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The crossroads of oil: perpetuation of settler colonialism based in Native American treaties and sustained through the construction and protection of oil pipelines in the American Great Lakes region

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THE CROSSROADS OF OIL:

PERPETUATION OF SETTLER COLONIALISM BASED IN NATIVE AMERICAN TREATIES AND SUSTAINED THROUGH THE CONSTRUCTION AND PROTECTION OF OIL PIPELINES IN THE AMERICAN GREAT LAKES REGION

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I. Abstract

This thesis focuses on structures of international law and Native American treaties that were drafted throughout the eighteenth, nineteenth, and twentieth centuries and how they directly affect today's energy infrastructure standards. These Native American land rights treaties stemming back to the mid eighteenth century were the initial legal renderings that imposed Euro-American ideals of private property ownership on the Great Lakes region, and its already established peoples, in the long process of settler-colonialism of the Americas. The two new nation-states of the United States and Canada were wrought from, and took shape on, what was already lands home to indigenous groups. The generalized rights of the US and Canadian governments to these lands and their resources has led to the socialization, acculturation, and acceptance of limitless extraction and transportation of nonrenewable resources. Tracing the historical and 'legal' roots of land appropriation is reflective of and vital to understanding the current battle that is taking place between multinational energy companies, the national governments of the US and Canada, and Native American tribes with environmental advocacy groups, over the continued operation of oil pipelines within the greater context of the climate crisis and the proliferation of crude oil pipelines.

Today, there is a continuation of legal battles, over land accumulation and resource acquisition, between the Enbridge energy company (largely backed by the national governments) and Great Lakes Native Americans tribes (often in alliance with environmental advocacy groups). Both pro-oil pipeline camps and anti-oil pipeline camps are utilizing past treaties to ground their claims in positive law, to bolster their respective logics. This mutual deployment of past and present laws, along with the dependent and entangled economic, cultural, and social relationship with oil makes it clear that oil pipelines are more than simple physical entities. They are in fact politically significant and inherently controversial. Energy infrastructure companies, such as Enbridge Inc., as well as the national governments of the United States and Canada are largely prioritizing the construction and operation of oil pipelines (because of energy demand) despite the strong indications that they are not sustainable and pose harmful

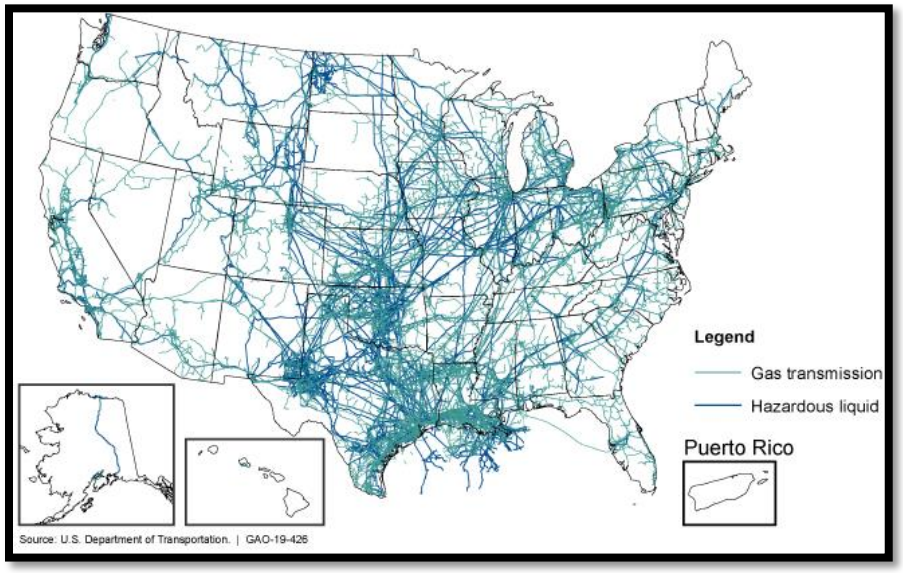
risks to the safety of surrounding communities and natural environments. It is this intersection of conflict that I analyze within the context of the perpetuation of the historical rendering of settler colonialism and land and resource appropriation, both in the Americas and around the world, that has bolstered the dependence on and subsequent conflict over oil and the way in which it continues to be transported through culturally and environmentally sensitive lands.

II. Introduction

The energy demands of the world are ever increasing. With modern life demands that increasingly require more, cost-efficient energy, natural resources and nature itself are commoditized. In 'the economy of now', today's pressing energy demands (to provide electricity for the growing human population's demand: to deliver consumer items at quicker speeds, to keep communication systems operating, and to transport individuals from one place to another, all at a low cost) seemingly overshadow the needs of tomorrow. Despite the evidence and widespread knowledge of worldwide climate change and the perceivably finite supply, there is an evident intentional perpetuation of economic demand and societal acceptance to continue using and expanding oil pipelines in the conveying of crude oil to harness the many uses and products that can come from its refined state. These oil pipelines are but one part of the greater network of fuel production, yet because of their prioritized construction and political and financial support in place of other, less efficient means of transportation, oil pipelines have become structurally inherent to the societal processes as they stand today. I see the physical existence of oil pipelines as being inseparable from the political arguments that will determine the world's energy future. Not only does the created reliance on energy from oil lead to more carbon exhaust and a greater risk of polluting accidents through its transport, but the focus on oil pipelines also draws funding and support from renewable energy infrastructure on an international scale. Much political and economic capital has gone into the creation of the network of oil pipelines and refineries making the assemblage entirely entangled. In North America, oil pipelines sprawl across the continent, connecting different areas along their route through the delivery of petroleum products to places of refining, production, and consumption. They are part of an even more massive network of water,

sewage, and natural gas lines, but for the purpose of this study, any mention of 'pipeline' will be referring to that which transports 'crude oil' unless otherwise stated.

Figure 1: U.S. Oil, Gas, and Hazardous Materials Pipelines

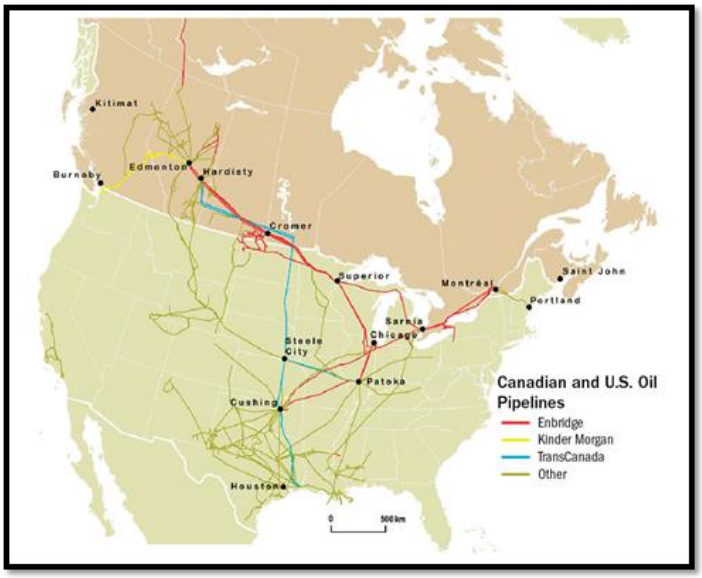


Map Accessed from U.S. Government Accountability Office (2019) depicting the extent of pipelines carrying natural gas and hazardous materials (crude oil being classified as a hazardous material) in the United States.

Oil has been deemed a societal necessity for the energy demands of today, and the distribution of it relies on the extensive networks of pipelines. The US consumed an average of 18.12 million barrels of petroleum products per day in 2020. Petroleum products accounted for 35% of the country's total yearly energy use (US EIA, 2021). This growing energy need is driving the demand for more oil and subsequently more oil pipelines as an efficient, cheap means of conveyance, compared to other methods like rail or truck. Enbridge Inc is a major energy company in North America, specializing in oil and gas storage and distribution, helping to fulfill this demand for transportation via pipelines. Based in Canada, Enbridge owns and operates nearly 25% of all North American crude oil pipelines (by pipeline mileage) including the Lakehead System of oil pipelines (Enbridge "Crude oil and liquids pipelines" 2021). Today, there is more than 190,000 miles of active petroleum pipelines in the United States (API, 2021), 9,299

miles of which are Enbridge's crude oil pipelines. Enbridge operates an additional 8,510 miles of crude oil pipelines in Canada, and these pipelines (combined with US mileage) account for 30% of all the crude transportation (by volume) in North America (Enbridge Inc 2021). In many cases, the construction and operation of these pipelines as a cheaper and less-polluting method (Klay et al 2017) is being prioritized by major pipeline companies, like Enbridge, and the Canadian and US federal governments (in the interest of energy need, industry stability, and the general status quo) despite growing concerns about the guaranteed health and safety of surrounding communities and the natural environment.

Figure 2: Extent of Enbridge Oil Lines



Map accessed from Government of Canda (2014): This map was created in 2014 by the Canada Centre for Mapping and Earth Observation and does not show the full extent of today's pipelines. Yet, it affectively illustrates both ends of the line and the overall reach of the Enbridge pipeline system, including the Lakehead System in question.

Oil pipelines are constructed on and traverse through private, public, and native lands. Relative to their vast network and convoluted placement in politics and economics, oil pipelines (like other vital space- connecting infrastructures) receive relatively little acknowledgement or public notice, let alone outright objections and protest. This is not to say that pipelines receive no attention. In fact, in recent years more and more detrimental incidences involving major oil

companies and oil leaks have earned headlines and considerable public outcry. Yet, compared to the sheer volume of pipelines that exist and continue to be invested in, planned, and constructed, the volume of critical protest is rather low and seemingly novel. All pipelines pose an inherent risk of structural or operational failure, as do all methods of crude oil transportation. It is the initial extreme visibility of construction, followed by their landscape-joining invisibility that set pipelines apart. Some prospective pipeline projects have been routed through environmentally and culturally sensitive lands and were canceled due to public protest e.g., Keystone XL and the Atlantic Coast Pipeline. However, this 'protested' number is few in the thousands of miles of constructed and operational oil pipelines. In general, these disputes and protests are subconsciously perceived as distant 'pseudo-events' (Urry 1995, 7). There is a phenomenon in which the average energy-dependent citizen views themselves as separate from the controversy and conflict of the energy they consume, making their contact with the physicality of energy sources unwanted or ignored, and, in some cases, unknown.

The projected image of modern life remains at a calculated separation from the essential truths of its dependence on energy from fossil fuels. The average citizen may never become fully aware of exactly where their energy comes from, but they should certainly be aware of the conflict that exists around the promotion and expansion of such energy sources over alternatives. It is difficult, however, to draw that direct connection with themselves, and they subconsciously separate their own culpability in the matter, creating space between perceptions and realities of the conflict. This creation of, and subconscious distinction between, 'liminal zones' enables the citizen to be as involved or uninvolved with the conflict as they desire (Urry 1995, 11). The voluntary state of participation in protest or support of energy does not dismiss implication in the perpetuation of the employment of hazardous energy transportation. It allows for a spectator's/tourist's level of involvement. This is due not only to the intentional placement of these pipelines, but also to the newly prioritized focus of our modern world. The United States' labor economy is primarily 'fueled' by the service sector, and this in turn leads to a concentration on the exchange of intelligence. The focus on the industrial, on metal and oil, has taken a backseat, almost altogether disappearing from view (Barry 2013,

137). Not only are such things seemingly unwanted within our sight, but they are perceptively irrelevant to us in our daily working lives (outside of being fully dependent on the energy that comes from the burning of such resources), much like the legal structures that govern our social world.

This apparent, general invisibility is in direct contrast to oil pipelines' presence in and near residential communities, common areas, and natural habitats and the threats they pose to public health because of the constant risk of spillage and spontaneous leaks. These threats are illustrated by past events, including one of the United States' largest inland oil spills that occurred in Marshall, Michigan near the Kalamazoo River when, in July of 2010, Enbridge's Line 6B ruptured and released an estimated twenty thousand barrels of oil into the river's tributary (Riesterer 2019). Despite the overall accident rate being low, when they occur, long-term damage is quickly done. Energy companies and their financial/legal backers are willing to take on the risk because of the far larger, guaranteed gains, but they are evidently not the only ones who would suffer from an accident.

Such 'risk' is part and parcel of any capitalist venture. It is in the interest of oil companies to frame such risk as a necessity: the 'benefits' of the economy and individual standard of living are dependent on and far outweigh the cost to small groups of exposed people or nonessential lands, and any attempt to harness a different means to energy would be far too costly. The fact that Enbridge Inc, the owner and operator of Lines 3, 5, and 6B, is using these government enforced 'regulations' on pipelines 3 and 5 as opportunities to expand pipeline oil capacity is stoking the embers on many preexisting environmental and land-rights violations; putting specific populations at a disproportionate risk. Regional agriculture and natural ecosystems may also be susceptible to damages from leaks and from initial infrastructure installation, as seen in the Line 3 replacement project that is intersecting private farmland and public lakes, but it was once all Ojibwe territory and remains today legally protected (by treaty), traditional Ojibwe fishing and hunting territory in northern Minnesota. The rerouting of the half-century old

pipeline segment is in response to judicial orders, after it was deemed the pipeline had "structural issues", and now it would seem as if the supposed replacement was being utilized as an expansion opportunity (Regan 2021), threatening waterways that provide as cultural livelihoods to the Ojibwe peoples. It is such disproportionately affected Native American reservations and protected lands of the Great Lakes region that are the focus of protest against Enbridge's Lines 3 and 5. Ojibwe tribes and activist groups are fighting back on the grounds of climate crisis, treaty infringements, and pollution prevention. The insistence of Enbridge and other energy companies on their perceived right of way through Native American land is a subsequent acculturated and socialized mindset that remains from the first enforcement of Euro-American ideals of property rights in the colonization of the Americas.

Figure 3: The Lakehead System

Map accessed from Energy News Network (2021) depicting Enbridge's Lakehead system of Great Lakes area crude oil pipelines.

Recent major international cooperation is based on the attempt to reduce global dependence on fossil fuel energies, considering the ever-increasing severity of climate change due to carbon emissions. The Paris Agreement (2015) established a binding treaty between 196 sovereign states with the aim to restrict global warming (UNFCC 2022). Despite bold claims and declarations of carbon-neutrality target years, many participating members widely continue to

employ fossil fuel energy sources, because of the large obstacles and initial costs of a full energy transition. The United States is one of the largest culprits consciously promoting domestic production and use of carbon energies and supporting carbon-energy companies (Liu Z. et al 2022). Thus, the pipelines are implicitly imbued with controversy; locally and globally. It is this inherent conflict between the perpetuation of oil pipelines and the health and safety of pipeline communities, natural ecosystems, and water resources I seek to detail and analyze at the present-day intersection of historically imposed settler-colonialism and the material construction of oil pipelines.

III. Questions Asked

I have lived nearly my entire life in the Great Lakes region. Having grown up in Wisconsin, I was constantly near many lakes of varying sizes (including the unparalleled Lake Michigan). I have always identified strongly with fresh water and its natural, surface waterbodies. My undergraduate education in Madison, WI made the wonders of lakes even more visible, in addition to clearly illustrating the human threat to a lake's natural processes. With all my close contact with freshwater I was still, until very recently, naïve to the many threats that face our reliable, long-term access to it. It is expected that one might not know the nuances of watershed boundary politics and commercial water usage law, yet I had been completely unaware of the millions on millions of gallons of oil that are gushing through pipes across the Great Lakes states every single day. There are several pipelines that run directly through the center of Wisconsin, through private farmland, state-owned public land, national forest preserves, and Native American reservation land. I was disconcerted to learn that so much of the land I had thought myself to be familiar with was a part of the oil industry's transportation route. How could someone be so unaware of what exists in their own backyard? And even so, if one does know, how is it that there is not more concern for the risk of spills? How have these vast systems of infrastructure remained relatively invisible and garnered widespread acceptance?

A. Project Development and Research Methodology

It was difficult to be unaware of highly publicized events, such as BP's Deepwater Horizon oil spill (2010) or Dakota Access Pipeline protests at the Standing Rock Reservation (2016-17), yet much of any other pipeline news or incidents of oil spills in the last couple of decades seemed to be far from common knowledge, and far from relevant to my life. Although I viewed the images of protest at Standing Rock as they unfolded and felt sympathy and understanding for the Lakota and Dakota tribes and activists, it seemed to be a world away. I did not see my role in the "pseudo-event" of the pipeline protest in the Dakotas (Urry 1995, 7). Having become newly aware of these numerous pipelines' existence, I casually set to finding more information on where they were and how it was that the Great Lakes' communities interacted with such significant and vital infrastructure. Simply keyword searching Google for Great Lakes related oil pipelines brought me articles from many different news outlets, yet I found that most of the detailed coverage of oil/pipeline coverage was done by local news coverage and independent research organizations. Not only that, but most pipeline protest seemed to be loosely to directly associated with regional Native American tribes. This initial correlation was later corroborated by protests over Line 5 in Michigan's Straits of Mackinac and the calling on past Native American treaties for both pro- and anti-pipeline groups. This protest over a singular stretch of pipeline brought countless numbers of actors to the scene, including federal governments and major international energy companies, making it very clear that the construction of and jurisdiction over an oil-conveying pipeline was far from simple. This realization motivated me to attempt to trace the entirety of the pipeline's network. My independent research began in 2019 and carried over into my graduate education, which further led to my questions ultimately becoming the topic of this thesis research.

It was my intention within the structures of this master's thesis to investigate the legal and political machinations that were historically employed to bring about the

construction of oil pipelines as border-crossing entities. These legal regimes have in turn affected the cultural and political structures that dictate social relationships to oil and land through to the present day. I first wanted to locate current geographic locations crucial to the Great Lake's oil industry. Then I sought to trace the history of the land on which these pipelines sit, and finally then to identify the major actors that were currently involved with the oil pipelines of the Great Lakes Region.

I located my targeted land-rights treaties through archival research. I executed my research of the oil industries of each specified area along Enbridge's Lakehead System through local opinion pieces, historical archives, and academic journal articles. I also tapped into Enbridge's and BP's own corporate sites, public outreach material, and data in order to observe their community relations and their attempts to harness a convincing corporate social responsibility model, by means of creating the perception of local community financial support and environmental conscientiousness. The consideration and application of different theories of property and materiality as well as theories of assemblage and material politics were also crucial to understanding the full scope of social relationships with the pipeline.

Initial plans for my research included the implementation of location-specific ethnographic methods, oil-community interviews and surveys, and protest observation and documentation. However, none of these desired methodological approaches fully materialized. Due to the timing of the onset of my thesis research, which began to take shape just weeks before the first COVID-19 pandemic lockdowns, I had difficulty accessing many of my contacts. The need for social distancing and restraints on travel also made it problematic to visit my points of interest. With much of the world's social structures being tested amid a global health crisis, the ability to network and communicate with new contacts was trying. I would also like to note the lack of direct Native American voice in this work. Although Indigenous peoples of the Anishinaabeg

are prominent subjects in my research, as well as the Cree and Native Americans as a whole, I did not reach out for input or feedback. This and the inability to follow through thoroughly on planned research methods are deep regrets of mine and it remains a goal for further research in the future.

B. Deployment of Methods

The present-day control of pipelines access across various local jurisdictions and communities has its roots in the violent European colonization of North America and the legal and political frameworks that facilitated the dispossession of Indigenous communities. To demonstrate these historical roots, I first began to identify and describe some of the relevant and crucial land acquisition treaties that were drafted during the initial formations of the United States and British Ruled America (today known as Canada) in the eighteenth and nineteenth century in the Great Lakes region. Through the search for the legal groundings of land ownership, I pinpointed several Native American treaties that established the contractual property laws that became the legal basis of the subsequent social relationships of power and control over the land on which the Lakehead System exists today. It is effective to view this legal basis of ownership situated in settler colonialism, and it was European derived concepts of private and state property that underlay the legal justification for the dispossession of Native American lands and resources. I borrowed such concepts mainly from Robert Williams in his historicization of legal classifications of Native Americans in *The American Indian in Western Legal Thought: The Discourses of Conquest* (1990). These western concepts continue to dictate the dispossession and use of this land according to the rules of US-Canadian economic structures. Such structures are propped up by the treaties that were established with the principle of exclusive control of private property held by private property owners. In turn, private owners and investors are protected and defended by the national state's power and power to enforce through the exclusion and refusal of other claimants.

In order to better understand such contentious and multiply determined socio-legal arrangements and to discern how oil pipelines have come to be perceived and experienced by their surrounding communities in present day, I investigated the physical, social, and political construction and perpetuation of trans-American crude oil pipelines from their origins of legality in Native American treaties and applied it to modern day locations. I specifically examine pipelines near Lake Michigan, collectively referred to as the Lakehead System, which are operated by the Canadian energy company Enbridge Inc. and include Pipeline 3, Pipeline 5, and Pipeline 6. I have focused on three specific locations along each of these pipelines, to emphasize the unique conflicts with the pipelines and differing relationships between oil companies and the communities at different points of the transportation process. These locations include a place of recent pipeline replacement in northern Minnesota, another at the point of refining at the BP Refinery in Whiting, Indiana, and a third at a legal battleground at the Straits of Mackinac, Michigan. Each of these pipelines interacts with a wide range of social, political, and institutional actors and entities (namely Anishinaabe/Ojibwe/Chippewa and Cree Native American tribes, environmental activists, local citizenry and property owners, Enbridge Inc, and state and federal governments of the US and Canada), as they wind their way from the Alberta Tar Sands in Athabasca, Canada over thousands of miles across private and public lands en route to their respective refineries in the US.

I applied theories of assemblage and complexity theory to the oil pipelines' vast network of contending groups of social and institutional actors. These actors' differing interests form assemblages of social relationships with all activity surrounding the creation and expansion and maintenance of oil pipelines. This critical approach to oil pipeline infrastructure through the social, political, and economic analysis was employed by Andrew Barry in his study of the multinational Baku-Tbilisi-Ceyhan (BTC) pipeline that

runs from the Caspian Sea to the Mediterranean through the countries of Turkey, Georgia, and Azerbaijan. Barry explains how different geographically dependent social, political, and economic actors within each of these countries attempted to either support or oppose the pipeline project throughout the course of its creation from its abstract political origins, and initial conceptualization, to its final physical construction. The BTC pipeline was a vast undertaking of international diplomacy and international financial investment with major transnational and local implications. It has been met with celebration for its alleged job creation and protest because of its geopolitical strife and environmental hazards. Much like the Enbridge pipelines, the BTC pipeline came to be through means of the privatization of formerly public lands that dispossessed local communities along the path. It was made possible through a collusion between national states, various coalitions of transnational capital, and formidable technical expertise.

This thesis will focus on this historical legal framework to demonstrate how contestations against this controversial infrastructure system continue to be neutralized or resisted, beginning with an analysis of the complex and historical legal frameworks that legitimize and make possible the construction and operations of pipelines. My investigation focuses on analyzing the diverse, interacting, and sometimes conflicting interests and strategies which are reflected in the creation and maintaining of the 'simple' physical material of the Enbridge Inc oil pipeline infrastructures. The initial 'legal' impositions that parceled up the Great Lakes region, as well as the tar pits of Alberta, Canada, are crucial to understanding the inherent prioritization and supposed necessity of the oil pipelines. I intend to illustrate just how instrumental the official international treaties have been, as legal justifications for continued resource extraction. The pipeline treaties between the United States and Canada are responsible for the ensured legality of the border crossing pipelines, as well as the apparent prioritization of fossil fuels over human safety.

IV. Settler Colonialism: legitimation and knowledge creation

What has been derided for centuries as "primitive superstition" has only recently been "discovered" by Western scientists and academics as "valid" knowledge. Nevertheless, knowledge alone has never ended imperialism.

-Nick Estes in *Our History is the Future* (2019)[1]

Crucial Native American treaties were formed between Indigenous tribes native to the Great Lakes region and Canada (formerly British Ruled America) and the United States beginning in the mid eighteenth century. These legal structures were precedence for contemporary international law, such as the pipeline treaty of 1977 between the US and Canada which established the legal framework underlying the transnational pipeline regime. It is but one of many different treaties involving the waterways, property lines, and imposed national border of Native Americans. This international law framework is currently being challenged on many fronts by state law and indigenous treaties in the case of Line 5 and the state of Michigan due the sheer age of the pipeline (64 years old) and the many leaks over the duration of its operation that threaten the headwaters of Lake Michigan. Yet, companies such as Pipelines 5's owner/operator Enbridge and other local oil-related businesses accept and support the status of oil and the surrounding legal and social structures, and they actively resist and oppose these challenges to the status quo.

These contemporary laws cannot be taken into consideration without first considering the colonial definitions of property and claims to North American commodities that were originally used to justify the seizures of Native American land. These settler-colonial ideals of property as the 'natural law' of absolute individual ownership to land are engrained and held strongly in the United States, based on Euro-American classifications of property (Harvey 2014, 39). The initial

[1] Nick Estes is a citizen of the Lower Brule Sioux Tribe in South Dakota and the author of *Our History is the Future: Standing Rock versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance* in which he details the protests of the Standing Rock protest of the Dakota Access Pipeline.

coercive dispossession of Native tribes paired with these ideals of law, backed by the monopoly of legal violence held by the nation-state, have paved the way for the ongoing appropriation of federal, public, and native lands by energy companies and other corporations in the pursuit of resource accumulation and profit.

A. Treaties Involving Native Americans

I will begin by presenting and describing only some of the many influential and long-sustained international treaties (transnational/bilateral/unilateral) and Native American treaties that have historically dictated the legal ownership of the waters of the Great Lakes and the lands that surround them. Among the treaties discussed, one of the most notable is the 1836 Washington Treaty that ceded the lands of Mackinac Straits from the tribes of the Ojibwa to the United States Territory. Along with the 1836 Washington Treaty, there are many examples of coercive treaty negotiations that enabled the dispossession and acquisition of native lands that now host the Enbridge crude oil pipelines in the Great Lakes region (Canada and the US). These treaties reflect the power dynamic that grounds international property relations in international law as it is seen today. They are key to the potential reclaiming of cultural and endangered lands that are today occupied by oil pipelines.

a. Imposition of Settler-Colonial Borders

The first official treaty between Canada (then British Ruled America) and the United States was the very treaty that recognized the end of the American Revolutionary War. The 1783 Treaty of Paris included in it the declaration of the separation of territories, splitting the Great Lakes. British North America was to have right to the northern side and the U.S. was to have the southern side of the lakes. Yet, the conclusive border was to be determined over the following decades (in the 1818 Anglo-American Treaty), after many blurred interpretations of the imposed line were rendered (Hele 2008, 67). The

fact of the matter is that the creation of the border was and still is a product of imposition by two invasive settler-colonial, Euro-American nation-states. Its presence was violently imposed upon a previously established peoples, whose differing tribes already had many border disputes and contrasting stakes. In fact, the parceling up of the 'American West' was a stark divergent from the stance of the British in King George III's Proclamation of 1763, which left the lands west of the Appalachian Mountains to the tribes of that region (Williams 1990, 228). The assignment of the border by the United States and British was not inclusive of Native American self-determination, nor did it acknowledge any Native sovereignty. The new settler-nations' appointed border seemingly perpetually served to "[divide] their homeland, their community, and their kin." (Hele, 2008, 84). The border was and is still today viewed by many Native Americans and Indigenous Canadians as a counterfeit construct, as it was stated in the Jay Treaty of 1794 that they (native peoples) had the implicit right to travel and transport goods between the two newly established settler nations (Hele 2008, xvii). The United States and Canada quickly came to establish a political and economic structure similar to that of their former imperial ruler, as David Kazanjain said, the "very same mercantilist policies [as Britain's], with minor alterations, were by the late eighteenth century marshaled to structure a North American orbit of its own." (Kazanjain 2003, 40). Along with the specifics of the Jay Treaty, many such treatises were disregarded over time as Canada and the United States fully claimed all land territories and native peoples completely under their jurisdictions.

Figure 4: The Land Cession

Accessed From the Smithsonian Institution: Bureau of American Ethnology to the Secretary of the Smithsonian Institution 18th pt 2. The Yellow Area indicates the land given up by the Anishnaabe Peoples in the Treaty of Washington 1836 that would become Michigan state lands.

The 1836 Chippewa-Ottawa treaty is also known as the 'Treaty of Washington'. The treaty has been called upon in the last few years, since Michigan Governor Whitmer demanded Enbridge shutdown Line 5 in November of 2020. The 1836 Treaty of Washington saw the Chippewa-Ottawa tribes (both tribes of a larger Indigenous group known as the Anishinaabeg) give up close to 14 million acres of land (see Figure 4). In return they were awarded certain cultural and economic rights (Bruess 2021). This binding legal document was wrought between Henry R. Schoolcraft, Commissioner on the part of the United States, and the Ottawa and Chippewa (more generally referred to as Ojibwe) nations of American Indians, by their chiefs and delegates. This treaty detailed the exact boundary of lands that the Ottawa and Chippewa nations were handing over to the US government (see Figure 4):

ARTICLE FIRST. The Ottawa and Chippewa nations of Indians cede to the United States all the tract of country within the following boundaries: Beginning at the mouth of Grand river of Lake Michigan on the north bank thereof, and following up the same to the line called for, in the first article of the treaty of Chicago of the 29th of August 1821, thence, in a direct line, to the head of Thunder-bay river, thence with the line established by the treaty of Saginaw of the 24th of September 1819...

(Clarke Historical Library)

According to Articles III and IV, what the native tribes were getting in return was a small portion of land just north of Mackinac Straits in addition to annuity payments:

ARTICLE THIRD. There shall also be reserved for the use of the Chippewas living north of the straits of Michilimackinac, the following tracts for the term of five years from the date of the ratification of this treaty, and no longer, unless the United States shall grant them permission to remain on said lands for a longer period, that is to say: Two tracts of three miles square each, on the north shores of the said straits, between Point-au-Barbe and Mille Coquin river, including the fishing grounds in front of such reservations, to be located by a council of the chiefs...

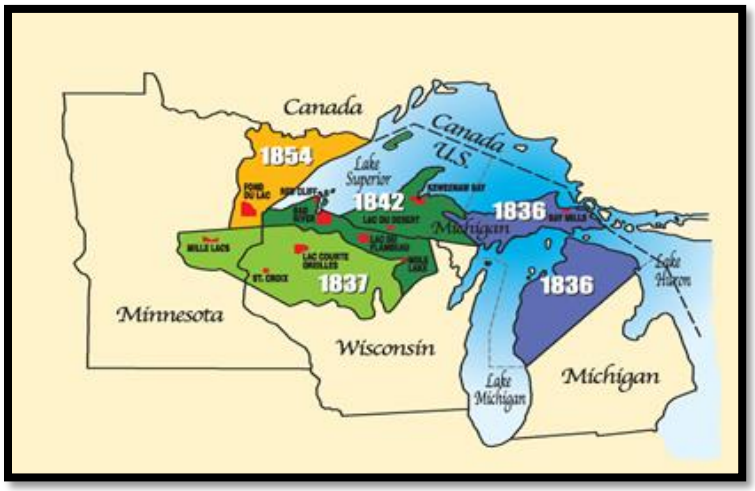
ARTICLE FOURTH. In consideration of the foregoing cessions, the United States engage to pay to the Ottawa and Chippewa nations, the following sums, namely.

1st. An annuity of thirty thousand dollars per annum, in specie, for twenty years; eighteen thousand dollars, to be paid to the Indians between Grand River and the Cheboigun; three thousand six hundred dollars, to the Indians on the Huron shore, between the Cheboigan and Thunder-bay river; and seven thousand four hundred dollars, to the Chippewas north of the straits, as far as the cession extends; the remaining one thousand dollars, to be invested in stock by the Treasury Department and to remain incapable of being sold, without the consent of the President and the Senate, which may, however, be given, after the expiration of twenty-one years.

(Clarke Historical Library)

As one can see from these excerpts of the treaty, the agreement was not without stipulations. The Ottawa-Chippewa Nations were given limits and restrictions on the amount of time they were entitled to the land and how they could spend their annuity payments. The money must be spent in a manner approved by the United States' President and Senate. Such limiting regulations are not uncommon in both Canadian/US -Native American Treaties. These clauses are often implemented and stand to "serve to reinforce the symbolic power of the dominant class" (Dokis 2015, 131). The Anishinaabeg have in recent years drawn on their original claims to sovereignty over the land and water of the Mackinac Straits area, because of the mounting controversies surrounding the Line 5 pipeline. The Ottawa and Chippewa tribes claim the Treaty is rendered void because the existence of the pipeline endangers their legal, traditional, and cultural rights to fish those waters (Havrelock). The present-day interpretations of the stipulations of this treaty will be discussed in a later section.

Figure 5: Anishinaabeg Territory Cessions



This map was accessed from the Great Lakes Indian Fish and Wildlife Commission and depicts general territory cessions in the Great Lakes region from 1836 to 1854, including that of the 1836 'Wahington Treaty'.

It must be noted that the Washington Treaty of 1836 was only one of many treaties between the US government and Native American tribes that resulted in land cessions in the Great Lakes region. Other major treaties to be noted include the Treaty of 1837 (between the US Government and the Ojibwe and Dakota Tribes) that gave up lands in present day western Wisconsin and eastern Minnesota surrounding the Mississippi River (Minnesota Indian Affairs Council 2022). The 1842 Treaty gave Chippewa tribal lands in Northern Wisconsin and the Upper Penninsula of Michigan to the United States (Kappler 1904). These treaties saw financial compensation awarded to the native tribes, as well as general hunting and fishing rights. However, these rights were for the most part ignored throughout the 19th and 20th centuries, and it was often the case that tribal members were arrested or fined for treaty guaranteed activities (Milwaukee Public Museum 2022). Both treaties and their detailed language still hold much significance in the greater understandings of land "ownership" and societal norms of appropriation and exploitation. However, the Washington Treaty of 1836 holds more contemporary significance due to the attention that is being drawn to Line 5 and the specific cultural rights that are highlighted in the treaty's language.

b. Legalized Dispossession

These treaties of the borderlands between the US and Canada did not only parcel up the land, but they also split up peoples, previously established communities, and nations. The creation of the border and the eventual enforcement of a militarized border control forced native peoples to choose a side and submit to the national sovereignty of one state or another, leading to skewed identities. The border became a "crucible where conflicting currents of identity, history, and culture shape local and national communities." (Hele, 2008, xxiii) The forced division was one of many of the colonial impositions that Native Americans were forced to endure, for these were foreign ideals of law and governance.

In the founding of the United States, the 'public good' did not recognize Native American natural-law rights, annulling their rights to their land (Williams 1990, 231). This fundamental assignment of legality was later upheld by the Supreme Court hearing of *Johnson v. McIntosh* of 1823. Within this case, the Supreme Court of the United States ruled that the sale of Illinois land by the Piankeshaw Indians to Thomas Johnson was invalid, for the Native tribe did not have the right to 'possess' this land in the first place (Williams 1990, 289). Supreme Court Justice John Marshall referred to the Doctrine of Discovery, directly legally legitimizing the colonization of Native American land (Williams 1990, 317). Under Canada's Indian Act of 1876, the federal government of Canada was given control of much of Aboriginal life, education, land, and resources (Montpetit 2011). Under this act the government of Canada had different requirements for maintaining 'Indian Status' and for how native peoples could perform their traditional practices (Montpetit 2011). There was also a movement to attempt to get Native Americans to farm their 'allotted' land. All of this was a claimed attempt to "civilize" American Indians in the name of development of progress, but it stood mostly as a means to impose an overall power and greater governance on the land and people of the Americas. Even in the projected display of diplomacy and cooperation, great power imbalance took shape. As David Kazanjian stated in his writings on early colonial America: "imperial U.S. citizenship is animated by a notion of equality that is intimately articulated with the seemingly opposed notions of racial and national codification" (Kazanjian 2003, 215). These indoctrinated power imbalances endure today in how native tribes attempt to dictate the way in which land is being utilized around energy infrastructures.

Despite the invasive nature of these laws and the oppressive nature of the Canadian and United States federal governments' policies toward them, the Native American tribes were anything but passive. Many of the tribes saw peaceful cooperation as the only answer to preserving their way of life, and they had many hard-fought political victories and arrangements with the imposing settler governments. Cooperation also took place

amongst different tribes. The Grand General Indian Council of Ontario brought together nearly all the Ojibwa of the Great Lakes every two years throughout the nineteenth century (Hele 2008, 16). Through the cooperative creation of petitions, lobbying, and letter-writing, Native tribes were able to influence some legislation in their favor, at least causing less harm to them and their ways of life than otherwise may have been the case. Many Native tribes also continue to refuse to recognize the US-Canada border, and they even attempt to leverage the border as a legal indication of their right-to-land and national sovereignty (Hele 2008, 28). This bears resemblance to the Ojibwe Tribe's response to Enbridge's Line 5 in the Straits of Mackinac. Not much can be found, however, on the Tribe's response to the pipeline's initial construction in 1953. The construction of the strait-bottom's line came from a property easement by the State of Michigan, without considering or acknowledging any rights of the tribe holding cultural rights over the waters (Bruess 2021). Yet, these claims to territorial and cultural sovereignty endure today in the fight to clear their lands of 'way-of-life-endangering' pipelines.

Over time, the power imbalance between governments of great powers, such as the US and Canada, and Native American tribes does not translate to just interpretation and enforcement of treaties. Even if it appears as if Native American interests were and are being protected and that such groups sign on willingly, these treaties are being contorted in the discourse of modern 'experts' (lawyers, judges, and politicians) and claims of exigencies of 'national interest' and demands of national economies for energy production. The language of law, in this case, is not universal. The way in which a modern state views the land and natural resources is much different than how Native Americans view the land in which they are "fundamentally engaged with a landscape that they understand as a means of survival, a principal source of identity, and a web of social and kinship relations in which human beings are merely one part." (Dokis 2015, 3) Nick Estes sees the network of relationships between the Native Americans, the

environment, and the occupying powers as essential to understanding all recent human history:

> "By focusing on these relationships, we can see that Indigenous history is not a narrow subfield of US history—or of the history of capitalism or imperialism, for that matter. Rather, Indigenous peoples are central subjects of modern world history."
>
> (Estes 2019, 36)

The history of these relationships and their consequential treaties dictate how we view and treat the land and its resources today. Most of these treaties simply aimed to shift previously established stewards in order to extract the resources that held utmost value in the settler-colonial gaze.

B. Continued Patterns of Expropriation

Native American Treaties that forfeited lands to the federal governments of the United States and Canada made way for uninhibited resource extraction and land degradation. Over the following centuries, settlements and westward expansion imposed greater pressures on Native American life, but they also demanded more of the natural environment's resources, putting more precious resources at great risk of corruption.

The midwestern industries of agriculture, mining, lumber, and metal foundries began to strain the land in the Great Lakes region in the 19th century. Laws of public and private land ownership within the Great Lakes watershed enable unfettered usage of the groundwater and the land around and above them, according to Riparian Rights, with very few mentions of further water protection outside of obtaining permits (Kent 1994,

9). These laws differ according to state and country, yet it would appear as if international diplomacy and bilateral action is effective if the result yields valuable resources and subsequent, abundant profits. The need to keep pace with the demands of their modernizing economies in the latter half of the Twentieth Century led to cooperative energy legislation between the United States and Canada that was reflective of land treaties established one hundred and fifty years beforehand.

a. Treaty of 1977

The landmark agreement that allowed for the sharing of oil pipelines across the US/Canada border was the treaty of 1977 (E101884 - CTS 1977 No. 29): Agreement between the Government of Canada and the Government of the United States of America Concerning Transit Pipelines, often referred to as 'Agreement Concerning Transit Pipelines'. This treaty between the two governments explicitly excluded any other "public authority" (see Article II below) and the affected native communities and nations on both sides of the border from having any say on where or how the transmission of hydrocarbons took place. Even though many subsequent oil pipelines ended up running through legally granted native lands and reservations, eminent domain was invoked by the United States and Canadian governments in their agreement. Such a treaty is in addition to the previously imposed treaties, yet it would seem to disregard the previous land agreements and reservation assignments. The US and Canada were awarding priority to the transmission of crude oil.

The 1977 treaty between the US and Canada begins as such:

> The Government of Canada and the Government of the United States of America,
>
> BELIEVING that pipelines can be an efficient, economical and safe means of transporting hydrocarbons from producing areas to consumers, in both Canada and the United States;

NOTING the number of hydrocarbon pipelines which now connect Canada and the United States and the important service which they render in transporting hydrocarbons to consumers in both countries; and

CONVINCED that measures to ensure the uninterrupted transmission by pipeline through the territory of one Party of hydrocarbons not originating in the territory of that Party, for delivery to the territory of the other Party, are the proper subject of an agreement between the two Governments...

(Accessed from 'Government of Canada')

The choice vocabulary words of 'important', 'convinced', and 'uninterrupted' signify the priority that the pipelines take. Article II of the treaty reiterates their perceived value, and the notion that this was a decision and agreement between 'two Governments' further emphasizes the lack of consideration for any other (smaller) groups with stakes in the matter.

ARTICLE II

No public authority in the territory of either Party shall institute any measures, other than those provided for in Article V, which are intended to, or which would have the effect of, impeding, diverting, redirecting or interfering with in any way the transmission of hydrocarbon in transit

ARTICLE V

1. In the event of an actual or threatened natural disaster, an operating emergency, or other demonstrable need temporarily to reduce or stop for safety or technical reasons the normal operation of a Transit Pipeline, the flow of hydrocarbons through such Transit Pipeline may be temporarily reduced or stopped in the interest of sound pipeline management and operational efficiency by or with the approval of the appropriate regulatory authorities of the Party in whose territory such disaster, emergency or other demonstrable need occurs.
2. Whenever a temporary reduction of the flow of hydrocarbons through a Transit Pipeline occurs...

3. The Party in whose territory the disaster, emergency or other demonstrable need occurs resulting in a temporary reduction or stoppage of the flow of hydrocarbons shall not unnecessarily delay or cause delay in the expeditious restoration of normal pipeline operations.

This treaty would appear to supersede local governance and fail to consider the voices and interests of all intermediary institutions, communities, and local voices. The power dynamics that exist within these supranational laws cannot be overemphasized. The treaty between the US and Canada as two neighboring States creates a nearly insurmountable hurdle of legality for any protesting parties. Based on the history of the founding of these two nations, the land seizures and the claims to eminent domain would not seem all that bewildering. Yet, the 'Agreement Concerning Transit Pipelines' was penned in 1977, by two representative, democratic legislative bodies, without the consultation of First Nation communities or any other potentially affected community. The fact that this treaty is still in effect exhibits the two countries' continued support for energy production, regardless of the issues it may cause for smaller governing bodies in safely regulating activities and risks associated with their communities.

The Treaty of 1977 stemmed from political and cultural controversy. This legal work was wrought with national energy security in mind, during an extremely fragile political period. Four years before its rendering, the Organization of Arab Petroleum Exporting Countries (OAPEC) declared an oil embargo on any country that allied itself with Israel at the time, leading to a global oil crisis. The United States was at a loss, because it largely depended on foreign energy imports of oil. After this became evident, with gasoline prices skyrocketing, the US sought to diversify its oil suppliers while making itself more energy independent. The US promptly set to starting work on the Trans-Alaskan pipeline, that began pumping in 1977, and subsequently sought to make its access to other nearby sources greater with the 'Transit Pipelines Treaty' in 1977, as President, Jimmy Carter urged Congress to ratify the agreement between the US and Canada

(Peters and Woolly 2022). Ironically, the very work that ensued to make sure the US did not have to answer to any other country, created a legal pact between two federal governments that would not have to answer to any 'smaller' body of governance.

b. Performative Cooperation and Trusteeship

Another example of disproportionate land acquisition that further illustrates the contemporary norms of property rights and national energies prioritization occurred in Alberta, Canada. This ancestral home of many First Nation communities in Canada, known as the Sahtu region, is now a part of the Canadian Northwest Territories. Disturbing power relations took shape in the Canadian government's manipulations of consultation with the Sahtu Dene when approaching the construction of a new natural gas pipeline both in the 1970s and later reproposed in 2004.

The now defunct plan for a natural gas pipeline was called the Mackenzie Gas Project and it was to be a 1200-kilometer natural gas pipeline extending from northern Alberta to the Mackenzie River Delta (Strong 2017). It is entrenched in the section 35(1) of the Canadian constitution that Aboriginal peoples must be consulted on "projects that might infringe on their rights and lands" (Dokis 2015, 131). This had led to cooperative planning and consultation between Canadian representatives, the Imperial Oil company (a subsidiary of ExxonMobil), and the Sahtu Dene in development and land management decisions in the pipeline's planning process (ExxonMobil 2019). However, in her research around Aboriginal-State relations sociologist and professor of anthropology Carly Dokis viewed this entreatment with the Dene peoples to be but "cultural performances" (Dokis 2015, 9). These dealings between nation-state governments and Native American tribes represent more of a symbolic sharing of authority and decision-making than an actual substantive co-management, because "the government was not legally required to accept or implement its [Aboriginal review panel's] report." (Dokis 2015, 8) Dokis' overall argument is that the Sahtu Dene involvement in the pipeline's

planning process was not adequate, because it “[was] limited by non-local epistemological and ontological underpinnings of governance, management, regulatory, and environmental assessment institutions and practices. Indeed, these have come to reinforce the power relationships between corporate proponents, aboriginal communities, and the state.” (Dokis 2015, xxiii) Although the Canadian constitution required it, Aboriginal consultation would appear to have been merely a symbolic gesture, as their input could ultimately be redacted from the final reports.

The Canadian Government’s treatment of the people of the First Nations in their push for development projects aligns with principles of ‘trusteeship’. The government and the Imperial Oil Company feigned interest in asking for First Nation cooperation in, let alone their desire for, a pipeline. Touted under the guise of progress and beneficial development, the Government and the Imperial Oil company saw only opportunity. In their study of ‘development’ Cowen and Shenton highlight passages from Staudt’s *Managing Development* (1991) to distinguish the issue with desires for development. Staudt stated that “Development is construed as ‘a process of enlarging people’s choices’” and that “development is defined as the means to ‘carry out a nation’s development goals’ and to promote economic growth, equity and national self-reliance.” (Staudt 1991:28–29) Cowen and Shenton counter with "Choice is as much a precondition for development as its result.” (Cowen and Shenton 1995, 26) Cowen and Shenton clearly saw that even in the theoretical principles of development, the choice and desire for said development was often left to the ‘developed’ in a model of trusteeship over the ‘undeveloped’. This power structure can be seen taking form in many resource extraction ventures, going back to initial land grabs of the nineteenth century, with the Nation-States and Corporate powers speaking presumably in the interest of others.

"During the nineteenth century, those who saw themselves as developed believed that they could act to determine the process of development for others deemed less developed. The development problem was thus resolved by the doctrine of 'trusteeship,' a doctrine which became central to the historical project of European empire."

(Cowen and Shenton 1995, 26)

Groups that may create obstacles to swift and maximal oil transmission are held at arm's length. The appointed right to dictate land utilization was awarded to Canadian 'Aboriginals' in the Canadian Supreme Court's decision in Tsilhqot'in Nation v. British Columbia. Even with this historical precedence (Aboriginal's "exclusive right to decide how the land is used and the right to benefit from those uses"), it is becoming clear that these rights can be overstepped if "the infringement is deemed to be in the national interest." (Dokis 2015, 5-6) These relationships of performative cooperation and trusteeship have stemmed from the exertion of a series of multiple laws between 1857 and 1890, both in Canada and the U.S., which legally characterized Native Americans as minors (Hele, 2008, 15). Such laws established a discursive relationship placing the federal government as the guardians and caretakers of Native life. Federal agents were placed on reservations, and they stood in as gatekeepers, interfering in any independent decision-making (Hele, 2008, 15). In fact, the entire process of resource management in the Northwest territories has formed a subsequent industry with hundreds of consultants, experts, and lawyers. Most of whom adhere to a certain model of logic. This in turn created a discourse in which the Aboriginal concerns were reinterpreted into the language of these experts' discourse (Dokis 2015, 9), and either accepted or dismissed accordingly. This phenomenon is still seen today in the First Nations' peoples are being 'consulted' and encouraged to perform in the cooperative committees around Enbridge's pipelines 3 and 5.

c. Collateral Resource Seizure

To accompany the longstanding valorization of private property, attempts are now being made to privatize common resources. Watershed politics is becoming a geopolitical issue that we will only see proliferate in coming years. It is the clearest form of water sovereignty and physical bordering of access. Dan Egan describes such an issue in his book *The Life and Death of the Great Lakes* (2017). Egan explains the drawn line around the US- and Canadian owned Great Lakes that divides those who are entitled to tap into the freshwater of the lakes and those who are not. "Cities and towns inside the basin line are entitled to use Great Lake water to irrigate crops, to fuel industry, and to provide their residents with drinking water" (Egan 2017, 248). The line is determined by the simplicity of the direction water flows on either side of the line. It will either feed back into the Great Lakes, find its way to the Gulf of Mexico, or some will head to the Hudson Bay. This is logical water conservation. Yet, this premise is being challenged in the call for water to be piped out of the basin area through gerrymandering of the line. This would allow for water to be piped from the lakes to locations within the counties that lie 'partially' along the line. The push for this new technicality comes because of the depletion of some surrounding community's groundwater supplies. Egan used the specific example of a Milwaukee, WI suburb that lies right on the border of Waukesha County. Waukesha County is growing at an accelerated speed and just so happens to barely straddle the access line (Egan 2017, 250). The implementation of such border reshaping is yet another form of accumulation by degradation. Simply because one community, or industry of said community, misused its resources, they are now allowed to tap into a greater, popularly believed to be, bottomless resource. The insatiable thirst of capitalist industry is allowed to continue drinking.

The laws of property ownership are but one piece in the legitimation of continued land-seizures and environmental threats for the sake of oil pipeline construction and use. Nick Estes saw that essentially native “lands, and lives, were targeted not because they

held precious resources or labor to be extracted. In fact, the opposite was true: our lands and lives were targeted and held value because they could be wasted—submerged, destroyed" (Estes 2019, 26). Commodification of nature and land is a process that occurs across social fields. Pipelines cannot be viewed simply as mere objects but must be seen as complex entities of assemblage because of the abilities afforded to them by legal structures to transcend borders and natural laws of being (Barry 2013). With these special abilities, pipelines have become vessels not only for the transport of oil, but also for human rights obstructions and a driving motivation for the normalization and subsequent perpetuation of settlerism. Progress would require that both native and non-native peoples cooperate and mutually create a land ethics that respects the land and nature as a priority, rather than secondarily, as objects of commodity exchange.

V. Social Complexity of Material Infrastructure

A well curated image of oil as a resource with the means to 'bring life' to entire cities, regions, and even nations have been built around locations and processes of oil extraction. Skyscrapers, roads, and individual livelihoods are associated with and linked to the extensive industries surrounding oil. In the US, access to oil and all its byproducts is the "way of life" (Vitalis 2020, 20). Yet, wars too have been fought for oil, physically, politically, and ideologically, to influence the entirety of global geo-politics. Energy is more than a physical entity, it is a way of life, a means to life. At this stage in humanity's use of oil energy most of its infrastructure goes unnoticed under widespread acceptance. It blends into the modern landscape. Pipelines are but one of the stages of the economic life cycle of oil, yet it is pipelines that have intruded into the realm of visibility and impose an evident potential for disaster.

From the public and private land they sit on, to the transnational corporate actors that own the oil to the physical pipes themselves, the exact story of ownership of these pipelines is a complicated one. Yet, even more complicated and interwoven are the human relationships with

the pipeline, the source of the energy that powers everyday life. A distinct kind of social reality is created by the presence and visibility/invisibility of the pipeline. Jason Dittmer's 'complexity theory' incorporates "environment and materiality into geopolitical analyses of change" (Dittmer 2014, 386). Dittmer's use of assemblage theory states that one must understand and take account of the functions and utility of all parts of the whole and the ever-changing processes of the assemblage (388). Barry (2013) employs theories of Michel Foucault to illustrate the manner in which oil companies and state governments were able to draw distinctions between the pipeline and its route and the surrounding territory of the Baku-Tbilisi-Ceyhan pipeline, that runs through Azerbaijan, Georgia, and Turkey. Through the formation of 'the affected community', the pipeline route itself became a space of transnational activity, separate from that of its local surroundings (Barry 2013, 104). Barry also recognizes and analyzes how these "spaces of environmental governance increasingly cut across the borders of nation states" (Barry 2013, 126). Not only is the land of a pipeline route affected, but even more so is the social and cultural environment surrounding the processes and construction that go into the formation of the physical oil pipelines.

Changes to the environmental landscape, cultural practices, and economic activity of a region are inevitable with the imposing physical presence of oil pipelines, increased human presence, and greater political interest. The formations of the BTC pipeline are comparable to the vast network of North American Enbridge pipelines that exist today by virtue of the dispossession of local populations through land and resource appropriation and exploitation. Barry found answers through his research around the post-Soviet renderings of the BTC pipeline. Barry's work addresses questions such as how it is possible to communicate, let alone engage with, such a widespread public in the planning stages of pipeline construction (Barry, 2013, p.96). Just as American Great Lakes pipelines were created by national interests in energy security and made possible from Euro-American ideals of right-to-land and settlerism, Middle Eastern oil industries were wrought through colonial empires' desire for foreign resource acquisition and approved for national economic development. British Petroleum prioritized the purchase or indirect procurement of lands that are now occupied by their BTC pipeline nearly immediately

after the dissolution of the USSR. Today BP (now: Beyond Petroleum) is a major player in the workings of the BTC pipeline, and they are also the owner and operator of the Whiting, Indiana oil refinery: a concrete point of overlap between Barry's study and the Lakehead System discussed herein.

A. Economic Regime and Societal Perception

For hundreds of years, oil has been one of the world's most sought-after and coveted energy sources. Oil superseded coal as the most widely used fuel source in the late 1950s (Melsted & Pallua 2018), and its value in energy has come to be matched by its value as a source and target of political power. As vast political and infrastructural endeavors, the construction of pipelines has come to be a physical embodiment of political power. Pipelines have been implemented by foreign governments through international corporations not only for the benefit of the 'uninterrupted' flow of raw materials, but also for their facility to impose other intentions. The former US ambassador to Azerbaijan, Richard Morningstar implied as much when discussing the greater motivations of developing the Baku-Ceyhan-Tbilisi (BTC) pipeline in the 1990s. He stated that the presence of US policy in the Caspian was not simply to build gas and oil pipelines, but to use them as tools for "establishing a political and economic framework." (Marriott and Minio-Paluello 2012, 217) One can see the development and 'modernization' effects an oil economy can have on oil pumping and transportation regions. Global cities have popped up and thrived along oil routes. Some of these major cities include Houston, Abu Dhabi, and Calgary, and on a smaller scale, towns of oil refinement include Abadan, Iran, and Whiting, Indiana, USA. The success and longevity of these locations depend entirely on the price of crude oil. They may owe their existence to the demand for oil, because without it the cities' development would almost certainly be conditioned by their mostly "desolate" locations (BP 1952). Yet, as is the case with Abadan and Whiting, it is seen that oil does not always possess the power for strictly positive change.

These capitals of oil production are not solely economic behemoths. They also stand as leverage points to impose economic ideologies and social structures. Beyond Petroleum (BP, formerly known as 'British Petroleum'), has long mirrored and acted as a tool for its colonizing motherland with its practices of foreign invasion and resource accumulation by degradation. Traces of BP's presence can still be seen today in Abadan, Iran, along the lines of the BTC pipeline, and in the small town of Whiting, Indiana (see infra, Part VI. B.). The North American energy company of Enbridge is using related tactics of image alterations through its campaign for 'corporate social responsibility' models and political manipulations of its job-dependent constituency. Through the complex assemblage of the Lakehead Oil Pipelines, Enbridge wields great power to shape and control the region, its economy, and its peoples.

Enbridge Inc has been in the energy business since 1949, founded as the Interprovincial Pipe Line Company. Headquartered in Calgary, Canada, today the company employs more than 12,000 people. According to their own their own website they transport 30% of North America's crude oil (and 20% of its natural gas) (Enbridge 2021). They are the operators of the Lakehead System, which includes the pipelines known numerically as 3, 5, and 6A. Physical assets of pipeline infrastructure enable the company to influence more than the physical realities of resource distribution throughout North America. As Dittmer states, "...because power is enacted through assemblage, it must be understood as distributed among the various components of that assemblage, human and non-human." (Dittmer 2014, 389). Enbridge is not only in the business of transporting crude oil, but also in the business of selling the idea of individual and community dependence on oil. Consider this advert is from the company's website:

Petroleum products are an essential part of our everyday lives. They fuel our cars, heat our homes, power industry, schools and hospitals, and are turned into hundreds of consumer goods, from clothing to cosmetics to cellphones. But before those products materialize, crude oil must be refined into petroleum.

(Enbridge Inc. 2021)

North America's energy grid dependence on sources such as crude oil and natural gas cannot be denied. To reiterate, the US consumed an average of 18.12 million barrels of petroleum products per day in 2020, and these products accounted for 35% of the country's total yearly energy use (US EIA, 2021). Yet, it is partly because of the public marketing and political lobbying of energy companies such as Enbridge that this energy dependence is so engrained.

The work we do creates well-paying jobs in towns and cities. It generates tax revenue to build schools, hospitals and roads. It stimulates local economies. It provides grants and volunteer labor that strengthen communities.

(Enbridge Inc. 2021)

Enbridge's and other energy companies' self-interest motivated lobbying continues amidst a current call by environmental groups to hold oil companies accountable for a prolonged misinformation campaign about climate change. These widespread social media movements are drawing attention to and calling out oil companies for withholding information concerning CO2 emissions. Not only are such companies withholding information, but it is also rather trendy, within the context of corporate social responsibility, to behave in a manner that projects appearances of environmental consciousness. Enbridge makes the claim on their website that safety is their top priority and the very foundation of what they do. They also make the claim that they have set a sustainability goal of helping reach 'net zero emission' by 2050 (Enbridge," NetZero"

2022). This phenomenon of nonrenewable resource associated companies claiming environmental awareness/activism is referred to as ‘greenwashing’. It is rampant among all types of businesses, but it seems especially ironic when practiced by oil companies.

Safety is the company’s top priority, yet accidents are common and often have tragic effects on local human populations, farmland, and natural ecosystems, especially when such disasters occur near water. One need only look at the 2010 rupture of Enbridge’s Line 6B in Michigan, which devastated the Kickapoo River tributary and was ultimately the United States' largest inland oil spill in history. To this day, it is estimated that only 90% of all the oil has been recovered or removed (Riesterer 2019). Line 5 spanning the Mackinac Straits is also estimated to have lost over a million gallons through various leaks throughout its 64-year lifetime (Beer & Taylor 2021). The effects to nearby wildlife, community drinking water, and local economies, not to mention the billions of dollars of cleanup required, seem a steep price to pay for the transport of a carbon-producing, nonrenewable resource. Yet, modernity is totally dependent on it. Like it or not, everyone requires energy from oil in some capacity. A third of the United States’ energy consumption is produced by petroleum products (US EIA 2021) by powering most private vehicles and contributing to the operation of industrial work and the heating of homes. But in addition to the generation of energy, oil’s strongest ‘pro’ argument is the entrenched systemic perception of the creation of jobs, promoting a healthy local/national economy, and the foreign policy security in energy dependence. The oil may be ‘crude’ but the political and social manipulation surrounding it has been methodically ’refined’, and it is continual. The physical upkeep of pipelines, as well as the ceaseless political coaxing, runs on an unending loop (Harvey & Knox 2015, 5). An entire way of life has sprung from the energy that is brought by the oil pipeline: an industry of energy that has brought jobs and electricity and heat to the communities surrounding the Great Lakes.

The space that surrounds oil transportation and production is difficult to measure. It is not simply the surrounding physical land and inhabitants. It can include any being or environmental aspect that is affected by the processes. This 'space of impacts', as Andrew Barry refers to it, is certainly not fixed and is created and categorized by events more than limited by physical boundaries itself (Barry 2013, 133). The tangled convoluted sense of ownership also gives great power to the pipeline and its governing energy companies. The interests that state and national governments have in playing the flexible, smiling host to pipelines and their promised benefits, makes governing groups go to great lengths to protect and even hide the pipelines and their negative attributes. Marriott and Minio-Paluello recognize this in the actions of the Turkish government surrounding the BTC pipeline, ""the arbitrary power of the state was being utili[ze]ed to prevent BP's pipeline being scrutini[z]ed." (Marriott and Minio-Paluello 2012, 432). The state ends up distorting the perceived public reality in order to be a part of the transportation of crude. The economic interests of a state far outweigh the human interests. They are separated within the greater societal psyche, because oil and the economy surrounding it always takes precedence. And thus, pipelines seem untouchable and simply part of the landscape of our 'modern' world.

> "There is a sense that these international pipelines are not about us and so do not concern us: they are about somewhere else. We think of them as forming part of our national infrastructure, like a bridge or main road, and imagine them to belong to the state. We are not in control of them, we are not responsible for them. They seem unchallengeably vast, a fact of life. Perhaps it is this sense that makes us so blind to them?"
>
> (Marriott and Minio-Paluello 2012, 621)

They are something we are supposed to accept and ignore.

a. Governance and Social Positionalities

The ‘unhindered’ transmission of crude across border suggests the inherent right of such commodified material resource, as compared to those rights of a humans, to free movement across national borders. While a border is often heavily fortified, if not simply vigorously surveilled, and the movement of humans across these borders is regulated regardless of where they are from, oil’s flow is unrestricted. Oil flows without interruption and has complete ‘freedom of movement’ (Marriott and Minio-Paluello 2012, 395). Obviously, oil cannot possess ‘rights’ in the literal sense, but this comparison of relative freedoms provides stark clarity into the priorities that nation-states hold in respect to humans versus the privileges of investors.

The initial laying of the BTC pipeline created substantial regional change and attracted new populations who then built communities. Today, geopolitical considerations loom large, and such levels of change and upheaval must be decided upon before being enacted (Marriott and Minio-Paluello 2012, 217) Geopolitical considerations have tended to favor oil-backing parties. Global financial institutions as well (such as the World Bank and IMF) generally support carbon economies and pressure local governments in order to protect foreign investors, even at high social costs to the host societies. As John Browne, the former chief executive of BP made clear, the companies ‘rights’ were prioritized by the international finance institutions, so to reduce their risks (Marriott and Minio-Paluello 2012, 223). The BTC and TransAmerican pipelines rest on what might be called ‘sidestepping’ treaties, i.e., treaties having the effect of circumventing domestic regulation and eroding sovereign prerogative. Just as the 1977 treaty between the US and Canada calls for the ‘uninterrupted transmission’ in the exchange of hydrocarbons, the treaties formed around the BTC pipelines allowed for the overriding of past and future domestic laws and tax codes of Azerbaijan, Turkey, and Georgia. Disputes between host states and oil companies were also removed from each of the countries respectively and are to be settled in international courts in Europe

(Marriott and Minio-Paluello 2012, 306). In fact, the sovereignty of the land surrounding the pipeline corridor was surrendered by the host countries in this as well (Marriott and Minio-Paluello 2012, 307).

Andrew Barry brings up an important question governance when discussing the controversy of the BTC pipeline's 'field coating material' SPC 2888. This epoxy coating was used to cover the joints of the connecting points of the pipeline, even though it was deemed to be a poor performer in varying conditions by many experts (Marriott and Minio-Paluello 2012, 371). Many demands to use a different coating were made by concerned parties including the UK's Export Credits Guarantee Department (ECGD), yet BP continued to use SPC 2888. Barry asked, "how did political controversy come to focus on the unruly behavior of materials rather than the behavior of persons?" (Barry 2013, 143). The socio-materiality of the pipeline gives it some perceivable privileges, but it also draws criticism. Barry compares the pipeline's controversial physicality with other issues, such as low pipeline worker wages and health and quality of life conditions of locals, which go unrecognized and unaddressed by governing bodies (Barry 2013, 145). "The failure of material structures was taken by radical critics to be a sign of wider defects in the relations between the government and business." (Barry 2013, 152). Ideologically, the material object symbolizes a "wrong" that takes the focus from human actors (BP) and human relations of production and reproduction.

Ultimately, as the majority stake holder in the BTC pipeline, BP is given nearly all the power to create whatever reality it requires for the creation and continuation of the pipeline. Through their own powers of knowledge creation from the bestowed corporate scientific expertise, BP can dictate the very rules to which they are subject (Barry 2013, 184). This is reflected in the position of control that Enbridge Inc retains over the regulation of its pipelines and the land on which the pipelines sit in North America. The pipelines are legally and literally embedded and imposed through the

presence of the pipelines' physicality. Such sovereignty reflects a deeper seeded history of the government's mixed involvement through supervision and/or neglect of the pipelines (Harvey & Knox 2015, 3).

VI. Dispossession by Pipelines (Settler Colonialism Through Material Infrastructure)

The crucial intersection of this thesis occurs when the results of the deep-seated, institutionalized settler-colonial principles meet with the economic demand for oil as the prioritized resource. Enbridge Inc is utilizing the engrained principles of right-to-land in their present oil pipeline objectives. The Baku-Tbilsi-Ceyhan Pipeline is a proper parallel for how the Enbridge crude oil pipelines were established and operate in the United States. The pipelines have made cause for manufactured, complex spatio-social realities that promote reliance on and desire for energy from oil. The attendant social and economic relationships have been the site of much contention over the years. In order to thoroughly highlight these relationships and examine how the transportation of oil is rendered as an acceptable part of the landscape through the political conjuring of oil companies and other interested parties with oil investments and how this is sometimes met with strong opposition, I narrow my scope and apply a socio-material theoretical lens to three strategic locations on the pipelines' routes where the contentious relations over the pipelines have become especially glaring. At these geographic points, we can see the concepts of 'knowledge creation and legitimation', 'accumulation through dispossession', and 'trusteeship' enacted in a physical form around the pipelines of the Great Lake's Region.

This study's communities of interest have been narrowed down to Clearbrook, Minnesota; Mackinaw City, Michigan; and Whiting, Indiana. I will begin my socio-material analysis at Enbridge's most recent pipeline instillation (pipeline 3 replacement) in northern Minnesota where there has been conflict between the Ojibwe tribe's "water protectors" and Enbridge since the project was commissioned in 2014. Second, I focus on the giant multinational corporation BP's oil refinery in Whiting Indiana, which is a long-established community

foundation of economy and culture that is based on the regional economic offerings of its predecessor Standard Oil. The final location of focus is the highly politicized crossing of the Straits of Mackinac in Michigan. Here, there is presently a heated battle between Enbridge and the State of Michigan, after years of pressures from the Ojibwe tribes and environmental activists, over the closing of Enbridge's Pipeline 5. The state of Michigan refused to continue to accept the risks the 60-year-old pipeline poses to the waters of Lake Michigan. These varied actors, histories, politics, motivations, and perspectives all coalesce around the simple physical structure of oil pipelines. This layered essence of the 'pipeline' brings me to view them as entities of socio-material assemblage. Not only is the pipeline a physical transporter of fossil fuels, but it also connects otherwise unrelated areas of the world, while it creates its own reality of energy and economic need on both ends of its being. The physical construction on such a large scale was accompanied by far greater effects on the economic, political, and social fabric of the regions surrounding the pipeline.

Oil pipelines are undoubtedly necessary to fuel the current energy infrastructures society presently utilizes. Without them, everyday public workings could not function as they do. Thus, I must describe why pipelines are so vital to society and why they continue to be supported as acceptable risks in sensitive and invaluable environments. The manner in which this collection of pipelines came to exist around the world's most valuable reserves of fresh water (the Great Lakes) is fascinating, to say the least. Parallel to the reflections of Marriott and Minio-Paluello about the BTC pipeline running through Azerbaijan in order to bring energy to the distant EU, the Lakehead pipeline system is bringing energy from the far reaches of northwest Canada. Oil does not work as the water cycle does, it is not some "water catchment area". There is no natural flow. Just as the crude must be forced through the pipeline, so too did powerful political and financial forces have to carve the path in which it now flows through the pipelines (Marriott and Minio-Paluello 2012, 234).

A. Breaking New Ground

Clearbrook, Minnesota is a small town at the intersection of big controversy. It sits at the intersection of Enbridge's mainline pipeline system and the Lakehead System. From Clearbrook, Pipeline 3 continues through northern Minnesota until it reaches its terminal in Superior, Wisconsin. On its route through northern Minnesota, the pipeline intersects with the Ojibwe Native American reservation of Leech Lake. This area of Minnesota is also the tributary headwaters of the Mississippi River, with hundreds of lakes, streams, and wetlands all feeding into the country's longest waterway (Regan, 2021). This community and its surrounding area have shown both support and protest for the operation of Pipeline 3 and its newly built route. Protest is especially strong when the pipeline replacement project meets water. The Ojibwe tribes in the area in opposition to the pipeline call themselves 'water protectors', for the waterways are symbols of their way of life, especially when it comes to the wild rices that grow there (Regan 2021). Not only are these protestors citing the risks that pose endangerment of their land and traditions, protected by US-Ojibwe treaties (the 1836 Washington Treaty), but they are also pointing to relatively recent catastrophes that occurred because of leaks and spills from local stretches of Pipeline 3.

Figure 6: The Line 3 Replacement Route

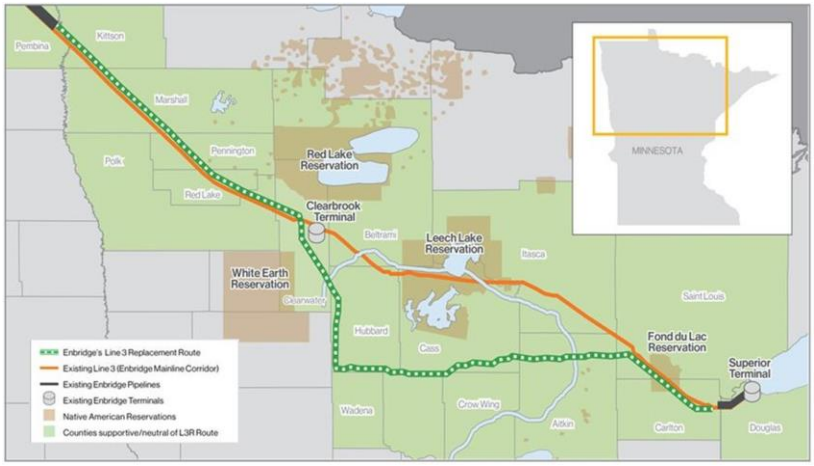


Image Accessed from Enbridge Inc. The green line denotes the new route for Line 3 through Northern Minnesota.

The Pipeline 3 Replacement Project was thrust upon Enbridge. In 2014, after multiple spills from the pipeline, President Obama's Administration ordered adequate repairs be made (Regan 2021). The first and largest of these spills occurred in March of 1991. In fact, this was to be the United States' largest inland oil spill to date. On March 3 of 1991, Line 3 ruptured outside of Grand Rapids, Minnesota and ultimately released over 1.7 million gallons of crude. The time of year benefited the cleanup and inhibited the amount of downstream contamination, for there was thick ice still covering much of the wetlands (stopline3.org). Fifteen years later in November of 2007, a fire along the pipeline outside of Clearbrook, led to the death of two Enbridge employees (Reuters 2010). Presently, Enbridge states on their website that the ordered pipeline repairs were in their own plans: "Enbridge is proposing to replace Line 3 to maintain our high safety standards, reduce future maintenance activities and create fewer disruptions to landowners and the environment, and restore the historical operating capabilities of Line 3" (Enbridge 2022). Enbridge does not cite any of the incidents as lending any weight to 'their decision' to replace this stretch of Line 3.

Regardless of who made the decision, would one not look at replacing such an outdated pipeline as an improvement? In order to transport crude more safely, would a replacement not be in everyone's interest? Here is where the major frustrations around Line 3 sit. It is not so much a replacement as a major rerouting. As one can see in Figure 6, Enbridge made plans to redirect the route of Line 3 further south of its previous course. This new path required more excavation, more resource consumption, and more water crossings. In its construction, it was reported that the replacement line caused many aquifer breaches, releasing an estimated 50 million gallons of pressurized groundwater (Marohn 2022), some of which went unreported by Enbridge for months (Bjorhus 2021). To this date, three separate aquifer breaches were reported in the Line 3 digging, accounting for 300 million gallons of leaked groundwater. This is in addition to the groundwater construction usage required for local pipeline installation. Enbridge was allowed additional water access by the DNR through 'water appropriation' permits

for construction purposes, but it was later fined $3.3 million by the DNR for the aquifer breaches (Enbridge 2022, “Line 3 Replacement Project”) (Bjorhus 2021). Such inadequate punishment is a prime example of the prioritization of oil over water. As long as they pay the subsequent fines, Enbridge is allowed to continue their construction. Not only is Line 3 construction directly contacting and draining water reserves, but it is also bringing the risk of further, potentially greater, oil spills to other lands. Line 3 replacement is in fact larger (36-inch diameter) than the previous line (34-inch diameter) (Enbridge 2022), enabling greater volume of oil flow, an estimated annual average of 760,000 barrels per day (Enbridge 2022). This will bring more oil through the region and, in the case of a future leak, a greater danger to the land, water, and civilians. Regardless of these concerning mistakes made by Enbridge, construction continued on Line 3.

The loudest voices speaking out against the pipeline and the damage it has caused and may still potentially cause, are those of the local Native American tribes of the Anishinaabe. It is these ‘water protectors’ that seem to be the only group willing to actively observe and oversee the activities of pipeline construction and operation. It was members of the Fond du Lac Band, a Minnesota Chippewa tribe, that reported aquifer breaches (Marohn 2022) and water protectors that detected and reported the spilling of drilling fluid into the Willow River in July of 2021 (Lorentz 2021). This oversight/neglect by Minnesota state agencies is glaring. In many cases, important decisions made in the pipeline corridor’s construction were made by Enbridge’s own environmental inspection team (Lorentz 2021). Direct action against Enbridge has been taken in the form of activist protest. At many points throughout pipeline 3’s construction, protestors blocked traffic and chained themselves to construction equipment, in order to slow down its rerouting and to draw attention to what they saw as a hazardous risk to the waterways of Northern Minnesota. The White Earth Band tribe went as far as to sue the Minnesota Department of Natural Resources in the summer of 2021, citing violations of tribal law allowing them the right to access wild rice plants in the area (Tigue 2021). Hundreds of

protestors have been arrested while attempting to impede pipeline construction. Reports of the police having used chemical irritants and rubber bullets against the protestors have been documented on video, yet these actions of violence are backed by the law of the state (Tigue 2021). In response to the pipeline's relocation through the Mississippi headwaters, tribal attorney Tara Houska stated, "It's a perpetuation of cultural genocide" (Regan 2021). Despite the physical protest of the pipeline and the ongoing attempt to draw attention to its environmental regulation violations, as of October 2021, oil is now flowing through Line 3.

B. Entrenched Economic Ideology

The area of Calumet is a geographical region on the southern tip of Lake Michigan. It includes the greater city of Chicago and its southern suburbs, as well as many northwest Indiana communities (see Figure 7). The Calumet area is one of the most biodiverse wetlands on the continent (The Wetlands Initiative 2021), making it home to many unique and vital plant and wildlife species, in addition to the millions of human inhabitants that call it home. It is the traditional homeland of the Potawatomi. This region of ecological wonder was met head on by industrial development as early as 1889. One of the most integral businesses to the industrial innovation of the region was Standard Oil and its refinery in Whiting, Indiana. Today, the refinery is of BP ownership and is the largest and oldest inland oil refinery in the United States (Pickren, 2019, p.40).

Enbridge Inc. operates pipelines that run from the Alberta tar pits, through the Canadian countryside, down through the Great Lakes states. One of their pipelines, Line 6, runs through central Wisconsin, into Illinois west of Chicago, and then across the Illinois/Indiana border to the pipeline terminal in Griffith, Indiana. From there the 12-mile long, BP owned pipeline BP2 transfers crude to Chicago's cross-border neighbor in Whiting, Indiana at the BP oil refinery (Enbridge "Assets" 2022). The BP oil refinery in Whiting, Indiana is a long-established industrial giant of the region. It is both integral to

the economy and the way of life. It originated as the industrial pioneer Standard Oil in the 1890s, when the company set roots and a precedence for economic and cultural tradition surrounding oil. The energy produced there is integral to the area's energy demands and it continues to be a vital location of energy and controversy, serving as a model of contemporary socio-material entanglement.

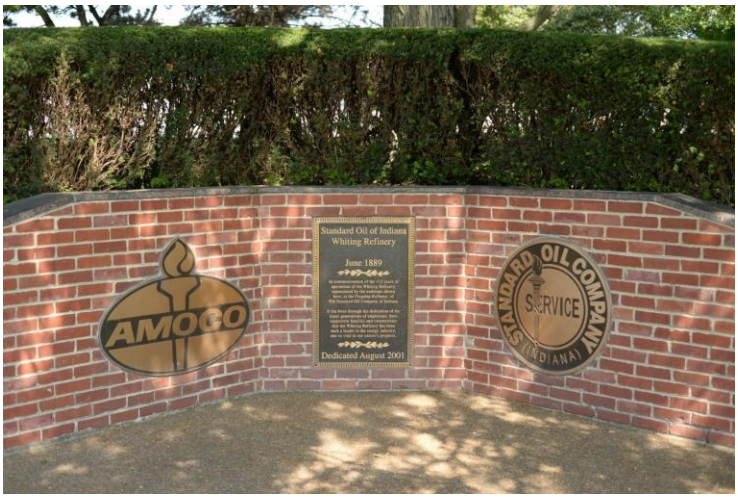
Figure 7: Calumet Region

This image depicts an outline of the Calumet Region, encompassing Chicago, Northeastern Illinois, and Northwestern Indiana. Accessed from The Calumet Collaborative

The longevity of the oil industry in Whiting has made it an establishment of economic and political might. The BP oil refinery, along with many other industrial manufacturing businesses, is a major employer of the region. It is difficult to imagine the region without the existence of these businesses. Yet, there is documented proof that the waste management of BP has been less than stellar. There have been many reported cases of affected water and air quality, all placing local civilians in direct danger. The single most striking occurrence in recent history took place on March 25, 2014, when there was a direct spill into Lake Michigan. Over the course of a few days, an estimated 1,638 gallons of oil was discharged into the lake (Jackson, 2014). Due to such activity and the general hazardous conditions of living and working near such known dangers, the status quo is

being challenged. In 2021, the Sierra Club's Hoosier chapter won a lawsuit against BP, over air pollutant violations. Part of the settlement ($2.75 million) requires BP to pay conservation groups and projects to filter out particle pollutants in schools of the area (Thiele 2022). Most activity, however, continues as the refinery is still running at full capacity.

Figure 8: Whiting Refinery Ownership



This commemorative plaque is found on the corner of 129th St and Highway 20 next to the Whiting oil refinery.

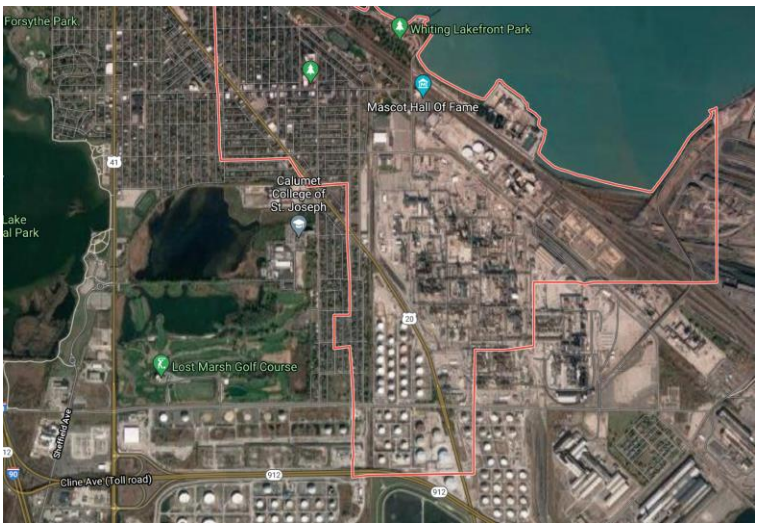
It is truly impossible to imagine the existence of Whiting without the presence of oil. Yes, the area was home to major steel works and other metal works companies, as well as other building materials manufacturers, but oil, alongside the railroads and highway system, has made Chicagoland the true crossroads of America. Before the 1890s Calumet was still a pristine natural landscape, then came Standard Oil in 1889. The natural sand formations made the land 'unusable' in other productive capacities. Other perks of the area included the facts that "land was cheap here and inhabitants were few" (Calumet Region Historical Guide, 1939, p.56). The Standard Oil Refinery was to get its oil from Lima, Ohio, and thus a pipeline was built before the refinery that was originally intended to be located on Chicago's South Side. Unfortunately for Standard Oil, a holding tank located on the South Side leaked and subsequently started a fire,

fueling public outrage and opposition to the refinery's presence in Chicago (Pickren, 2019, p.42). According to the Calumet Region Historical Guide (1939), the refining of oil was a “nuisance industry” and thus Standard Oil was obliged to set up their operation across the border, out of sight. Whiting proved to be a better location for fewer taxes and resource accessibility, but it was less-than desirable for construction reasons (lots of sand). Yet, Standard Oil made it work in their favor. One of the first infrastructural projects they undertook was that of a water intake pipe from Lake Michigan. This was to serve their refining processes, but it also later served the town’s needs (Pickren, 2019, p.45). The oil refinery was the lifeblood of the surrounding communities, building the towns and supporting the region. What worked for Standard Oil worked to improve Whiting, or so it was perceived. As the twentieth century advanced, the company became the leading producer of kerosine and gasoline in the Midwest and more and more pipelines were being directed to the refinery from states such as Oklahoma and Kansas (Wells & Wells, 2013). Standard Oil absorbed the American Oil Company in 1922 and rebranded all of their products as Amoco. In 1998, the company merged with British Petroleum. Standard Oil truly set the stage for the steel industry that was to follow and most literally ‘build Chicago’ as we know it today.

Due to its regional dominance and national importance as a major energy provider, the Whiting Refinery is one of the most integral and entrenched industries in the Great Lakes region. Yet, it is also one of its greatest threats. The oil refinery is an archetype of the Midwestern rustbelt industry. The entire infrastructure of which is unnaturally fabricated. The very land on which it sits is manufactured or reclaimed from the swamps over which it was constructed. It is a signpost of fictitious-ness. It is the largest industrial consumer of freshwater at 1.12 billion gallons of water consumed per day (Pickren 2019, 45). That is the unfortunate lens in which most industry seems to view the apparently bottomless waters of Lake Michigan: "abundant water for the insatiable thirst of the modern factory" (Pickren 2019, 45). This apparent abuse of the valuable water source only comes to light when there is the shock-worthy, photo-worthy oil spill or labor dispute. Again, we recall the March 24th oil spill into Lake Michigan in 2014. This was less than a year after the refinery went through a $4.3 billion retrofitting to accommodate

the refining processes of crude oil sands from Canada (Hawthorne, 2014)(Pickren, 2019). Whiting is also the location of BP's longest held labor strike. From February to May of 2015, 1,100 union workers went on strike demanding "tighter standards" for worker protections (Reuters 2015). These startling, singular moments are certainly noteworthy, but it is the constant, silent, and often unnoticed, waste management mistakes that are truly putting the region at risk. It is in this viewpoint that such energy companies receive special treatment and delayed regulation, that I regard the Calumet industrial corridor as a unique socio-economic legal zone. The very businesses that employ the surrounding communities are guilty of threatening their access to clean air and water. The most immediate area around the refinery endures the greatest exposure to pollutants and thus the greatest risk of health repercussions. The power imbalance shows the weakness of the local and state governments in comparison to the company of BP (Marriott and Minio-Paluello 2012, 333). This privatization of the profits and socialization of the risks is characteristic of neoliberal capitalism and goes hand in hand with the concept of accumulation by degradation.

Figure 9: Whiting from above



The outlined red is Whiting, Indiana's town limits. Much of the area is dominated by the BP refinery. Accessed from google.com/maps.

C. Apparent Danger

The Straits of Mackinac is a narrow expanse of water between the peninsulas of Michigan connecting Lake Michigan and Lake Huron waters. It is a historical region of cultural significance to the Ojibwe tribe. Line 5 is the highly contested stretch of the Enbridge Lakehead System that runs directly under through Straits of Mackinac. The pipeline splits into two parallel pipes as it runs under the water, lying on the floor of the waterway. It was installed in 1953 and has lain there ever since, with little to no maintenance (Michigan Environmental Council 2018). 540,000 barrels of crude oil pass through Line 5 on average every day (Enbridge 2022). Because of its precarious position, at the bottom of the straits, and aged condition, this pipeline is one of the more publicly visible and disputed matters of Great Lakes fossil fuel transportation.

Figure 10: Enbridge's Line 5 Crossing at the Straits of Mackinac

Imaged accessed from CBC.org. This map shows the route of Line 5 from Superior, WI, its crossing of the Straits of Mackinac, to its terminus in Sarnia, ON, Canada.

This Strait is a vital area where the merging of Lake Michigan and Lake Huron occurs. The headwaters of freshwater for millions of people, which is the economic fuel for millions more. One can draw a parallel between the straits of Mackinac and Borjomi,

Georgia, a location through which the BTC pipeline runs. Borjomi, home to the world-famous Borjomi mineral water that is exported from the natural springs there, is considered the 'Pearl of the Caucasus'. It is an extremely popular tourist destination and a huge contributor to the national export economy (at times accounting for 10% of Georgia's export trade economy) (Marriott and Minio-Paluello 2012, 357). Outrage over the plans to run the BTC pipeline through Borjomi ensued in 2002 because of the direct threat the pipeline posed to the region's greatest industry. The oil that flows through Line 5 not only threatens the tourist industries and fishing industry of northern Michigan, but it also holds the drinking water of millions in peril.

As of November 13, 2020, Michigan Governor Gretchen Whitmer announced plans to shut down Pipeline 5. The governor cited "persistent and incurable violations" by Enridge through the operations of the pipeline and "Whitmer and Michigan Department of Natural Resources (DNR) Director Dan Eichinger informed the Canadian fossil fuel giant that a 1953 easement allowing it to operate the pipelines is being revoked and terminated." The Governor of Michigan declared that Enbridge must shut down pipeline 5 by May of 2021 because "Enbridge has imposed on the people of Michigan an unacceptable risk of a catastrophic oil spill in the Great Lakes that could devastate our economy and way of life." This direct order by the State of Michigan shows great promise in reclaiming the common waters of Lake Michigan and the other Great Lakes and re-characterizing them in the eyes of society as an irreplaceable, valuable resource. One should be excited about what this could mean for the future of other water sources and for the distancing from fossil fuel production, yet due the ongoing legal battles and flow of oil through Line 5, there is still room for doubt, because it remains pending in the same court" (Corbett 2020). Despite the Governor's declared deadline of May 2021, oil has continued to flow through Line 5 to this day.

Governor Whitmer and the State of Michigan were not the first to attempt to nullify the easements given to Enbridge and Line 5. The Native Americans of the Ojibwe Tribes have in recent years drawn on their original claim to sovereignty over the land and water of the Mackinac Straits area, because of the risks imposed by the Line 5 pipeline. The Ottawa and Chippewa tribes claim the Washington Treaty of 1836 is rendered void because the existence of the pipeline endangers their legal, traditional, and cultural right to fish those waters (Havrelock). “Five Michigan tribes including the Bay Mills Indian Community, Grand Traverse Band of Ottawa and Chippewa Indians, Little Traverse Bay Band of Odawa and the Nottawaseppi Huron Band of Potawatomi signed friend-of-the-court briefs in support of the legal action. And in May 2021, the Bay Mills tribal council voted to banish Enbridge’s Line 5 pipelines from tribal lands” (Pember 2022). Despite their cultural claim to the land backed by the Washington Treaty, their opponents are also calling on historical treatises. The Canadian federal government is citing the 1977 pipeline treaty with the US in support of their domestic company Enbridge.

The battle against Line 5 has brought many groups from many different geographies together in alliance. Further up the pipeline, along its route in Northern Wisconsin, 12 miles of Line 5 crosses through the Bad River Reservation. “The land is what makes us who we are here but it’s not so much the land we are trying to save as much as we are determined to keep ourselves strong,” Bad River tribe member Aururo Conley said. (Pember 2022). Many native tribes along Line 5, directly in contact with the pipeline are acting in protest to Enbridge. So too are Indigenous groups in Canada speaking out against the pipeline and their federal governments support of it. Grand Chief Reg Niganobe of the Anishinabek Nation of Canada pointed out the irony of the Canadian federal government calling on the treaty of 1977 while ignoring the early treaties and “promises” with Indigenous groups of the Americas (Major 2021). Enbridge is moving forward with “state approved” plans to build a tunnel for the pipeline. The projected cost for a sub-straits, pipeline covering tunnel is $500 million (LeBlanc 2022). The

construction would not be able to begin until late 2024, due to permit delays. This delay and the further environmental impact from the planned construction is yet another reason Governor Whitmer, the state of Michigan, and environmental activists are calling for the closing of Line 5.

VII. Energy Futures

Public protest is a great threat to energy companies and oil pipelines. The immediate strength of protests lies in its ability to cause substantial financial implications. The postponement of construction or operation of pipelines is extremely costly to many large players (Barry 2013, 136). This is evident in the hostage situation of the Colonial Oil pipeline in May of 2021. The entirety of Colonial Oil's pipeline system (the largest in the United States) was shut down on May 7, 2020, due to a security breach by hackers who demanded a ransom of cryptocurrency to relinquish their hold on the company's system. The shutdown was declared a state of emergency by President Biden because it caused many fuel shortages on the east coast and an immediate increase in gas prices. The system was reactivated on May 12, 2021, but those five days cost Colonial the inability to transport the 2.5 million gallons of gasoline it pumps per day and a payment of $4.4 million paid to the hackers (Turton and Kartikay 2021). The large majority of the crypto ransom was later recovered by the Department of Justice, but the damage was done (Morrison 2021). Despite the disruption, protesting pipelines only seems to go as far as to garner some social currency, whereas the fiscal backing of counter-movements is nothing in comparison to that of energy companies and other affiliated parties. This shows the potential for an economic, social, and cultural future that considers more than immediate profits and convenient energy. But could it be that simple?

The fossil fuel industry is seemingly coming to terms with the inevitable end to their products' feasibility and demand. Yet, that does not mean they are helping to make the weaning any more palatable. As Julia Rock reports in Jacobin, Enbridge has estimated the economic lifeline of their Lakehead Pipeline System, and it does not exceed nineteen years from now. In

response to the recognized fact that the timetable has shortened, Enbridge sees the only answer is to “raise rates in order to recover its construction costs” (Rock 2021). This blatant adjustment to ‘disaster capitalism’ does not consider the fact that it is Enbridge (amongst other oil-related businesses) that is responsible for the shortening window and accelerated need to replace oil energies.

Oil pipelines continue to be large targets of new investment. Today, nearly 15,000 miles of new oil pipeline are under development. The oil that would be pumped through this potential future pipeline would contribute about 5 billion tons of CO2 to global emissions per year (Carrington 2022). Such exorbitant plans are being justified by the threat of the Russian-Ukranian war and its subsequent energy insecurity and soaring global gas prices, yet again. However, this propaganda is enlivened by the estimated $75 billion already spent on pipeline projects that would be rendered null if action on climate change is eventually actualized (Carrington 2022). This year’s record in highest ‘Clean Energy’ investment, comes alongside greater increases in coal and gas investments. According to the International Energy Agency, “clean energy investment accounts for around 5% of oil and gas company capital expenditure worldwide” (IEA 2022).

Extractive energy companies and national governments will go to great lengths to protect their 'right' to practice whatever economic activities they so desire with the land that they consider theirs, no matter the social or environmental damages it creates. To do this, they garner their own powers of knowledge creation, often with the assistance of international institutions and national governments with their own short-term benefits in mind. The citizens that are directly affected by the negative impacts of extraction are left to attempt to protect themselves and their surrounding natural ecosystem, often at the risk of damaging their own economic and social securities. Communities must be willing to separate themselves from the short-term benefits of a harmful local industrial activity, to protect the long-term futures of what is truly crucial to the 'sustainability' of humanity as we know it. Yet, this is easier said than done.

Dorceta Taylor made this clear in her exploration of Environmental Justice. She understands that “social location and people’s experiences and perceptions of the issues will also influence the type of movements they develop” (Taylor, 2000, p. 510). As seen simply by the ever-presence of the oil refinery in Whiting, one cannot imagine the region existing without it. Many livelihoods and ways of life are tied to that business. However, an energy revolution is inevidtable, and the need for green infrastructures and renewable energies is growing every day. Can this region make the shift? Furthermore, if, and when, the transition away from crude oil happens, who will take on the costs and risk associated with it (Rock, 2021)?

VIII. Conclusions

After providing a historical mapping of the initial land appropriation and drawing parallels to the BTC pipeline, I detailed and analyzed key locations along the Lakehead pipeline system within the theoretical framework of socio-material assemblages, with examples of formations around elements of physical infrastructure that may become the centerpiece of social, political, economic, cultural, and environmental dissidence, in times of transition. I explored the social and political mechanisms and discourse that are able to render oil pipelines simultaneously visible and invisible, with Barry’s study of the BTC pipeline as a point of reference and methods model. This question of visibility/invisibility is produced through power of knowledge and control of public discourse by energy companies and interest groups. National, state, and local governments, in the US and Canada, also have their own separate interests at stake in where and how they get their oil energy. This has led to a mix of relationships that have been generated by the mere existence of and inevitable conflicts of the oil pipelines. How effectively each of these groups can harness historical treaty rights is becoming more and more crucial to the projected futures of oil pipelines and their sustainability, both environmentally and socially.

Entire economies, communities, and lives depend on oil pipelines and the energy it transports. Enbridge's lines 3, 5, and 6 are physical entities enabling and proliferating ideals of settler colonialism through its transportation of needed energy sources. Pipeline accidents and oil

spills have proven to be detrimental to communities and their surrounding natural environments. Subsequent protest has drawn attention to the risks at hand when transporting oil, including risks to cultural ways-of-life, but the apparent need for oil energy is greater than ever. With countless international crises of war, economic collapse, and social insecurity, such contention is seemingly overshadowed. Yet, the supply of carbon energies is finite, and their aftereffects are taking a fast toll. Despite the state of the world, its modern mechanisms will inevitably halt if new realities are not recognized and created.

This is the intersection at which we find the energy conflict. Conflict imbued with settler-colonialism of native lands and dispossession of common resources based on coercive treaties drafted hundreds of years ago AND the distinct social, political, and economic dependence that has been rendered in a web around the physical structures of oil pipelines. It has been my goal to make clear that North American oil pipelines continue to be employed and expanded upon in this time of global warming awareness in part because of the acculturated and socialized mindset that remains from the first enforcement of Euro-American ideals of property rights in the colonization of the Americas. The assumed 'right-to-land' by the governance of the United States and Canada has led to the socialization, acculturation, and acceptance of limitless extraction and transportation of nonrenewable resources. Despite the irony of the existence of preceding works of legality in Indigenous treaties, energy companies and their governing states call on more contemporary renderings of law to justify their perseverance of carbon energy production, transportation, and consumption, sustaining indoctrinated power imbalances over the land and its First Nations. This intersection of land and resource accumulation through dispossession with the contemporary social, economic, and cultural power of oil is the crossroads at which energy production and consumption currently sits.

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