

# BAD PROSPECTS

**The Mining Exploration Financial Model  
that Rewards a Few While Creating  
Excessive Risks in the Shared Watersheds  
of British Columbia and Alaska**





## CONTENTS

<b>Executive Summary</b>	<b>2</b>
<b>The Transboundary Watershed Region</b>	<b>3</b>
<b>What is the Prospect Generator Model (PGM)?</b>	<b>5</b>
<b>Methodology</b>	<b>6</b>
<b>Prospect Generators on the B.C. side of the Transboundary Watershed Region</b>	<b>7</b>
<b>Why Canada?</b>	<b>9</b>
<b>Low Risk for Miners, Massive Risk for Everyone Else</b>	<b>10</b>
<b>Are New Gold Mines Necessary?</b>	<b>12</b>
<b>Case Studies</b>	<b>13</b>
Taku River Watershed: Brixton Metals Corporation	13
Unuk/Nass River Watershed: Teuton Resources, Silver Grail Resources, and Tudor Gold	14
Stikine River Watershed: Enduro Metals and HEG & Associates Exploration Services	17
<b>Conclusion and Recommendations</b>	<b>20</b>
<b>References</b>	<b>21</b>

## ABOUT EIA

For over 30 years as a non-profit organization, EIA has pioneered the use of undercover investigations to expose environmental crime around the world. Intelligence reports, documentary evidence, campaigning expertise, and an international advocacy network enable EIA to achieve far reaching environmental justice by amplifying local voices, spurring changes in market demand, government policy, and enforcement related to global trade in forest products, wildlife, and other environmental products.

### EIA US

PO Box 53343  
Washington DC 20009  
USA  
T: +1 202 483-6621  
E: [info@eia-global.org](mailto:info@eia-global.org)

[us.eia.org](http://us.eia.org)

Design: [www.designsolutions.me.uk](http://www.designsolutions.me.uk)

Front cover: © EIA

© Environmental Investigation Agency, Inc. 2024

Unless otherwise noted, the source for the report are EIA's internal investigative reports, photos, audio and video evidence collected during the investigation.

**Please note:** All monetary values stated in this report are shown in Canadian dollars.





# EXECUTIVE SUMMARY

Source: Colin Arisman | colinarisman.com

The transboundary watershed region, a vital and heavily glaciated ecological and cultural area where large salmon rivers flow from Northwest British Columbia (B.C.) into Southeast Alaska, faces escalating pressure from B.C. mining exploration propelled by a complex version of the Prospect Generator Model (PGM).

An Environmental Investigation Agency (EIA) study reveals that the PGM, as employed in this region known to the mining industry as the “Golden Triangle,” shares many of the structural and operational attributes of a Ponzi scheme.

Our investigation found a web-like network of more than 450 Canadian companies that are currently linked through the PGM and focused on claims staking and mining exploration across Northwest B.C. EIA estimates over 80% of these B.C. mining claims are within 5 km of a river or stream and about 18% of claims are on top of glaciers. These “prospect generators” are mining not as much for gold as they are for retail investors and uniquely Canadian tax benefits. Most of these companies are listed on the Toronto Venture Stock Exchange (TSX.V) and generate no revenue.

The companies rely on a continuous stream of funds from smaller investors to pay handsome executive salaries, dig hundreds of kilometers of holes, build infrastructure such as roads, bridges, and camps along fragile ecosystems like retreating glaciers and wild salmon habitat, and establish joint ventures and option agreements with other companies. Mining-friendly laws such as the colonial B.C. Mineral Tenure Act and tax policies in Canada and B.C. that incentivize exploration, such as Flow-through Shares and the Mineral Exploration Tax Credit, make this salmon-rich region a particularly attractive place for mining executives and major investors to deploy the PGM financial approach as part of a new speculative gold rush.

The hope of retail investors is that one of these prospects will one day become a highly profitable mine that delivers large returns. However, according to the Association for Mineral Exploration, only one in 10,000 claims becomes a mine, which means average investors, Canadian taxpayers, Indigenous peoples, rural residents, and U.S. communities and economies downstream are left shouldering the financial and environmental risks and costs of the Prospect Generator Model and B.C. gold

mine exploration. Meanwhile, a small cohort of distant mine owners and major investors get rich while carrying almost no risk. Such imbalance distorts the risk-to-reward ratio and raises questions about the long-term financial sustainability for investors and the social responsibility of mining enterprises.

For ten years, Alaska Tribes, municipalities, commercial fishermen, lawmakers, and tens of thousands of U.S. and Canadian citizens have expressed concern about Canada’s industrialization and pollution of shared wild salmon rivers. Two large-scale B.C. mines with tailings dams currently operate and one abandoned B.C. mine has been polluting for over 66 years in the region, and over 100 mine projects are in some phase of exploration, proposal, or development. Alaska Senator Lisa Murkowski recently wrote to President Biden urging the U.S. to not support any mine in Canada until the calls of Alaska Tribes and communities for international watershed protections are addressed.

Given the myriad adverse social and environmental impacts perpetuated by the PGM and the lack of benefits to any but a few made clear in this investigation, Canada’s support for initiating new gold exploration projects in the AK-B.C. transboundary region and continued support for big tax incentives for mine proponents is puzzling. There is growing consensus that global gold stockpiles are more than adequate, with over 90% of newly mined gold used for jewelry or bullion, not renewable energy production; irreversible impacts to Indigenous communities and this biodiversity hotspot are increasing; and researchers predict thousands of kilometers of new wild salmon habitat will emerge here this century as glaciers melt — if they are not first dug up for mine exploration and development. In light of these challenges, it is imperative to revise or terminate British Columbia and Canadian policies that foster PGM-driven exploration and to enforce regulatory changes that prioritize Indigenous rights and environmental protection.



Source: Chris Miller | csmphotos.com

## THE TRANSBOUNDARY WATERSHED REGION

The transboundary watershed region is an area of Northwest British Columbia (B.C.), Canada, and Southeast Alaska, United States, that encompasses the watersheds of four major rivers, the T'aakū (Taku), Shtax'heen (Stikine), Joonáx (Unuk), and Naas (Nass), and smaller watersheds like the Whiting and Salmon Rivers and the K'ahna.aan (Portland Canal). Covering 130,000 square kilometers, or 32 million acres, the majority of the watersheds of the transboundary region lie within B.C. The pristine rivers shared by several Indigenous nations, B.C., and Alaska, flow from the high alpine tundra and boreal forests of British Columbia into the temperate

rainforests and island marine environment of Southeast Alaska.

The transboundary region is a uniquely complex and interconnected web critical for the survival of salmon and many other species of fish and wildlife. For tens of thousands of years, these shared rivers have been stewarded by Alaska Native peoples and First Nations in B.C. Close to two dozen communities on both sides of the international boundary depend on these waters for food security, traditional ceremonies, and their very survival. In a time of accelerating climate change and species loss,



the significance of these watersheds as complete, resilient reservoirs of biodiversity are in serious danger of being lost.

The rugged and remote character of the B.C. portion of the transboundary region, without roads and power infrastructure, kept it mostly free of industrial development throughout much of the 20th century. However, within the past quarter-century, B.C. has viewed the transboundary river headwaters as a highly attractive mining frontier. B.C. has so far welcomed at least 100 companies with mining claims in various stages of exploration, planning, development, or operation on the B.C. side of the transboundary region—known to industry as “The Golden Triangle.” B.C.’s industrial exploration, mining activity, and mining waste pose a significant threat to the shared salmon river ecosystems, and threaten to bring much more pollution to the shared salmon river ecosystems.

The United States-Canada Boundary Waters Treaty of 1909 was established to prevent and resolve disputes involving shared waters along the international boundary. Although the Treaty has been invoked in several locations along the U.S.-Canada border in the last 115 years, the governments have not yet specifically agreed to enforce the Boundary Waters Treaty in the Alaska-B.C. transboundary region. For ten years, Alaska Tribes, municipalities, commercial fishermen, business owners, and lawmakers at every level of government, as well as thousands of individual Alaskans, have called for enforceable watershed protections in the transboundary region due to B.C.’s legacy mining and recent industrial boom of mining exploration, proposed mining, and mining operations along shared rivers without the consent of those downstream. This surge in mining industry activity in the transboundary watershed region is predominantly being driven by small exploration companies that employ a specific approach: the Prospect Generator Model.

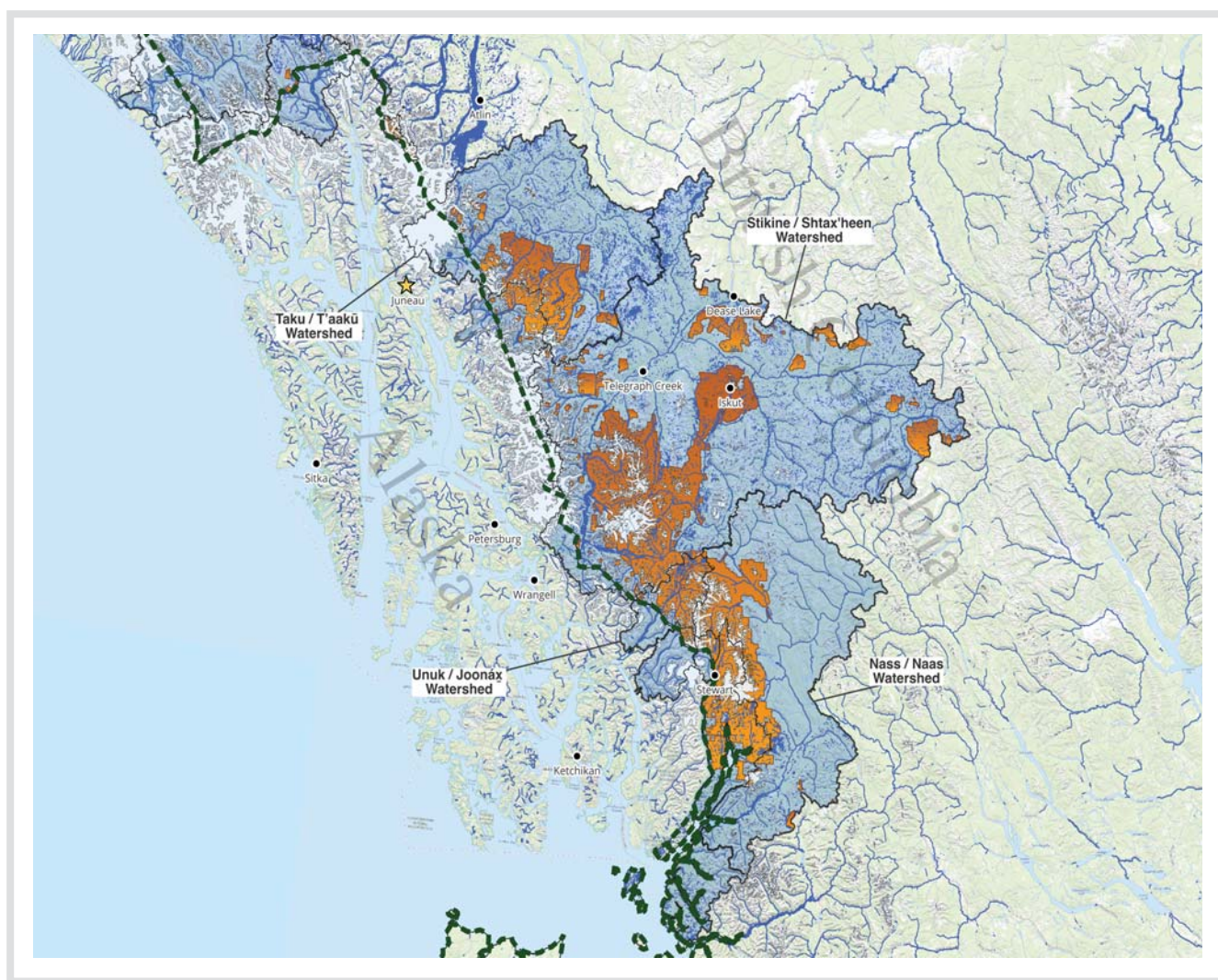


Figure 1  
Mining claims (orange) in the Alaska-British Columbia Transboundary Watershed Region, showing overlap with rivers, streams, lakes and glaciers





Source: Colin Arisman | colinarisman.com

## WHAT IS THE PROSPECT GENERATOR MODEL?

The Prospect Generator Model (PGM) is a financial model utilized in the mining industry. The model relies on multiple companies raising funds from investors for the development of multiple mining claims or “prospects” with the goal that at least one claim will become a profitable mine and cover the cost of exploring the others’ prospects. The companies are known as “prospect generators” because they “generate” many “prospects” by staking and nominally developing mining claims. The term “Prospect Generator Model,” as originally coined in the 1990s by American investor Rick Rule, refers to the operations of an individual company raising investments on multiple prospects with the hope that one may become an operating, profitable mine.<sup>1</sup> However, the application of the PGM, as defined in this report, represents the complex networks of companies that are connected through various joint ventures, investments, and/or geographic proximity. The need for this labyrinthine structure is critical because, as often is the

case, a single company cannot sustain the model on its own unless one of its claims becomes profitable in a relatively short period of time.

Prospect generators typically generate little to no revenue and what little revenue they do generate is likely not from mining operations. To cover their expenses, including executive salaries, Prospect Generators rely on raising funds through stock offerings, engaging in other investment mechanisms, or establishing joint ventures and option agreements with other companies.<sup>2</sup> However, the revenue generated by joint ventures and option agreements also ultimately comes from investors because these other companies are likely to have little to no revenue, as well. The allure to potential average investors is that one of these prospects will one day actually become a highly profitable mine and therefore offer very large returns. However, according to the Association for Mining Exploration,

"Typically, 1 in 10,000 exploration projects becomes a mine,"<sup>3</sup> leaving the chances of striking it rich with a particular investment at a fraction of a percent.

To satisfy investors in the furtherance of the goal of generating revenue from mining, prospect generators spend investment money to develop their prospects. This takes the form of hiring and deploying geologists to the field to analyze the prospects by drilling core samples and other methods of mineral analysis. The companies then regularly issue technical reports on their viability. In many cases, executives or other related parties benefit from this spending on exploration by compensating themselves or companies they control for exploration-related consulting services.

The primary stated benefit of the PGM is that it reduces investor risk in mining by spreading the risk across multiple projects. However, the risk is only truly spread for executives, major investors, or other related parties of prospect generator companies who continue to receive high salaries, tax breaks, or other benefits with no real financial repercussions for continuing to pursue risky prospects. In reality, the risk to the average investor is not effectively spread, similar to how buying more lottery tickets only marginally improves the odds of winning but doesn't meaningfully decrease the inherent risk or unpredictability of the lottery itself. A lottery analogy is often employed by Rick Rule: "...think of it as attempting to acquire a bag of lottery tickets or rather partial lottery tickets, where somebody else paid for most of the tickets...."<sup>4</sup> For the most part, average investors are the ones buying the bulk of these "lottery tickets" while

company executives get to both sell the "tickets" as well as profit from any potential winnings. Rick Rule typically cites more favorable odds of 3,000 to 1 for mining investing, compared to the previously mentioned 10,000 to 1 odds. Regarding investment in B.C. mines, he has made remarks such as "the idea that you take a one in three thousand chance for a ten to one return makes the B.C. lottery look like a really good deal."<sup>5</sup> However, many casino games, like roulette, offer better odds.<sup>6</sup>

Generally speaking, the PGM shares many of the structural and operational attributes of the classic "Ponzi scheme." In a Ponzi scheme, a company with no real revenue promises investors big returns when in reality the majority of returns are paid by other investors. Thus, a Ponzi scheme will collapse when the company is unable to continuously attract enough investors.<sup>7</sup> In some cases, the organizers of a Ponzi scheme have some luck with investments or a strong market, which can further perpetuate the facade of productive financial returns, allowing the fraudulent scheme to continue longer. This was the case with Bernie Madoff whose hedge fund could continue to support his fraudulent claims until the 2008 stock market crash.<sup>8</sup> Within the PGM, there is a network of companies with no actual revenue paying themselves with investor money and dangling the possibility of a large return as the primary selling point. The model's structural resiliency is based upon the fact that there are so many different companies involved whereby it is more difficult for the failure of any one to crash the whole model. However, ultimately, a constant stream of revenue from low-level investors is required for the scheme to continue.

---

## METHODOLOGY

The conclusions in this report are based on analysis, using both software-based and manual methods, of information freely accessible on the internet. Spatial Analysis is based on GIS data downloaded from British Columbia's Mineral Titles Online system<sup>9</sup> and the British Columbia Freshwater Atlas.<sup>10</sup> GIS software was used to analyze the spatial relationships between mining claims, rivers, lakes, and glaciers.

Company relationship graphs were compiled based on the previous five years of Audited Annual Financial Statements and Management, Discussion, and Analysis (MD&A) documents downloaded via the Canadian Securities Administrator's SEDAR+ online portal.<sup>11</sup> A custom software tool was used to parse the documents for company names and relationships and generate a network map based on this data. Company connections are based on joint ventures, partnership agreements, net smelter royalty agreements, and other financial agreements based on the ownership of claims in the transboundary region. Efforts were made to filter out

irrelevant information such as vendor companies, accounting firms, and other entities not connected financially via the Prospect Generator Model. EIA also assessed current and historical stock information for relevant companies. EIA chose to look at the top 20 publicly traded ultimate parent companies by area of claims in the transboundary region as the basis for this analysis.

Mining exploration-related information such as mining expenses, borehole information, and carbon footprint information is based on reports downloaded via British Columbia's Assessment Report Index System.<sup>12</sup> This information in these reports is compiled by the companies in question to document their activities during specific years.

In total, EIA's analysis of open-source information assessed over 2 gigabytes of PDFs, GIS data, and other tabular data files.



# PROSPECT GENERATORS ON THE B.C. SIDE OF THE TRANSBOUNDARY WATERSHED REGION

The transboundary region between Canada and Alaska is an excellent example of the Prospect Generator Model in action. While there are only two operating B.C. mines in the region, Red Chris and Brucejack, the area has some of the highest density of mining claims in British Columbia. Claims within the watersheds that border Southeast Alaska account for about 20% of all claims in B.C. by area. Eighty-two percent of these claims are within 5 km of a river or stream. There are around 100 companies with claims in this region according to analysis of data from

B.C. Mineral Titles Online.<sup>13</sup> However, that number is an oversimplification. As described earlier, Prospect Generators regularly make joint ventures, option agreements, or other partnerships with multiple companies. The Environmental Investigation Agency analyzed annual financial statements and MD&A documents of the top 20 publicly traded ultimate parent companies by area of claims in the transboundary region. EIA discovered these companies were part of a network of over 450 companies via relationships like

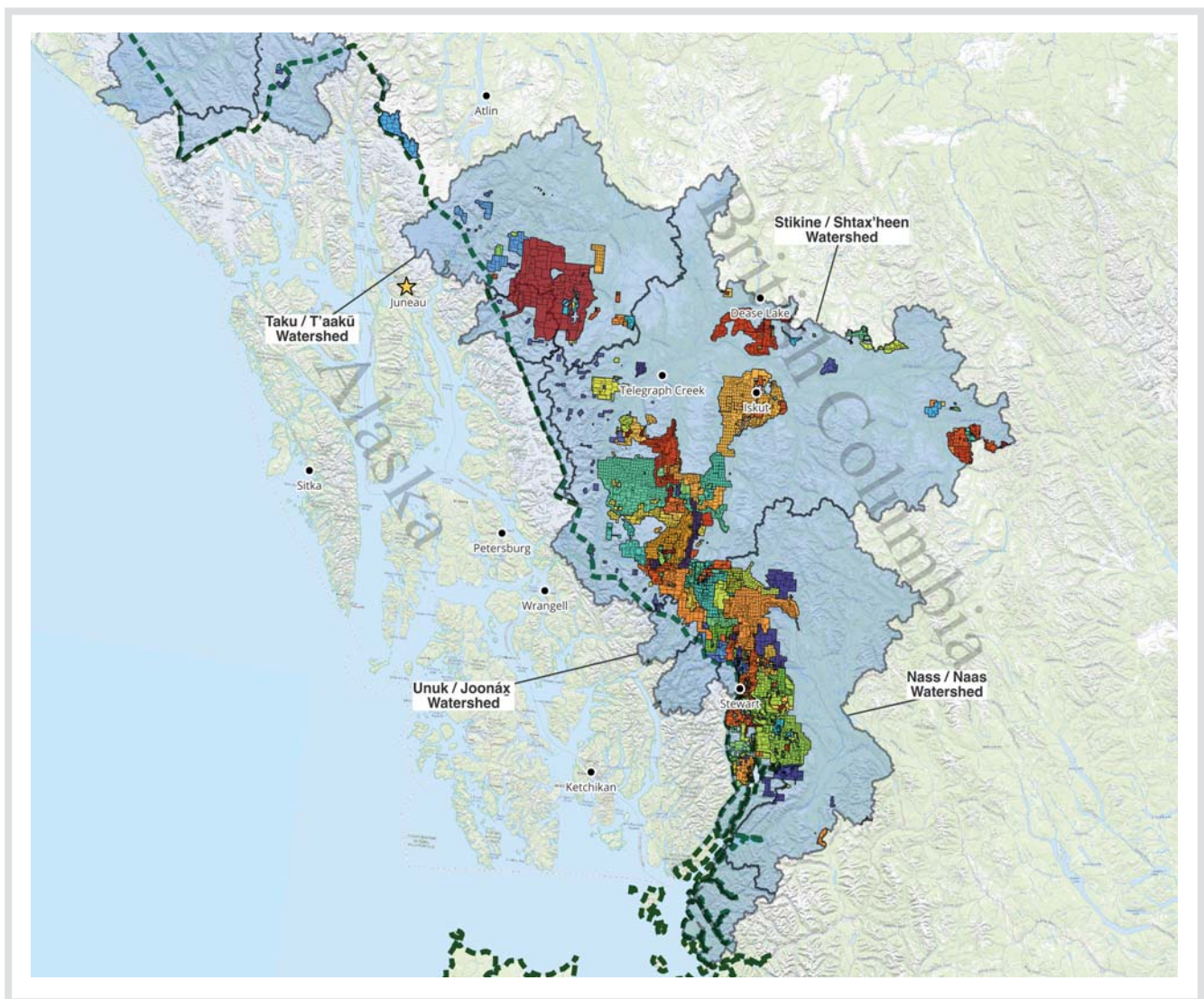


Figure 2  
Mining claims by company (various colors) in the Alaska-British Columbia transboundary watershed region



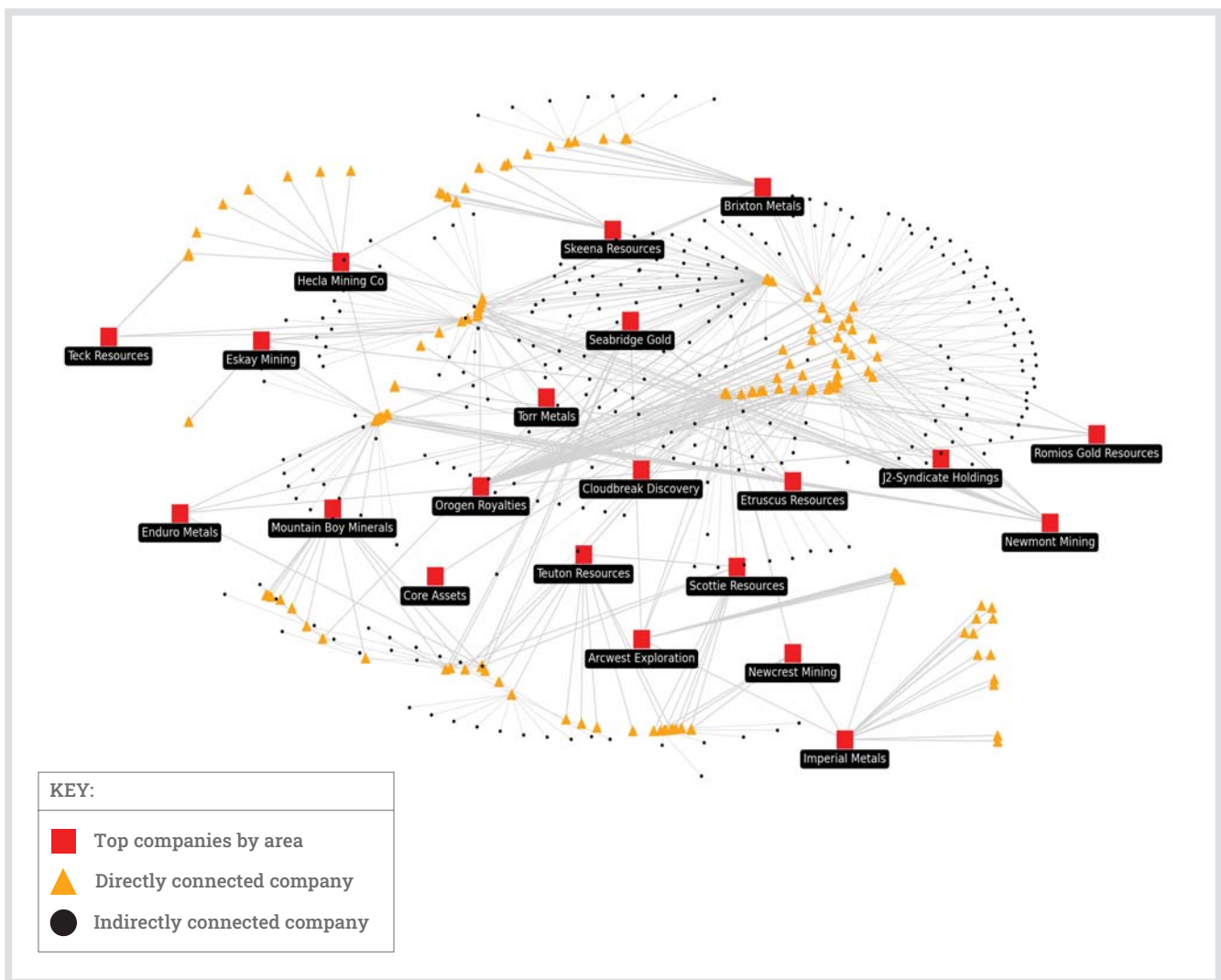


Figure 3  
EIA analysis of Annual Financial Statements and MD&A documents discovered a network of over 450 companies connected directly and indirectly to the top 20 ultimate parent companies by area of claims in the transboundary watershed region.

joint ventures, option agreements, related party transactions, and more. A large number of these companies are publicly traded, have little to no revenue, and so are ultimately largely funded by stock sales.

The majority of the top 20 claims-holding companies by area in the transboundary watershed region are so-called junior mining exploration companies. This class of company, predominant in the PGM, are small- to medium-sized, focusing on the early stages of exploration for potential mineral resources. They most often list on the Toronto Venture Stock Exchange (TSX.V), though some are listed elsewhere. None of the junior mining companies analyzed in this report had significant revenue. All of them operated at a deficit and generally had an overall negative trend in their stock price. Where some junior mining companies have experienced increases in stock prices, they have typically overall followed more of a “boom-and-bust” pattern as opposed to long-term growth in value.

**EIA discovered these companies were part of a network of over 450 companies via relationships like joint ventures, option agreements, related party transactions, and more.**





## WHY CANADA?

Though the PGM is a worldwide phenomenon, the model has strong roots in Canada. Canada, and specifically B.C., has a long, and sometimes sordid history with junior mining exploration companies. Until it closed in 1999, the Vancouver Stock Exchange (VSE) was plagued with scandals, many related to junior mining exploration companies that did not deliver. The prevalence of fraud on this exchange is one of the reasons why the VSE merged with other exchanges in 1999 to form a new exchange which ultimately became the TSX Venture Exchange (TSX.V), where the majority of public companies in the transboundary region are now listed.<sup>14</sup> As of 2017, it has been calculated that almost 75% of mining companies in the world are legally headquartered in Canada<sup>15</sup> and around “40% of the world’s public mining companies are listed on the Toronto Stock Exchange (TSX) and TSX.V.”<sup>16</sup>

The continued prevalence of mining companies in B.C. is also bolstered by tax incentives. There are a number of Canadian tax incentives that greatly benefit mining companies. One of these benefits is Flow-through Shares (FTS). Since Prospect Generators generally do not and may never make a profit, the benefits of tax deductions from expenses may never be realized by a company. Thus, FTS were created as a special kind of common stock that includes a tax incentive which allows exploration expenses incurred by a company to “flow

through” to the purchaser of these shares who can then claim the expenses as deductions on their personal income tax, thereby reducing their personal tax liability.<sup>17</sup> The benefit to wealthy investors is significant. A purchaser of FTS can reduce their taxable income by an amount equal to the purchase price of the shares. FTS are not generally available on the open market and are most often sold through private placements to qualified investors, so the wealthiest investors are the primary beneficiaries of this tax benefit. The benefits of FTS can only be used by one person or entity. Tax deductions from FTS result in immediate forgone tax revenue in Canada which may never be recuperated if the company that sold the shares never makes enough profit to be significantly taxed.

Another tax incentive is the B.C. Mineral Exploration Tax Credit (METC). This tax credit allows companies to claim a 20% refundable tax credit on qualifying exploration expenses. Depending on the situation, this can result in the government of Canada sending a check directly to companies. Owners of FTS are also eligible for the B.C. Mining Flow-through Share Income Tax Credit (MFTS) which allows purchasers of FTS to claim a 20% non-refundable tax credit on qualified exploration expenses connected to the FTS. It should be noted that the METC is being phased out in favor of a new credit called the Critical Mineral Exploration Tax Credit which affords a



more lucrative 30% tax credit. According to estimates by the Prospectors and Developers Association of Canada, after taking into account these tax breaks, the net cost to an investor in the highest tax bracket based in B.C. is around 31 cents on the dollar.<sup>18</sup> The rest of the cost is ultimately covered by forgone taxes, resulting in taxpayer dollars being redirected into the coffers of prospect generator companies and their wealthiest investors. It is estimated that FTS, METC and MFTS tax benefits combined have cost the federal government of Canada approximately half a billion dollars a year over the last three years (2021-2023).<sup>19</sup>

In addition, staking mining claims in B.C. is also extremely easy. The province's Mineral Tenure Act, which has had only minor updates since the 1850s, does not require the Free Prior and Informed Consent of First Nations, consultation, or even notification of First Nations, property owners, or stakeholders before staking claims—even on unceded Indigenous lands. The law allows claims to be made on over 76% percent of the province through an easy online registration system—one of its few modern updates over the last 170 years—for as little as \$1.75 per hectare.<sup>20</sup>

---

**It is estimated that FTS, METC, and MFTS tax benefits combined have cost the federal government of Canada approximately half a billion dollars a year over the last three years (2021-2023).**

---

---

## **LOW RISK FOR MINERS, MASSIVE RISK FOR EVERYONE ELSE**

As previously explained, the primary benefit for companies that follow the Prospect Generator Model is to reduce financial risk associated with mining. Company executives are able to benefit merely from the idea of a potential mine for years without any personal risk of loss. However, the risk to other stakeholders is great. The average stockholder carries much of the financial risk in these projects. In the likely scenario where a particular investment becomes one of the 9,999 projects that fail, it is the stockholders who are left holding the bag, while company executives and the biggest investors move on, having already received substantial salaries and/or substantial tax benefits. In addition to average investor risk, Canadian taxpayers also assume risk via the tax benefits generously given to these companies and their wealthiest investors. However, the biggest risks associated with the PGM are borne by local people and the environment.

There are risks and real impacts associated with the time and effort lost by those opposed to mining projects, given the uncertainty of which projects, among the scores of proposed ventures, will actually materialize. Consequently, opponents are compelled to stretch their resources contending with each proposal with equal intensity—a situation that leads to a significant drain on their time, finances, and resolve. Given that the B.C.

Mineral Tenure Act does not mandate the Free Prior and Informed Consent of First Nations or endorsement by other stakeholders before starting mining exploration; those concerned about specific mining projects in Canada find themselves with limited means to challenge them. Those in Alaska downstream of these potential projects have even fewer options. Many First Nations and Tribal citizens, as well as Canadian and Alaskan stakeholders, oppose or have deep concerns over mining projects, including hundreds of businesses, commercial fishermen, fishing organizations, and municipalities, but have no forum in which to protect their interests.

In October 2021, the Gitxaala Nation, based on B.C.'s North Coast just south of the Alaska-B.C. transboundary region, filed a petition for judicial review of the B.C. Mineral Tenure Act due to the lack of a requirement for consultation with First Nations prior to mineral claims staking. In September 2023, the Supreme Court of B.C. ruled that mining companies do have a duty to consult, and directed the Province of B.C. to create a new claims-staking system in the next eighteen months. Additionally, also in September 2023, Senator Lisa Murkowski of Alaska sent a letter to President Joe Biden expressing concern that Canadian mining could impact salmon-producing rivers that cross the border between the two countries. Murkowski's letter urged the Biden

administration not to allocate any U.S. funding to Canadian mine projects in Canada until binding protections developed by Indigenous peoples and local communities are in place in Alaska-B.C. transboundary watersheds.<sup>21</sup> Despite these calls on the B.C., Canadian, and U.S. federal governments for action, B.C. mining exploration and development in the transboundary region continues unabated.

The environmental repercussions of companies' involvement in PGM activities also represent a concerning risk factor. Although these companies do not typically engage directly in actual mining operations, their exploration activities pose an active threat to the environment. These activities encompass a range of actions, including drilling boreholes, building roads, camps, and other infrastructure, and transporting heavy machinery, all of which contribute to the degradation of pristine natural areas. The impact of these activities extends well beyond mere temporary disruption; they can have far-reaching and adverse effects on these unspoiled natural landscapes. Particularly concerning is the harm inflicted on sensitive ecosystems, such as delicate salmon-spawning streams and the intricate network of rivers that sustain various forms of aquatic life.

There is little published information on the direct environmental impacts of mining exploration; however, a recent study on the effects of exploration at the controversial Pebble site in Alaska gives insight into this damage. The study found elevated levels of aluminum, iron, copper, and/or zinc in surface water near drilling sites—some of which exceeded water quality standards. Perhaps most concerning was the researchers' discovery of dissolved copper at drilling sites, which is neurotoxic to salmon, inhibiting their olfaction and potentially preventing them from navigating back to their home streams.<sup>22</sup> Companies exploring in the transboundary region regularly conduct extensive drilling operations. For example, the joint venture between Teuton Resources, Tudor Gold, and American Creek Resources drilled a total of 45.5 kilometers of boreholes in the Unuk and Nass watersheds in 2020 alone.<sup>23</sup>

During exploration activities, companies also tend to have an outsized contribution to climate change. Fuel is required to run equipment and for transportation. Due to the remote nature of these exploration sites, transportation often requires helicopters, which burn a lot of fuel compared to other means of transportation. During the approximately five months of the 2020 season, Teuton Resources, Tudor Gold, and American Creek Resources, for example, burned over a million dollars' worth of fuel for helicopter flights and other uses for the exploration of the claims they co-own.<sup>24</sup> The approximately 868,000 liters of fuel burned is equivalent to over 2,000 metric tons of CO<sub>2</sub> emissions—or approximately the amount generated by 450 cars driven for one year.<sup>25</sup>

Furthermore, some of these companies have staked claims on lands currently covered by glaciers, making

them presently inaccessible for mining. Spatial analysis of the area reveals that approximately 18% of the area of claims in the transboundary region are covered by glaciers. However, as climate change progresses, these icy barriers are melting, opening up new areas for extraction, as they already have in Gitanyow territory in the Nass River valley.<sup>26</sup> Essentially, these companies are banking on the effects of climate change to open up access to mineral resources in the future. Yet, as climate change advances, the melting of these glaciers not only opens new prospects for resource extraction but also creates expansive, cold freshwater habitat crucial for the breeding and growth of wild salmon. This situation is leading to an inevitable conflict between the mining industry's interests and the preservation of new salmon habitat.<sup>27</sup>

In the unlikely scenario the projects evolve into operational mines, there is potential for severe environmental and social impacts, including the failures of tailings dams—a mitigation technique used to store harmful mine waste behind earthen walls. For example, in 2014, elsewhere in B.C., the tailings dam of the Mount Polley mine experienced a dam breach and released 25 billion liters of contaminated material.<sup>28</sup> Many of the proposed mining projects in the transboundary watershed region are much larger in scale than B.C.'s Mount Polley mine and could, therefore, result in even more disastrous tailings dam failures than what was witnessed at Mount Polley in 2014. For example, a 2016 report that compared B.C. mine projects in the Alaska-B.C. transboundary region to the Mount Polley mine highlighted how the transboundary mine projects include tailings dams that are 2-6 times the height of Mount Polley's mine waste dam that failed. Additionally, the operating Red Chris mine, co-owned by Mount Polley mine owner Imperial Metals in the Stikine watershed, the proposed Galore Creek mine in the Stikine watershed, and the proposed KSM mine in the Unuk and Nass watersheds are designed to hold 7, 9, and 27 times the volume of Mount Polley's waste storage facility, respectively.<sup>29</sup>

Even in the absence of a major disaster, daily industrial activities in the vicinity of pristine salmon stream habitats can cause significant contamination and widespread ecological harm. Moreover, the environmental risks persist beyond the operational life of a mine. For instance, B.C.'s Tulsequah Chief mine, which operated from 1951 to 1957, has leaked acidic contamination into the transboundary Taku River watershed for 66 years and counting.<sup>30</sup>

In the Alaska-B.C. transboundary region, the considerable expenditure of average investor and taxpayer money, the stress imposed on local communities, and the environmental degradation and potential for catastrophic damage is being pursued for the goal of extracting gold from the earth. Yet, there is a growing consensus that our global society does not necessitate newly mined gold.





Source: Chris Miller | csmphotos.com

## ARE NEW GOLD MINES NECESSARY?

Gold mining is considered one of the most harmful industries in the world.<sup>31</sup> Despite relatively recent increases in regulatory controls to mitigate environmental impacts, gold mining exploration and operations regularly lead to the unintentional release of harmful toxins (including mercury, cyanide, and arsenic) into streams, rivers, and entire watersheds. Long-term impacts of these toxins include contaminated drinking water, degradation or ruin of pristine wildlife habitats and whole ecosystems, and even the displacement of entire communities. In the United States, one-tenth of all industrial toxic waste releases reported to the Environmental Protection Agency (EPA) in 2019 originated from gold mines, and half of these releases contained arsenic compounds.<sup>32</sup> Furthermore, within the past decade, significant failures of tailings dams have occurred at gold mines, both active and closed, all over the world. The mining industry in general has a lengthy record of negatively impacting natural landscapes, including federally-designated protected areas. In fact, over 70% of exploration and active mining areas globally operate within unique environments that are considered vital for conservation and of high importance for biodiversity.<sup>33</sup>

As policy makers and regulators attempt to advance new operational mine management and safety criteria, as well as mine decommissioning and recycling incentive

programs, the unfortunate previous multi-decadal failure to impose adequate environmental regulation and safeguards (and in numerous instances, the adoption of deregulatory or self-regulation practices) has led to significant environmental damage. More and more communities and scientists are starting to ask whether any level of gold mining is acceptable from a risk point of view.

Approximately 92% of the global demand for gold lies exclusively within the realm of luxury goods in the form of jewelry and stockpiled as bullion in Central Bank vaults around the world (to which that gold remains securely stored and never sees the light of day). The remaining 8% is used for specific industrial purposes such as in key elemental components of some electronics and medical instruments.<sup>34</sup>

The industrial demand for gold and the perceived financial security of gold desired by governments can be easily met with the current gold production.<sup>35</sup> Furthermore, gold is not consumed during its use and is infinitely recyclable, so recycling can play a bigger part in meeting any necessary demand for gold.<sup>36</sup> All of these reasons raise the question if new gold mines, like those being explored for in the Transboundary Region, are necessary.

# CASE STUDIES

The following case studies offer analysis of three companies, each situated in one of the three primary watersheds within the transboundary watershed region. EIA chose case-study companies based on their location, substantial investment in exploration, and the unique elements of the Prospect Generator Model they represent.

## Taku River Watershed: Brixton Metals Corporation

Brixton Metals Corporation was founded in 2009 and then listed as a publicly traded company in 2010 as the result of a reverse takeover with a company called Marksmen Capital, a capital pool company. This is a common practice for companies as an easier way to go public. According to Brixton Metals, "The Company is in

the process of exploring its exploration and evaluation asset and has not yet determined whether the property contains ore reserves that are economically recoverable."<sup>37</sup> As reported in 2022, the company had a total deficit of \$64.7 million dollars.<sup>38</sup>

Brixton Metals was founded by CEO Gary Thompson and CFO Cale Moodie, who are well compensated in their roles. In fiscal year 2022, Mr. Thompson was paid \$448,593 and Mr. Moodie was paid \$195,434. Both men receive their payments as "Consulting Fees" to companies they control as opposed to salaries.<sup>39</sup> Taken in combination with the other executives, directors and related third parties (including an unnamed spouse of a director who was paid \$108,885), Brixton Metals spent \$1,284,056 on related party transactions in 2022. This constitutes 9.1% of the

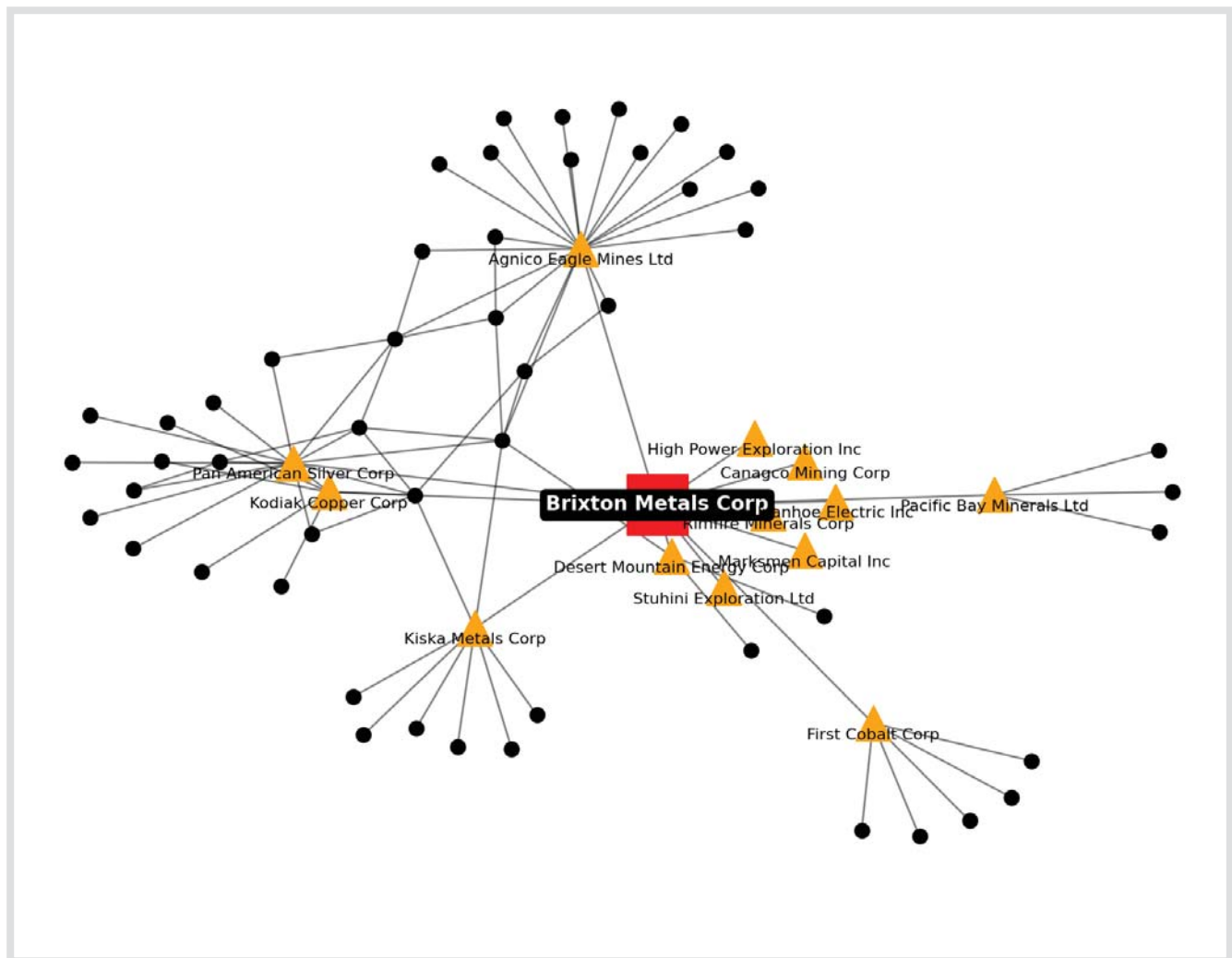


Figure 4  
The network of companies directly and indirectly connected to Brixton Metals.



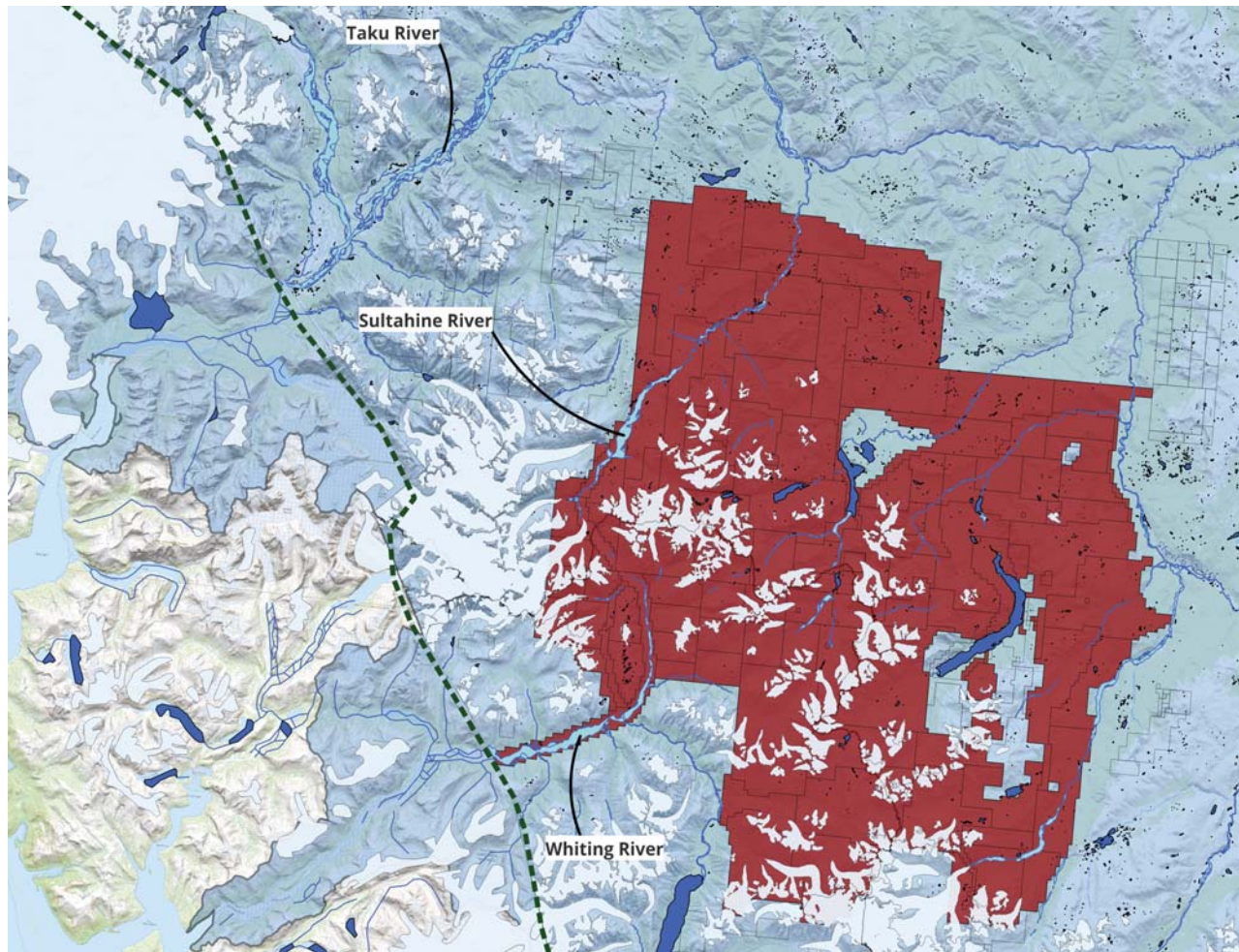


Figure 5  
Brixton Metals-owned claims (red) in the Taku watershed, showing overlap with rivers, streams, lakes, and glaciers

company's total expenditures for the year. As Brixton Metals has no revenue, all of these payments were financed by shareholders or taxpayers.

Brixton Metals has expanded rapidly within the Taku watershed, starting in 2013. According to the B.C. Mineral Titles Online, Brixton has purchased over 2,800 km<sup>2</sup> of mineral claims, an area twice the size of Los Angeles. Close to 75% of this land is within 5 km of a river or stream and about 13% of this land is covered by glaciers. Brixton's claims comprise around 15% of the Taku watershed by area.

During the 2022 season, Brixton metals burned 7,592 liters of Gasoline, 51,441 liters of Diesel, and 67,224 liters of Jet A Fuel – or 326 metric tons CO<sub>2</sub> equivalent. During its operations, the company drilled 6.7 kilometers of boreholes. In total, Brixton spent \$5,534,385 on exploration in the 2022 season.<sup>40</sup>

## Unuk/Nass River Watersheds: Teuton Resources, Silver Grail Resources, and Tudor Gold

Teuton Resources and Silver Grail Resources are two publicly traded companies that “jointly [conduct] business and exploration activities” and share “office premises and consultants and [have] common directors.”<sup>41</sup> A Google Maps result reveals the companies’ common office premises appear to be a nondescript house in suburban Victoria, B.C. According to the Teuton Resources website,<sup>42</sup> founder and President Dino Cremonese, “was one of the first to use the prospect generator model.” Teuton was founded in 1980, was publicly listed in 1985, and has made “over 50 options or joint ventures...with over \$50 million spent on exploration of Teuton properties” since that time. Silver Grail Resources was also founded in 1980 but as Komody Resources and has changed its name several times in the intervening years, including to Fest Resources in 1987, then to Minvita Resources in 1992, and finally to

Silver Grail Resources in 2006. The annual reports of both companies state that they have “no source of recurring revenue, and “[generate] negative cash flows from operating activities.” As of December 31, 2022, together the companies have an accumulated deficit of over \$30 million dollars.<sup>43</sup>

Despite having no revenue or profit for nearly 40 years, Cremonese is well compensated. For the 2022 fiscal year, he was paid by Teuton Resources a salary of \$187,500, engineering fees totaling \$55,189, and \$4,800 in rent – presumably because the companies’ office doubles as his home. Normal cash-based compensation is far exceeded by share-based compensation. Both Silver Grail and Teuton Resources regularly issue stock options to their executives. In 2022, Teuton Resources “incurred share-based compensation of \$1,878,064 to directors of the Company.”<sup>44</sup>

Teuton Resources’ claims lie mostly within the Unuk and Nass watersheds. Analysis of data from the B.C. MTO reveals the area of these claims covers over 550 km<sup>2</sup>. About 46% of these lands are covered by glaciers, and about 66% are within 5 km of rivers or streams.

These claims provide only a partial representation of Teuton Resources’ holdings. A significant portion of their assets is held in the Treaty Creek joint venture with Tudor Gold and American Creek Resources. Tudor Gold holds the majority of this joint venture at sixty percent. While Teuton Resources does not offer flow-through shares, Tudor Gold does. In 2022, Tudor Gold sold 6,916,178 flow-through shares for a total value of \$13,309,402.20.<sup>45</sup> Though it is not possible to determine the exact amount using public information, these flow-through shares cost Canadian taxpayers at least an estimated \$7.4 million.<sup>46</sup>

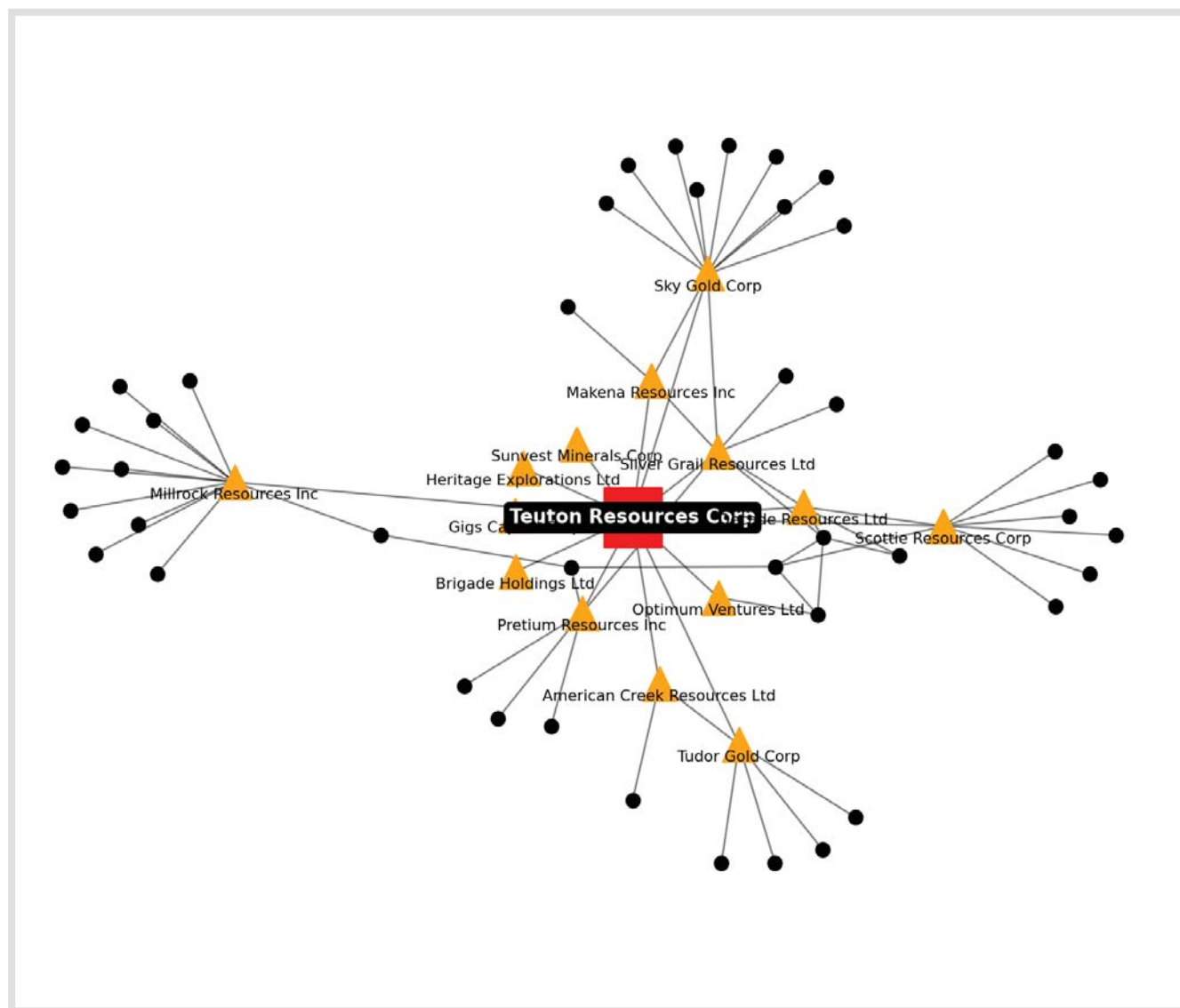


Figure 6  
The network of companies directly and indirectly connected to Teuton Resources.



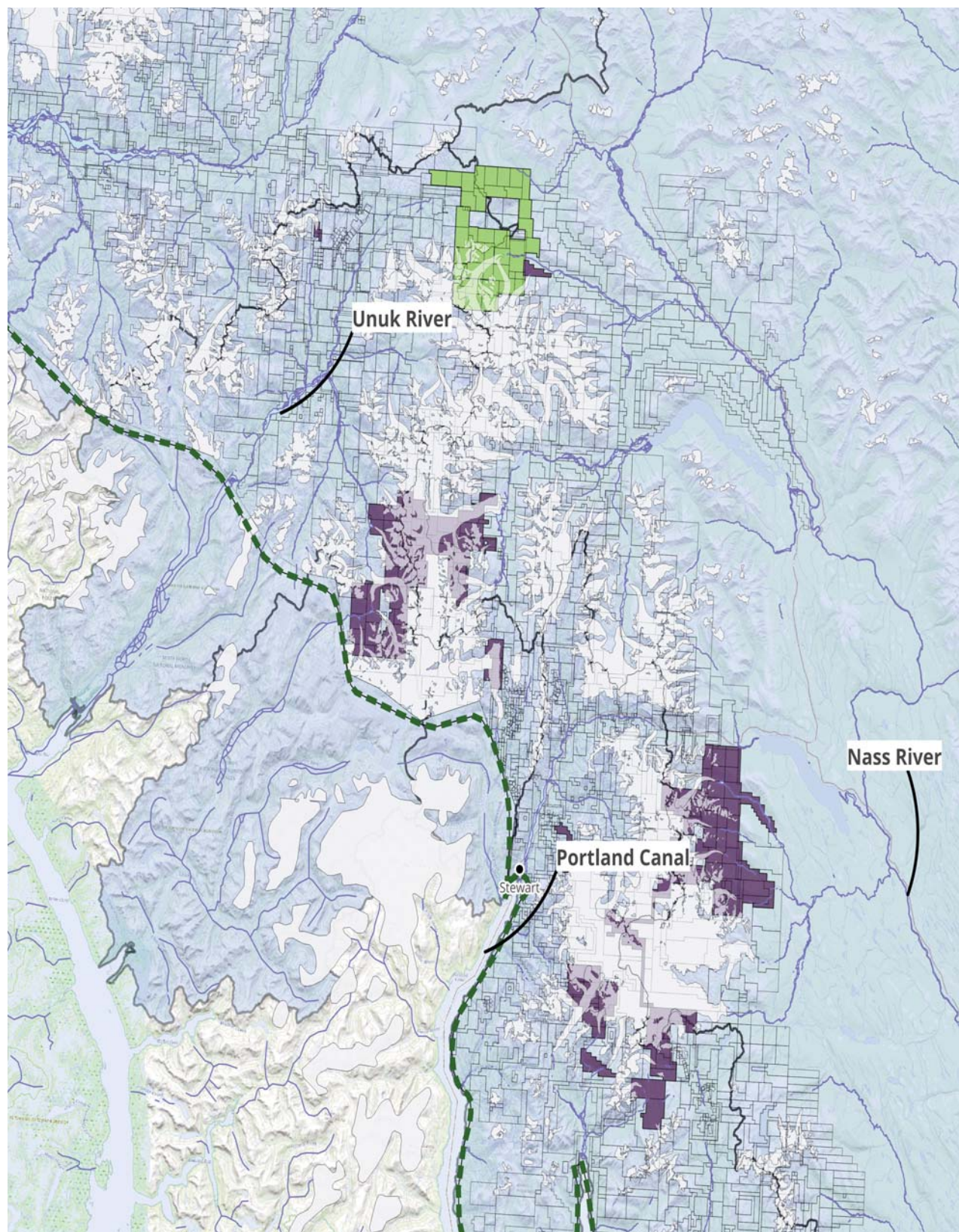


Figure 7  
 Teuton Resources-owned claims (purple) and Tudor Gold, Teuton Resources, and American Creek Resources-owned claims (green) in the Unuk and Nass watersheds, showing overlap with rivers, streams, lakes, and glaciers

As of early 2023, 22% of Tudor Gold shares are owned by Tudor Holdings (a company controlled by Tudor Gold director, Helmut Finger) and 17% are owned by Eric Sprott, a registered insider of at least 140 companies, including Tudor Gold. The remaining 61% of Tudor Gold's \$200 million market share is owned by funds and retail investors.<sup>47</sup> Except for a brief spike in 2020, Tudor's stock price has generally trended flat or downward.

As previously mentioned, the combined mine exploration efforts of Teuton Resources, Tudor Gold, and American Creek Resources resulted in 868,000 liters of fuel being burned in 2020. During that season, the companies were responsible for drilling 45.5 kilometers of holes into the earth. The drilling at the Tudor/Teuton/American Creek properties is managed by More Core Diamond Drilling Service, a company controlled by Tudor Gold director Sean Pownall. More Core was paid over \$8 million dollars by Tudor Gold in 2020. The properties jointly owned by the three companies spent over \$23 million dollars on exploration in 2020 and were collectively the largest spenders in B.C. on exploration that year.<sup>48</sup>

## Stikine River Watershed: Enduro Metals and HEG & Associates Exploration Services

Enduro Metals Corporation (Enduro) was first publicly listed on the TSX.V as Naina Capital Corp. in March 2010. Over the years, its name changed to Sierra Iron Ore Corporation, to Crystal Lake Mining Corporation, and finally to Enduro in July 2020. Around the same time as the company was renamed Enduro, a new CEO, Cole Evans, was appointed. Evans, who received his Bachelor of Science degree in Geological and Earth Sciences from University of B.C. in 2017, is also the CEO of a company called HEG & Associates Exploration Services (HEG). Cole Evans co-founded HEG with his friend Dylan Hunko in the same year he graduated from UBC. According to its website, HEG provides a "full spectrum of services, from property reconnaissance to advanced stage exploration."<sup>49</sup>

In 2022, approximately one-third of the company's expenses were paid to Directors and Key Management Personnel or companies they control. However, this

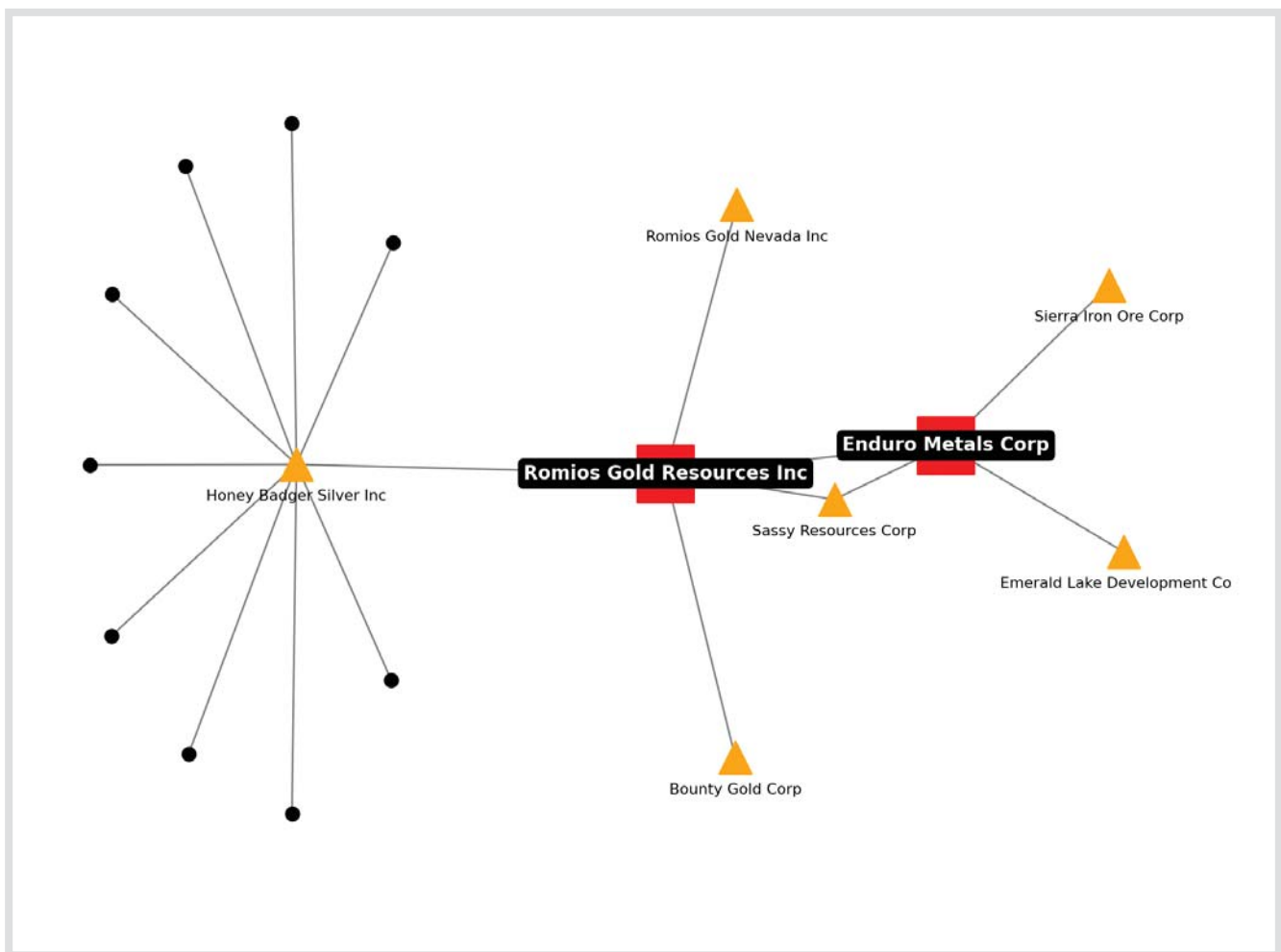


Figure 8  
The Network of companies directly and indirectly connected to Enduro Metals.



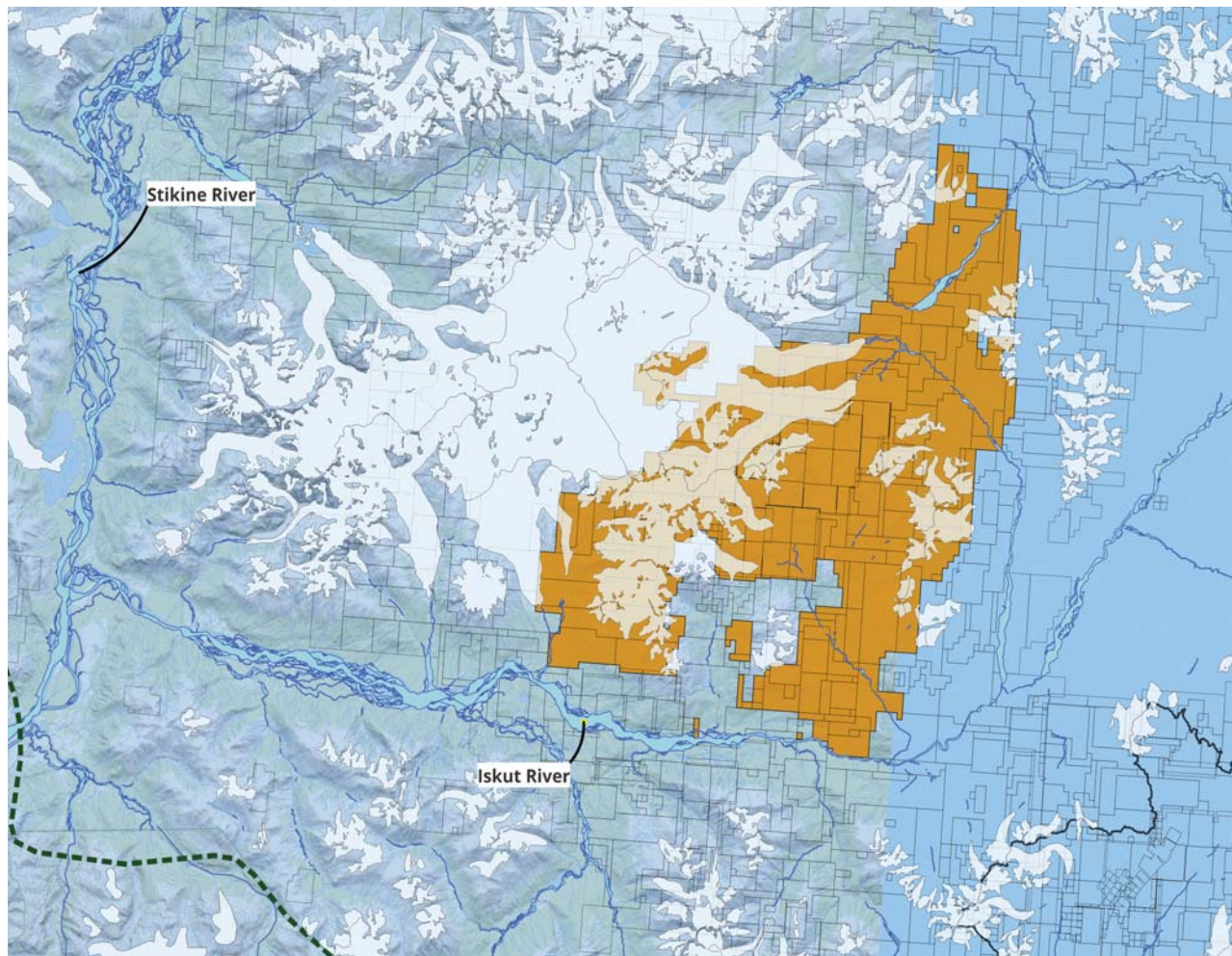


Figure 9  
Enduro Metals-owned claims (orange) in the Stikine watershed, showing overlap with rivers, streams, lakes, and glaciers

does not paint the complete picture. Generally, expenses related to mining exploration are treated as capitalized expenditures and therefore assets on a company's balance sheet. In 2022, "remuneration paid to related parties for exploration and evaluation activities" totalled \$1,103,497. Enduro's annual report does not explicitly break down which related party(s) received this amount. However, analysis of Enduro's assessment report for the 2021 exploration season at the Newmont Lake properties shows HEG received at least \$840,000 for Geological Services and Consulting. In addition, HEG founder Dylan Hunko received \$76,666.64 for In-field Exploration Management and John Ryan, the Chief Geoscientist for HEG, was paid \$21,000 for Desktop Based Leapfrog Modelling.<sup>50</sup>

Enduro Metals regularly issues flow-through shares through private placements. A prominent example that illustrates how flow-through shares channel taxpayer funds to private enterprises occurred in May 2022, when Enduro finalized a private placement worth \$10 million. Per Enduro's press statements, \$8,760,000 of

the \$10 million was acquired by a "leading mining financial institution" as 24 million "charity flow-through shares."<sup>51</sup> Consequently, in addition to the flow-through share deduction and the Mineral Exploration Tax Credit, the institution likely also benefited from a charitable donation deduction. As reported by the Canadian Business Journal, the net cost of acquiring these charity flow-through shares is between 5% and 15% of the face value,<sup>52</sup> with the remainder subsidized by Canadian taxpayers via forgone tax revenue.

Under the regulations governing flow-through shares, Enduro is obliged to allocate this capital to eligible Canadian exploration expenses, which, due to Enduro's practice of contracting out most of this work to HEG, funnels taxpayer dollars into the coffers of a privately-held firm overseen by the CEO of Enduro. Moreover, since exploration expenditures are capitalized, the payments to HEG are recorded as assets on Enduro's balance sheet, thereby bolstering the company's financial statements.





Source: Chris Miller | csmphotos.com

The specific charitable organization that received the shares remains undisclosed, but it is generally understood that the recipient of charitable flow-through shares typically liquidates them promptly on the open market. This issuance of a substantial number of shares to the public domain dilutes the share value for existing stockholders. Given that the institution responsible for creating the shares donates them immediately, it bears no risk if the stock price drops significantly. Notably, one

year subsequent to the issuance of these shares, Enduro's stock value had diminished by 70%.<sup>53</sup>

Enduro Metals' claims cover 673 km<sup>2</sup>, an area just slightly smaller than New York City, of which about 30% is covered by glaciers. Close to seventy-five percent of the area is within 5 km of rivers or streams, including the Iskut River—the Stikine River's largest tributary.



## CONCLUSION AND RECOMMENDATIONS

**While the PGM is highly profitable for the owners and principal investors of these companies operating in B.C., it often results in ordinary shareholders seeing little return on investments that appreciate in value infrequently.**

Meanwhile, taxpayers bear a substantial portion of the financial strain through mechanisms such as Flow-through Shares and the Mining Exploration Tax Credit. These instruments, designed to be advantageous for the companies and wealthy investors, shift the financial burden onto the public.

Moreover, local communities constantly find themselves on the defensive, battling against projects that might never come to fruition. This relentless fight is akin to chasing shadows, with the looming, yet elusive threat ever-present. The environment is not spared either. Mineral exploration, with companies drilling dozens of kilometers of holes through hardrock metallic deposits and burning large amounts of fuel for frequent helicopter trips to remote sites and camps, leaves permanent and cumulative marks on the landscape and exacerbates climate change.

Finally, the potential for devastating environmental consequences, such as a tailings dam collapse, increases if one of these ventures develops into a full-scale project and subsequently fails. Given enough time, the possibility of such failures is not just theoretical but probable. Considering the myriad adverse impacts presented by the PGM, its continued implementation is difficult to justify let alone incentivize—especially in a wild, biodiverse place like the watersheds of the Alaska-British Columbia transboundary watershed region. The collective toll this model takes on shareholders, taxpayers, local communities, and the environment far outweighs the benefits accrued by a select few. The mechanisms that enable this model to continue need to be curtailed.

### EIA Recommendations:

- The United States should adhere to Alaska's Senator Lisa Murkowski's request to President Joe Biden in a letter dated Sept. 15, 2023 "not to allocate any U.S. funding to Canadian projects in the transboundary watershed in general, and to withhold all U.S. support for [mining] projects within Canada" until two conditions are met: (1) Active remediation is "underway at the Tulsequah Chief mine...."; and (2) "...support the request of Alaska Tribes, municipalities, business owners, and residents to establish a robust international framework that strengthens governance while preventing and resolving disputes over the use of shared waters."<sup>54</sup>
- The Canadian federal and British Columbia provincial governments should revise and/or terminate tax benefits such as Flow-through Shares and the B.C. Mineral Exploration Tax Credit to prevent the incentivization of mining exploration under the Prospector Generator Model that causes Indigenous peoples, Canadian taxpayers, and U.S. communities and economies downstream to shoulder the mining industry's externalized economic, environmental, and social costs.
- The British Columbia provincial government should reform the B.C. Mineral Tenure Act to require the Free, Prior and Informed Consent of First Nations in accordance with the United Nations Declaration on the Rights of Indigenous Peoples and should engage with First Nations to review existing claims for potential reassessment. Additionally, B.C. should not allow new mineral claims to be staked in the province while a new claims-staking system is developed, as recently required by the Supreme Court of B.C.
- The Canadian federal and British Columbia provincial governments should require financial assurance and liabilities for mineral exploration.
- Canadian provinces and territories should strengthen the disclosure requirements for companies to be publicly listed on their stock exchanges.
- The global community should consider the merits of an agreement to limit new gold production and instead use the gold resources already available.

## REFERENCES

1. <https://www.mining.com/web/prospect-generation-making-mining-into-a-numbers-game/>
2. Ibid.
3. [https://amebc.ca/wp-content/uploads/2021/06/AME-Mineral-Exploration-Lifecycle\\_008.pdf](https://amebc.ca/wp-content/uploads/2021/06/AME-Mineral-Exploration-Lifecycle_008.pdf)
4. <https://www.youtube.com/watch?v=DxxZOA403dY&t=730s>
5. <https://www.youtube.com/watch?v=xy0YiWBbZel&t=327s>
6. <https://www.techopedia.com/gambling-guides/roulette-odds-probability>
7. <https://web.archive.org/web/20120626031655/https://www.sec.gov/answers/ponzi.htm>
8. <https://www.investopedia.com/terms/b/bernard-madoff.asp>
9. <https://www.mtonline.gov.bc.ca/mtov/home>
10. <https://www2.gov.bc.ca/gov/content/data/geographic-data-services/topographic-data/freshwater>
11. <https://www.sedarplus.ca/landingpage/>
12. <https://apps.nrs.gov.bc.ca/pub/aris>
13. <https://www.mtonline.gov.bc.ca/mtov/home>
14. <https://corporatefinanceinstitute.com/resources/equities/vancouver-stock-exchange-vse>
15. <https://www.theguardian.com/cities/2017/mar/03/toronto-hidden-history-how-city-built-mining>
16. <https://www.tsx.com/listings/listing-with-us/sector-and-product-profiles/mining>
17. <https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/flow-through-shares-ftss/investors/flow-through-share-program-works.html>
18. <https://www.pdac.ca/programs-and-advocacy/access-to-capital/flow-through-shares>
19. Page 30, <https://www.canada.ca/content/dam/fin/publications/taxexp-depfisc/2023/taxexp-depfisc-23-eng.pdf>
20. <https://reformbcmining.ca/wp-content/uploads/2020/09/BCMLR-Fact-sheet.pdf>
21. <https://static1.squarespace.com/static/630575024bbe7028e1b70ba8/t/651319ea2efaab66a14215bb/1695750635157/Transboundary+Letter+Final+%281%29.pdf>
22. <https://www.mdpi.com/2076-3298/6/7/84#B10-environments-06-00084>
23. Teuton, Tudor, American Creek 2021 Assessment report <https://apps.nrs.gov.bc.ca/pub/aris/detail/39910>
24. Ibid.
25. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
26. <https://www.science.org/doi/10.1126/science.adj4911>
27. <https://www.nature.com/articles/s41467-021-26897-2>
28. <https://thenarwhal.ca/topics/mount-polley-mine-disaster>
29. Post-Mount Polley: Tailings Dam Safety in British Columbia" - a report by David Chambers, Ph.D. (March 22, 2016) - [https://earthworks.org/resources/post\\_mount\\_polley\\_tailings\\_dam\\_safety\\_in\\_british\\_columbia/](https://earthworks.org/resources/post_mount_polley_tailings_dam_safety_in_british_columbia/)
30. <https://thenarwhal.ca/tulsequah-chief-mine-clean-up/>
31. <https://earthworks.org/issues/environmental-impacts-of-gold-mining/>
32. US Environmental Protection Agency 2021 2019 TRI National Inventory (available at: [www.epa.gov/trinationalanalysis](http://www.epa.gov/trinationalanalysis))
33. Sonter et al. 2018. Mining and biodiversity: Key issues and research needs in conservation science. Proceedings of Royal Society B. <https://royalsocietypublishing.org/doi/10.1098/rspb.2018.1926#:~:text=Mining%20directly%20emits%20carbon%2C%20as,impacts%20on%20biodiversity%20%5B36%5D>
34. Lezak et al. 2023. The case against gold mining. Environmental Research Letters 18:1 <https://iopscience.iop.org/article/10.1088/1748-9326/ac9f26/pdf>
35. Ibid.
36. Ibid.
37. Brixton Metals 2022 Audited Annual Financial Statement
38. Ibid.
39. Ibid.
40. <https://apps.nrs.gov.bc.ca/pub/aris/Report/40294.pdf/>
41. 2022 Teuton Resources Annual Financial Statement
42. <http://teuton.com/meet-teuton/>
43. 2022 Silver Grail Resources Annual Financial Statement
44. Teuton Resources December 31, 2022 MD&A
45. Tudor Gold 2022 45-106F1 Report of Exempt Distribution forms
46. Based on the net cost of investors in Alberta <https://www.pdac.ca/programs-and-advocacy/access-to-capital/flow-through-shares>
47. Tahltan Central Government – Industry Review 2023
48. Assessment Report on the Treaty Creek Property 2020 Diamond Drilling Program, Skeena Mining Division <https://apps.nrs.gov.bc.ca/pub/aris/Report/39910.pdf/>
49. <https://hegexplore.ca/>
50. Enduro Metals 2021 assessment report for Newmont Lakw <https://apps.nrs.gov.bc.ca/pub/aris/Report/40310.pdf/>
51. Press Releases issued April 22, 2022 and May 19, 2022 <https://endurometals.com/news/>
52. <https://www.cbj.ca/flow-through-share-donation-a-powerful-way-to-multiply-your-charitable-donations/>
53. Enduro Metals share price May 20, 2022 and May 18, 2023
54. <https://static1.squarespace.com/static/630575024bbe7028e1b70ba8/t/651319ea2efaab66a14215bb/1695750635157/Transboundary+Letter+Final+%281%29.pdf>



---

## IMAGE INDEX

### Page 1

British Columbia's developing Galore Creek proposed mine at the base of a glacier in the iconic transboundary Alaska-British Columbia Stikine River watershed, where B.C. has allowed dozens of mining companies to stake at least 20% of the watershed with mining claims, including virtually all of the lands adjacent to the Iskut River, the Stikine River's largest tributary.

Photo by Colin Arisman | colinarisman.com

### Page 2

British Columbia's Red Chris mine waste ("tailings") dam and open pits in the headwaters of the Iskut River, a major tributary of the Alaska-British Columbia transboundary Stikine River. British Columbia and Canada allowed the Red Chris mine, co-owned by Mount Polley owner Imperial Metals, to open less than six months after the Mount Polley tailings dam disaster in 2014.

Photo by Colin Arisman | colinarisman.com

### Page 3

The Alaska-British Columbia transboundary Unuk River flows from the boreal forest of British Columbia into the temperate rainforest of the Tongass National Forest and the Misty Fjords National Monument near Ketchikan, Alaska. B.C. has allowed mining companies to stake close to 90% of the B.C. side of the Unuk River with mining claims, permitted the operating Brucejack gold mine in 2017, and granted the nearby developing Kerr-Sulphurets-Mitchell (KSM) proposed gold mine an environmental certificate in 2014.

Photo by Chris Miller | csmphotos.com

### Page 5

The Stikine River is an international wild salmon river shared by Alaska and British Columbia that flows from the boreal forest of Northwest British Columbia into the temperate rainforest of the Tongass National Forest and the Stikine LeConte Wilderness Area in Southeast Alaska.

Photo by Colin Arisman | colinarisman.com

### Page 9

British Columbia's Brucejack gold mine in the headwaters of the transboundary Unuk River is one of British Columbia's two large-scale operating mines located along international rivers shared by Alaska and British Columbia. B.C. has allowed mining companies to stake almost 90% of the B.C. side of the Unuk River with mining claims, and granted the nearby developing Kerr-Sulphurets-Mitchell (KSM) proposed mine an environmental certificate in 2014.

Photo by Chris Miller | csmphotos.com

### Page 12

The Tulsequah Chief, an abandoned Canadian mine just miles from the Alaska/Canada border, has been contaminating the otherwise pristine Taku River system with acid mine drainage for more than 65 years. Over 100 abandoned, exploratory, proposed, developing, and operating British Columbia gold-copper mines already pollute and/or threaten to further contaminate the Taku, Stikine, Unuk, and Nass rivers, as well as the transboundary Portland Canal, with acid mine drainage, selenium, and other toxicants.

Photo by Chris Miller | csmphotos.com

### Page 19

Bjorn Dihle stands in front of acid mine drainage at the abandoned Tulsequah Chief Mine, which has been contaminating the transboundary Taku River for more than 65 years. The Taku River empties into the ocean just south of Alaska's capital.

Photo by Chris Miller | csmphotos.com



**environmental  
investigation  
agency**

**EIA US**

PO Box 53343  
Washington DC 20009 USA  
T: +1 202 483-6621  
E: [info@eia-global.org](mailto:info@eia-global.org)  
[us.eia.org](http://us.eia.org)

**EIA UK**

62-63 Upper Street,  
London N1 0NY UK  
T: +44 (0) 20 7354 7960  
E: [ukinfo@eia-international.org](mailto:ukinfo@eia-international.org)  
[eia-international.org](http://eia-international.org)