



Desktop Prospecting and Extractivism at Home

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Abstract Government-run geological surveys have increasingly facilitated exploration for potential mines by inviting novice prospectors to sift through old datasets prior to visiting physical sites, a process known colloquially as desktop prospecting. In northern British Columbia, Canada, some novices have developed sophisticated techniques for analyzing promising signs in these data and narrativizing their own desktop prospecting labor within broader environmental and economic shifts playing out across rural Canada. This article examines how efforts to vernacularize simulation-based geological expertise into new forms of work-from-home labor is transforming the ways settler entrepreneurs articulate attachments to rural areas. This growing interdependence of entrepreneurial web-based prospecting and extractivism writ large underscores a fundamental transition in how government ministries and developers relate the development of mines to the making of homes. Computer modeling tools have transformed prospectors' relations with people and places by altering where and how they conduct day-to-day work. The valorization of model-work as an accessible, democratizing practice has also shaped how prospectors discern what kinds of homes bear the risks of mineral exploration labor. With free maps and simple analytical software in hand, BC-based geotechnical institutions insist, individual prospectors might yet play critical roles in luring mineral exploration companies back to the region after a decades-long decline in mining activity. As climate change renders regional timber extraction uncertain and mining industry restructuring continues apace, settler prospectors' homemaking aspirations are turning inward toward domestic spaces of labor—some of the few spaces where precariously employed resource workers can still maintain illusions of control.

Keywords geology, simulation, British Columbia, Canada, settler colonialism

In northern British Columbia, Canada, *small town* is a relative term. Smithers, home to roughly five thousand people and situated thirteen hours by car from Vancouver, is an urban destination for many people in northern BC. Its hardware stores, hospital, and community college serve several thousand White and First Nations people scattered beyond the city's limits, many of whom live in small hamlets or in solitary cabins, sometimes kilometers away from paved roads. Since the early 2000s, a growing number of these people have begun desktop prospecting—searching for mineral deposits by

scouring public geoscience databases on personal computers. Whether they pursued the practice as a hobby or as full-time employment, most desktop prospectors I met in the region presented it as a convenient means of working from home.

Many in Smithers were drawn into prospecting by George and Margaret, a White couple in their sixties who promoted data-sharing initiatives for a geoscience research organization I call DataGeo.¹ People I met urged me to visit the couple at their home two hours away rather than wait for their once-a-month trips to town. “You’re going to love it out there,” they gushed. “During the winter, it feels like you’re alone in the wilderness.” Thanks to their satellite internet connection, though, the couple have remained tethered to mining’s professional worlds. Margaret worked as a mining industry training consultant and organized courses for prospective technicians, including several courses designed explicitly for Gitxsan, Wet’suwet’en, and other First Nations people who lived in the surrounding region. George is a retired engineering consultant who used to help mining companies optimize decades-long operational plans. Their friends often boasted that working with globally dispersed clients meant the couple could effectively live anywhere, a luxury desktop prospecting further enabled.

The notion that enterprising individuals in British Columbia’s northern interior could establish homes wherever they like—in deep wilderness, on the unceded territories of more than a dozen First Nations based throughout the region—was common among my White interlocutors.² It was an ambition some residents projected onto me, too. When I first began visiting the region in 2012 to study the afterlives of government forestry research programs and Gitxsan First Nation-led digital mapping programs established after a long period of direct conflict, I occasionally met Smithers-based geologists and attended their talks at the local community college.³ Presenters argued that digital prospecting was a good career for people dreaming of mountain homes; the few who start mines, some added, might even help their neighbors hold on to their homes as well.

Eventually I met eleven desktop prospectors—all White men in their midforties to late sixties—who invited me to their homes to watch them work. Driving to George and Margaret’s house during my first winter in the region, I found myself ruminating on how the work required to reach the deep woods, let alone build ideal homes there as settlers-cum-entrepreneurs, would complicate the concept of leaving. Perhaps mindful of the trance-like effect of the drive, the couple were already outside as I reached their driveway. “You should see it in the summer,” Margaret laughed as she gestured at meter-long icicles and ushered me into the house. Few of their White neighbors remained during

1. “George” and “Margaret” are pseudonyms. “DataGeo” is also a pseudonym; several public organizations in British Columbia host desktop prospecting workshops, but identifying the small organization that George works for would make it very easy to identify him.

2. Özden-Schilling, “Amenity Migration Revisited.”

3. Özden-Schilling, *Ends of Research*.

the winter, when temperatures fell below minus 30 degrees Celsius and all grocery stores within half an hour's drive closed for the season. Inside the house, though, the cabin's appeal was apparent. George took my parka and led me through a small kitchen into the couple's living room. Stacks of maps and mining industry magazines fought rock samples for space on a round dining table that served as George's desk. Beyond the table, a large window looked out over a snow-covered yard and onto the frozen surface of Babine Lake.

Other White desktop prospectors in Smithers—particularly those approaching retirement—had described similarly bucolic homes to me as “sanctuaries” for “hibernating geologists.” George, however, was eager to work. Carrying a wooden chair from the kitchen and gesturing for me to sit while he opened his laptop, he briskly led me through a computer modeling tutorial he was developing for an upcoming workshop. His goal, he explained, was to teach prospectors simple tricks for reading maps of magnetic potential and picking out signs denoting possible mineralization. “Lots of prospectors are intimidated by the word *magnetometry*, let alone a giant map of magnetic data,” George admitted. “I call my method ‘donut-ology.’ If you can find donut-shaped structures in magnetic potential in these maps, then you’ve got good reason to hire drillers to go hunt in that region for a porphyry deposit.”

The process seemed simple enough: choose a section of the map, then slowly scan the false-color lines comprising the map, left to right, from top to bottom, until you find pairs of “rabbit ears” on successive lines, several hundred meters across (fig. 1). A ring of high potential surrounding a spot of low potential could signify the presence of a porphyry deposit—a broad disk of copper- and gold-rich ore deep beneath the surface. Hovering with his mouse over a ring composed of “rabbit ears,” George opened two web browsers. In one window, a list of links described geophysical data collected over the area. In the other, a simple model-building interface invited us to upload additional datasets, then run them through cross-referencing algorithms to extrapolate what kinds of subsurface structures these data might indicate.

Periodically, George reflected on the economic stakes of our exercise. A single porphyry mine could generate hundreds of jobs and billions of dollars in revenue, he explained excitedly as we adjusted the simulator's parameters. In British Columbia's northern interior, it had become an article of faith among industry spokespersons that new porphyry mines were among the few ways that hundreds of families living in the region might keep their homes amid a looming downturn in the provincial timber industry. Anxieties about job losses had become endemic since the mid-2000s, after an infestation of mountain pine beetles killed millions of pine trees across the province.⁴ I had seen the endless expanse of beetle-killed red and black pines throughout my drive to Babine Lake (fig. 2). Regional residents would welcome new mines, George insisted, particularly as the infestation's long-term effects on timber production remained ambiguous. He

4. Corbett et al., “Economic Impact.”

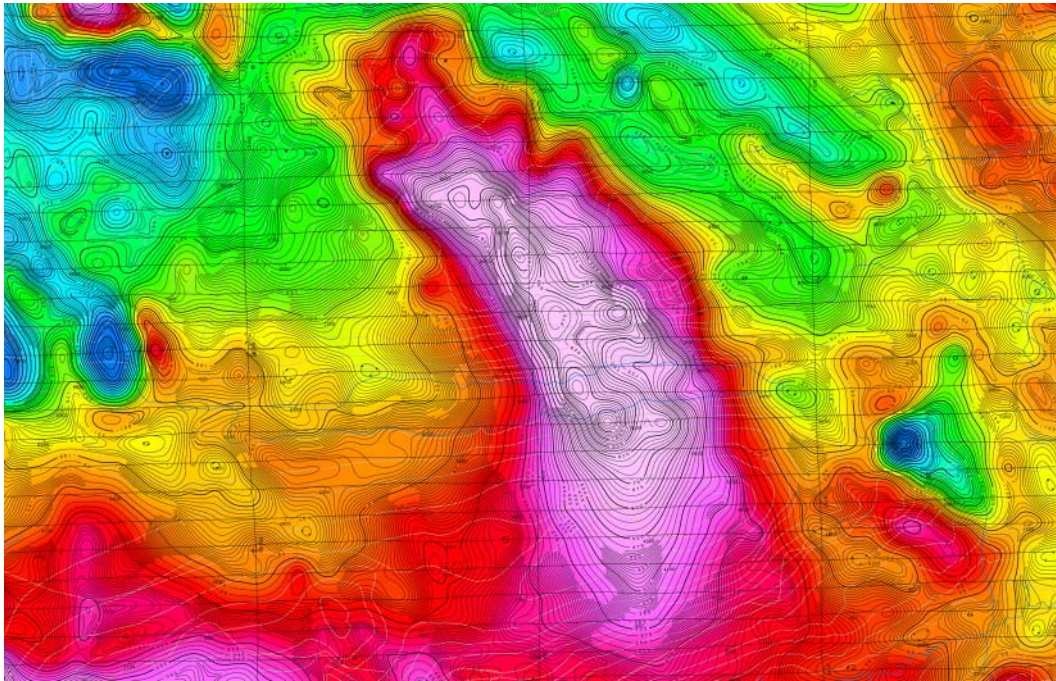


Figure 1. Magnetic potential survey data, British Columbia's central interior (from Carson et al., "Geophysical Series"). Image use permissions granted in accordance with Open Government Licence—Canada.

and Margaret knew dozens laid off from timber industry jobs who were already moving away; Margaret's classes for drilling technicians and exploration field assistants were also full of young Gitksan and Wet'suwet'en men who had recently lost jobs on logging crews and in sawmills. George's enthusiasm for prospecting's puzzles, though, obscured an intimate complicity: as resource developers were devising new ways to divest from rural communities, it had fallen to solitary prospectors building models at home to secure British Columbia's economic future.

Working the Earth, Working from Home

Most mineral prospecting work in North America no longer takes place along streambeds or mountainsides; it is done, instead, on computer screens. Aided by public datasets and web-based visualization and analysis tools, contemporary desktop prospectors have transformed how mining companies locate and develop hidden orebodies into producing mines. This growing interdependence of entrepreneurial web-based prospecting and industrial extraction, however, underscores a fundamental transition in how individual workers relate the development of mines to the making of homes. To proponents, desktop prospecting creates new homes and secures existing ones for resource workers by enabling developers to plan new mines and, occasionally, to extend the lives of others by locating new orebodies nearby. More intimately, boosters insist, the practice offers precariously employed individuals new means of working the earth while working from home.



Figure 2. Beetle-killed pine near Smithers. Photograph by the author.

The ways people craft senses of home within extractive landscapes has always been driven by technologies, whether through everyday uses of industrial tools or shared technological imaginaries.⁵ Such senses are not always positive. Much like the domestic spaces structured by violence and unequal power relations examined by feminist geographers,⁶ the landscapes and domiciles claimed by resource workers are marked by ideals of order and aspirations to dominate.⁷ By remaking spaces across many scales at once, however, extractivist labor blurs distinctions between homemaking and place-making. Carried to an extreme, the earthmoving equipment and explosives utilized in mining can even facilitate domicide, the deliberate destruction of places and senses of place.⁸ Indeed, processes of homemaking and unmaking are often driven by similar cultural imaginaries and economic processes, perhaps nowhere more dramatically than in the planning of large mines. To settler societies enculturated to see environmental destruction as the necessary price of material wealth, mines and their surroundings often become “sacrificial

5. Nye, *America as Second Creation*; Smith and Tidwell, “Everyday Lives of Energy Transitions.”

6. Blunt and Dowling, *Home*; Brickell, “‘Mapping’ and ‘Doing’”; Massey, “Place Called Home.”

7. Francaviglia, *Hard Places*.

8. Porteous and Smith, *Domicide*.

landscapes,” the transformations of which are unavoidable steps toward settlement’s goals.⁹ Yet particularly around large mines hosting multiple generations of workers, the goals settlers project onto mining landscapes change over time, and the senses of home that inhere in these spaces change as well.¹⁰

The rise of model-work in the extractive industries calls for a new account of technologically mediated homemaking, particularly in Canada and other settler states that have long dominated global mining. Since the mid-twentieth century, the proliferation of computer models among geologists and mining engineers has radically changed how practitioners establish a feeling for underground structures.¹¹ As with nuclear weapons testing and other domains where technoscientific labor has been extensively virtualized, these transitions have raised far-ranging questions about how practitioners relate to fellow practitioners and to the landscapes transformed by their work.¹² The ways experts evaluate the competency of their colleagues and apprehend the violence of extraction are increasingly saturated with normative modeling concepts. In an equally consequential sense, modeling tools have also transformed prospectors’ relations with people and places simply by altering where and how they conduct day-to-day work.

Typically working from online repositories of government-collected data, British Columbia’s desktop prospectors rely on geographic information systems (GIS) mapping software and spatial modeling algorithms to render disparate geoscientific data into three-dimensional models of underground structures.¹³ Whether parsing gravimetric survey data for evidence of differences in underground masses, magnetic potential data for evidence of concentrated metallic anomalies, or mineral concentration data from chemical assays of drill core and other physical samples, prospectors use spatial models to orient searches for new orebodies—expeditions that many desktop prospectors hope to undertake in person themselves, once they have identified potential prospects onscreen.

The broadening use of models has enabled mine developers to reorganize mine planning processes and substantially reduce permanent technical staff. Some experts who participated in these transitions have since established technical consultancies focused on different stages of exploration and mining. Others became full-time prospectors, exploring claims independently in the hopes of selling finds to developers. Some exploration experts leveraged their model-work and mobility to give themselves the freedom to live in particular places—not unlike itinerant journalists, computer programmers, and other so-called digital nomads. Initially, the government researchers and industry representatives who designed these tools assumed they would draw more city residents

9. Black, *Petrolia*.

10. Ferry, *Not Ours Alone*; Smith Rolston, *Mining Coal*.

11. Nystrom, *Seeing Underground*. See also Stevens, “Feeling for the Algorithm.”

12. Gusterson, “Virtual Nuclear Weapons Laboratory”; Lehman, “From Ships to Robots.”

13. Schilling, “Uranium, Geoinformatics, and the Economic Image of Uranium Mining”; Montsion et al., “Knowledge-Driven Mineral Prospectivity Modelling.”

into mineral prospecting, and perhaps soften urban opposition toward mining in general.¹⁴ Many White rural would-be prospectors, however, have turned to model-work so that they might continue to live in their favored locales.

Processes of home- and place-making are central to both settler-colonial and Indigenous entanglements with extraction. Addressing all the well-developed literatures that examine these entanglements is far beyond the scope of this article. I focus instead on George and Margaret's personal encounters with desktop prospecting as a lens for reflecting on a series of new analytical conjunctures. By asking how the evolving technical organization of mineral exploration work shapes where and how participants conceptualize ideal homes and homemaking processes, and how these transitions have transformed participants' engagements with settler imaginaries, I also acknowledge recent calls for more granular treatments of extractivism in humanistic scholarship.¹⁵ The resource logics of extractivism, I argue, shape relations even in domestic spaces and increasingly contour how individuals articulate personal aspirations and senses of home.

At every stage of exploration and mining, homemaking is treated by extractivism's experts as the realization of intentional processes. For centuries, the technological organization of mining has acted as a global racializing force by recognizing the intentions and subjectivities of some people and not others. As Kathryn Yusoff argues, these processes of racialization have remade the earth while also complicating how humanism might reckon with this damage.¹⁶ Thanks to industry restructuring, however, many White prospectors' homemaking aspirations are increasingly turning inward toward domestic spaces of labor—among the few spaces where precariously employed workers still maintain illusions of control. Informalization has also revealed subtle divergences between the aspirations of settler-run corporations and the individuals who manage extractive processes. While the former continue to exercise control over the futures of populations and landscapes, the latter increasingly subsist on elusive dreams of intentionality. As shifting technical tools and economic processes lead more prospectors to work on their home landscapes, from home, in other words, model-work has only deepened individuals' desires to use technical mastery to secure attachments to place—aspirations that have become increasingly difficult to fulfill.

Across rural Canada, individuals unmoored by industry restructuring are encountering new limits to settler imaginaries. Rather than abandoning their desires to establish ideal homes in remote areas while remaking the landscapes around them, many are shifting these designs to their own domiciles and technical tools. The kinds of tools that encourage such transpositions, though, carry new threats of erasure. In rural resource work, computer models have radically expanded the agential capacities of individual

14. Williams, "Liane Boyer Turned to Prospecting."

15. Szeman and Wenzel, "What Do We Talk about When We Talk about Extractivism?"

16. Yusoff, *Billion Black Anthropocenes*.

workers even as they have rendered many workers expendable. In the process, these models have re-mediated many workers' relationships to the places in which—and on which—they work.

Viewed within the flows of day-to-day life, model-work in the extractive industries has provided some individuals with new terms and tools for negotiating threats of displacement. Foresters overseeing long-term experiments, for instance, have used simulations of tree growth and ecosystem change to re-mediate processes of institutional succession.¹⁷ Subsurface models of water flow draw nonspecialists into some political debates, while rendering other debates inaccessible.¹⁸ By enabling experts and hobbyists alike to simulate slowly unfolding temporal processes or spaces that cannot be physically accessed, computer models can engender new forms of ethical attention that transform how individuals experience nondigital worlds.¹⁹ Yet as new forms of model-work are being undertaken in unstable working arrangements by practitioners facing precarious times, a new critical question emerges: What does virtual place-making afford when multiple senses of home are at stake?

Senses of Home, Senses of Threat

Working from home has freighted the place-making affordances of model-work with new kinds of associations and anxieties. For recent retirees and longtime consultants, home offices may be refuges—private sites for pursuing long-deferred passion projects, insulated from the pressures of corporate workplaces. Remote home offices can also offer prospectors sites from which to imagine the potential impacts of their labor on surrounding landscapes and regional economies. For many other individuals, however, a home office is less bucolic ideal than space of abandonment: a holding area defined by its distance from institutional attachments and by the difficulty of moving outside it.²⁰

Long before the emergence of desktop prospecting, settler narratives linking extraction to homemaking were animated by imagined threats of loss. Many early settlers across North America were motivated by nostalgia for property they believed their European ancestors had lost, and embraced the machinery of their trades in part to reassure themselves that their descendants would be secure against similar losses.²¹ Axes and other technologies of extraction undergirded what David Nye calls a “technological creation story,”²² one that tethered settlers to changing landscapes by equating homemaking with self-making through physical presence and toil. Similar stories saturate contemporary Canada. Near Williams Lake, a town situated on the territories

17. Özden-Schilling, “Aging in Digital.”

18. Ballesterio, *Future History of Water*.

19. Messeri, *Placing Outer Space*; Neale and May, “Fuzzy Boundaries”; Özden-Schilling, “Authors of Misfortune.”

20. Gershon, *Down and Out*.

21. Marx, *Machine in the Garden*.

22. Nye, *America as Second Creation*, 50.

of the Tsilhqot'in Nation, Elizabeth Furniss locates narratives of home- and self-making labor threading through the town's annual "Stampede" and shows how these narratives structure White and First Nations residents' anxious encounters throughout British Columbia's northern interior.²³ J. Edward Chamberlin, meanwhile, draws comparisons between settler stories of heroic independence with the place-based performances through which Tsilhqot'in and other First Nations people assert intergenerational collectivity and obligations to land.²⁴ Altogether different senses of self, Chamberlin observes, underlie these narrative forms.

The timing of these analyses is important. Both Furniss and Chamberlin wrote after the Supreme Court of Canada's decision in *Delgamuukw and Gisday'wa v. the Queen*, a watershed land claim launched by the Gitksan and Wet'suwet'en First Nations, where standing for oral histories and hereditary leaders was first established in Canadian courts. The Court's apparent receptivity to collective narratives, Chamberlin suggested then, might yet offer White Canadians a future model of attentive humility. Yet for many contemporary British Columbians, still living on unceded First Nations land (including George and Margaret, whose cabin lay on the territory of the Lake Babine or Nat'oot'en Nation), the contraction of the timber industry and the concomitant extension of new entrepreneurial tools has only strengthened colonial narratives of intentional creation by amplifying their own fears of loss.

Some prospectors seize on settlement narratives to frame professional transitions as personal adventures. Speaking to a mining industry magazine in 2018, exploration geologist Liane Boyer, a White woman, described desktop prospecting as a means of recommitting to her role as a mother while she worked to exploit the underground wealth near the city she had recently made her home. "The amazing thing about living in Thunder Bay is it really is the gateway to northwestern Ontario—an area that, in my opinion, is underexplored," Boyer offered. "When I got past the fog of having very young children and started to sink my teeth into the geology of this region, the potential was exhilarating. I think when you've spent your career looking for mineral deposits, it's hard to stop."²⁵

Unlike Boyer, all desktop prospectors I met in British Columbia were men. Most had worked in the mining industry, and several were married to women who, like Margaret, had also worked as mining engineers and industry consultants. None of the women I met who were married to desktop prospectors were engaged in desktop prospecting themselves—an apparently common situation in British Columbia that was a frequent topic of jokes, and an occasional source of tension, among the people who met with me as couples. Several of these men assured me that working from home actually helped them distribute childcare responsibilities more equitably—claims their wives

23. Furniss, *Burden of History*.

24. Chamberlin, *If This Is Your Land*.

25. Williams, "Liane Boyer Turned to Prospecting."

usually met with incredulous laughter. When explaining whether their own prospecting efforts counted as full-time work, nearly all spoke in aspirational terms. Few had sold enough claims to treat prospecting as their primary income; several had taken on substantial debt to acquire new claims. Nevertheless, they all presented their time on computers as a prelude to future time in the field—a hoped-for transition that compelled careful thought. They insisted that public datasets and web-based staking systems that enable interested parties to file claims before physically visiting claimed lands minimizes disruptions to surrounding communities and levels the playing field for prospectors competing with companies.

Others viewed these infrastructures far more critically. My Gitxsan and Wet'suwet'en interlocutors decried British Columbia's online claim staking system, Mineral Titles Online (MTO), for undermining Indigenous sovereignty by making it easier for White British Columbians to establish attachments to unceded territories. Academic critics forcefully underscore these points. Building on Dawn Hoozevee's critiques of colonial British and Canadian minerals law, Hannah Tollefson argues that new digital interfaces "are designed to create a seamless experience for acquiring mineral rights. [MTO] does this through attempting to reify settler colonial constructions of space and erase Indigenous jurisdiction and with it, the contested status of land title in British Columbia, where the vast majority of land is not covered by treaty."²⁶ On a day-to-day level, my Gitxsan interlocutors reminded me, the provincial government's already-meager development consultation protocols affected only advanced projects nearing production, not the exploratory work where projects first gain momentum.

When we met in 2013, George had begun teaching simplified computer modeling techniques to other desktop prospectors. Most of his workshops had been organized with DataGeo, a Vancouver-based organization that assembled geotechnical datasets and distributed them for free online. Incorporated during MTO's launch year in 2005 while British Columbia's resource ministries were undergoing dramatic contractions, DataGeo encouraged mineral and gas companies to develop projects in the province and urged residents to begin entrepreneurial endeavors of their own. George freely admitted that Canadian prospecting associations were overwhelmingly White; DataGeo's vision of entrepreneurialism, he insisted, sought to change this. Since its inception, the organization had recruited field assistants from First Nations communities in areas undergoing DataGeo-funded surveys. The organization had also invited First Nations governance groups to participate in survey planning discussions and had partnered with industry-focused First Nations consortia to publicize the ways DataGeo-produced data and analysis tools might help prospective workers meet mining industry demands. Other regional outreach efforts, I knew, effected similar entreaties. Margaret herself organized training programs for would-be mining technicians and prospectors at the community college in Smithers, including a field-based program explicitly focused on First Nations youth.²⁷

26. Tollefson, "Staking a Claim," 178. See also Hoozevee, "Sub-surface Property."

27. McCreary, "Mining Aboriginal Success."

First Nations employment within the timber industry had always been proportionally low in British Columbia's northern interior, she reminded me, and mining companies were eager to fill the gap.²⁸

Not all my interlocutors shared Margaret's enthusiasm. Older Gitxsan and Wet'suwet'en who conducted research for the *Delgamuukw* and *Gisday'wa* land claim or had organized mapping projects in the years that followed complained that industry initiatives had helped obscure these earlier sovereignty battles and perverted their contemporary legacies. Few youth living on reserves possessed personal computers, they reminded me—a long-standing impediment to their efforts to teach GIS-based counter-mapping methods.²⁹ Some lamented that numerous band offices were accepting mining company funds to buy laptops for training and prospecting work, further complicating development consultations. Their reflections suggested that the more would-be prospectors and technicians treated new technical skills as means of emplacing themselves in the region, the harder it would be for individual youth to envision their own futures through collective projects.

The valorization of model-work as a democratizing practice—one theoretically accessible to White and First Nations prospectors alike—has helped shape how rural residents discern what kinds of homes bear the risks of mineral exploration labor. By emphasizing how online databases and claims registries affect the economic security of individual entrepreneurs, organizations that promote the expansion of desktop prospecting deflect attention away from the social, legal, and ecological threats facing prospecting landscapes and onto the threats of dislocation facing prospectors themselves. Such redirection has long been fundamental to what Yusoff calls "white geology." In *A Billion Black Anthropocenes or None*, Yusoff shows how the writings of early geologists "reveal the affective infrastructure that travel under scientific reason that privileges white comfort ('anxiety') over Black pain."³⁰ Such infrastructure, Yusoff reminds us, still operates over far-ranging scales in the mining industry. Perhaps most perniciously, this affective redirection also helps present new mines as solutions to crises following in extraction's wake.

British Columbia residents' anxieties have been heightened dramatically by the mountain pine beetle infestation—a catastrophe most residents relied on simulations to comprehend. Particularly at the infestation's height between 2003 and 2014, models of the beetles' spread became crucial to the ways government actors imagined futures for provincial industries. Spatial projections delimited where federal disaster relief funds could support new resource development projects.³¹ Since 2013, these boundaries have

28. While First Nations people comprised 17 percent of British Columbia's northern interior population in 2016, only 5 percent of people directly employed by the region's timber industry then were First Nations. See Statistics Canada, "Census Profile, 2016 Census"; and BC First Nations Forestry Council, "Forestry Workforce Strategy."

29. Özden-Schilling, "Cartographies of Consignment."

30. Yusoff, *Billion Black Anthropocenes*, 79.

31. Corbett et al., "Economic Impact."

also enframed geophysical surveys and other research initiatives designed to enliven the mining industry as timber harvests begin to collapse. While these initiatives' organizers celebrate an emergent resource economy driven by locally embedded entrepreneurs, they also forebode what might befall rural life in the province—and, implicitly, settler life across Canada—if new mines fail to materialize.

The View from Nowhere

An hour into our modeling exercises, George was in a reflective mood. He and Margaret had always hoped to retire “in the middle of nowhere,” he admitted. Like other prospectors I met near Smithers, George was eager to share his excitement at navigating technical puzzles. As we sat near his woodstove, my eyes drifted to photographs on his walls that depicted George visiting mines all over the world. Even outside his popular workshops, George was renowned among regional prospectors. In 2007, he convinced the operators of a copper-molybdenum mine 150 kilometers southwest of Babine Lake to conduct exploratory drilling nearby. The mine was approaching the end of its operational life span, and staff salaries had been reduced as planners struggled to keep the mine open. For months, George built models from aerial survey data, searching for signs of neighboring mineralization. After drillers successfully located a new orebody based on George's directions, planners extended the mine's life span by a decade. Circulated by DataGeo and other industry outreach groups, George's story offered a flattering example of what talented individual prospectors could do if they had the right tools.

Proliferating public geoscience data required quality control, too. George's heuristics were particularly useful for coarse magnetometric scans based on data obtained from aerial survey intervals of a quarter kilometer or more, versus the costly fifty-meter intervals flown for well-funded companies. The map George and I examined had been produced from coarse surveys near the Alaska panhandle, an enormous region dubbed the “golden triangle.” In the late nineteenth century, the area was a destination for gold panners, many of whom later participated in the Klondike gold rush. Over a century later, the region remained a favored reference for provincial government and industry actors narrativizing early settlers and contemporary prospectors as the makers of a continuous history.

I often encountered frontier tropes while speaking to mineral explorers. Yet the design of George's “donut-ology” exercises—the technical problem that George's tricks were designed to solve—underscored how the adventurous ambitions of individual prospectors supported broader arcs of extractive development. Unlike the veins and nuggets sought by nineteenth-century prospectors, a single porphyry deposit, with dispersed gold concentrations measuring only a few grams per ton, might measure kilometers in diameter. Whenever I asked why so many were obsessed with such enormous orebodies, I expected to hear complaints about geologists' delusions of grandeur. What my interlocutors offered instead was resignation. “The permitting process for a mine in BC takes more than a decade,” Margaret grumbled when she rejoined us midway

through the morning. “If you want to keep investors on board from discovery to production, you better be after something big.”

While the transition toward model-work has not prevented prospectors from joining professional associations or building collaborative relationships, it does seem to have increased the allure of fantasies of individual salvation. Halfway through lunch after our model-building session, George retrieved a small glass vial from a bookshelf crowded with rock samples. Tapping it on the table, he pointed to a pile of dust at the bottom of the vial. “I always keep this in my pocket when I teach workshops, to show folks how much physical material at an exploration site gets chemically assayed. They don’t believe it. Twenty thousand tons of ore might come out of a mine every day, and this is how much rock we’ve actually sampled, to know how much gold and copper we’re pulling out. We can’t live without statistical models.” Through careful sampling, the mineral concentrations of enormous three-dimensional orebodies could be extrapolated in precise detail. The engineering models that George used during his career were far more complex than the free web tool undergirding our “donut-ology” exercise, but the statistical principles—and their consequences for redistributions of labor—remained fundamentally the same. George suggested that a single prospector, aided by spatial models, could reorganize the working lives of thousands—geologists, drilling crews, mining engineers, excavators—who might eventually shape landscapes as well. The sheer uniqueness of George’s success—so unique that it made him an especially compelling representative for DataGeo—contrasted with his optimism. While a handful of modelers might succeed in using this power to site their own homes wherever they pleased, most would eventually find their aspirations constrained.

No Place like Home

Climate change-related displacement, landscape destruction, and new configurations of domestic labor articulated within global commodity supply chains will only deepen the problems inherent in the home and increase its allure as an idealizing trope, particularly within settler colonies. Ethnographic writing about new precarities attending extraction can illuminate gaps that the term *home* increasingly labels: between landscape and domicile; between screenwork and fieldwork; between a prospector’s hope and its infinite deferral. Homemaking matters to desktop prospectors not only because they remain anxious that industry transitions threaten their bucolic houses but also because the technical reorganizations abetting these transitions make it less likely that individuals now working from home will ever leave.

Situating model-work in domestic spaces underscores the inordinate amount of time that contemporary knowledge workers spend simply waiting.³² Few mineral claims progress beyond preliminary inspection—a fact asserted by every prospector I met in Canada. Even amid active projects, however, desktop prospectors wait in ways that

32. Ferry and Limbert, *Timely Assets*.

affect their senses of home. As they wait for new data, mineral prices changes, exploratory trip opportunities, and eventually for their own claims to lapse, individuals searching for prospects from personal computers nevertheless imagine where they might go once a project winds down. Free datasets, maps, and modeling tools proffered by organizations make prospecting accessible to people who cannot easily travel. Yet this access has also rendered physical sites more remote, since prospectors working from home have become more likely to abandon claims before visiting them than were their predecessors with paper maps.³³ The technological creation stories undergirding settlement's landscapes keep turning inward.

Perhaps most consequentially, the where and how of model-work has changed desktop prospectors' senses of home by altering how they perceive the ways different spaces become vulnerable to time. Models of mineral potential lend these entities an aura of stability—that they will remain where they are, ready and waiting to be put into production. Working with these tools causes users to confront beguiling images of potential even as many negotiate precarities in their day-to-day lives; such forms of labor can also make prospectors' own homes seem imperiled by comparison.³⁴ While visiting Smithers in 2017, my conversations with desktop prospectors dwelled on potential deferred. The copper-molybdenum mine that George's model-work had helped to reopen had suspended operations the previous year, when copper prices declined. "It's still got a good life span," one offered. "There's five years left in the new orebody." Another prospector warned that nobody knew when the "new life span" would recommence. The situation was common for low-grade porphyries across North America: model-work finds and reopens mines but can also put them into hibernation for decades, sometimes beyond the life spans of their original discoverers. In the meantime, desktop prospectors simply keep looking and waiting for new homes they can confidently claim as their own.

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33. Fortems, "Prospectors a Rare Prospect."

34. On "potential," see Kneas, "Placing Resources."

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