

The Santu Miali mine is located in Sardinia, next to the town of Furtei. It is on the border of the Campidano tectonic plain. A few million years ago, during the Pleistocene, the plain sank and was filled by sediments. On the border of the plain, a long fracture sent magma rising up to form volcanic hills. The rock is about 20 million years old, dating to the Oligo-Miocene era. Volcanic activity occurs near the end of the volcanic cycle; there is no eruption, but there is very hot water circulation from deep in the earth, which forms mineral deposits. This circulated water, rich in silica and other minerals, is deposited when the fluids

HISTORY

conditions of the environment change.

In Furtei, the gold deposit is classified as a

reach the surface, where the temperature or pressure

high-sulfidation deposit. The minerals in this kind of deposit—whether gold, silver, or copper—are diffused in the rock. The fluids that brought the minerals to the surface are very acidic and aggressive to the rock, which makes it difficult for geologists to recognize what kind of rock it was in origin. In the area around Santu Miali, there is stratification between lava flows and pyroclastic flows, which are fluidized masses of rock fragments resulting from volcanic eruption.

CANADA'S COLONIAL LEGACY

The history of Canada is a history of colonization. Canada served as a frontier for both the French and British empires, producing material goods and wealth. Despite Canada's current status as an independent nation, our economy remains deeply entwined with extractive industries. The importance of oil, lumber, mineral extraction, and other natural resources to Canada's economy is significant, even as service sector and professional sector jobs make up an increasing portion of our workforce. Extractive industries are a significant part of not just our history and economy, but also our national identity. The image of a lumberjack or a man on the oilfields is deeply Canadian, for better or for worse.

The increase of globalization has resulted in one of our exports being home-made colonization, where Canadian firms establish the same sort of extractive neo-colonial relationships with peripheral locations rich in resources, continuing the cycle of extraction and consumption. This system is supported by a complicated and self-reinforcing system of companies, domestic and international policies, financial regulations, lobbyists, media channels, and international organizations, all of whom work together to create a set of circumstances where mining companies can thrive.

Canada's Regulatory Framework

Canada's laws and regulations are strongly favourable to the mining industry. The Canadian government provides judicial shelter and financial support for the extractive industry, both at home and abroad.

The Ontario Securities Commission (OSC), charged with supervising the Toronto Stock Exchange, has limited budget to investigate violations of insider trading regulations. Many cases go uninvestigated, and the OSC provides only inconsistent monitoring (Denault & Sacher, 2012). Mining firms are subject to voluntary, not mandatory, disclosures with regard to financial reporting. Corporations are accountable to an audit committee, intended as a neutral observer and intervenor in mining practices, which is not required or able to disclose most of its findings, and is further generally composed of lobbyists or people with an interest in the continuing operation of the status quo. Even if financial crimes make it to court, Canadian white collar criminals face fewer consequences than

their American counterparts (Denault & Sacher, 2012).

Mining firms are allowed to self-regulate to a significant degree, with financial, labour, and environmental practices generally overseen by the mining companies themselves (Denault & Sacher, 2012). Canada's framework for investigating and reining in abuses in the mining sector is astonishingly weak. The recently appointed and long awaited Ombudsperson for Responsible Enterprise lacks the ability to require information of mining companies, which means that they are not able to examine or comment on the full scope of activities. While the creation of this office represents progress, Canada's approach still lacks teeth, as it cannot force companies to turn over documents or compel witnesses to testify. The office will instead take on the role of dispute resolution-- a far cry from the powers required to meaningfully reign in Canada's international extractive industry.

Canada's International Impact

Canada has been involved in drafting a number of mining investment policies and codes in other countries, generally mirroring Canada's own.

Accordingly, they are favourable to extractive industries, with negligible taxes, limited environmental protections, self-governance of mining firms, and absence of consideration for indigenous rights. In part, these policies have been developed through international organizations such as the IMF and the World Bank. Mining projects often come hand-inhand with international development projects, aimed at increasing the economic activity of a country. It is ironic, then, that mining companies are given similar tax advantages as those available in Canada. Again,

frequently damaging extractive activity is subsidized by the public purse, with little income making its way to the coffers of the government where the mining operations are located.

International development through agencies like Export Development Canada and the Canadian International Development Agency has the stated aim of helping underdeveloped countries, but the end result is frequently extractive projects highly beneficial to companies based outside the country where the mining is taking place; the proceeds from the extractive activity leaves the country, and leaves it little better financially than when it started. These organizations have also provided insurance against political risks; this functions essentially as insurance against angry populations.

Lobbyists & Media

The formal rules and regulations supporting the mining industry both in Canada and internationally are mirrored by a network of informal mechanisms composed of lobbyists, private and public media organizations, and professional bodies. Information disseminated to the public both by the government and the media tend to elide environmental and human rights consequences of Canadian mining in international contexts. Universities invest in and benefit from mining, while training upcoming cohorts of professionals to think of mining as largely being exploration. Some of these professionals will make up the supporting cast of Toronto's financial district mining firms, with lawyers, geologists, bankers, and urban planners lending their professional expertise to the industry.

Mining companies also do their own work in generating positive public opinion, many by sponsoring or supporting institutions associated with positive work by the public. For example,

Financial Entanglement

Canada's financial system is immensely favourable to the mining industry. The Toronto Stock Exchange (TSX) and the TSX Venture Exchange (TSXV) register hundreds of billions of dollars worth of transactions for the industry. Much of this capital is not Canadian -- in fact, many mining firms registered in Canada have no mining claims within the country. The regulations in place for the TSX make speculation easy. Information disclosure rules are ambiguous in the extreme; there is no requirement for firms to provide clarity about resources in contrast to reserves-- which, in a mining context, means that there is no distinction made between reporting precise estimates of quantities of actually exploitable ore, and gross estimates of exploitable ore. This obfuscation in reported resources attracts investors based on inflated expectations and underestimated costs.

Canadian mining firm Goldcorp sponsored a significant part of the Vancouver Aquarium's recent renovation, and their name is now accordingly on the side of the building.

Talking about the relationship of "the public" to the mining industry is complicated as the public is composed of many groups: the public can be indigenous peoples, negatively affected by incursions on their land, or local workers who benefit from the work brought by the mine, or governments who receive both tax income from the mine and also frequently the ongoing costs of cleanup when the mine shuts down. The public is also frequently understood as a self-interested investor, complacent about where their profits originate.

It is critical to note that the informal networks and mechanisms described here that support and advance extractive industries all occur under the umbrella of a number of complicated overarching societal structures, among them neocolonialism, neoliberalism, capitalism, and imperialism.

Investment in mining firms is also supported by the Canadian government through tax advantages, such as flow-through shares, which allow firms to transfer resource expenses to the investor. This mechanism means that governments are forgoing tax revenues; in turn, this means that mining exploration is frequently supported by public funds. Further, the Canadian government provides loans and investment guarantees to mining exploration firms who are seeking private funding.

It is difficult for the average Canadian investor to opt out of this system, both because of its complexity and its ubiquity. Canada's pension funds, insurance, mutual funds, RRSPs, and savings accounts at banks and credit unions filter through the TSX, and a significant subset of money subsequently ends up in the mining industry.

Neocolonialism & Frontier Places

Canada's colonial past influences and informs its neo-colonial present. The structures of globalization and neoliberalism have allowed and encouraged extractive and sometimes exploitative relationships between Canadian companies and countries with valuable natural resources. The framework previously examined, with Canada and Toronto functioning as the centre of a network, establishes metaphorical frontiers where resource extraction is conducted.

This is problematic for the frontier places; as power originates from and concentrates in centres, places are less cared for when they are seen as peripheral. Canada, as a previously colonized place, understands resource extraction and bases large parts of both its identity and economy on these industries. It is currently engaging and aiding in the neocolonialist process of extracting resources from what it considers as frontier places; generally located in areas with weak environmental or human rights protections, or places otherwise vulnerable to the influence of foreign capital. This dynamic flips the script of Canada's historic position as a frontier location itself; but as with traditional colonization. it is mostly lip service that goes toward benefits in the places of extraction, while the spaces of consumption skirt environmental and social consequences. The centre is cushioned by distance.



Sardinia as a Colonized Place: Where Our Stories Meet

Our work considers the post-closure legacy of Santu Miali, a mine in Sardinia; this place is where our metaphorical threads of theory and physical thread of gold join together. The island of Sardinia has an identity distinct from Italy, recognized by its status as an autonomous region. It has been colonized or invaded numerous times over its long history, resulting in an equally lengthy history of resistance. Sardinia's long history is inscribed in its landscape.

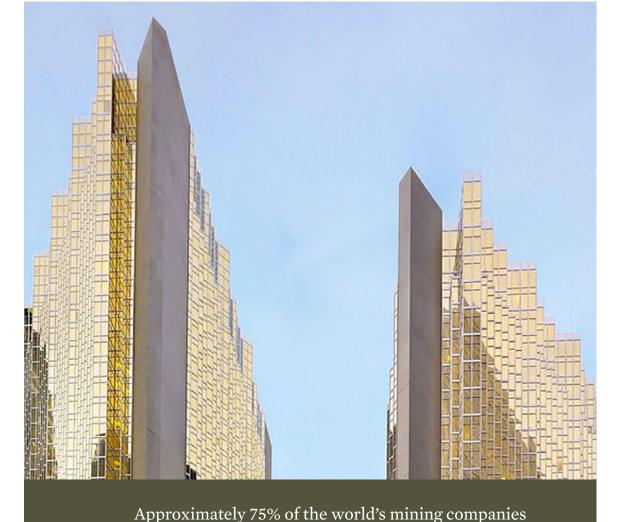
In Sardinia, humans shaped the landscape using stones for six millennia. Early in Sardinia's history, domus de janas, small rooms carved into rockpediments, were made as burial chambers. Nuragi, neolithic stone towers that were used for living and defensive purposes, still dot the landscape (Berger, 2003). The soil in Sardinia is poor and rocky; every tanca (pasture) has stones piled up to allow the soil to be worked Berger, 2003). Stone walls demarcate tancas, roads, and create sheep pens. The use of stones marks the Sardinian landscape as occupied and full of meaning.

Another story about Sardinian stones is told by geologists and mining interests. Sardinian rocks are rich in mineral deposits and has attracted invaders and colonizers over the past four millennia (Berger,

2003). Recently, international mining interests have told a story about the stones of Sardinia and extracted gold from them and have forever changed the landscape. The Santu Miali mine was operational from 1997 to 2008, when it shut down abruptly and resulted in significant community action to retain jobs and mitigate negative consequences. Benefits of mining do not generally stay where the mine is; in Santu Miali's case there were forcible interventions from the community to ensure this was not the case.

We would do the community surrounding Santu Miali a disservice if we presented the mine as straightforwardly negative; the community benefits from and takes pride in their mining history. They are now affected by the lingering effects of the mining companies that came from outside their borders, leaving when the gold was no longer there. The aftereffects of Santu Miali's mining operations, however, remain where they were unearthed.





are registered in Canada. Over 1,400 mining companies are headquartered in Ontario alone, despite only a few dozen mines operating in the province. Mining operations are instead conducted outside of Canada's borders, benefitting from Canada's regulatory structure, which disproportionately benefits extractive companies.

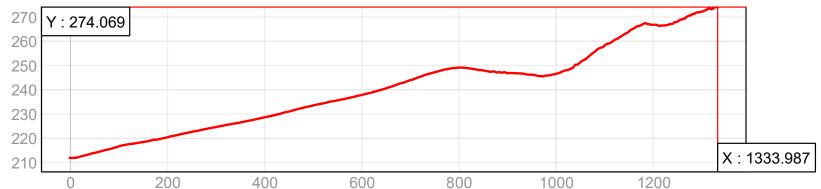
These regulations and social factors outlined above work together to create Toronto as a centre of global mining, embodied by the RBC building, whose gold-covered surface reflects the work of the companies located within.

A HISTORY OF MINE OWNERSHIP

An Australian mining company known as Gemco began mining four open-pit gold mine sites in Furtei from 1997 until 2002 with a 10% partner in the Sardinian government. After this era, a joint venture between Canadian mining company Sargold (previously Canley Developments Inc.) and Gold Mines of Sardinia (GMS) initiated the mine's resurgence in 2003. Ownership of the mine was volatile as both Sargold and GMS each initially held a 45% direct interest in the mine with the remaining 10% belonging to Progemisa SpA, an Italian government organization.

In 2003, GMS merged with Full Riches Ltd. to form Medoro Resources Ltd. After Medora sold its 45% share of the mine to Sargold in 2004, it was granted 90% ownership of the mine and its assets. Sargold's initial exploratory drilling results seemed promising as it was anticipated the mine would produce about 500 ounces of gold per month. In 2007, another Canadian mining and exploration firm known as Buffalo Gold acquired Sargold. However, as the mine regularly produced lower returns than promised, contributing to losses of \$5 million, the operation ceased in 2008 and Buffalo Gold abandoned the four open pits and the tailings pond, which has gained recognition from locals as "Cyanide Beach".







SHUTDOWN & OCCUPATION

Once extraction activity concluded in 2008, approximately 40 former mine employees from SGM remained on site without work. The company's abandonment of the mine imposed a dangerous situation on the environment and workers garrisoned together to protect the environment as well as the surrounding regions from numerous environmental hazards. The workers knew it was crucial to maintain the pump, which captures poisonous drainage and lifts it back into the tailings pond. If the pump were to fail, there would be extreme risks of groundwater contamination, but the Canadian mining company who abandoned the site ignored these hazards. This forced the former mine employees to take charge and maintain the pump constantly, without pay.

After months of occupying the site, the Sardinian regional environmental agency, IGEA decided to step in and takeover the mine's remediation. The agency secured the mine to ensure there was no danger of toxic materials diffusing into the wider landscape, and developed a \$5.7 million remediation plan for the site. The workers had autonomy over those months and sought a future from this occupation. Their course of action was to occupy a part of the Industry Department from the Sardinian regional government for about 43 days. The former mine workers warned the government of serious environmental problems and demanded they regain employment to help clean up the site. The workers' perseverance gained popularity among the entire Sardinian public. Many of the former mine employees were able to (re)secure employment to help with the site's remediation.



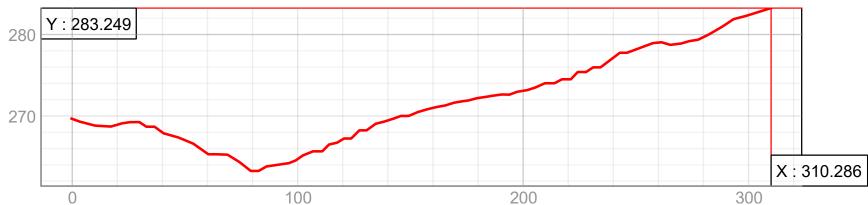






RECALLING PAST MEMORIES







Mining Afterlives: International Perspectives

Physical

The ramifications of mining are prevalent in the natural environment and on the health of communities. One of the most intrusive and contested aspects of mining is the extraction process; such as cyanide leaching or Carbon in Leach (CIL), which is used to extract gold from ore (Earthworks, 2019). Measures are put in place to prevent dangerous chemicals from spilling into surrounding landscapes, such as storing poisonous drainage in large dams known as "tailings ponds". However, these preventative measures have been known to fail, and the result can be catastrophic (Earthworks, 2019). As chemical spills can flow into groundwater, they may persist in the environment by killing marine life, contaminating drinking water, and damaging agriculture (Earthworks, 2019). The implications of cyanide on the physical landscape are extensive, as they create much larger mines, enormous open pits, and produce a significant amount of waste (Earthworks, 2019).

Some documented risks to humans include lead poisoning and chemical burns as a result of swimming in water bodies connected to a mine (Klauk, 2019). It has been recorded that just a teaspoon of 2% cyanide solution will cause death to humans (Klauk, 2019). Mining's transformation of the landscape may endure in the environment for centuries (Beckett, 2018). Due to the ability of these dangerous chemicals to remain in the environment, their consequences also persist throughout a mine's afterlife. Moreover, physical consequences of a mine's closure include deteriorated infrastructure, impeded river systems, dust build up and polluted water bodies (Siyongwana and Shabalala, 2019). Health problems including respiratory illness and mental illness have also been recorded as common consequences of mine closure on humans (Siyongwana and Shabalala, 2019). The mine's remediation also poses numerous environmental challenges (Beckett, 2018). In particular, because remediation typically focuses on the technical aspects of the clean up rather

than the social aspects, these remediation projects risk bolstering environmental injustices tied to mining and conceal the government and mining industry's involvement in devastating the environment (Beckett, 2018). Additionally, remediation may in fact only clean up parts of a site and ignore the ability of waste to flow into the surrounding environment (Beckett, 2018).

Discovering gold can bring incredible economic

Economic

opportunities for towns surrounding a mine, including infrastructure development, service provision, and growth in mine-supporting businesses (Siyongwana and Shabalala, 2019). Mines also provide job opportunities, contributing to raid growth within local communities (Siyongwana and Shabalala, 2019). During difficult times where the mining industry has become unprofitable, they may experience obstacles to meeting financial responsibilities, including paying employee wages (Siyongwana and Shabalala, 2019). These conditions can produce discontent among mine workers, forcing companies to recruit contract workers when they cannot retain employees (Siyongwana and Shabalala, 2019). Contract workers who live outside of mining towns therefore spend money outside of mining towns, furthering the financial instability of mining towns (Siyongwana and Shabalala, 2019). Once a mine finally ceases, there are numerous economic consequences including: diminishing local tax revenue, collapsing real estate values, severe unemployment, and a loss of corporate financial support to local communities (Siyongwana and Shabalala, 2019). Understanding the economic impacts of mine closure is imperative to planning for economic revitalization of mining communities (Blackwell, McFarlane and Fischer, 2017) as the lack of economic opportunities post mine closure is a prime contributor to a number of other social issues experienced by local communities.

National

With expanding investment in developing countries and their mining industry, there is growing concern that international corporations pursue countries with more lax environmental regulations that could maximize profit while polluting the environment (World Bank, 2014). In efforts to promote sustainability, governments, mining companies, and communities worldwide are encouraged to cooperate with one another to promote local development (World Bank, 2014).

In keeping with these sustainable approaches, international mining companies have been known to implement corporate level policies, such as corporate social responsibility (CSR) to aid communities tied to a mine, and reduce conflict between communities and companies (World Bank, 2014). Some CSR activities may include infrastructure development that can benefit the community and the mining company, like the provision of local roads (World Bank, 2014). As such, some of these corporate level policies can help alleviate certain challenges imposed on mining communities during a mine's operation and after its closure. However, despite the fact that governments and companies have put in place these policies to safeguard local communities, the environment, and the companies themselves during the mine's existence, there are a number of negative socioeconomic consequences of mine closure that these policies do not account for, including unemployment and loss of service provision for local communities. Furthermore, the repercussions of mine closure can be felt locally, and can spread across regional, state, and national scales (Blackwell, McFarlane and Fischer, 2017).

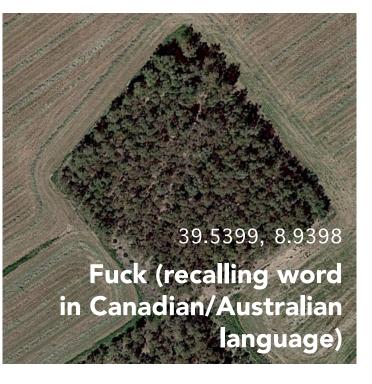
Social

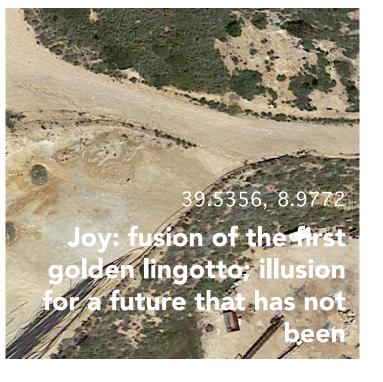
Mining operations can provide a number of social services to their surrounding communities, but once the mine closes these services can fail and

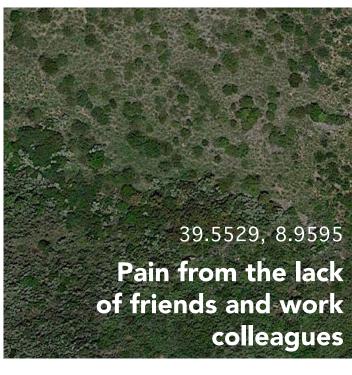
create a number of socio-economic challenges (Siyongwana and Shabalala, 2019). Many of these challenges have been linked to a lack of economic opportunity, limited social cohesion, and activity among community members (Siyongwana and Shabalala, 2019). Prevalent social challenges as a result of mine closure include increasing crime rates, substance abuse, declining standards of living, emigration of people out of mining towns, physical and mental health challenges, exacerbated food insecurity, and social disruptions (Siyongwana and Shabalala, 2019). When communities are not consulted throughout a mine's closure process, these challenges can intensify (Siyongwana and Shabalala, 2019). Environmental and social implications of mining and remediation are often closely related. Thus, communities who have strong attachments with their environments are known to suffer throughout the entire lifespan and afterlife of a mine, as diverse social challenges are amplified. For instance, both mining and remediation processes impede the ability of Indigenous communities to care for their land, and for the land to provide for them (Beckett, 2018). However, it is important to note that these communities can be incredibly resilient to the numerous challenges they face as a result of mining. In some scenarios, mine closure has been known to increase social cohesion among communities as they join together in finding new assets in their environment to support their livelihoods (Siyongwana and Shabalala, 2019). Governments have also been noted to provide added support to communities affected by mine closure by imposing new government initiatives that take ownership over businesses, encourage tourism, and reduce poverty at the local and national scale (World Bank, 2014).

STORIES FROM SARDINIA



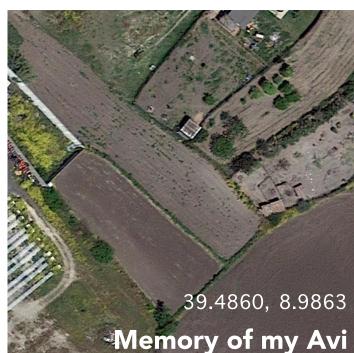


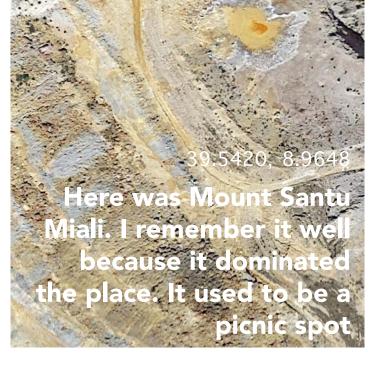














SARDINIA AS A CENTRE

Frontier culture attempts to erase local places, knowledge, resource rights, and ecosystems (Tsing, 2000). In this process of eradication, 'frontier' places or places in the periphery, can become destinations of resource discovery and extraction (Tsing, 2000). However, the stories which are told about frontier places, and the lived experiences within these places are not one in the same. Likewise, the stories told about Sardinia may not accurately reflect the experiences, identities, and histories held by locals. The stories shared among Sardinian locals affirm that the island is not a frontier place. It is as such, not only a destination of resource extraction, but a region with its own importance and history. Extractive industries that seek to explore frontier places fail to acknowledge and understand the importance of place and local contexts. Perceiving Sardinia as a frontier place means viewing Sardinians as a homogenous group, ignoring the uniqueness of each individual story attached to the island.

Through participatory research, it is evident that Sardinians demonstrate a natural enthusiasm to share stories of their history, dialect, and cultures. Namely, the region has preserved thousands of artifacts in which the island cherishes as identity markers of its distinct civilization (Carta, 2014). For example, 8,000 stone structures known as the 'nuraghi' which are only found in Sardinia, is perhaps the most obvious representation of the island's unique histories (Carta, 2014). In telling their stories, Sardinians have become somewhat of a mediator in educating foreign observers in order to transcribe their own culture and help eradicate some of the cultural misrepresentations that have been made as a result of frontier culture. These stories told from lived experience, help us to uncover the truth that Sardinia is very much a centre of culture, history, and identities and in no way a frontier place identified solely by their extractive value. Telling and retelling these stories to the foreign observer, such as ourselves, further sustains the idea of Sardinia's cultural distinctiveness (Carta, 2014).

Collapsing Distance: Urban Hauntings & Privately Owned Public Spaces

Our team participated in a collaborative walking tour through Toronto's financial district. The tour, entitled The Bank, The Mine, The Colony, The Crime, served to examine the perspectives on Canada's mining industry and impacts. Our stop on the tour was a projection installation on the theme of haunting urban space. The installation consisted of a video projected on a screen hung in a privately owned public space (POPS). Often, POPS are mere patches of concrete, a negative space between two forms, as is the case here. In setting up our projection, we've activated the POPS, and in projecting our ghostly images, we've attempted to bridge the gap between the financial headquarters of the extractive industry, and the people and places in far-away developing countries that are actually impacted by the violence imposed by these companies. Our work centred the idea of hauntings in urban space, drawing attention to absence and making visible hidden connections.

The presentation consisted of images and videos gathered over the course of our research into mining firms based in the Royal Bank of Canada Plaza, on 200 Bay St. We pursued themes of violence, information dissemination, and financialization. All of the themes discussed the ideas of consequences being removed from actions—impacts that are not felt by actors. Additionally, the research found negative consequences that were largely denied by the firms who caused them. This gap between reality and what is acceptable to discuss forms another basis for our work on hauntings, with ghostly images representing hidden truths.

Blasts & Graphs

Canada is an imperial centre of global mining interests that bring distant lands under the control of mining companies for resource extraction. The impacts that are done to people and the environment are hidden behind resource estimates, stock analyses, and financial statements. This is seen at the Furtei mine where the documents submitted to Canadian Securities Administrators do not mention the people or landscape.





PRODUCTION	COST OF SALES PER OUNCE (?)	ALL-IN SUSTAINING COSTS PER OUNCE (?
330,000 - 350,000	\$890 - \$940	\$670 - \$730

OLD PRODUCED	COST OF SALES PER OUNCE	TOTAL CASH PER OUNCE
63,263	\$1,011	\$594
inces (7)	* *	

Reserves and Resources

PROVEN AND PROBABLE GOLD RESERVES (NON-ATTRIBUTABLE 100% BASIS) ⑦	MEASURED AND INDICATED GOLD RESOURCES (NON-ATTRIBUTABLE 100% BASIS) ①	INFERRED GOLD RESOURCES (NON-ATTRIBUTABLE 100% BASIS) ⑦
8.3	13	4.2
Million Ounces	Million Ounces	Million Ounces







Fast & Slow Violence

Canadian mining, politicians, investors, and the media are complicit in the violence done to people and landscapes in the name of mining profitability. The scarred landscape, with its abandoned pits and tailings ponds, are a testament to the violence done at Furtei. Without the intervention of local residents, the tailings pond, after being abandoned, would have breached its dykes and rapidly caused an environmental and social disaster as cyanide laced materials would enter the watershed.

People, Places, & Propaganda

The dominant story of Canadian mining is that of daring entrepreneurs and swashbuckling explorers who find and generate great wealth. The narratives of the people and places impacted through mining are often untold and forgotten. But the people of Sardinia have their own stories to tell about mining, the land, their communities and they must live with the ghosts of mining long after the imperial miner has left.

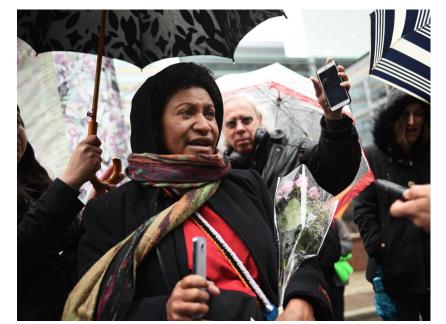














Through deep-rooted histories of colonization, extractive industries exploring mineral reserves globally have long ignored the stories of local individuals in their pursuit of resource extraction and capital gain. Through participatory research in Sardinia, we encountered the stories and everyday lives of those affected by mining. We seek to use these stories told of place close the perceived distance between places of extraction and places of financialization. Using these stories of local context, and international examples, we seek to uncover the ramifications of mining on the lives of those directly implicated by a mine. In efforts to collapse the distance, we examined the perspectives on the global impacts of Canada's mining industry. Our work in Toronto, our work centred on the idea of hauntings in urban space. We situated the stories told by those implicated by Canadian mining operations into the urban environment of Toronto's financial district, a prime destination for some of Canada's largest mining corporations. Projecting these stories onto the physical environment allowed us to bring awareness to the lived experiences of those tied to a mine, as haunting as they may be. Uncovering the

and organizations in an attempt to tell the story of the mine from the point of view of those who live in the area. Representing these unique stories into this visual essay provides us the opportunity to deconstruct generalizations made of distant places, and forces us to take accountability of Canada's colonial and exploitative history in the foreign locations we invest in. In Sardinia, we uncover some of the stories told of the Santu Miali gold mine in an effort to recenter the region and deconstruct global perspectives of the region as a frontier place. Understanding these unique stories allows for collaboration and collapses the distance between places of capital accumulation and places of extraction and uncovers ways values held by local individuals can be regenerated throughout a mine's afterlife. Through this visual essay, we seek to speak between the data we collected, both qualitative and quantitative, to elicit and represent stories told outside of conventional GIS and remote tools.