+WEL.pdf>

<https://esemag.com/water/federal-government-invests-in-yellowknife-drinking-water-pipeline/>

As recently as 2022, arsenic contamination from mining was found "throughout the [Yellowknife] bay, including the farthest sites near the mouth of the bay. . . . The presence of arsenic trioxide at the sediment surface suggests it may still be entering the bay from the mine property or soils along the shoreline."

[https://www.enr.gov.nt.ca/sites/enr/files/resources/128-cimp\\_bulletin\\_45\\_en\\_final\\_to\\_post.pdf](https://www.enr.gov.nt.ca/sites/enr/files/resources/128-cimp_bulletin_45_en_final_to_post.pdf)

Eddie Rabesca still sets nets at Homj'k'eè (on the North Arm) in winter, catching whitefish, louche, jackfish (pike), and coney. *"Every year, I set a net over there. Even there, the fish has changed."*

When he fished near Sqòmbak'e, Elder Eddie Rabesca said, he went further out Tideè (Great Slave Lake) to Wool Bay (Taehdeh cho), where the fish were good and there were lots of fishermen: *"one time we lived there all summer long."* He said nobody sets a net by Yellowknife River, near Sqòmbak'e.

Most Elders discussed where not to harvest. But Elder Alice Sangris Widfladt, who lived in Ndilq across Back Bay from Giant Mine, describes how a few Dene men were hired to work but most stayed away due to their fear of working underground. *"Grandfather said . . . lots of white men and Métis took over our land because of the mine. There was a rush to live there."* She also stressed that the damaging chemicals used brought harm to the lake and vegetation animals feed on. Before they realized the extent of the contaminants, people set nets and hunted moose, bear, rabbits, and ducks in the area, until they were later told not to set nets in the lake or hunt animals in the vicinity. And women were told not to pick berries close to the mine, which they had always done because there were blueberries and cranberries on and around the mining operation. Unlike in the past when sick, unhealthy animals were obvious, Tłıchq did not eat them. And now that pollution and contaminates were rarely noticeable, Tłıchq people feared for their health and that of the land and animals, especially, at ʔenòqda (Trout Rock), Whòsiwekòq (Blackduck Camp), and K'itsi (Whitebeach Point).

Elder Alice Sangris Widfladt stated that people were told to move far away from Giant Mine and the polluted water, which went into Tideè by Sqòmbak'e (Yellowknife). Poisons leaked into the lake by Taàmj, where people always fished, she said, so the nets had to be taken out and people do not eat fish from there. *"A lot of people [were] experiencing tummy aches."* There is also a big hill where yellow water was pumped from the mine into a small lake (which became a tailings pond). The mine's smell was in the air, the smoke would go *"twenty to thirty miles"* and *"we breathe it in!"* She said that T'ehdaà (Dettah), previously a traditional fishing camp was built to get further away from the polluted Giant Mine area. Her family spent a lot of time at their fish camp,<sup>5</sup> on an island even further away, where the fish were good. Before the mines were built, men hunted all over the Sqòmbak'e area, even for migrating caribou. She remembered her grandfather telling her he killed a moose where Sutherland's Drugs is, downtown on Franklin Avenue. *"Sqòmbak'e has expanded, and I don't know where to hunt, he said."*

The city grew around them because of the mines. Elder Alice Sangris Widfladt said lots of people used to live in Willow Flats and Peace River Flats (Yellowknife's old town) but had to move to where Ndilq is now. *"A lot of Métis lived there. The men are from Fort Res[olution] but the women are [Tłıchq] from Behchokò."* She said the water was yellow by Con Mine as well, and berry picking had to stop there too; you had to go to far west

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<sup>5</sup> Probably Wool Bay (Taehdeh cho)

to ʔenòòdaà. Same with plants for medicine. The whole Sqòmbak'é area was completely changed.

### SQÒMBAK'É K'EGOʔÒ (Impact of Mining Activities)

Elders interviewed, grew up on country foods. As children these Elders talked about eating whatever their fathers or other men brought home for them to eat. Whether it be fish, caribou meat, moose meat, bear meat or small game, all was good to eat. They did not hesitate to eat anything before them; they all describe their staples as being *"all good and healthy"* to eat. If there was an abundance of meat or fish, women would take advantage of this to teach young girls to make dry fish or dry meat. These they stored and kept for the cold winter months when it was hard to harvest food. There were no sweets other than berries picked on the land. There was no electricity. Firewood was used for cooking and heat.

*"Hands-on"* work, cutting-up and preparing meat and fish to eat or store, allowed the preparer to see the quality of food up close. The young men accompanied their fathers or older men when they hunted, fished, and trapped. Seeing their catch up close, they would discern whether the meat *"is good"* or *"not good"*. This is evident in how in their later years they can do the things that Elders used to do. Like Elder Charlie Apples said, *"Everything our elders taught us, we still do today. We live it."* In other words, both harvesters and preparers of food inspect it to make sure it is edible. All was good for consumption when Elders interviewed were born and growing up on the land. Significant changes to the land were only observed after seeing the negative impacts of mining on the lives of many who passed on.

Living along the shores of Tideè (Great Slave Lake) may seem like a safe distance from Sqòmbak'é, but over the years Elders have seen significant changes and unhealthy wildlife and habitat throughout the land. Experiencing the changes and damage to Kwetjìᑲàa (Rayrock), Elders see the similarities along the shores of Tideè. While all Elders spoke of living at or visiting Whq̄siwekq̄q̄ (Blackduck Camp), some spoke of living on taagaà (shores) of Tideè. They travelled by dogteam with their families; some spoke of hunting or trapping. The land was vital to securing their needs wherever they lived. Elder Rosa Huskey stated in her interview that despite the cold she joined the women to look for moss used in diaper bags for babies. The land where they camped had a large marshy area where they collected moss and carried it on their backs to camp. Given that the store did not sell clothes at the time, she had to be resourceful in making traditional clothing for her children.

The men knew where all the good fishing spots were. They mentioned setting nets in Homìk'éè (on the North Arm) and among the North Arm islands and around K'itsiì (Whitebeach Point). There was an abundance of fish in the area when fishermen came from the south to ʔenòòda (Trout Rock) after mining began in Sqòmbak'é. There was a flurry of fishing activity that Elder Moise Rabesca says wiped out coney and trout in the North Arm. Trout and coney are slowly making a return and are caught in nets again. Unlike the past when the meat of the fish was strong and sturdy and good to eat, fish today show signs of negative impacts. While Elder Charlie Apples says the meat of the fish is *"soggy and weak"*, Elder Dora Migwi says the fish

caught in a net from the North Arm was "milky like" and unlike the sturdy fish meat she was accustomed to in the past.

Elder Michel Louis Rabesca lives along the highway and has a cabin close to a lake. He said they could not fish there because they were too close to the highway. He does not use tree sap from near the road or the mines. More specifically he noted:

*Where mines are built all the land has been ruined. Everything is spoiled . . . and we know that. I've worked the land for many years, so I use tree water. Once I wanted to know [more] so close to my house, so by the roadside I took some trees. I made some tree broth. The tree broth turned just white. It looked just like milk. But far back, probably two or three miles, thereabouts, I came across some tamarack trees. The tamarack is good and it's good when we drink its broth. It's [the tree] good so I cut it down and where my camp was, is where I carried it. I made broth out of that. I made broth from tamarack by the roadside and broth from tamarack from five miles away. They were both different. The trees were the same, yet the broths were different. I wondered about that for myself and at the time that the road was built it made of dirt so maybe the dust [or gas] blew around? Maybe its because of that? Maybe its because of the mine, I don't know. I'm saying that that is what I observed. When we say spruce gum water, that's how spruce is. It's the same. Even that is like that. When I collected spruce gum from far away, even that looked very good. But the ones by the roadside looked just white [not good]. When I collected spruce gum from far away that looked very good. But the ones by the roadside looked just white. - Elder Michel Louis Rabesca*



Elders Charlie Apples and Moise Rabesca recall when Highway 3 was first being built in the 1950s and completed in 1960. Many Tłıchǫ men were hired to cut brush and trees from Behchokǫ towards the men who were brush cutting from Sòǵmbak'è.



Brush cutting gave many men paying jobs, but the downside was credit that was due on payday, leaving men with little cash. They brought home cow meat and pork, sometimes leftover from the brush cutting camp.



When the road was built and used by large trucks and vehicles, thick dust clouds settled on either side of the highway. In the early stages of the highway, young men would walk along the highway hunting for muskrat or ducks. Elders Eddie Rabesca and Michel Louis Rabesca live near the highway. Prior to paving, they said that they never hunted along the highway and still will not. Michel thinks that the dust from the highway, so thick it was impossible to *"pass another vehicle,"* has settled all along the highway and wonders how much of the land is polluted. Thus, hunting along the highway is out of the question even though his cabin is away from the road. Elder Celine Tatzia reinforces this: *"We can't go picking berries along the highway. We can hunt along the highway [but] even if we were to kill an animal, we can't eat the meat. We can't eat rabbit meat. It's no good."*

Elder Rosa Mantla shared that she often lived on the land with her late husband and family. She named all the places where she lived and travelled north of Hàèlǎ (Marian Village) on ʔhdaak'ètì (Marian Lake). She recalls on one of her late husband's trips past Hàèlǎ, when he and another man stopped to make camp as they were hungry. They had shot a duck, then plucked and cleaned it before cooking it. As the husband touched the belly of the duck, it was moving with parasites. Upon finding that, he threw the duck in the fire. Elder Dora Migwi said she feared that the problem could be widespread. Tideè is a big lake and full of waterfowl. If a hunter got hungry, the men would kill ducks and cook it while camping.

Water has always been used in cooking or making tea. There used to be no concerns about using lake water to make tea, but Elder Eddie Rabesca says they now carry water to make tea when they travel the land. They hesitate to use lake water wherever they travel. The chemicals used by the mines are suspect and many believe the waters are polluted and can no longer be used for drinking. Unless water is treated, there are hesitations when it comes to cooking or drinking. Many Elders drink bottled water instead of water from the tap.

Elder Michel Louis Rabesca says snow is a concern. In the winter when they collect snow from the shoreline for tea, Michel's boys use a snow machine to go far from town to collect snow. *"We used to canoe on the small lakes and anywhere along the shore we drink water. We can't help ourselves to water [now]. Unless we boil water, we can't drink water. It may cause stomach-ache. It does that everywhere . . . When we canoe somewhere, we now carry water with us. When we want to camp somewhere along the road, we make tea with the water we carry with us."* Elder Celine Tatzia said this too: *"Here in Behchokò they give us water and it's no good. We don't use that kind [for tea]."* Many families are known to collect snow for the summer to make tea with, like Elder Michel Louis Rabesca, who has enough snow water to last him till the next snowfall.

## CONCLUSION

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The mines at Sqòmbak'é caused damage to the land and the Tłıchq's way of life, even before the road was built from the south and the city grew large. Pollution in the air and water harmed the animals, water, fish, and plants, which became unsafe to eat and drink. Families had to move further away or get food from elsewhere to survive. Harvesting areas were also lost to development and roads. As Elder Michel Louis said, "Today, berries don't grow, and no caribou!"

The city grew even more after the road was built and the territorial government moved to Sqòmbak'é. Government officials lived there; and major decisions were made on behalf of the people they represented, including decisions respecting Tłıchq traditional land.

Many services were available in Sqòmbak'é that were not provided in the small communities, including a residential school, but Tłıchq people in the area lost the freedom to use the land and its natural resources as they had always done. People had to learn to speak English, and new foods were introduced. The way of life around the city was very different than in the small Tłıchq communities and camps.

"Those of us who have grandchildren growing, what will life be like for them?" asked Elder Eddie Rabesca. "They will always have to buy from the store, it would seem."

## REFERENCES

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- Auditor General Canada. 2012. "Chapter 3 – Federal contaminated sites and their impacts." *Report of the Commissioner of the Environment and Sustainable Development—Spring 2012*. [https://reviewboard.ca/upload/project\\_document/EA0809-001\\_Commissioner\\_for\\_the\\_Env\\_2012\\_Spring\\_Report.PDF](https://reviewboard.ca/upload/project_document/EA0809-001_Commissioner_for_the_Env_2012_Spring_Report.PDF). Accessed October 24, 2022
- Bullen, Warwick, and Malcolm Robb. ND. "Socio-economic Contribution of Gold Mining in the Yellowknife Mining District." [https://www.miningnorth.com/\\_rsc/site-content/library/economics/Robb-Bullen-Socio-Economic\\_Impacts\\_of\\_GoldMining\\_in\\_Yellowknife2004.pdf](https://www.miningnorth.com/_rsc/site-content/library/economics/Robb-Bullen-Socio-Economic_Impacts_of_GoldMining_in_Yellowknife2004.pdf). Accessed October 24, 2022
- Canada North Environmental Services. 2018. "Giant Mine Human Health and Ecological Risk Assessment, Final Report". (Markham, Ontario: Project No. 2385, January 2018).
- CBC. "Tłıchq government receives funding for new apprenticeship program." February 23, 2023. Accessed: March 14, 2023 <https://www.cbc.ca/news/canada/north/tlicho-trades-apprentice-program-1.6758761>
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). 2018. "History of Giant Mine." Accessed: March 14, 2023 <https://www.rcaanc-cirnac.gc.ca/eng/1100100027388/1617821149343>
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). ND. "Giant Mine Regulatory Context and Environmental Assessment" Accessed April 2022 <https://www.rcaanc-cirnac.gc.ca/eng/1522948831260/1617973271169>
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). "Socio Economics, Employment and Contract Opportunities. Presentation." April 2022. Accessed: March 14, 2023 <https://www.rcaanc-cirnac.gc.ca/eng/1671719019334/1671719068612?wbdisable=true>
- Government of Northwest Territories (GNWT). "NWT-Wide Community-Based Water Quality Monitoring (CBM) Program – 2013 Results." Accessed: October 17, 2022. [https://nwt.discoveryportal.enr.gov.nt.ca/geoportal/documents/Water%20Poster%2024x36%20150610%20LowRes%20\(3\).pdf](https://nwt.discoveryportal.enr.gov.nt.ca/geoportal/documents/Water%20Poster%2024x36%20150610%20LowRes%20(3).pdf).
- Government of Northwest Territories (GNWT). "Water Management and Monitoring, Community-based Monitoring." Accessed: October 17, 2022 <https://www.enr.gov.nt.ca/en/services/water-management-and-monitoring/community-based-monitoring>.
- Government of Northwest Territories (GNWT). "Arsenic Concentrations." Live Interactive Mapping Tool. Accessed November 2021. <https://nwtgeomatics.maps.arcgis.com/apps/webappviewer/index.html?id=8e71506a496b4587af25f537cf80d886>

- Indian and Northern Affairs Canada (INAC) and Government of the Northwest Territories (GNWT). 2010. "Giant Mine Remediation Project Developer's Assessment Report". Accessed February 2022. [https://reviewboard.ca/upload/project\\_document/EA0809-001\\_Giant\\_DAR.PDF](https://reviewboard.ca/upload/project_document/EA0809-001_Giant_DAR.PDF)
- Johnson, Ken and Greg Haist. 2007. "Snare River Hydro: A History Dedication". Accessed October 17, 2022. [https://issuu.com/cryofront/docs/snare\\_river\\_hydro\\_-\\_a\\_history\\_dedication](https://issuu.com/cryofront/docs/snare_river_hydro_-_a_history_dedication)
- Legat, Aalice, Georgina Chocolate, Madelaine Chocolate and Sally Anne Zoe. 2014. *Habitat of Dogrib Traditional Territory: Place Names as Indicators of Biogeographical Knowledge*. October 2014. [https://research.tlicho.ca/sites/default/files/105-place\\_names\\_report-web.pdf](https://research.tlicho.ca/sites/default/files/105-place_names_report-web.pdf)
- Legat, Aalice, Joan Ryan, Sally Ann Zoe, Marie Adele Rabesca, and Madeleine Chocolate. 2015. *The Trees all Changed to Wood: Remembering Rayrock Uranium Mine*. December 2015. [https://research.tlicho.ca/sites/default/files/trees\\_all\\_change\\_to\\_woods\\_report.pdf](https://research.tlicho.ca/sites/default/files/trees_all_change_to_woods_report.pdf)
- Legat, Aalice, Georgina Chocolate, Bobby Gon, Sally Anne Zoe, and Madeleine Chocolate. 2015. *Caribou Migration and the State of their Habitat: Tłıchq Knowledge and Perspectives on 2ekwò (Barrenland Caribou)*. January 2015. Yellowknife, NWT. <https://www.wrrb.ca/sites/default/files/Caribou%20Migration%20and%20the%20State%20of%20Their%20Habitat.%20Behchoko%20Tlicho%20Traditional%20Knowledge%20Reports%20Series%202.pdf>. Access February 10, 2023
- Raihan K. Khan and Mark A. Strand. 2018. "Road dust and its effect on human health: a literature review." *Epidemiol Health* 40. (April 10, 2018) doi: 10.4178/epih.e2018013 <https://www.e-epih.org/upload/pdf/epih-40-e2018013.pdf>
- Silke, Ryan. 2009. "The Operational History of Mines in the Northwest Territories, Canada." [https://www.miningnorth.com/\\_rsc/site-content/library/NWT\\_Mines\\_History\\_RSilke2009.pdf](https://www.miningnorth.com/_rsc/site-content/library/NWT_Mines_History_RSilke2009.pdf)
- Saxon, L, Aalice Legat, Georgina Chocolate, and S.A. Gon. 2023 (draft). Tłıchq Placenames: Indicators of Knowing Mqwhì Gogha Dè Njıtlèè.
- Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP). Webpage. Accessed October 17, 2022. <https://wrrb.ca/projects/tlicho-aquatic-ecosystem-monitoring-program>
- Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP). 2016. "Final Report, Behchokò, 2015." September 30, 2016. Accessed October 17, 2022. [https://wrrb.ca/sites/default/files/FINAL\\_Report\\_TAEMP\\_Behchoko\\_%202015\\_final\\_for\\_website\\_0.pdf](https://wrrb.ca/sites/default/files/FINAL_Report_TAEMP_Behchoko_%202015_final_for_website_0.pdf).
- Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP). 2018. "Final Report, Wekweètì 2016." July 5, 2018. Accessed October 17, 2022.

[https://wrrb.ca/sites/default/files/FINAL\\_Report\\_TAEMP\\_Wekweeti\\_%202016\\_for\\_website.pdf](https://wrrb.ca/sites/default/files/FINAL_Report_TAEMP_Wekweeti_%202016_for_website.pdf).

Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP). "Final Report, Gamètì 2017." June 27, 2019. Accessed October 17, 2022.

[https://www.wrrb.ca/sites/default/files/FINAL\\_Report\\_TAEMP\\_Gam%C3%A8t%C3%AC\\_%202017\\_for\\_website\\_0.pdf](https://www.wrrb.ca/sites/default/files/FINAL_Report_TAEMP_Gam%C3%A8t%C3%AC_%202017_for_website_0.pdf).

Tłıchq Aquatic Ecosystem Monitoring Program (TAEMP). "Final Report, Whatì 2018." June 27, 2019. Accessed October 17, 2022.

[https://www.wrrb.ca/sites/default/files/FINAL%20Report\\_TAEMP\\_Whati\\_%202018\\_0.pdf](https://www.wrrb.ca/sites/default/files/FINAL%20Report_TAEMP_Whati_%202018_0.pdf).

Yellowknife Health Effects Monitoring Program (YKHEMP). n.d. "Results". Accessed October 17, 2022. <https://ykhemp.ca/results/>

"Yellowknife Highway." Wikimedia foundation, last modified March 9, 2022,

[https://en.wikipedia.org/wiki/Yellowknife\\_Highway](https://en.wikipedia.org/wiki/Yellowknife_Highway)

## APPENDICES

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## Appendix A: Questionnaire

### **Tłıchq Research: History and Traditional Knowledge**

The following is an outline of the Tłıchq history and traditional knowledge that is being sought in relation to Giant Mine and related infrastructure of Snare Hydro and Hwy 3. Since the mine was in operation close to 70 years, different generations will have different knowledge and information that can be documented. Every generation will have something to share.

#### *SECTION 1: BIBLIOGRAPHICAL INFORMATION*

Name: \_\_\_\_\_

Gender (Optional): \_\_\_\_\_

How old are you (year born)? \_\_\_\_\_

Where were you born/raised? \_\_\_\_\_

Where is this interview being conducted? \_\_\_\_\_

Where do you live? \_\_\_\_\_

Date and time? \_\_\_\_\_

#### *SECTION 2: PERSONAL HISTORY RELATING TO GIANT MINE*

- Do you have any personal history with the Giant Mine? Previous interviews or Knowledge Studies? Have you worked for the mine? If so, when and where?
- Has Giant Mine had an influence on your life?
- Are you part of the Yellowknife Human Effects Monitoring Program, the Hotı ts'eeda study or any other study focused on health effects related to Giant Mine?
- Which Giant Mine period will you talk about the most? 1930-1940 1941-1950 1951-1960 1961-1970 1971-1980 1981-1990 1991-2004

#### *SECTION 3: VEGETATION AND MEDICINAL PLANT GATHERING*

- Talk about your or your family members experience in medicinal plant gathering or gathering plants for food in the study area?
  - What species of plants do you harvest and for what use? Are any species difficult to find elsewhere?
- Can you identify on the map where you go in gathering food or medicinal plants?
- How do you get to these places? Draw on map
- Have you or your family always used these areas? If no, when did you start?

- Did the presence of Giant Mine change your harvesting of plants for medicine or sustenance? For example, did you avoid an area? Did you go somewhere else? Did you harvest less? (Map if relevant).
- Have you collected mushrooms within 25 km of Giant Mine? Do you or your family collect berries, medicines, or other plants within 10 km of Giant Mine?
- What else would you like to share about vegetation and medicinal plant gathering near Giant Mine?

#### *SECTION 4: FISHING LOCATIONS*

- Do you or members of your family/community have important fishing sites in the study area? Map locations
- Do you engage in fishing in Yellowknife Bay, Baker Creek, and Back Bay or Great Slave Lake? Which areas do you fish most often?
- How do you get to these places? Draw on a map.
- What species of fish do you commonly catch? Do the location or type of fishing change seasonally? If so, how?
- Are any of the fish species only found in the study area?
- Has the number of fish changed in recent years? If so, what does that change look like?
- Has the Giant Mine affected the places you fish or your ability to access fishing locations? If so, where and how?
- What else would you like to share about fishing and fishing locations near Giant Mine?

#### *SECTION 5: HARVESTING LOCATIONS*

- Did you or your family do any harvesting (hunting and trapping) in the study area? What species do you harvest?
- Can you identify on the map the harvesting locations and what type of harvesting is associated with each location?
- Have harvesting practices changed or remained the same over time? If so, how?
- Did the Giant Mine affect your ability to harvest? For example, did you avoid an area? Did you go somewhere else? Did you harvest less? (Map if relevant).
- Have you or your family harvested grouse, ptarmigan, rabbit, snowshoe hares, muskrat or other species within 10 km of Giant Mine? If so, when and what species?
- What else would you like to share about harvesting locations near Giant Mine?



#### *SECTION 6: CULTURAL SITES AND PLACE NAMES*

- Can you identify the following types of places and what do you know about these places?
  - Places you remember having camped or created a temporary shelter
  - Permanent structures, such as a cabin
  - Places used for ceremonies, burials, gatherings, etc.
  - Places of spiritual or cultural importance, such as the home of a spirit or locations that are associated with special knowledge or stories (as well as any protocols for respecting that place)
  - Places of cultural or spiritual importance that you have heard of other Tłıchǫ people using
  - Place names for different places in the study area
- Can you say if Giant Mine and related infrastructure change your relationship with any of these places?
- Are there any other important locations you think we should be documenting today?

#### *SECTION 7: DRINKING WATER LOCATIONS*

- Did you or your family use drinking water from any areas in or around Giant Mine before the mine was built? Can you map the locations for us?
- If the locations are different today, why did they change?
- Do you now or previously gather snow and ice for drinking water within the study area?
- Do you use local lakes as a source of drinking water? If so, which lakes and how often?

#### *SECTION 8: SUMMARY*

- Is there anything from your personal experience of Giant mine over the years that we have not touched on today that you think is important to be recorded as part of the interview?
- Do you know anyone we should interview that has knowledge or personal experience related to Giant Mine?

## Appendix B: Maps

Figure 1: Tłıchq Knowledge Project – Study Area Overview

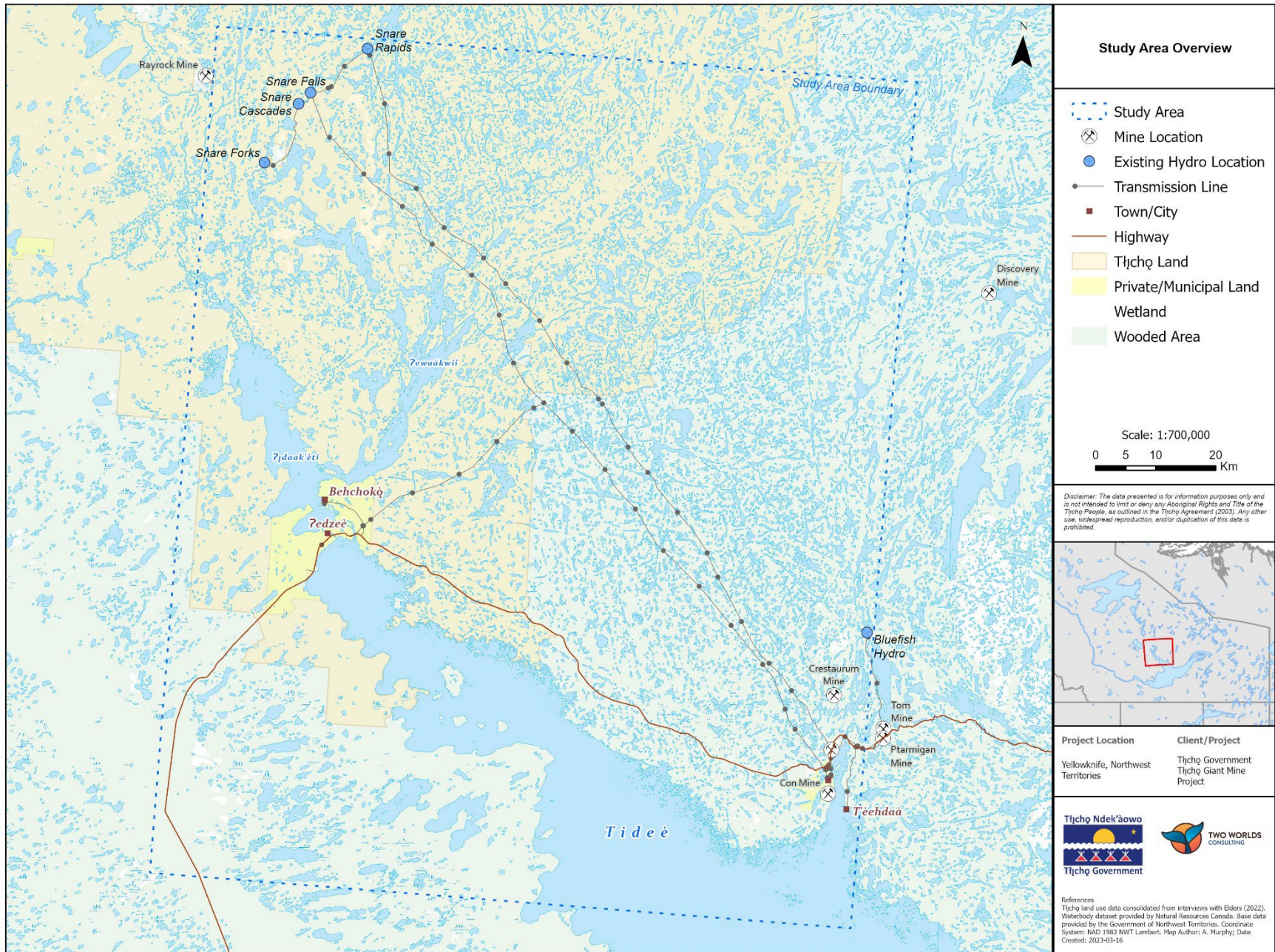




Figure 2: Tłı̨chǫ Elders' Knowledge of Land and Resource Use for Camp and Travel

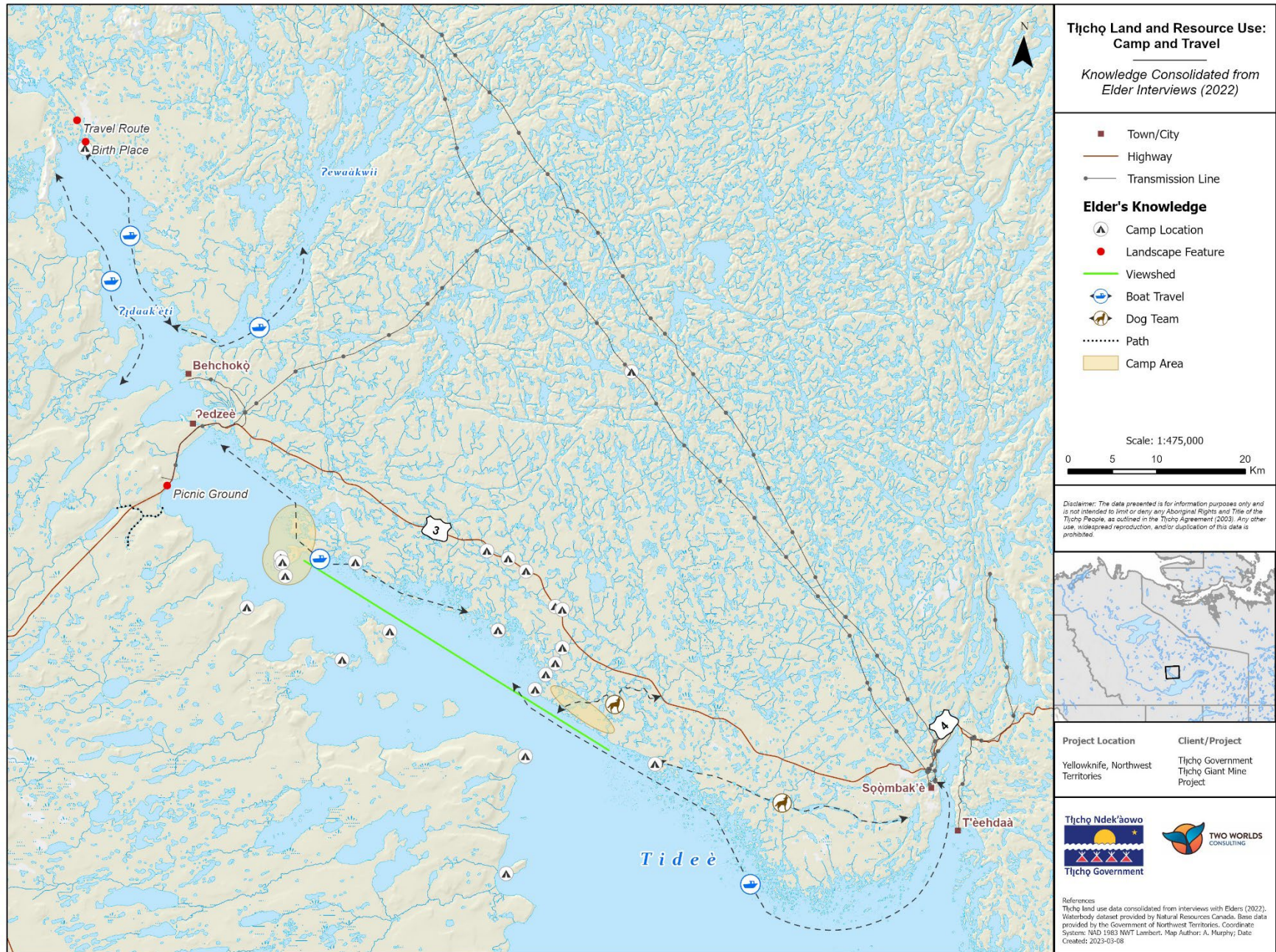




Figure 3: Tłıchǫ Elders' Knowledge of Land and Resource Use for Hunting, Fishing, and Trapping

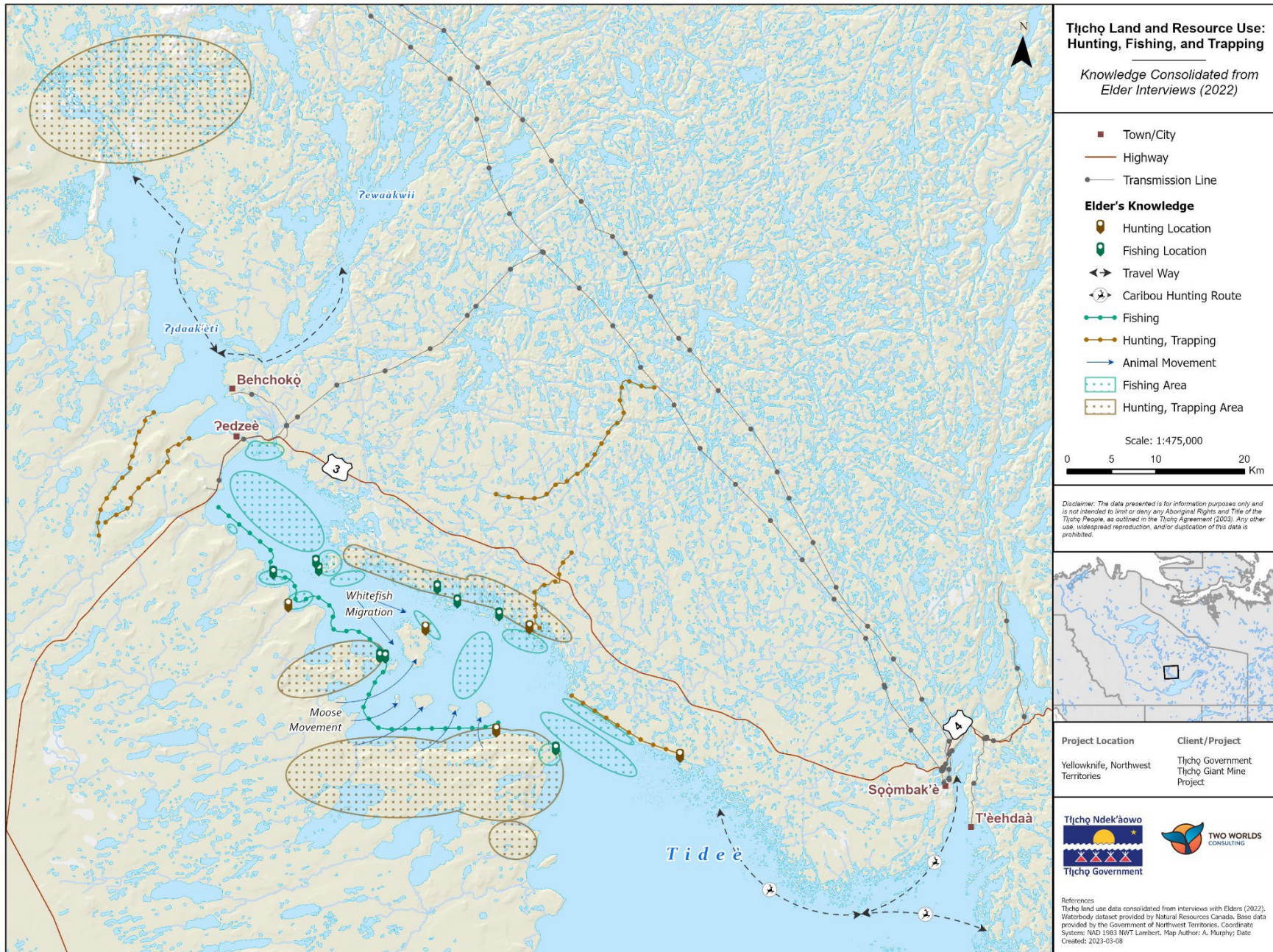




Figure 4: Tłıchq Place Names Identified by Elders – Map A

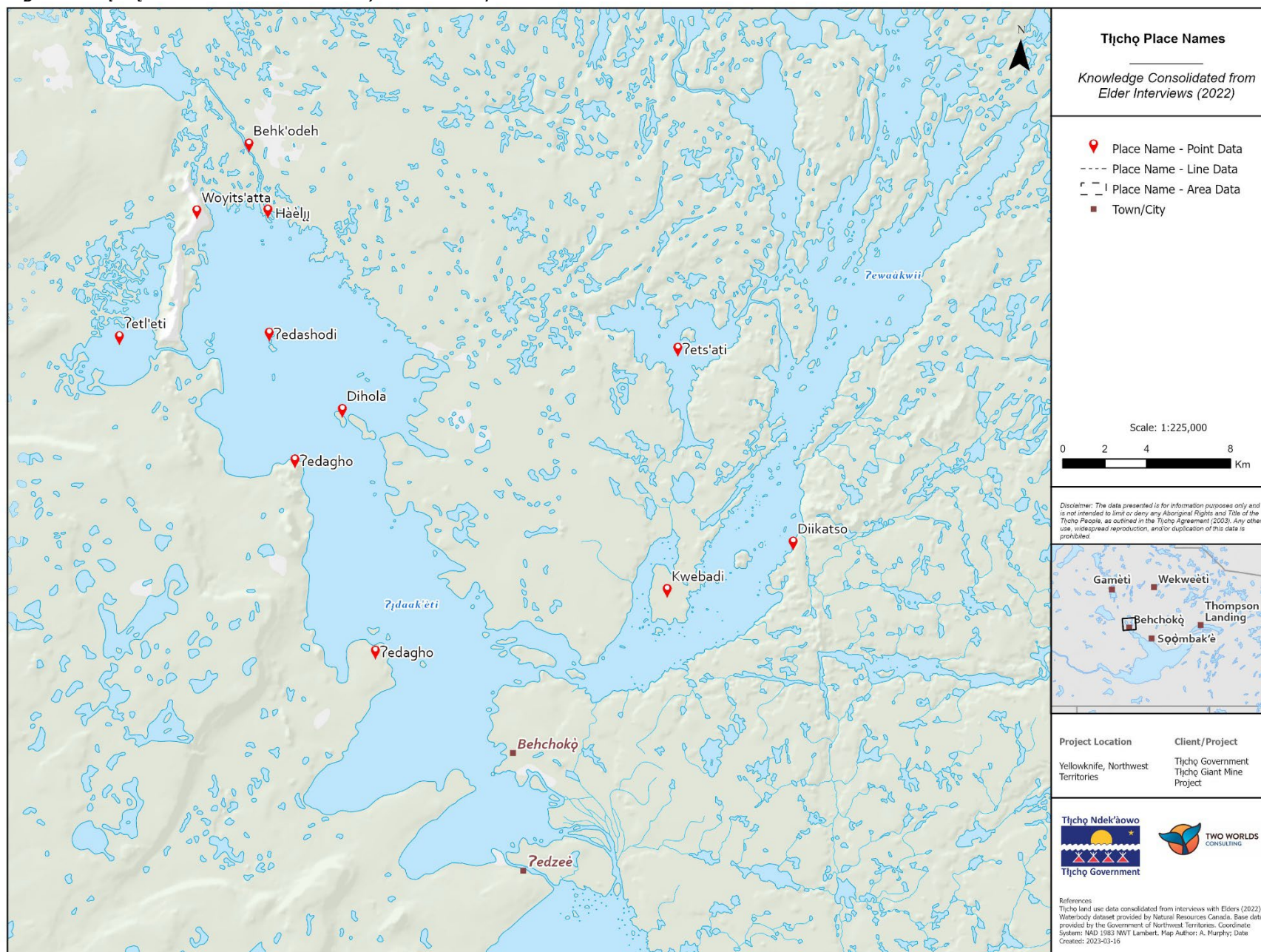




Figure 5: Tłı̨chq̓ Place Names Identified by Elders – Map B

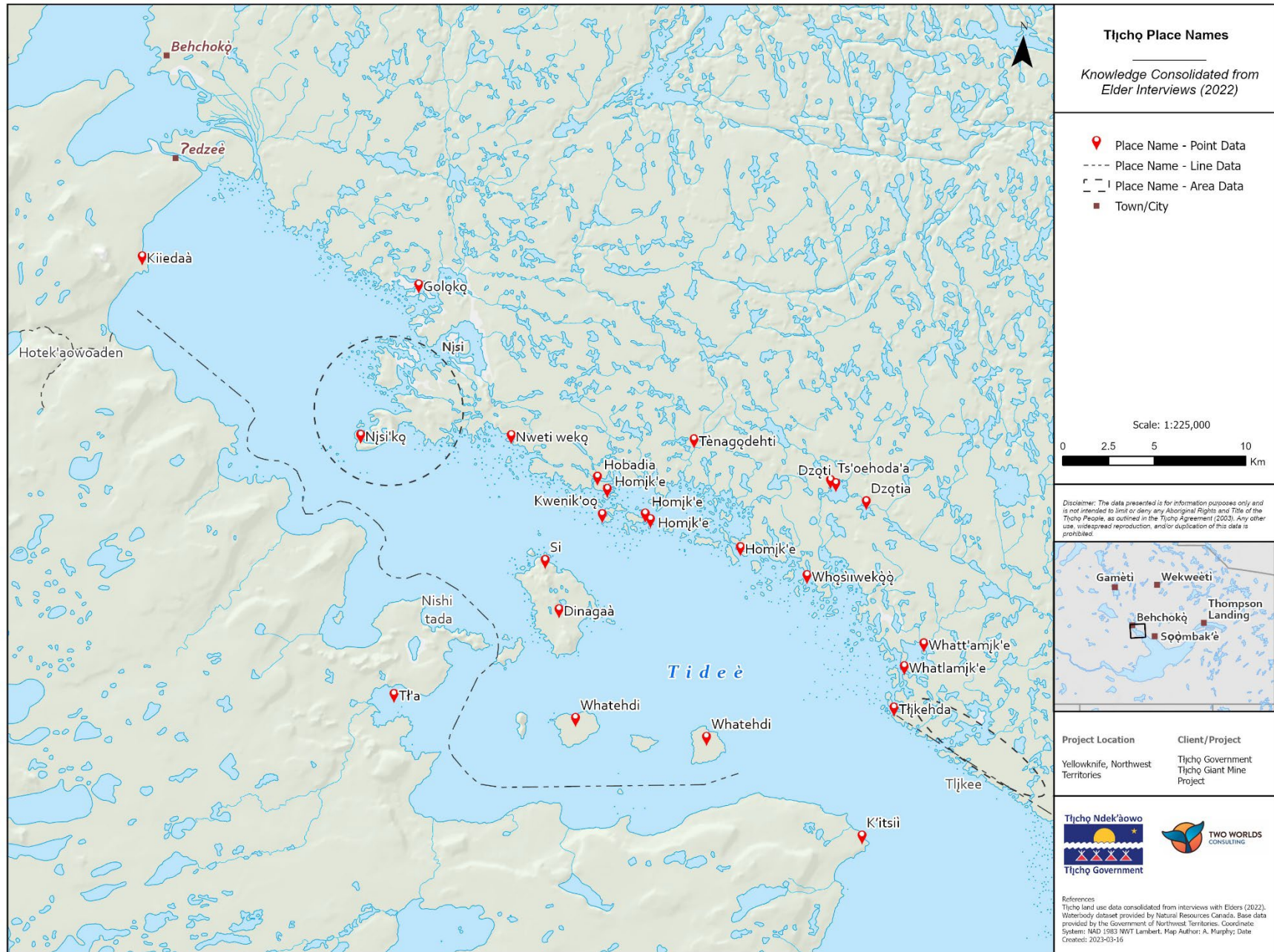




Figure 6: Tłıchq Place Names Identified by Elders – Map C

