

**Drawing The Line:**

*An environmental history of the Westcoast Transmission natural gas pipeline, 1948-1982*

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## **Abstract**

This dissertation is an environmental history of Westcoast Transmission Company Limited (Westcoast), which built Canada's first big-inch natural gas pipeline and inaugurated large-scale natural gas usage in British Columbia. The study starts in the late 1940s, when the company was founded, and ends in 1982 when it effectively concluded its first encounter with substantial public resistance to its natural gas pipeline ventures. The dissertation asks to what extent Westcoast shaped human-nature relations and argues that Westcoast's energy transition was about more than technological innovations and economic questions of supply and demand. Instead, natural gas usage and exploitation were intertwined with gender identity, community building, geopolitical questions, colonial ambition, and the definition of modernity. Relying primarily on three archival collections in two Canadian cities, parts of which are newly available to the public, this dissertation explains how Westcoast developed, operated, maintained, and expanded its complex energy system and sheds light on Canada's relatively late transition to fossil fuels and the persistent nature of Canada's fossil fuel reliance.

Key terms: energy transition, fossil fuels, natural gas, environmental history, Canadian history, B.C. history, colonialism, gender dynamics, Mackenzie Valley Pipeline Inquiry.



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## Introduction

In April 1949, a Special Act of the Parliament of Canada incorporated Westcoast Transmission Company Limited (“Westcoast” or “Westcoast Transmission”).<sup>1</sup> Francis Murray Patrick (Frank) McMahon founded this company to construct a 1,046-kilometre (650-mile) natural gas pipeline from newly uncovered reserves of natural gas in British Columbia (B.C.) and Alberta's Peace River region to the Canada-U.S. border near Huntingdon, B.C., where it would connect with Westcoast's American partner, Pacific Northwest (see Image 1 and Figure 1).<sup>2</sup> Piercing through the forests, mountains, and valleys of Western Canada, the natural gas pipeline was the first big-inch pipeline in the country, and its completion in 1957 inaugurated the natural gas industry in British Columbia.<sup>3</sup> In the ensuing decades, Westcoast Transmission would cement its presence in Western Canada, significantly expand its

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<sup>1</sup> Westcoast Transmission Company Limited, “Frank McMahon 1902-1986,” *Pipeline News* (June 1986): p.3. UBCSC, WEI, Box 6, File 35.; Westcoast Transmission Company Limited, *The Westcoast Story*, October 1957, UBCSC, WEI, Box 7, File 27.; “Province Lacks Power to Halt Export of Gas,” *Edmonton Journal* (Edmonton, Alb.) Mar. 25, 1949, p.1.

“Westcoast Transmission Company Limited,” *Calgary Herald* (Calgary, Alb.), Mar. 28, 1949, p.2.; “Westcoast Transmission Company Limited,” *Edmonton Journal* (Edmonton, Alb.), Mar. 29, 1949, p.20.; “Westcoast Transmission Company Limited,” *Province* (Vancouver, B.C.), Mar. 30, 1949, p.30.; “Westcoast Transmission Company Limited,” *Vancouver Sun* (Vancouver, B.C.), Mar. 31, 1949, p.37.; “Westcoast Transmission Company Limited,” *Times Colonist* (Victoria, B.C.), Mar. 31, 1949, p.21.; “Westcoast Transmission Company Limited,” *Nanaimo Daily News* (Nanaimo, B.C.), Mar. 31, 1949, p.3.; “Westcoast Transmission Company Limited,” *Surrey Leader* (Surrey, B.C.), Mar. 31, 1949, p.5.; “Westcoast Transmission Company Limited,” *Quesnel Cariboo Observer*, (Quesnel, B.C.), Apr. 2, 1949, p.A4.; “Westcoast Transmission Company Limited,” *Calgary Herald* (Calgary, Alb.), Apr. 4, 1949, p.18.; “Westcoast Transmission Company Limited,” *Edmonton Journal* (Edmonton, Alb.), Apr. 5, 1949, p.22.; “Westcoast Transmission Company Limited,” *Richmond Review* (Richmond, B.C.), Apr. 6, 1949, p.6.; “Westcoast Transmission Company Limited,” *Chilliwack Progress* (Chilliwack, B.C.), Apr. 6, 1949, p.5.; “Westcoast Transmission Company Limited,” *Times Colonist* (Victoria, B.C.), Apr. 7, 1949, p.21.; “Westcoast Transmission Company Limited,” *Langley Advance* (Langley, B.C.), Apr. 28, 1949, p.2.; “Westcoast Transmission Company Limited,” *Langley Advance* (Langley, B.C.), May 19, 1949, p.2.

<sup>2</sup> Edna Hunter, “Frank M. McMahon Biography,” *Westcoast Transmission Company Limited*, May 21, 1986, University of British Columbia Special Collections (hereafter UBCSC), Westcoast Energy Inc. Fonds (hereafter WEI), Box 3, File 35.; Westcoast Transmission Company Limited, *The Westcoast Story*, October 1957, UBCSC, WEI, Box 7, File 27.

<sup>3</sup> Westcoast Transmission Company Limited, *The Westcoast Story*.

operations and acquire shares in production wells, potential oil and gas land, and gas processing plants without significant, organized resistance.<sup>4</sup> While a transmission company at heart, Westcoast thus also functioned as a producing and developing corporation. Conditions changed in the 1970s, when Indigenous and environmentalist actors publicly opposed Westcoast's participation, as a member of Foothills PipeLines Ltd., in a natural gas pipeline project through the Mackenzie Valley in the Northwest Territories.



*Image 1: Frank McMahon.*

“Bennett’s – P.G.E. Trip to Fort St. John, August 31, 1956: [Frank McMahon standing in front of pipes],” Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1395.

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<sup>4</sup> “Westcoast Energy Inc.,” UBCSC, WEI, Accessed Apr. 30, 2023, [https://rbarchives.library.ubc.ca/uploads/r/university-of-british-columbia-library-rare-books-and-special-collections/4/6/46c7bf0a153292f58a4e3a62b46d25ceaaae2e930b0c6fee347dff38bb06be49/Westcoast\\_Energy\\_Inc.pdf](https://rbarchives.library.ubc.ca/uploads/r/university-of-british-columbia-library-rare-books-and-special-collections/4/6/46c7bf0a153292f58a4e3a62b46d25ceaaae2e930b0c6fee347dff38bb06be49/Westcoast_Energy_Inc.pdf);



*Figure 1: Westcoast main pipeline system.*

Westcoast Transmission Company Limited, *The Westcoast Story*, October 1957, UBCSC, WEI, Box 7, File 27.

This dissertation traces Westcoast’s operations from its inception in the 1940s through its first episode of major, public, organized opposition in the 1970s. It asks to what extent the construction, operation, and expansion of Westcoast’s natural gas pipeline system in this period altered or generated new socio-ecological relations in Western Canada. In this context, “socio-ecological relations” refers to the reciprocal relationship between people and the environment or, more specifically, between people and the resources they consume.<sup>5</sup> Tracing

<sup>5</sup> This term builds on vernacular explanation and interpretations of the discipline environmental history which analyzes, as prominent environmental historian Donald Worster states “the role and

Westcoast's history from its inception in the late 1940s through to the 1970s, allows this analysis to examine, not just the influence of natural gas's arrival on socio-ecological relations, or human relationships with their natural surroundings in Western Canada but map such relations until natural gas encountered its first substantial, public opposition.

The Westcoast pipeline arose in the post-war years when, as B.C. historian Jean Barman puts it, "the creation of British Columbia as a cohesive unit" occurred. A history of Westcoast Transmission, the first large-scale transmission company of natural gas in British Columbia, sheds a substantial light on the role of that fuel therein. Westcoast arose when the Social Credit Party, led by W.A.C. Bennett, governed British Columbia. Between 1952 and 1972, Bennett would move to augment provincial cohesiveness through extensive investments in infrastructure. Calling the province, "the last economic frontier of North America," he moved to develop its interior and northern resources for the benefit of the whole, spending more on transportation infrastructure in his first six years in office than his predecessors had done collectively. Bridges arose across the Kootenay River and the Pacific Great Eastern Railway reached Fort St. John in 1958.<sup>6</sup> These infrastructure developments paved the way for heavy energy expenditures, primarily in hydroelectricity, in the 1960s. For Bennett, high energy usage and B.C.'s development went hand in hand and the provincial government dammed both the Columbia River and Peace River during his tenure.<sup>7</sup> Under Bennett, the previously rather undeveloped white settlements in interior and northern regions of the province that had formed in the latter half of the 19<sup>th</sup> century, tied in with the metropolitan

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place of nature in human life." In the discipline, terms like "nature" or the "environment" are used to refer to the nonhuman world or those aspects humans have not generated in the primary of sense. This common understanding is rather arbitrarily and scholars like Worster acknowledge that the term become increasingly arbitrary as humans have a growing impact on all components of "nature." Donald Worster, "Appendix: Doing Environmental History," in eds. *The Ends of the Earth: Perspectives on Modern Environmental History* by Donald Worster. (Cambridge: Cambridge University Press, 1989): p.292.

<sup>6</sup> Jean Barman, *The West Beyond the West: A History of British Columbia* (Toronto: University of Toronto Press, 2007): p.298.

<sup>7</sup> Ibid., p.280.; Tina Loo, "Disturbing the Peace: Environmental Change and the Scales of Justice on a Northern River," *Environmental History* Vol. 12, No. 4 (2007): p. 899-900.

Lower Mainland and blossomed.<sup>8</sup> Prince George, for instance, grew from a settlement of 2,000 residents in 1941, to one of 33,000 in three decades, boasting shops and paved roads where mud roads had laid.<sup>9</sup> Not dismissing their importance, Bennett's investments partly reflected his time, as projects like the St. Lawrence Seaway were built elsewhere on the continent.<sup>10</sup> Scholars, like anthropologist James C. Scott and environmental historians Tina Loo and Meg Stanley consider Bennett's "mega-projects" exemplary of "high modernism." This ideology is characterized by the overarching and abiding belief that science and technology will advance societies.<sup>11</sup> Westcoast's arrival and development during Bennett's tenure furthers the existing understanding of this period of high modernism and white, settler solidification in the provincial interior and north.

For British Columbia, the construction of the Westcoast pipeline system enabled the advent of large-scale natural gas consumption. The company would supply two distribution companies: Inland Natural Gas Co. Ltd. (Inland) and British Columbia Electric Company Limited (B.C. Electric). Inland set out to service the Cariboo District, including Prince George, Merritt, Quesnel, and Williams Lake, and the Okanagan Valley, containing Kamloops, Kelowna and Penticton.<sup>12</sup> B.C. Electric transformed its manufactured gas distribution system in the Greater Vancouver and Greater Victoria areas to accommodate

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<sup>8</sup> Adele Perry, *On the Edge of Empire: Gender, Race, and the Making of British Columbia, 1849-1871* (Toronto: University of Toronto Press, 2001): p.196.

<sup>9</sup> Jean Barman, *The West Beyond the West*, p.207.

<sup>10</sup> James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, (New Haven, CT: Yale University Press, 2020), p. 5.

<sup>11</sup> Ibid.; Tina Loo and Meg Stanley, "An Environmental History of Progress: Damming the Peace and Columbia Rivers," *The Canadian Historical Review* Vol. 92, No. 3 (2011): p. 401.

<sup>12</sup> Inland Natural Gas Co. Ltd. purchased natural gas to supply Prince George, Quesnel, Williams Lake, Merritt, Kamloops, Vernon, Kelowna, Summerland, Penticton, and various small communities in the Thompson River and Okanagan Valley (principal among them are Savona, Monte Creek, Westwold, Falkland, Oyama, Winfield, Westbank, and Peachland). - *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, Commonwealth Services Inc. (New York, February 1956): p.44, UBCSC, WEI, Box 10, File 12.; *Report Natural Gas Market in Service Area of Inland Natural Gas Co. Ltd. Westcoast Transmission Company Limited*, New York: Ford, Bacon & Davis, 1955, p.7, 11, UBCSC, WEI, Box 10, File 10.

natural gas.<sup>13</sup> The corporation also extended its distribution activities into Burnaby, North Vancouver, Port Coquitlam, Port Moody, and the Lower Fraser River Valley.<sup>14</sup> Before Westcoast introduced natural gas, the Cariboo District and Okanagan Valley relied on a combination of wood, oil, coal, and electricity (diesel-generated and hydroelectricity respectively).<sup>15</sup> Any gas that the companies provided constituted manufactured gas.<sup>16</sup> "Manufactured gas" is distilled primarily from coal, while "natural gas" refers to the fuel trapped within the earth.<sup>17</sup> In 1955, Inland would build the necessary distribution system and the lateral and branch lines that connected it to Westcoast's 30-inch mainline.<sup>18</sup> Similar to Inland, B.C. Electric established the required lateral lines to connect its distribution system with Westcoast's mainline.<sup>19</sup> A history of Westcoast's system equals an introduction into the origin of large parts of B.C.'s natural gas service and allows for analyses of the initial impact of this energy transition on socio-ecological relationships.

An analysis of Westcoast's pipeline system also sheds light on a formative period in

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<sup>13</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.64. - The Greater Vancouver Service Area of B.C. Electric included the Cities of Vancouver, New Westminster, North Vancouver, Port Coquitlam, and Port Moody; the District Municipalities of Burnaby (portion), North Vancouver (portion), Fraser Mills, West Vancouver (portion), Richmond (portion) and Coquitlam (portion); and the University Endowment Area (portion). - *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.70–71.

<sup>14</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.65–66.

<sup>15</sup> *Ibid.*, p.46–54.; *Report Natural Gas Market in Service Area of Inland Natural Gas Co. Ltd.*, p.7, 11.; the region is therefore exemplary of R.W. Sandwell's conclusions on Canadian energy history. Sandwell argues that it took Canada until 1955 to rely for 90 per cent on mineral energy sources, and people generally switched in a non-linear fashion to such energy supplies. Given Canada's size, geography, and dispersed settlement, residents often combined the organic sources in their proximity with mineral energy supplies. R.W. Sandwell, *Powering up Canada: A History of Power, Fuel, and Energy from 1600* (Montreal: McGill-Queen's University Press, 2016): p.4.

<sup>16</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.2.

<sup>17</sup> Colin A.M. Duncan and R.W. Sandwell, "Manufactured and Natural Gas," in eds., *Powering up Canada: The History of Power, Fuel, and Energy From 1600* by R.W. Sandwell. (Montreal: McGill-Queen's University Press, 2016): p.300.

<sup>18</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.44.

<sup>19</sup> *Ibid.*, p.67.

Alberta's natural gas history. Around 1947, Alberta had the highest percentage of homes with gas ranges in the nation as comparatively many communities resided in economic proximity to natural gas reserves.<sup>20</sup> The techniques to capture, purify and transport natural gas over substantial distances had only slowly been established. Prior to the early 20<sup>th</sup> century, iron pipes remained too small and volatile to transport natural gas over long stretches as the screws and couplings that engineers used to bind pipeline segments together often faulted. In the 1920s, engineers resolved the latter issue and a leak-proof rubber ringed joint as well as innovative welding technologies furthered long-distance pipeline developments.<sup>21</sup> Unable to transport natural gas in barrels, the fuel relied on expensive pipeline systems which required large reserves of natural gas to make them economical. To avoid any unnecessary financial risks, companies only developed natural gas fields in proximity to reliable markets.<sup>22</sup> Prior to the massive natural gas and oil discoveries in 1947 at Leduc, just south of Edmonton, natural gas therefore constituted a relatively minor share of Canada's energy consumption.

Frank McMahon acquired significant wealth at Leduc and invested in a pipeline proposal from the Peace River region on the Alberta-B.C. border to southern markets. At the time, Alberta only exported a small quantity of natural gas to support the American war industry in Montana. Plans for an eastern pipeline connecting Alberta and Ontario (TransCanada PipeLines Limited) only arose in the early 1950s and Westcoast was therefore amongst the first long-distance natural gas pipeline companies that wished to export substantial amounts of natural gas from Alberta. As a result, Westcoast partly stimulated the creation of that province's regulatory framework for such critical matters. A history of Westcoast Transmission, the first 24-inch gas line, therefore sheds light on this monumental period in North American natural gas history, when pipeline technology reached novel

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<sup>20</sup> Colin A.M. Duncan and R.W. Sandwell, "Manufactured and Natural Gas," p.315.

<sup>21</sup> Ibid. p.313-314.

<sup>22</sup> Ibid. p. 313.

heights, fostering the growth of the trans- and inter- continental pipeline networks existing today.

By carrying the analysis of Westcoast's operations into the 1970s, this dissertation engages with the rise of Canada's organized Indigenous and environmental activism. In 1969, the Pierre E. Trudeau government issued the White Paper, designed to end Indian status and dismantle the Indian Act.<sup>23</sup> This policy document was widely opposed as many considered it an opportunity for the Canadian government to clear itself from its historical obligations towards the Indigenous communities.<sup>24</sup> During the 1970s, Indigenous resistance gained prominence, with the Cree and Inuit of northern Quebec, for instance, opposing the construction of the James Bay dam in 1972.<sup>25</sup> That same decade, the Canadian environmental movement advanced, instigating what scholars like historian Jonathan Clapperton and environmental historian Liza Piper call "a wave of environmental consciousness" that transformed and transcended North America in the 1970s.<sup>26</sup> In the context of the Vietnam War, baby boom, and 1960s youth culture, countercultures engaged with environmental concerns gained prominence, giving rise to not just Greenpeace, and the World Wildlife Fund, but also small activist organizations, in which marginalized groups like women and Indigenous communities featured prominently. Against this backdrop, Westcoast Transmission sought to expand its natural gas system into the Arctic.

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<sup>23</sup> A Canadian federal law, The Indian Act shapes matters related to Indigenous status, bands and reserves. Throughout history the Canadian federal government has utilized this act to exert significant control over Indigenous day-to-day lives, status, and cultural practices. - "The Indian Act," UBC Indigenous Foundations, Accessed September 1, 2023, [https://indigenousfoundations.arts.ubc.ca/the\\_indian\\_act/](https://indigenousfoundations.arts.ubc.ca/the_indian_act/); Government of Canada, *Indian Act*, 1985, Accessed September 1, 2023, <https://laws-lois.justice.gc.ca/eng/acts/i-5/>.

<sup>24</sup> "The White Paper 1969," *Indigenous Foundations University of British Columbia*, Accessed Jun. 2, 2023, [https://indigenousfoundations.arts.ubc.ca/the\\_white\\_paper\\_1969/](https://indigenousfoundations.arts.ubc.ca/the_white_paper_1969/).

<sup>25</sup> *The James Bay and Northern Quebec Agreement*, Ottawa: Indian and Northern Affairs, 1976, [https://www.engov.ca/wp-content/uploads/2018/03/01-james\\_bay\\_and\\_northern\\_quebec\\_agreement\\_consolidated\\_to\\_september\\_13\\_2013\\_-1.pdf](https://www.engov.ca/wp-content/uploads/2018/03/01-james_bay_and_northern_quebec_agreement_consolidated_to_september_13_2013_-1.pdf).

<sup>26</sup> Jonathan Clapperton and Elizabeth Piper, "In the Shadow of the Green Giants: Environmentalism and Civic Engagement." In eds. *Environmental Activism on the Ground* by Jonathan Clapperton and Elizabeth Piper (Calgary: University of Calgary Press, 2019): p.2.; Ryan O'Connor, *The First Green Wave: Pollution Probe and the Origins of Environmental Activism in Ontario* (Vancouver, B.C: UBC Press, 2014): p.4.



The 1970s featured the first substantial, organized Indigenous and environmentalist opposition to natural gas developments. Both the United States and Canada had turned to newly uncovered Arctic gas reserves in Prudhoe Bay Alaska, as well as potential reserves in the Northwest Territories' Mackenzie Valley, as a solution to the rising energy prices and shortages during the energy crisis of the early 1970s. Westcoast Transmission, as part of Foothills Pipelines Ltd., designed two pipeline routes to these reserves. One ran through the Mackenzie Valley, and the other through the Yukon, alongside the Alaska Highway.<sup>27</sup> Faced with rising Indigenous and environmental concerns the Canadian government appointed Justice Thomas Berger to analyze the desirability of a natural gas pipeline through the Mackenzie Valley.<sup>28</sup> The public nature of this Inquiry and its community-engaged consultation style offered, for the first time, a national platform to Indigenous and environmental concerns opposed to natural gas infrastructure.<sup>29</sup> As a result, many academics have heralded the inquiry as a “ground-breaking” moment in Canadian energy history.<sup>30</sup> With a focus on Westcoast's participation, this dissertation places this alleged momentous inquiry into the larger context of western Canada's pipeline history and Arctic gas developments at the time.

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<sup>27</sup> François Bregha, “The Mackenzie Valley Pipeline and Canadian Natural Gas Policy,” *Canadian Public Policy* Vol. 3, No. 1 (1977): p.73.; National Energy Board, *Volume IV: An Approach for the Supply and Transportation of Beaufort/ Mackenzie Basin Natural Gas to Canadian Markets*, August 1974. p.6.; Joel J. Sokolesky, “The Canada-U.S. Alaska Highway Pipeline: A Study In Environmental Decision-Making.” *The American Review of Canadian Studies* Vol. 9, No. 2 (1979): p.87.

<sup>28</sup> Government of Canada, “Description – Past environmental and socio-economic reviews,” Accessed Jun. 1, 2023, [https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/pipeline2\\_e.pdf](https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/pipeline2_e.pdf); Thomas R. Berger, *Northern Frontier, Northern Homeland* Vol. 2, Ottawa: Mackenzie Valley Pipeline Inquiry, 1977, Appendix II.

<sup>29</sup> Robert B. Gibson, “From Wreck Cove To Voisey's Bay: The Evolution Of Federal Environmental Assessment In Canada,” *Impact Assessment and Project Appraisal*, Vol. 20, No. 3 (2002): p.154.; Bram Noble, Kevin Hanna, and Jill Blakly, “Northern Environmental Assessment: A Gap Analysis and Research Agenda,” In *Resources and Sustainable Development in the Arctic* ,” in eds. *Resources and Sustainable Development in the Arctic* by Chris Southcott, Frances Abele, David Natcher, and Brenda Parlee, (United Kingdom: Routledge, 2019): p.65–87.

<sup>30</sup> Stephen Goudge, “The Berger Inquiry in Retrospect: Its Legacy,” *Canadian Journal of Women and the Law* Vol. 28, No. 2 (2016): p.399-400.

Geographically, in this period, Westcoast's system includes gathering lines in Alberta's Peace region (part of the original main system) and the Northwest Territories (constructed in 1972).<sup>31</sup> In 1980, Foothills Pipe Lines Ltd. initiated Phase I (or the “Pre-build”) of the Alaska Highway pipeline, which included sections in Alberta, B.C., and Saskatchewan.<sup>32</sup> Foothills announced that it would defer Phase II through the Yukon in early 1982, which is why the dissertation ends in that year.<sup>33</sup> Most of Westcoast’s system, however, resides in British Columbia, following parts of B.C.’s Highway 97 and 5, with processing and meter stations located in proximity to towns like Fort St. John, Merritt, and Hope.<sup>34</sup> The pipeline system crosses substantial amounts of provincial and federal lands and Indian Reserves. In ca. 1958, the company spoke of 1,150 landowners throughout the province, who had granted easements for the pipeline’s right of way.<sup>35</sup> Limited information was available in the consulted archives on the “15 Indian Reservations” that Westcoast in circa 1958 said it engaged with.<sup>36</sup> Cross-referencing the pipeline routes with contemporary maps reveals that the company crosses Treaty 8 in the northeast, and Dene-thah, Dunne-za, Sekani, Dakelh, Secqepemc, Okanagan,

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<sup>31</sup> Westcoast Transmission Company Limited, “System and Capacity,” *Fact Card 1980*, UBCSC, WEI Box. 11, File 24.; Westcoast Transmission Company Limited, “Trunk Line Extension to Fort Nelson,” *Annual Report 1961*, UBCSC, WEI Box. 7, File 13.; Westcoast Transmission Company Limited, “Fort Nelson Region,” *Annual Report 1962*, UBCSC, WEI Box. 7, File 13.

<sup>32</sup> Westcoast Transmissions Company Limited, “Alaska Gas Project Wins in U.S. Congress Voting,” *Pipeline News* Vol. 8, No. 5 (October 1978): p.1., UBCSC, WEI, Box 11, File 45.; Westcoast Transmissions Company Limited, “Alaska Pipeline Pre-build Gets Ottawa 'Go-Ahead',” *Pipeline News* Vol. 10, No. 4 (September 1980): p.3., UBCSC, WEI, Box 11, File 46.

<sup>33</sup> “Pipeline History,” *Government of Canada*, Accessed Apr. 2, <https://northern-pipeline.canada.ca/129>.

<sup>34</sup> Westcoast Transmission Company Limited, *The Westcoast Story*, October 1957, UBCSC, WEI, Box 7, File 27.

<sup>35</sup> Westcoast Transmission Company Limited, “The Story of a Pipeline,” Ca. 1958, UBCSC, WEI, Box 11, File 5.

<sup>36</sup> Ibid.; The Canadian federal government recognizes three groups of Indigenous communities: First Nations, Inuit, and Métis. Some Indigenous communities reside on land ceded in treaties, but many live on unceded territory that the Crown has not acquired. “Treaties and Agreements,” *Government of Canada*, Accessed October 1, 2023, <https://www.rcaanc-cirnac.gc.ca/eng/1100100028574/1529354437231>.; “Indigenous Peoples and Communities,” *Government of Canada*, Accessed October 1, 2023, <https://www.rcaanc-cirnac.gc.ca/eng/1100100013785/1529102490303>.; Historica Canada, *Indigenous Perspectives Education Guide*, Accessed October 1, 2023, <https://fb.historicacanada.ca/education/english/indigenous-perspectives/2/>.

Nlaka'pamux, Stl'atl'imc and Coastal Salish land (See Figure 2 and link in footnote for interactive and detailed maps).<sup>37</sup>

The pipeline traverses an intricate variation of ecosystems, each challenging the construction of Westcoast's system in their own ways. From north to south, the pipeline's main system starts near Fort St. John and Fort Nelson which reside in a combination of forests and muskeg.<sup>38</sup> A swampy soil, the B.C.'s Ministry of Forests defines "muskeg" as "the peatland combination of bogs and nutrient-poor fens that cover extensive parts of northeast British Columbia."<sup>39</sup> Continuing south, the pipeline enters the forests surrounding Prince George and Quesnel, traverses the ranching settlement of Williams Lake, and the Cariboo country known for what a Westcoast publication called "its rolling parklands and fine lush grasses devoted mainly to cattle ranching."<sup>40</sup> From the Cariboo, the line bends west, to the Coquihalla Pass in the Cascade Mountain Range. It is there that the Westcoast pipeline reaches its highest altitude, 4,510 feet. Continuing onwards to the international border, the line descends to the town of Hope and the sea-level Fraser Valley region known for its farming.<sup>41</sup> In the north, the muskeg soil with permafrost patches posed significant challenges, as did the glacial boulders of the Foothills and the "considerable quantities of rock" that had to be moved in the Cascades. In addition, the original pipeline system contains seven major riving crossings, five of which the company designed aerial spans for. The route also contains

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<sup>37</sup> "Indigenous Maps and Mapping," *The University of British Columbia*, Accessed October 1, 2023, <https://www.bcrobyn.com/wp-content/uploads/2012/12/map2.jpg>; "First Nations in BC," *British Columbia Assembly of First Nations*, Accessed October 1, 2023, <https://www.bcafn.ca/first-nations-bc/interactive-map/>; "First Nations Communities of B.C.," *Government of British Columbia*, Accessed October 1, 2023, <https://governmentofbc.maps.arcgis.com/apps/webappviewer/index.html?id=18c1c33d5b6040c5b81acb44d972e503>; "First Peoples' Map," *First Peoples' Cultural Council*, February 27, 2020, <https://www.cer-rec.gc.ca/en/safety-environment/industry-performance/interactive-pipeline/> <https://fpcc.ca/stories/first-peoples-map/>.

<sup>38</sup> Westcoast Transmission Company Limited, "The Story of a Pipeline."

<sup>39</sup> *The Ecology of the Boreal White and Black Spruce Zone*, British Columbia Ministry of Forest, Accessed September 1, 2023, <https://www.for.gov.bc.ca/hfd/pubs/docs/bro/bro49.pdf>.

<sup>40</sup> Westcoast Transmission Company Limited, "The Story of a Pipeline."

<sup>41</sup> Ibid.

41 railway crossings, 66 cased highway crossings, and crossings of 70 small streams and creeks. This dissertation analyzes the interplay between these environments and Westcoast's system.

## **Research Question and Key Arguments**

This dissertation specifically focuses on the impact of the company on socio-ecological relations in Western Canada between 1948 and 1982. Four overlapping arguments are presented throughout. First, this work argues that the Westcoast Transmission natural gas pipeline system transformed socio-ecological relationships in Western Canada (particularly British Columbia) as part of an energy transition to new fossil fuels in the second half of the twentieth century. Second, the energy transition that this pipeline system facilitated occurred within and was influenced by the nature of natural gas, the physical environment itself, the power structures of settler colonialism, prevailing settler gender norms, and economic nationalism. It highlights that energy transitions are not just economical questions of supply and demand, but intricately intertwined with human identities, political and social power, and the natural environment. Third, significant change over time can be observed in the period covered in this study. The political economy that shaped the development, operations, and expansion of the Westcoast Transmission pipeline system at heart remained the same, with economic nationalism, energy security, and colonial ambition playing key roles. However, by the 1970s Westcoast Transmission had to at least consider environmentalism and Indigenous rights as part of its expansion projects and public image, often using its support for such concerns as a façade for its prevailing political economic interests. Lastly, the dissertation shows that high modernist megaprojects were not solely the domain of state actors but were also led by private corporations working in partnership with state actors to achieve a common vision.

## Literature review

The chapters engage with the existing scholarship on Canada's historical transition to fossil fuels. The growing body of works on energy transitions has yet to fully unpack Canada's atypical energy history. Most existing studies focus on the shift from an organic (wood, wind, animals) regime to a mineral (coal, oil, natural gas) energy regime in European countries. Historian E.A. Wrigley's research on England's Industrial Revolution, for instance, argues that the country liberated itself from the confines of an organic energy regime because of the country's great mineral wealth.<sup>42</sup> Alternatively, historian R.P. Sieferle argues that Germany's extensive organic energy wealth, or abundance of wood, resulted in the country's comparatively slow transition to mineral energy.<sup>43</sup> In contrast, historians R.W. Sandwell, Richard Unger and John Thistle assert that Canada, a country with abundant organic and mineral wealth, transitioned to fossil fuels in a less-linear fashion than both Wrigley and Sieferle present.<sup>44</sup> As Sandwell states, "It was not until 1955 that Canada reached the 90 per cent level of modern versus traditional energy use that Britain had attained by 1845, more than a century earlier."<sup>45</sup> The scholar finds that Canadians generally opted for organic energy sources in their proximity because of the country's dispersed settlement pattern and cold climate. Once residents did transition to mineral fuel, they did so in non-linear ways, often combining various energy sources.<sup>46</sup> Existing scholarship on energy transitions in Canada, however, often neglects the importance of pipeline technology and the characteristics of fossil

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<sup>42</sup> E. A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010).

<sup>43</sup> Rolf Peter Sieferle, *The Subterranean Forest: Energy Systems and the Industrial Revolution* (Cambridge: White Horse Press, 2001).

<sup>44</sup> Richard W. Unger and John Thistle, *Energy Consumption in Canada in the 19th and 20th Centuries*. Consiglio Nazionale delle Ricerche, 2013.; R.W. Sandwell, *Powering up Canada: A History of Power, Fuel, and Energy from 1600* (Montreal: McGill-Queen's University Press, 2016).

<sup>45</sup> R.W. Sandwell, *Powering up Canada*, p.4.

<sup>46</sup> R.W. Sandwell, *Powering up Canada*.

fuels like natural gas.

A history of pipeline infrastructure, especially natural gas lines, can help explain Canada's relatively late transition to fossil fuels. Environmental historian Christopher Jones highlights the importance of pipeline infrastructure for energy transitions, arguing that pipelines were more than "passive conduits between producers and consumers," and instead "established landscapes of intensification that both initiated and maintained energy transitions."<sup>47</sup> Duncan and Sandwell, in their overview history of Canadian energy usage explain when and why long-distance pipelines became popular in the mid-twentieth century, emphasizing the role of technological innovations. Absent in their work is an extensive study of the relation between the geophysical and material characteristics of natural gas and Canada's comparatively late energy transition. The fuel, unlike oil, is not uncovered in clearly defined contraptions. Instead, natural gas can be found in pockets beneath the earth's surface that expand and contract depending on their location and condition, making it difficult to measure the exact quantity of natural gas in a reserve. Completely delineating a suspected area of natural gas with wells proved the most accurate method at the time, a costly endeavour, especially if a market has not yet been guaranteed. Pipelines, moreover, required compressor and meter stations to monitor and move the natural gas.<sup>48</sup> Processing plants

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<sup>47</sup> Christopher F. Jones, *Routes of Power: Energy and Modern America* (Cambridge: Harvard University Press, 2014): p.4-5.

<sup>48</sup> As natural gas flows through a pipeline system, various factors, including friction and elevation differences reduce the fuel's pressure and slow it down. Compressor stations are placed at strategic locations to maintain the pressure and thus a steady flow of natural gas to markets. Meter stations are located where natural gas enters (from gathering lines) or leaves (to distributions systems) the main system. They measure the volume, temperature, and pressure of gas to ensure a reliable and measurable flow. In addition, they are equipped to counter any deviations through a system of filters, heaters, and condensate tanks. "Meter Station Technical Description," *NOVA Gas Transmission Ltd. NGTL West Path Delivery 2022*, Accessed September 3, 2023, [https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90550/554112/3901587/3930580/3931099/C06605%2D22\\_Attachment\\_4\\_%2D\\_Meter\\_Station\\_Technical\\_Description\\_%2D\\_A7G0R5.pdf?nodeid=3933544&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90550/554112/3901587/3930580/3931099/C06605%2D22_Attachment_4_%2D_Meter_Station_Technical_Description_%2D_A7G0R5.pdf?nodeid=3933544&vernum=-2); "Natural Gas Meter Stations," TC Energy, Accessed September 2, 2023, <https://www.tcenergy.com/siteassets/pdfs/discover-energy/transcanada-natural-gas-meter-stations-canada.pdf>; "Understanding Natural Gas Compressor Stations," *PennState Extension*, March 26, 2015, <https://extension.psu.edu/understanding-natural-gas-compressor-stations>.

removed hydrogen sulphide from sour gas and extracted sulphur, which was sold as a by-product.<sup>49</sup> Exposure to hydrogen sulphide is dangerous and Westcoast had to devise a system to navigate its hazardous health effects.<sup>50</sup> This dissertation adds an analysis of these geophysical and material characteristics of natural gas and its interplay with pipeline technologies to the existing debates on Canadian energy history, offering a further explanation as to why the country adopted fossil fuels relatively late.

The limited existing work on oil and gas pipelines in Canada was completed before the 1980s and primarily draws from the field of political economy. They therefore leave space for analyses of the social inequalities and settler-colonial attitudes that shaped the development of the nation's energy regimes. Activist, author and politician, William Kilbourn published *Pipeline* in 1970, which offers a "history of business and politics" of the Trans-Canada line.<sup>51</sup> The only history of Westcoast Transmission is a commissioned work of a sensationalized nature.<sup>52</sup> Journalist Earle Gray's 1982 *Wildcatters* is not a critical assessment of the history of the Westcoast pipeline system, but instead, "an epic story of daring gambles and audacious promotions" sponsored by the company itself.<sup>53</sup> The author emphasizes he "was left entirely to my discretion," but his tone and findings offer a narrative sympathetic to Westcoast's

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<sup>49</sup> Westcoast for instance designed the Fort Nelson Gas Treating plant, located 15 miles south of the town to process high pressure gas and transform it from "sour" to "sweet" gas appropriate for domestic, commercial, and industrial use. In 1964, the plant had a capacity to treat 200 million cubic feet of raw gas per day. Using firstly a hot potassium carbonate treating process and secondly a monoethanolamide (M.E.A.) treating process, acid gas components, hydrogen sulphide, and carbon dioxide were removed from sour gas to produce sweet gas. The remaining sweet gas would be water-saturated and, to prevent water from condensing during the gas' transportation to market, dried in de-hydrators before entering the main transmission system. Westcoast Transmission Company Limited, "Ultra-Modern Gas Treating Plant at Fort Nelson," *Pipeline* Vol. 2 No. 5 (August 1964): p.8, UBCSC, WEI, Box 11, File 38.

<sup>50</sup> Westcoast Transmission Company Limited, "Ultra-Modern Gas Treating Plant at Fort Nelson," *Pipeline* Vol. 2, No. 5 (August 1964): p.8, UBCSC, WEI, Box. 11, File 38.; Peter C. Newman, *Continental Reach: the Westcoast Energy Story* (Vancouver: Douglas & McIntyre, 2002): p.55.

<sup>51</sup> William Kilbourne, *Pipeline: TransCanada and the Great Debate, a History of Business and Politics* (Toronto: Clarke, Irwin, 1970).

<sup>52</sup> Earle Gray, *Wildcatters: The Story of Pacific Petroleum and Westcoast Transmission* (Toronto: McClelland and Stewart, 1982).

<sup>53</sup> *Ibid.*, p.7.

interests.<sup>54</sup> François Bregha analyzes the geo-political relations of Canada and the U.S. during the Arctic pipeline debates of the 1970s in his 1979 book *Bob Blair's Pipeline*.<sup>55</sup> He focuses on Westcoast's partner during the debates, Alberta Gas Trunk Line, especially on that company's chairman, and is particularly concerned that Canada is becoming the "resource hinterland to the United States."<sup>56</sup> Similarly, histories of Canada's largest oil pipelines were commissioned and published by petroleum companies.<sup>57</sup> More recently, environmental historian Sean Kheraj completed a series of articles on Canada's oil pipeline history, focusing on spills.<sup>58</sup> Moving the attention away from political economy, this dissertation uncovers the dynamics of social inequalities and colonialism that influenced the development of Canada's energy infrastructure.

It draws from the works of scholars who have studied the interplay between social inequalities, settler-colonialism, and energy transitions and infrastructure. Human ecologist Andreas Malm has criticized Wrigley's analysis of the Industrial Revolution, asserting that Wrigley neglects the power imbalances that fostered England's transition to coal.<sup>59</sup> Political

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<sup>54</sup> Ibid.

<sup>55</sup> François Bregha, *Bob Blair's Pipeline: The Business and Politics of Northern Energy Development Projects* (Toronto: James Lorimer & Company Limited, 1979).

<sup>56</sup> Ibid., p.204.

<sup>57</sup> Neill C. Wilson and Frank J. Taylor, *The Building of Trans Mountain: Canada's First Oil Pipeline Across the Rockies* (Vancouver: Trans Mountain Oil Pipe Line Company, 1954.); Bob Bott, *Mileposts: The Story of the World's Longest Petroleum Pipeline*, (Edmonton: Interprovincial Pipe Line Company, 1989).

<sup>58</sup> Sean Kheraj, "The Biggest Oil Pipeline Spills in Canadian History," *Active History: History Matters*, July 23, 2015, <http://activehistory.ca/2015/07/the-biggest-oil-pipeline-spills-in-canadian-history/>.; Sean Kheraj, "Burrard Inlet, Beaches, and Oil Spills: A Historical Perspective," *Active History: History Matters*, April 16, 2015, <http://activehistory.ca/2015/04/burrard-inlet-beaches-and-oil-spills-ahistorical-perspective/>.; Sean Kheraj, "Oil Pipeline Spill History at the National Energy Board of Canada Library," *Active History: History Matters*, May 9, 2014, <http://activehistory.ca/2014/05/oil-pipeline-spill-history-at-the-national-energy-board-of-canada-library/>.; Sean Kheraj, "Tracking Canada's History of Oil Pipeline Spills" *The Otter: Canadian Environmental History*, November 8, 2013, <http://niche-canada.org/2013/11/08/tracking-canadas-history-of-oil-pipelinespills/>.; Sean Kheraj, "Alberta Oil Pipeline Spills Past and Present: The Enbridge Athabasca Pipeline Heavy Crude Oil Spill" *The Otter: Canadian Environmental History*, June 24, 2012, <http://nichecanada.org/2012/06/24/alberta-oil-pipeline-spills-past-and-present-the-enbridge-athabasca-pipelineheavy-crude-oil-spill/>.; Sean Kheraj, "The History of Oil Pipeline Spills in Alberta, 2006-2012," *Active History: History Matters*, June 12, 2012, <http://activehistory.ca/2012/06/the-history-of-oil-pipeline-spills-in-alberta-2006-2012/>.

<sup>59</sup> Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (New York: Verso, 2016).



theorist and historian Timothy Mitchell has recently studied the role of such social inequalities in the transition from coal to oil in the West, asserting that oil's mobility allowed it to circumvent labour-related concerns with relative ease.<sup>60</sup> Within a Canadian context, scholars of settler-Indigenous relations have argued for the close connection between colonial expansion on Indigenous land and resource extraction. Member of the Serpent River First Nation and Indigenous Studies professor, Lianne Leddy argues that the postwar period can be seen as a “new colonial age,” during which settlers migrated in larger numbers to areas where white presence had previously remained limited. As she writes, “even in the postwar period, when status Indians could vote in federal elections and the power of Indian agents slowly eroded, colonial processes were still powerful and facilitated land encroachments and environmental devastation.”<sup>61</sup> Anishinaabe leader and historian Brittany Luby arrives at similar conclusions using the example of the Hydro-Electric Power Commission of Ontario (HEPCO)'s transformation of the Winnipeg River and its influence on Anishinaabe society and autonomy.<sup>62</sup> Liza Piper reiterates the close connection between energy infrastructure expansion and colonialism. The environmental historian shows in her work on Subarctic Canada that resource exploration was at the heart of Treaties 5, 8, and 11 and settler-colonial attitudes would fundamentally shape the course of economic development around the large lakes.<sup>63</sup> Anthropologist Carly Dokis emphasizes that colonial patterns of resource exploration, as described by Leddy, Luby and Piper, can still be observed in contemporary society. The author uses recent attempts to erect a pipeline in the Mackenzie Valley to show that Indigenous and public participation are improperly honored but instead used to “maintain

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<sup>60</sup> Timothy Mitchell, *Carbon Democracy: Political Power in the Age of Oil* (London: Verso, 2011).

<sup>61</sup> Lianne C. Leddy, “Intersections of Indigenous and Environmental History in Canada,” *The Canadian Historical Review* Vol. 98, No. 1 (2017): p. 92.

<sup>62</sup> Brittany Luby, *Dammed: The Politics of Loss and Survival in Anishinaabe Territory* (Winnipeg, Manitoba: University of Manitoba Press, 2020): p.12, 168, 170.

<sup>63</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2010): p.3-4, 7-9.

institutional legitimacy” and “the appearance of public participation in the decision-making.”<sup>64</sup> Building on these conclusions, this dissertation uses a natural gas pipeline case-study to argue that the advent of Canada’s mineral energy regime relied on and cemented the colonial institutions and attitudes that dictated Indigenous lives.

It specifically does this in the context of Western Canada. The geographical scope of this dissertation allows it to engage with scholarship on energy transitions and big-energy infrastructure projects in B.C. Environmental historians Tina Loo and Meg Stanley’s work has been especially instrumental in this realm.<sup>65</sup> Tina Loo and Meg Stanley have extensively analyzed damming during this period in B.C. They established that publicly funded, hydro-power projects like the Peace River dam were emblematic of W.A.C. Bennett's "high modernist" attitude.<sup>66</sup> However, little research has been done on private energy projects, outside the public realm, during Bennett’s time in office. This dissertation adds to Loo and Stanley’s work the conclusion that high modernist visions of northern development went beyond the public sector and extended to private ventures, such as the Westcoast gas pipeline system.

Concluding with the Arctic gas pipeline debates, this dissertation lastly situates the prevailing scholarship on the Berger Inquiry in its broader historical context. The historiography on the Arctic gas discussions tends to favour the Berger Inquiry and the Mackenzie Valley pipeline discussions over the alternative Foothills Alaska Highway pipeline proposal. Numerous authors have emphasized the ground-breaking approach taken by Justice Berger. Scholars, including economist and sociologist John A. Gray and Patricia J. Gray, have expressly noted the unprecedented role played by the media, which brought the Berger

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<sup>64</sup> Carly A. Dokis, *Where the Rivers Meet: Pipelines, Participatory Resource Management, and Aboriginal-State Relations in the Northwest Territories* (Vancouver: UBC Press, 2015): p.5.

<sup>65</sup> Tina Loo and Meg Stanley, “An Environmental History of Progress,” p.399–427.

<sup>66</sup> *Ibid.*, p.401.; Tina Loo, “High Modernism, Conflict, and the Nature of Change in Canada,” p.36.

Inquiry into the homes of Southern Canadians and disseminated the proceedings in various Indigenous languages.<sup>67</sup> Other academics remain convinced of the report's lasting legacy and impact, arguing that it established a new benchmark for Indigenous consultation.<sup>68</sup> Historian Paul Sabin for instance concludes that the Berger Inquiry positioned Indigenous and Métis communities as actors with agency, countering prevailing perceptions of them as "traditional ... specimens from an ancient past."<sup>69</sup> Certain scholars, like historian of science Stephen Bocking criticize the heroism attached to Thomas Berger, arguing that the Berger case is more extensively studied than applied, "Where, one wonders, is Thomas Berger when we need him?"<sup>70</sup> The Berger Inquiry remains the focal point of the Arctic Pipeline discourse, while academics pay limited attention to the broader Arctic pipeline debates at the time. Those works that have, like François Bregha's *Bob Blair's Pipeline*, value the geo-political legacy of the Arctic gas debates over their lasting influence on Indigenous communities and the environment.<sup>71</sup> This dissertation recognizes that the Inquiry was the first thorough review

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<sup>67</sup> Stephen Goudge, "The Berger Inquiry in Retrospect: Its Legacy," *Canadian journal of women and the law* Vol. 28, No. 2 (2016): p.399-400.; John A. Gray and Patricia J. Gray, "The Berger Report: Its Impact on Northern Pipelines and Decision Making in Northern Development," *Canadian Public Policy* Vol. 3, No. 4 (1977): p.510, 515.

<sup>68</sup> D.J. Gamble, "The Berger Inquiry: An Impact Assessment Process." *Science* Vol. 199, No. 4332 (1978): p.951, 946. John A. Gray and Patricia J. Gray, "The Berger Report," p.510, 515.; Roger Hutchinson, *Prophets, Pastors, and public choices: Canadian churches and the Mackenzie Valley Pipeline Debate* (Waterloo: Wilfrid Laurier University Press, 1992).; Ted Jackson, "Resisting Pipeline Imperialism: The Struggle for Self-Determination in the Canadian North," *Alternatives: Perspectives on Society, Technology and Environment*, Vol. 7, No. 4 (1978): p.51.; Mark Nuttall, "Aboriginal Participation, Consultation, And Canada's Mackenzie Gas Project," *Energy & Environment* Vol. 19, No. 5 (September 2008): p.632.; Robert B. Gibson, "From Wreck Cove To Voisey's Bay," p.154.; Bram Noble, Kevin Hanna, and Jill Blakly, "Northern Environmental Assessment," p.65-87.; Paul Sabin, "Voices from the Hydrocarbon Frontier," p.42.

<sup>69</sup> Paul Sabin, "Voices from the Hydrocarbon Frontier," p.42.

<sup>70</sup> Stephen Bocking, "Thomas Berger's Unfinished Revolution," *Alternatives Journal* Vol. 33, No. 2/3 (2007): p.50-51.; for critiques of the Berger Inquiry see also Chris Southcott, Frances Abele, David Natcher and Brenda Parlee, "Beyond the Berger Inquiry," p.394.

<sup>71</sup> François Bregha, *Bob Blair's Pipeline*.; see also, Earle Gray, *Super Pipe: The Arctic Pipeline, World's Greatest Fiasco?* (Toronto: Griffin House, 1979).; Julia Christensen and Miriam Grant, "How Political Change Paved the Way for Indigenous Knowledge: The Mackenzie Valley Resource Management Act," *Arctic* Vol. 60, No. 2 (2007): p.115-123.; Thierry Rodon, "Institutional Development And Resource Development: The Case Of Canada's Indigenous Peoples," *Canadian Journal of Development Studies* Vol. 39, No. 1 (2018): p.120, 133.; Stephen Bocking, "Thomas Berger's Unfinished Revolution," *Alternatives Journal* Vol. 33, No. 2/3 (2007): p.50-51.

of a pipeline that included Indigenous voices and ways. However, it places the Berger Inquiry into the larger context of the Arctic gas debates of the 1970s to question how the Alaska Highway pipeline could be approved so shortly after the completion of a such an alleged ground-breaking pipeline inquiry.

Critically engaging with the established scholarship on energy transitions, in Canada and Western Canada in particular, this dissertation seeks to uncover the various ways in which the advent of large-scale natural gas usage in B.C. influenced human-nature relations.

## **Chapter overview**

The research is organized across five chapters, using a chronological and thematic approach. Chapter 1 covers the socio-ecological understandings and relations produced during the regulatory approval process of Westcoast's main system. It analyzes the interplay between the nature of natural gas and the attempts of companies, engineers, geologists, and regulatory authorities to quantify and interpret the volatile fuel. By focusing on the socio-ecological relations of construction and maintenance crews, Chapter 2 shows the limitations of those socio-ecological understandings produced in Canada's southern board and hearing rooms. It covers the construction of the Westcoast mainline system between 1955 and 1957 and various critical expansion and maintenance activities in, primarily, the 1960s and early 1970s. Chapter 3 studies the ideological ideas and dynamics of colonialism and communal identity that were instrumental to the energy transition that Westcoast initiated. Specifically, it analyzes how Westcoast's permanent employees and their families, fostered by Westcoast and the B.C. government's high modernist ideals, tried to establish a sense of home and belonging in a (to them) novel environment. Chapter 4 highlights how gender norms fostered the energy transition to large-scale natural gas usage in B.C. It further emphasizes the importance of the social construction of the energy source for this change. Chapter 5, like Chapter 1,

emphasizes the importance of narrative creation for energy transitions. It focuses on the Arctic gas pipeline debates of the 1970s and puts the Berger Inquiry into the broader context of those discussions. This final chapter asks to what extent Westcoast had to alter their socio-ecological understandings to create a gas pipeline to the Arctic. Together, these five chapters explore how the mid-20th century energy transition was about more than technical innovations and questions of supply and demand. It was also deeply rooted in narrative creation, a sense of identity, and Canadian colonialism.

### **Sources and Methodology**

Three major archival collections in two Canadian cities form the basis of this research. First, The Westcoast Transmission Company Ltd.'s corporate archive is at the University of British Columbia's (UBC) Rare Books and Special Collections in Vancouver, B.C. The "Westcoast Energy Inc." fonds contains company newsletters, annual reports, speeches, and alternative corporate publications such as promotional flyers, books, photographs and articles from various magazines and newspapers. Second, Library and Archives Canada (LAC) in Ottawa, Ont. primarily provided material, such as hearing transcripts and reports, related to the National Energy Board as part of the archive's "R.G. 99" collection. Chapter two also includes various documents obtained from the LAC location in Vancouver.

In addition to these physical archives, the ensuing analyses, third, rely on the extensive digital newspaper archive at Newspapers.com.<sup>72</sup> This archive contained articles from national newspapers such as *Financial Post* and more local ones like *Vancouver Sun*, *Montreal Gazette*, and *Calgary Herald*. This dissertation relies on newspaper sources for the periods 1945 to 1980 and 1970 to 1982. Datasets of thousands of articles contain these articles. The

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<sup>72</sup> These articles were filtered using the key term "Westcoast Transmission."

final chapter partially builds on material from Canada Energy Regulator in Calgary, Alberta, and the Mackenzie Valley Pipeline Inquiry hearing transcripts provided by the Prince of Wales Northern Heritage Centre in Yellowknife. Archivists at UBC, both LAC locations, and at the Canada Energy Regulator helped identify relevant materials for this dissertation.

This dissertation acknowledges that various biases influenced the sources in which it is grounded. White, settler, male actors primarily composed and produced the consulted archival collections. As a result, their voices, interests, and value systems echoed most strongly in the material. The corporate collection contains what Westcoast deemed valuable to maintain and primarily strongly reflects the company's viewpoints. Public sector reports and hearing transcripts provided a governmental narrative produced by white public sector employees within established protocols and regulations. Journalists partially sensationalized their writing. Together, combined, contrasted, and compared, this dissertation tried to counter the inherent biases of these works, and it acknowledges it where caution is warranted.

Moreover, my background and positionality as a white immigrant from the Netherlands, raised in a politically Left household, have influenced the selection of topics and the perspectives considered. This work focuses on environmental issues, gender, and Indigenous concerns and purposefully brings the voices of nature, women, and Indigenous actors to the foreground. It does not pretend to adopt an Indigenous perspective, and Indigenous communities were not engaged in the process. Instead, this dissertation unravels Westcoast Transmission's attitudes and actions towards Indigenous communities along its right-of-way. Please contemplate these biases while reading the ensuing chapters that trace Westcoast Transmission's history from its regulatory hearings to the advent of a "new" period in the mid and late 1970s, during which Indigenous and the environment gained prominence.



## **Chapter 1: The “Illegibility” of Natural Gas**

### **1.1. Introduction**

Frank McMahon, an entrepreneur from Moyie, British Columbia (B.C.) or, as his company recalled him, "an almost legendary figure in the annals of Western Canada's energy history," accumulated significant wealth while drilling for oil in the Turner Valley and Leduc regions of Alberta in the 1930s and 1940s.<sup>1</sup> In these regions south of Calgary and near Edmonton respectively, McMahon acquired the starting capital to spawn Canada's first big-inch natural gas transmission line.<sup>2</sup> At the same time, the oil booms in these regions impelled the governments of Alberta and, to a lesser extent, British Columbia to implement natural gas regulations to a previously unparalleled extent.<sup>3</sup> It would be primarily those regulations that Frank McMahon, following the incorporation of his Westcoast Transmission Company Ltd., encountered while trying to gather approval from provincial and national authorities for a natural gas pipeline from the Peace River district in northeastern B.C. and northwestern Alberta. This initial chapter unpacks the socio-ecological understandings produced during Westcoast's approval processes between 1948 and 1955 that ultimately culminated in the construction of the Westcoast mainline system.<sup>4</sup>

The Turner Valley discovery shifted the mineral energy industry in Canada to the west and pressed Alberta to prepare a regulatory system to control the provincial boom in resource

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<sup>1</sup> "Frank M. McMahon 1902-1986," *Pipeline News* (June 1986), UBCSC, WEI, Box. 6, File 35.; McKenzie Porter, "Frank McMahon's Five Lucky Lives." *Maclean's* (Jan. 5, 1957): p.14, <https://ezproxy.library.yorku.ca/login?url=https://www.proquest.com/magazines/frank-mcmahons-five-lucky-lives/docview/1437816854/se-2>.

<sup>2</sup> Ibid.; "Plans Laid, Surveys Made," *Vancouver Sun* (Vancouver, B.C.), June 1, 1949, p.1.

<sup>3</sup> David Breen, *Alberta's Petroleum Industry and the Conservation Board* (Edmonton: University of Alberta Press, 1993): p.243.

<sup>4</sup> Westcoast Transmission Company Limited, *The Story of a Pipeline*, Ca. 1958, UBCSC, WEI, Box. 11, File 8.; Earle Gray, *Wildcatters: The Story of Pacific Petroleums and Westcoast Transmission* (Toronto: McClelland and Stewart, 1982) - See especially Chapters 8-12.



exploration. In 1936 Royalite Oil Company, a subsidiary of Imperial Oil Ltd., uncovered a considerable accumulation of natural wealth in the deeper Mississippian formation of the Turner Valley, a region south of Calgary.<sup>5</sup> The natural gas industry previously centred in Ontario, where engineer Eugene Coste drilled for gas in 1889 and established the Ontario Natural Gas Company to supply nearby communities and the American cities of Buffalo and Detroit.<sup>6</sup> The Canadian oil sector similarly found its origin in Ontario.<sup>7</sup> The Turner Valley discovery moved the attention of the oil and gas industry west, but producers generally favoured oil over natural gas. Oil could be marketed with relative ease and accrued a more substantial profit, especially as the popularity of internal combustion engines rose. The fuel could also be easily transported in barrels and did not warrant the costly and legally complex construction of a natural gas pipeline.<sup>8</sup> These factors outweighed the advantages of natural gas, such as its high heating power and reputation as a clean alternative to coal and wood, both of which were accompanied by air quality and smog concerns.<sup>9</sup> The result was a scramble for oil and the burning or flaring of gas, which most producers considered a “waste product.”<sup>10</sup> Apart from wasting a potential future gas supply, the flaring removed a pressure

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<sup>5</sup> Colin A.M. Duncan and R.W. Sandwell, “Manufactured and Natural Gas,” in eds. *Powering up Canada: The History of Power, Fuel, and Energy From 1600* by R.W. Sandwell (Montreal: McGill-Queen’s University Press, 2016): p.314.

<sup>6</sup> Ibid.; Tim Krywulak, *Fuelling Progress: One Hundred Years of the Canadian Gas Association, 1907-2007* (Ottawa: Canadian Gas Association, 2007): p.12, 14.

<sup>7</sup> For an in-depth analysis of Canada's and Ontario's first oil boom, see Robert Armstrong, “An Environmental History of Oil Development in Southwestern Ontario, 1858-1885,” Ph.D. Diss. (Western University, 2019).; R.W. Sandwell, “An Introduction to Canadian Energy History,” in eds. R.W. Sandwell, *Powering up Canada: The History of Power, Fuel, and Energy From 1600* (Montreal: McGill-Queen’s University Press, 2016): p.18.; Colin A.M. Duncan and R.W. Sandwell, “Manufactured and Natural Gas,” p.314; Steve Penfold, “Petroleum Liquids,” in eds. *Powering up Canada: The History of Power, Fuel, and Energy From 1600* by R.W. Sandwell (Montreal: McGill-Queen’s University Press, 2016): p.284.; Gordon Cope, “Petroleum,” *The Canadian Encyclopedia*, Historica Canada, April 07, 2009, <https://www.thecanadianencyclopedia.ca/en/article/petroleum>.

<sup>8</sup> Colin A.M. Duncan and R.W. Sandwell, “Manufactured and Natural Gas,” p. 316.

<sup>9</sup> Ibid., p. 315-316.; Andrew Watson, “Coal in Canada” in eds. *Powering up Canada: The History of Power, Fuel, and Energy From 1600* by R.W. Sandwell (Montreal: McGill-Queen’s University Press, 2016): p.238.; *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, p.48–49, UBCSC, WEI, Box 10, File 12.

<sup>10</sup> Colin A.M. Duncan and R.W. Sandwell, “Manufactured and Natural Gas,” p.313.

source that could drive oil to the surface, reducing the amount of oil that was ultimately recoverable from Turner Valley.<sup>11</sup> In 1938, the province established the Petroleum and Natural Gas Conservation Board (“Conservation Board”), an agency tasked with controlling the flow of oil and gas and curbing the wasteful flaring of natural gas at Turner Valley.<sup>12</sup>

Efforts to control the wasting of natural gas were slow despite an increase in demand during the Second World War.<sup>13</sup> The regulatory framework that originated in Turner Valley matured in the wake of the 1947 Leduc oil discovery and grew to encompass provincial usage and the export of natural gas from the province.<sup>14</sup> The explosion in demand for exploration rights and petroleum leaseholds brought about by Leduc pushed the Alberta government and the Conservation Board to issue regulatory adjustments. Amongst them was the 1947 “Petroleum and Natural Gas Regulations.”<sup>15</sup> New to Alberta’s regulatory framework, but the product of concerns raised during the 1920s was the reservation therein of natural gas for provincial users and purposes. The Alberta cabinet notified leaseholders that it would only in “special circumstances” grant a permit to export natural gas. What such circumstances entailed remained undefined.<sup>16</sup> As early as the late 1920s, Alberta communities like Medicine Hat and Calgary opposed the export, noting the province’s growing domestic and industrial needs.<sup>17</sup> Historian David Breen captures the complexities of natural gas export in 1947 as follows: “The question of gas exports was a delicate matter, complicated not only by

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<sup>11</sup> David Breen, *Alberta’s Petroleum Industry and the Conservation Board*, p.159.; The energy from natural gas, as it expands, can be used to drive oil into a wellbore. This process is known as solution gas or gas cap drive. “4.3: Drive Mechanisms in Oil Reservoirs,” *PennState College of Earth and Mineral Sciences*, Accessed June 1, 2023, <https://www.e-education.psu.edu/png301/node/595>.

<sup>12</sup> David Breen, *Alberta’s Petroleum Industry and the Conservation Board*, p.154.

<sup>13</sup> During the war, demand for natural gas grew as Calgary expanded, and several air force bases and prisoner-of-war camps were connected to the natural gas distribution network. In addition, a Crown agency called the Allied War Supplies Corporation supervised the operation of an alkylate plant and a manufacturer of chemical products for munition in Alberta, significantly increasing the demand for natural gas. *Ibid.*, p.207-208.

<sup>14</sup> *Ibid.*, p. 248, 251-252.; Earle Gray, *Wildcatters*, p.82.

<sup>15</sup> David Breen, *Alberta’s Petroleum Industry and the Conservation Board*, p.255.

<sup>16</sup> *Ibid.* 256.

<sup>17</sup> *Ibid.* 59-60.

competing industry interests but also by a charged political history that went back to the 1920s”<sup>18</sup> Frank McMahon would be amongst the first to press Alberta’s Conservation Board on when, why, and how much natural gas could be exported from the province when he proposed his Westcoast natural gas pipeline.

Frank McMahon capitalized on the Turner Valley and Leduc oil booms, accruing significant wealth.<sup>19</sup> He invested his fortune in a natural gas pipeline plan from the Peace River region in northwestern Alberta and northeastern B.C. to markets in the Pacific Northwest.<sup>20</sup> George Dawson of the Geological Survey established the oil and gas potential of the Peace region as early as 1887 on a map of the Great Mackenzie Basin. More notably, between 1922 and 1924, Northwest Company, a subsidiary of Imperial Oil, uncovered but abandoned significant gas reserves near the Alberta town of Pouce Coupe, close to the B.C. border.<sup>21</sup> Produced from geological formations comparable to the Viking gas fields near Edmonton, McMahon hoped drilling in the Peace River would reap similar results.<sup>22</sup> In August 1947, McMahon added B.C. acreage to his Alberta segment of the Peace area.<sup>23</sup> Previously, the Thomas D. Pattullo government of B.C. had reserved the right to explore and develop the minerals in B.C. for a public development program.<sup>24</sup> In 1947, as Leduc revealed the value of private petroleum exploration, the government finally opened the land for

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<sup>18</sup> Ibid., p.318.

<sup>19</sup> Ibid., p.272, 277, 283.; Westcoast Transmission Company Limited, “Frank McMahon Retires From Board of Directors,” *Pipeline* Vol. 10 (May 1970): p.3. UBCSC, WEI, Box 11, File 42; Frank McMahon, “Men and Resources,” (Speech, Calgary Chamber of Commerce General Meeting, March 13, 1964). UBCSC, WEI, Box 3, File 34.; Earle Gray, *Wildcatters*, p.46-48, 52, 83.

<sup>20</sup> Westcoast Transmission Company Limited, *The Story of a Pipeline*.

<sup>21</sup> Earle Gray, *Wildcatters*, p.36.

<sup>22</sup> Frank McMahon, “Statement to the Borden Commission,” April 21, 1958, p.4. UBCSC, WEI, Box 3, File 27.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.; Ed Janicki, “Petroleum Exploration History of Northeastern British Columbia,” *Ministry of Energy, Mines and Petroleum Resources*, 2008, p.43.; Earle Gray, *Wildcatters*, p.39.; McKenzie Porter, “Frank McMahon's five lucky lives,” p.40.

exploration, and McMahon took out the first three drilling permits.<sup>25</sup> In the ensuing years, an extensive wildcatting program established the presence of natural gas in the Peace River region of Alberta and B.C.<sup>26</sup> In 1949, as exploration companies uncovered more gas reservoirs in the Peace River area, McMahon established Westcoast Transmission Company Limited to bring this new fuel source to market.<sup>27</sup>

Westcoast believed such a market existed in the Pacific Northwest. At the time, none of the towns and communities in the Greater Vancouver and Victoria area, Fraser Valley, Cariboo district (including Prince George, Quesnel, Williams Lake and Merritt) and the Okanagan Valley (with Kelowna, Vernon and Penticton) had natural gas service.<sup>28</sup> The

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<sup>25</sup> McKenzie Porter, "Frank McMahon's five lucky lives," p.40.; George L. McMahon, "Oil and Gas Development in British Columbia," (Speech, Annual Meeting B.C. Section Canadian Institute of Mining and Metallurgy Hotel Vancouver, Vancouver B.C., October 22, 1952), p.6. UBCSC, WEI, Box. 7, File 6.

<sup>26</sup> "Wildcatting" is a type of exploratory drilling that focusses on unproven areas. "Wildcatting in West Virginia," *Washington Post* (Washington D.C.), Aug. 5, 1979, <https://www.washingtonpost.com/archive/lifestyle/magazine/1979/08/05/wildcatting-in-west-virginia/df29cb36-796a-42ed-b959-a5c789cab87a/>.; Westcoast Transmission Company Limited, "Frank McMahon Retires from Board of Directors.," Westcoast Transmission Company Limited, "Frank McMahon, 1902-1986," *Pipeline* (June 1986): p.3. UBCSC, WEI, Box 6, File 35.

<sup>27</sup> "B.C. Pipelines Bill Published," *Star-Phoenix* (Saskatoon, Sask.), Mar. 21, 1949, p.4.; "Public Notices Westcoast Transmission Company Limited," *Calgary Herald* (Calgary, Alb.), Mar. 21, 1949, p.15.; "Pipeline Company Seeks Charter," *Edmonton Journal*, (Edmonton, Alb.), Mar. 21, 1949, p.19.; "Westcoast Transmission Company Limited," *Edmonton Journal* (Edmonton, Alb.), Mar. 22, 1949, p.20.; "Province Lacks Power to Halt Export of Gas," *Edmonton Journal* (Edmonton, Alb.) Mar. 25, 1949, p.1.; "Westcoast Transmission Company Limited," *Calgary Herald* (Calgary, Alb.), Mar. 28, 1949, p.2.; "Westcoast Transmission Company Limited," *Edmonton Journal* (Edmonton, Alb.), Mar. 29, 1949, p.20.; "Westcoast Transmission Company Limited," *Province* (Vancouver, B.C.), Mar. 30, 1949, p.30.; "Westcoast Transmission Company Limited," *Vancouver Sun* (Vancouver, B.C.), Mar. 31, 1949, p.37.; "Westcoast Transmission Company Limited," *Times Colonist* (Victoria, B.C.), Mar. 31, 1949, p.21.; "Westcoast Transmission Company Limited," *Nanaimo Daily News* (Nanaimo, B.C.), Mar. 31, 1949, p.3.; "Westcoast Transmission Company Limited," *Surrey Leader* (Surrey, B.C.), Mar. 31, 1949, p.5.; "Westcoast Transmission Company Limited," *Quesnel Cariboo Observer*, (Quesnel, B.C.), Apr. 2, 1949, p.A4.; "Westcoast Transmission Company Limited," *Calgary Herald* (Calgary, Alb.), Apr. 4, 1949, p.18.; "Westcoast Transmission Company Limited," *Edmonton Journal* (Edmonton, Alb.), Apr. 5, 1949, p.22.; "Westcoast Transmission Company Limited," *Richmond Review* (Richmond, B.C.), Apr. 6, 1949, p.6.; "Westcoast Transmission Company Limited," *Chilliwack Progress* (Chilliwack, B.C.), Apr. 6, 1949, p.5.; "Westcoast Transmission Company Limited," *Times Colonist* (Victoria, B.C.), Apr. 7, 1949, p.21.; "Westcoast Transmission Company Limited," *Langley Advance* (Langley, B.C.), Apr. 28, 1949, p.2.; Robert G. Jennings, "Men and Resources," (speech at Calgary Chamber of Commerce General Meeting, May 21, 1971), UBCSC, WEI Box 3, File 34.

<sup>28</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, Commonwealth Services Inc. (New York, February 1956): p.44, 67.

lumber-dominated economy of the Cariboo District and agricultural Okanagan Valley primarily relied on wood, even though a Westcoast commissioned 1956 review concluded that residents considered it “unsatisfactory and dirty,” and the supply of good-quality wood for fuel was diminishing.<sup>29</sup> In addition to wood, coal and electricity use rose while consumers still used oil for space heating.<sup>30</sup> The Fraser Valley, also a primarily agricultural region, was similarly using a combination of wood, coal, electricity, and oil.<sup>31</sup> The Vancouver region, whose principal industries at the time were lumber, shipping, oil refineries, fishing and fish and meat packing, relied on hydroelectricity and manufactured gas. However, coal, oil, and wood played vital roles as well.<sup>32</sup> Frank McMahon believed natural gas could be an economically competitive addition to the prevailing energy picture as a substantial, reliable, and comparatively clean fuel with a high heating power.

In the late 1940s, demand for natural gas moreover increased as regions of North America experienced energy shortages. At the time, the U.S. Federal Power Commission alarmingly stated that the United States faced an acute natural gas deficit.<sup>33</sup> As a result, Ontario, dependent on American gas imports in addition to American coal and domestic hydroelectricity, had been left strapped for gas as its U.S. partner curtailed supplies.<sup>34</sup> Additionally, Ontario and British Columbia experienced hydro-power shortages during the winter heating season of 1948 to 1949, highlighting a need to develop alternative energy sources for those regions. Given this scenario, the Province of Alberta, with its relatively

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<sup>29</sup> *Report Natural Gas Market in Service Area of Inland Natural Gas Co. Ltd. Westcoast Transmission Company Limited*, New York: Ford, Bacon & Davis, 1955, p.10, UBCSC, WEI, Box 10, File 10.

<sup>30</sup> *Ibid.*, p.49-53.

<sup>31</sup> *Ibid.*, p.75-77.

<sup>32</sup> *Ibid.*, p.71-74.; The usage of diverse energy sources in these areas exemplifies the conclusions of Sandwell, who argued that Canada, as opposed to other western countries, relied on a wide variety of fuels until well into the 20<sup>th</sup> century. R.W. Sandwell, “An Introduction to Canadian Energy History,” p.4.

<sup>33</sup> Canada, The Province of Alberta, Natural Gas Commission. *Enquiry into the Reserves and Consumption of Natural Gas in the Province of Alberta*. (Alberta), 1949, p.95-96.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.319-322.

<sup>34</sup> *Ibid.*; Colin A.M. Duncan and R.W. Sandwell, “Manufactured and Natural Gas,” p.314.

abundant availability of hydroelectricity, coal, oil, and natural gas, was seen by some companies and politicians as a potential haven for industries seeking an assured and uninterrupted energy supply.<sup>35</sup> Well-established Canadian chemical engineer J.R. Donald expressed this view in 1949, "With the general power shortage as it exists in Eastern Canada and with the general fuel shortage as it existed during the war, Alberta would provide a very attractive picture for industrial expansion."<sup>36</sup> The Research Council of Alberta noted the unique appeal of natural gas to solve energy shortages, remarking that it was a fuel "of the highest grade" and emphasizing that its utilization in industries had increased since the Second World War.<sup>37</sup> Although there were dissenting voices, such as Chief Dominion Geologist of Canada H. Zinder, who did not equate the availability of abundant energy supplies in a given region with industrial expansion in that same area, the advantages of natural gas development were widely extolled throughout North America in the late 1940s.<sup>38</sup> Frank McMahon sought to take advantage of this appeal and the discrepancy in demand and supply of natural gas in the U.S. and Canada. However, before this idea could materialize, Westcoast had to acquire the necessary regulatory approval for its natural gas pipeline project.

As the export of provincial natural wealth constituted a sensitive topic, McMahon first had to appear before a special commission, the Alberta Natural Gas Commission (also known as the "Dinning Commission"), which defined the terms for gas export from the province. Called under the provisions of the Public Inquiries Act in November 1948, the Alberta government directed the Natural Gas Commission to investigate the natural gas reserves in the province, to inquire into the potential reserves of natural gas, and to estimate the

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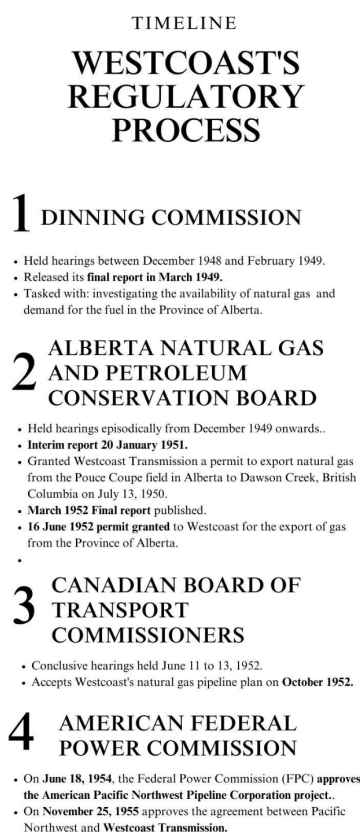
<sup>35</sup> Canada, The Province of Alberta, Natural Gas Commission (Alberta), 1949, p.77.

<sup>36</sup> Ibid.

<sup>37</sup> Initially, the war drove the increased demand for natural gas. However, as advances were made in chemistry to increase control over and expand the usage of natural gas, the demand for the fuel and its by-products grew extensively. The commercial exploitation of natural gas was expanded to supply not just the small-scale production of chemicals but the mass production of everyday household products. - Canada, The Province of Alberta, Natural Gas Commission (Alberta), 1949, p.75-77.

<sup>38</sup> Canada, The Province of Alberta, Natural Gas Commission (Alberta), 1949, p.76-77, 79.

province's future requirements of natural gas for domestic, commercial and industrial purposes.<sup>39</sup> The Commission held hearings in Medicine Hat, Calgary, and Edmonton between December 1948 and February 1949 and released its concluding report in March 1949.<sup>40</sup> Following Dinning's recommendations, the Alberta Natural Gas and Petroleum Conservation Board decided if (and which) pipeline company, Westcoast or one of four others, should be granted an export permit. Its hearings started in December 1949 and progressed episodically until, finally, the Conservation Board granted Westcoast its permit on June 16, 1952 (see Figure 2).<sup>41</sup>



*Figure 2: Timeline Westcoast regulatory process.*

<sup>39</sup> Canada, The Province of Alberta, Natural Gas Commission. 1949.

<sup>40</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.322.; Canada, The Province of Alberta, Natural Gas Commission. 1949.

<sup>41</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.345, 351, 381.; The Figure was designed by Esther van 't Veen.

British Columbia did not hold a comparable authority. The province instead left it to the federal authorities to decide on Westcoast's export matter. The Canadian Board of Transport Commissioners had to approve natural gas export across provincial and national boundaries.<sup>42</sup> That Board accepted Westcoast's plan relatively swiftly in October 1952.<sup>43</sup> Lastly, the American Federal Power Commission (FPC) in Washington D.C., the American equivalent of the Federal Board of Transport Commissioners, had to grant Westcoast access to the United States energy market. It initially approved the American Pacific Northwest Pipeline Corporation's project in June 1954, which aimed to pipe gas from the San Juan reservoirs in the southern U.S. to the country's Pacific Northwest. However, when those reserves proved inadequate, the Board approved cooperation between Westcoast Transmission and the Pacific Northwest Pipeline Corporation in November 1955.<sup>44</sup> The approval process proved to be a challenging endeavour, spanning over five years, but ultimately culminated in the construction of the Westcoast mainline between 1955 and 1957.<sup>45</sup>

This chapter delves into the meaning-making practices that those partaking in the hearings listed above employed to convince authorities of a natural gas pipeline's merits. The

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<sup>42</sup> Westcoast Transmission Company Limited, *The Story of a Pipeline*.; The Board of Transport Commissioners was initially founded to control the railways, but its jurisdiction was expanded in the 1930s. Arthur R. Wright, "An Examination of the Role of the Board of Transport Commissioners for Canada as a Regulatory Tribunal," *Canadian Public Administration* Vol. 6, No. 4 (1963): p.356.; A. W. Currie, "The Board of Transport Commissioners as an Administrative Body," *The Canadian Journal of Economics and Political Science* Vol. 11, No. 3 (1945): p.342.

<sup>43</sup> "Board Approves Gas Pipeline to Vancouver," *Times Colonist* (Vancouver, B.C.), Oct. 11, 1952, p.1.; "Decision Seen As Step Forward For Oil Industry," *Calgary Herald* (Calgary, Alb.), Oct. 11, 1952, p.1.; "Peace River Reserves Are Ruled Sufficient," *Edmonton Journal* (Edmonton, Alb.), Oct. 11, 1952, p.1.; "Gas Pipeline Authorized," *Star-Phoenix* (Saskatoon, Sask.), Oct. 11, 1952, p.1.; "One Big Hurdle Is Past," *Quesnel Cariboo Observer* (Quesnel, B.C.), Oct. 14, 1952, p.A2.

<sup>44</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.390.; Earle Gray, *Wildcatters*, p. 181.

<sup>45</sup> Westcoast Transmission Company Limited, *The Story of a Pipeline*.; Earle Gray, *Wildcatters*, See especially Chapters 8-12.



focus is on the conflict between quantitative and schematic analyses of natural gas transportation and the narratives used to attach socio-ecological meaning to those schematics. The existing historiography on the concept of "legibility," or the human inclination to simplify intricate systems to exert control over them, and the ensuing analyses are closely intertwined.<sup>46</sup>

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<sup>46</sup> James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 2020): p.1–2.

## 1.2. Legibility and the Uncertainties of Natural Gas

Environmental historians often consider the process of simplifying complex societal systems into standardized understandings as a driving force for large-scale industrial activities like mining, damming, and oil and gas exploitation.<sup>47</sup> In his renowned work, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (1998), anthropologist James C. Scott coined the term "legibility" to describe this simplification process. Scott showed that states rationalized and simplified intricate systems through the creation of, for instance, maps and censuses to make societies more manageable. In his words, they were "rationalizing and standardizing what was a social hieroglyph into a legible and administratively more convenient format."<sup>48</sup> This "legibility" facilitated the justification and implementation of large-scale engineering schemes such as scientific forests and model towns in the case of Scott.<sup>49</sup> Scott's analysis focuses on the ambitions of "high modernists" like Le Corbusier and Mao Zedong, who embraced "legibility" as part of an ideology known as "high modernism." A strong belief in the ability of science and technology to improve societies through standardization characterizes this ideology or, as Scott puts it, a desire to "rationally engineer all aspects of social life in order to improve the human condition."<sup>50</sup> The author focuses on state actors that adhered to this philosophy and engaged in the process of "legibility."<sup>51</sup> This chapter instead looks at the concept in the context of a private venture. In the ensuing sections, the concept of legibility, as explained in Scott's work, is analyzed in the context of Westcoast's regulatory hearings and the Dinning Inquiry. It unpacks the various

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<sup>47</sup> Tina Loo, "High Modernism, Conflict, and the Nature of Change in Canada: A Look at Seeing Like a State," *The Canadian Historical Review* Vol. 97, No. 1 (2016): p.34–58.

<sup>48</sup> James C. Scott, *Seeing Like a State*, p.3.

<sup>49</sup> Especially chapters 1 and 2 of James C. Scott's *Seeing Like a State*.

<sup>50</sup> *Ibid.*, p.88.

<sup>51</sup> James C. Scott, *Seeing Like a State*.

ways Westcoast and its opponents conceptually organized nature and society to acquire approval for a pipeline project. Chapter 3 explores the company's High Modernist vision.

Following Scott's publication, numerous academics have explored the concept of “legibility” and applied it to various domains of nature and society, including fisheries, censuses, and electrical power grids.<sup>52</sup> Those who have critiqued Scott's work primarily take contention with Scott's declensionism. According to Scott, simplified schematics fail to fully grasp social, political, and economic networks and the local knowledge on which they are based. They also fail to consider the complexities of natural ecosystems. He argues that oversimplification results in displacement and destruction of these local networks, ultimately undermining the projects built upon the essentially flawed, “legible” understandings.<sup>53</sup> In contrast, environmental historian Tina Loo suggests that Scott’s declensionist outlook overlooks the optimism and potential for a “better” society that fueled these simplifications.<sup>54</sup> Her work with environmental historian Meg Stanley moreover argues that high modernist projects did not rely on one form of local knowledge but a variety, many of which crews produced during the construction of the projects.<sup>55</sup> Environmental historian Daniel Macfarlane agrees with Loo and Stanley's critiques of Scott (see Chapter 2).<sup>56</sup> This analysis of

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<sup>52</sup> The list is quite inexhaustive but includes Michael Del Vecchio, “Surviving Fisheries Management: Aquaculture, Angling, and Lake Ahmic,” *Scientia Canadensis* Vol. 34, No. 2 (2011): p.1–28; Keren Weitzberg, “The Unaccountable Census: Colonial Enumeration And Its Implications For The Somali People Of Kenya,” *Journal of African History* Vol. 56, No. 3 (2015): p.409–428.; Christopher D. Conway, “Ontario’s Electrical Future: Global Environmental Limits, Systems Thinking, and Electrical Power Planning in Ontario, 1974–1983,” *Scientia Canadensis* Vol. 37, No. 1-2 (2014): p.34–58.; Ronald Rudin. “The First French-Canadian National Parks: Kouchibouguac and Forillon in History and Memory,” *Journal of the Canadian Historical Association* Vol. 22, No. 1 (2011): p.161–200.; and, Tina Loo, “High Modernism, Conflict, and the Nature of Change in Canada, p.34–58.

<sup>53</sup> James C. Scott, *Seeing Like a State*, p.350–357.

<sup>54</sup> Tina Loo, “High Modernism, Conflict, and the Nature of Change in Canada,” p.39.

<sup>55</sup> Tina Loo and Meg Stanley, “An Environmental History of Progress: Damming the Peace and Columbia Rivers,” *The Canadian Historical Review* Vol. 92, No. 3 (2011): p.407–408.

<sup>56</sup> In his work on the St. Lawrence River, he observes an intricate interplay between micro and macro-level analyses and operations, concluding that “St. Lawrence planners repeatedly modified and adapted their engineering plans based on what they faced on the ground.” - Daniel Macfarlane, *Negotiating a River: Canada, the U.S., and the Creation of the St. Lawrence Seaway* (Vancouver: UBC Press, 2014): p.227–228.

the Westcoast Transmission natural gas pipeline's regulatory proceedings situates itself within the existing historiography on legibility.

It adds to the academic debates and an exploration of the concept within the context of private venture and natural gas pipeline hearings, both of which have received limited academic attention. It aligns with authors like Tina Loo as it reveals that regulatory authorities seemed convinced of the overall merits of the pipeline project. However, the analysis reveals that the existing literature inflates the role of legibility, in its current understanding, as a driving force behind big industrial projects. Instead, this chapter argues that, to a large extent, the absence of legibility, or the inability of those involved in the natural gas industry to provide a fully legible overview of the quantity of natural gas available and requested, played a crucial role in Westcoast's regulatory proceedings. It would ultimately be illegibility and how actors ascribed meaning to that illegibility that led to the approval of the Westcoast pipeline. Through an analysis of the interplay between legibility and illegibility during the Westcoast pipeline hearings, this chapter offers a more nuanced understanding of the concept of legibility.

Three interrelated sub-arguments support this chapter's overarching claim. First, this chapter agrees with Scott that a legible picture of the natural gas reserves, pipeline right-of-way, and natural gas markets played a crucial role in Westcoast's regulatory processes and eventual approvals. Stripped from their numerous complexities, the engineering and geological studies of the natural gas fields, pipeline, and rights-of-ways produced a decontextualized abstract landscape of natural resources very much in line with the "legible" administrative orderings that Scott describes. Unpredictable, volatile natural gas reservoirs were transformed into neatly defined squares and sorted into categories like "proven" and "probable" reserves. These standardizations served as the foundation for subsequent discussions and deliberations.

Second, the economics of natural gas exploration, coupled with the inherent nature of natural gas itself, compelled stakeholders in the regulatory hearings to acknowledge and embrace a certain degree of uncertainty. Challenges like water intrusion in reservoirs and soil complexities that impacted seismographic readings made it difficult to accurately quantify and standardize natural gas reserves. Moreover, the comprehensive mapping of an entire natural gas field remained costly, particularly without an established market and the accompanying guaranteed future returns. Therefore, the regulatory hearings were equally, if not more, concerned with determining the level of "illegibility" that authorities would be willing to accept or tolerate.

Third, the uncertainty surrounding natural gas estimates left ample room for interpretation. Participants in the regulatory hearings crafted narratives to imbue socio-ecological meaning into the limited available information. The absence of definitive data enabled transmission companies like Westcoast to present their understanding of the quantity of available gas and the feasibility of constructing a pipeline from the northern regions of Alberta and B.C. In Westcoast's case, these narratives played a critical role in transforming the natural gas reserves in northeastern British Columbia and northwestern Alberta from uneconomical, distant resources into a viable economic opportunity. Overall, this chapter asserts that the company's ability to navigate the uncertainties inherent in western Canada's natural gas picture primarily drove the success of the Westcoast Transmission natural gas pipeline. The company presented a persuasive narrative that garnered support and approval from regulatory authorities.

A comparative analysis of the Dinning Commission of Inquiry and the three regulatory hearings, two in Canada and one in the United States, substantiates this argument (see Figure 1). The chapter analyzes each of these episodes in roughly chronological order. During each set of hearings, the transmission companies, expert witnesses, and

commissioners produced a rationalized and standardized overview of natural gas supplies and demand. Given the nature of natural gas and gas exploration, this overview remained inherently incomplete. Each participant used this "illegibility" to its advantage, filling in the blanks using their political-economic perspectives.

### 1.3. The Dinning Commission

Three companies, including Westcoast Transmission, proposed natural gas pipeline projects to the province's authorities to profit from Alberta's natural gas reserves. First, Western Pipe Lines suggested a line from Alberta to Winnipeg with connections to Saskatoon and other communities in Saskatchewan. Second, Northwest Natural Gas Company offered a pipeline from southern Alberta through the Crowsnest Pass to the U.S. Pacific Northwest, and third, Frank McMahon proposed an "all-Canadian" route from Alberta through British Columbia and south to the United States.<sup>57</sup> Each awaiting the terms under which they could propose to export gas from the province, the Alberta government, under the leadership of Ernest Manning, established the "Natural Gas Commission" in November 1948 to advise and clarify this matter. R.J. Dinning headed the commission. Professor Andrew Steward from the University of Alberta and Roy C. Marler from the Alberta Federation of Agriculture aided his work as commissioners (see Image 2).<sup>58</sup> The Natural Gas Commission would become known

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<sup>57</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.322.; "Urges Alberta Give Canada Gas Priority," *Edmonton Journal* (Edmonton, Alb.), Jan. 14, 1949, p.1; "Export of Gas Would Depend On U.S. Supply," *Calgary Herald* (Calgary, Alb.), Jan. 11, 1949, p.9.; "Gas Export Declared Threat to Coal Mining," *Calgary Herald* (Calgary, Alb.), Jan. 28, 1949, p.15.

<sup>58</sup> "Members of the Three-Man," *Calgary Herald* (Calgary, Alb.), Jan. 21, 1949, p.11.; "Natural Gas Board Urged Safeguard Alberta Interests," *Edmonton Journal* (Edmonton, Alb.), Jan. 4, 1949, p.1.; "Natural Gas Export Opposed Before Board," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 4, 1949, p.1.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.322.; D.p. MacDonald, "Interview Work 1," *Oil History Project*, Oct. 26, 1984, [https://glenbow.ucalgary.ca/wp-content/uploads/2019/06/PIOHP\\_McDonald\\_Douglas\\_Peter-pt2.pdf](https://glenbow.ucalgary.ca/wp-content/uploads/2019/06/PIOHP_McDonald_Douglas_Peter-pt2.pdf), p.7.; "Gas Export," *Calgary Herald* (Calgary, Alb.), Mar. 9, 1949, p.3.; "Gas Survey Hearings End, Report Expected In Month," *Edmonton Journal* (Edmonton, Alb.), Feb. 10, 1949, p.13.; "No Suggestions Made In Gas Export Study," *Edmonton Bulletin*

as the “Dinning Commission,” after its chair. The Commission conducted hearings in Medicine Hat, Calgary, and Edmonton between December 1948 and February 1949. In March 1949, the Commission released its final report, which provided a quantification of Alberta's natural gas reserves, offering a "legible" view of the subterranean reservoirs in the province.<sup>59</sup> However, the report also acknowledged numerous partial and unaccounted-for factors that were open to interpretation and required further analysis.<sup>60</sup> The Dinning Commission hearings marked the first instance where Westcoast had to articulate its understanding of Alberta's natural gas reserves, estimate future gas demands, and elucidate the potential implications of natural gas development. The ensuing sections argue that while the presentation of standardizations played a crucial role in the Dinning Commission hearings, the proceedings primarily allowed Westcoast to shape the narratives surrounding the prospective exploitation and exportation of Alberta's natural gas resources.



*Image 2: The Dinning Commission. Left to Right: R.C. Marler, R.J. Dinning (chairman), and Prof. Andrew Stewart.*

"Members of the Three-Man," *Calgary Herald* (Calgary, Alb.), Jan. 21, 1949, P.11.

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(Edmonton, Alb.), Mar. 7, 1949, p.23.; Canada. The Province of Alberta. Natural Gas Commission (Alberta), 1948.

<sup>59</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.322.

<sup>60</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.117.

Several expert witnesses presented systematic representations of Alberta's natural gas supply to the Dinning Commission, offering a "legible" picture as described by Scott. Among them were Dr. G.S. Hume, the Chief Dominion Geologist of Canada; H. Zinder, a natural gas consultant and Utilities Commissioner from Washington D.C.; and J.R. Donald, a Canadian Chemical Engineer from Montreal and former American Federal Power Commission member.<sup>61</sup> These experts employed two approaches, namely the volumetric and pressure-decline methods, to quantify and categorize the gas reserves located within porous rock formations, seemingly simplifying the complex nature of the resource. The pressure-decline method assumes that a gas reservoir has a fixed volume. The available quantity of gas in the field at various pressures can be calculated by determining the pressure decline resulting from the production of a specific quantity of gas. Dr. G.S. Hume praised this method "By far the most reliable estimates are those of the producing gas fields."<sup>62</sup> The volumetric method, also known as the porosity-area method, attempts to quantify the void spaces within the reservoir rocks filled with gas. This method requires knowledge of the area covered by the reserve, as well as factors such as the average porosity of the reservoir rocks and the extent to which voids are filled with liquids instead of gas. Due to its reliance on more "known" factors, the volumetric method was considered less accurate for fields that had not been fully explored.<sup>63</sup> The pressure-decline and volumetric methods gave the officials essential rationalized standardizations or metrics of otherwise illegible subterranean bodies.

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<sup>61</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.322.; "Gas Pipeline to Winnipeg Doubtful," *Vancouver Sun* (Vancouver, B.C.), Jan. 13, 1949, p.16.; "Manitoba Scene Of Gas Search," *Edmonton Journal* (Edmonton, Alb.), Jan. 13, 1949, p.7.; "Medicine Hat Gas Said Good for 200 Years," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 22, 1949, p.2.; "Sees Big Reserve Medicine Hat Gas," *Edmonton Journal* (Edmonton, Alb.), Jan. 22, 1949, p.1.; "Tell U.S. Stand On Gas Exports," *Edmonton Journal* (Edmonton, Alb.), Jan. 21, 1949, p.6.; Canada. The Province of Alberta. Natural Gas Commission. *Inquiry into the Reserves and Consumption of Natural Gas in the Province of Alberta*. (Alberta), 1948, p.11.

<sup>62</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.34.

<sup>63</sup> *Ibid.*, p.35.



Inspired by a 1948 report on “Natural Gas Reserves of the Prairie Provinces” by Dr. Hume and A. Ignatieff of the Bureau of Mines, the expert witnesses classified their calculations into three distinct reserve categories: “proven,” “probable,” and “possible or potential.”<sup>64</sup> The “proven” category encompassed fields that had undergone sufficient tests to warrant a well-grounded assessment. Fields for which substantial information was missing but which had nevertheless been calculated or estimated using the porosity-area method were labelled “probable.” The last category contained expected, but yet to be appraised, natural gas fields.<sup>65</sup> In the case of Alberta, the Dinning Commission reached a consensus on a total “existing and proven” reserve amounting to 4.26 trillion cubic feet, with an estimated 3.49 trillion cubic feet of dry clean gas ultimately “recoverable.”<sup>66</sup> The Commission defined recoverability as “the proportion of gas that might ultimately be withdrawn from the reservoir,” which among others, water encroachment, well performance, and various mechanical issues could influence.<sup>67</sup> The Commission refrained from estimating potential reserves but assumed that “substantial additions” would undoubtedly be made.<sup>68</sup> By employing these clearly defined categories, officials could navigate the complexities of the natural gas reserves without getting entangled in intricate and uncertain details of the geology. Alberta would export its natural gas if enough reserves fell within the “proven” category surplus to the needs of the province.

However, the natural composition of the subterranean gas bodies significantly impacted the data's accuracy. The area-porosity method relied on calculations involving the thickness of the sand, its porosity, the quantity of connate water, and levels of gas-oil

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<sup>64</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.319.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid., p.323.

<sup>67</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.45-46.

<sup>68</sup> Ibid., p.330, 323.

interference, all of which were challenging to obtain.<sup>69</sup> Exploration activities had discovered gas in sediments spanning from the pre-Cambrian to the Upper Cretaceans, with variations in thickness ranging from a few feet near the Pre-Cambrian Shield to miles in the Rocky Mountains. Furthermore, the size of each reserve often remained a matter of estimation.<sup>70</sup> Therefore, the final report of the Dinning Commission acknowledged the impossibility of establishing an average thickness for any formation in Alberta.<sup>71</sup> Most of the gas reserves in Alberta at the time of the Dinning Commission were only partially uncovered, rendering the porosity-area method inaccurate unless drilled wells completely delineated the reserve. Geologist T.A. Link asserted that only half of Alberta had undergone the required, significant deep drilling exploration.<sup>72</sup> Consequently, reserve estimates based on this method were categorized as “probable” rather than “proven.”<sup>73</sup> The pressure-decline method required the production of sufficient gas from a well to observe a substantial decline in pressure. However, the encroachment of water around the reservoir edges sometimes resulted in a lower reservoir decline than expected, leading to inflated reserve estimates.<sup>74</sup> Both methods, moreover, had to consider operational losses, including the gas required for removing impurities such as carbon dioxide and hydrogen sulphide.<sup>75</sup> Additionally, producers could not economically extract all gas in a reservoir, necessitating a deduction of the remaining gas from the total estimate. J. Davies, appearing on behalf of the City of Calgary, dealt at great length with the problem of

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<sup>69</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board For Permission To Remove Gas Or Cause It To Be Removed From The Province Under The Provisions Of The Gas Resource Preservation Act* (Alberta), 1951, p.12. Library and Archive Canada RG99, Vol. 6, File 8.; Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.18–19, 46.

<sup>70</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.20.

<sup>71</sup> *Ibid.*, p.22.

<sup>72</sup> *Ibid.*, p.55.

<sup>73</sup> *Ibid.*, p.36.

<sup>74</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board. *Interim Report with Respect to Applications Now Before the Board* (Alberta), 1951, p.12.

<sup>75</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.46.

recoverability and availability, emphasizing the need to consider these factors adequately. He asserted that,

it is submitted that the data before the Commission referring to in situ natural gas is of theoretical value only and has little practical application to the problem of pipeline gas for the people of Alberta, inasmuch as it affords no evidence of the amount of gas that can be recovered nor the rate at which recovery can be effected, the two principal factors with which we are concerned.<sup>76</sup>

The nature of natural gas and gas reservoirs made it a difficult-to-quantify fuel, rendering reserve estimates limited and primarily reliant on people's best guesses rather than proven facts.

Furthermore, the costs associated with gas exploitation hindered the acquisition of definitive evidence. The exploration and development expenses for natural gas reserves escalated, and companies asserted they needed more of a guarantee from regulatory institutions that they would recoup their expenditures in the future. Especially for companies with comparatively little capital, accurate testing of discovered gas wells proved too costly without a viable market.<sup>77</sup> A vicious circle thus unfolded with, on the one hand, the commission required accurate reserve estimates before it approved a natural gas pipeline to a market. These estimates could only be acquired through active production. On the other hand, companies required a guaranteed market before continuing their expensive exploration and drilling activities. Clifton C. Cross, representing a consortium of small capital companies in Alberta, admitted this during his testimony to the Dinning Commission, "He pointed out that gas wells had been discovered, but cased and capped because of the lack of market."<sup>78</sup> A reliable market, the associated certainty of shareholder returns, and the consequent influx of

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<sup>76</sup> Ibid., p.46.

<sup>77</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.13.

<sup>78</sup> Ibid.

funds would transform this scenario. Other syndicates and companies agreed with Mr. Cross, and later regulatory hearings at Alberta's Natural Gas and Petroleum Conservation Board presented a similar story.<sup>79</sup> Testimony before the Dinning Commission acknowledged that most of Alberta's drilling activities had focused on oil exploration, leading to a limited and incomplete assessment of Alberta's natural gas reserves.<sup>80</sup> Estimates would only be elusive until a substantial natural gas market motivated drillers to map out their discoveries more extensively and a sufficient market could only be achieved with a transportation system that could bring natural gas to urban consumers. The costs associated with gas drilling, coupled with the inherent characteristics of natural gas reservoirs, thus impeded the production of conclusive rationalized standardizations of Alberta's natural gas reserves.

The Dinning Commission, therefore, adopted the viewpoint that all findings were estimations, but they remained certain that Alberta contained a substantial supply of gas. Dr. Hume acknowledged that, while the existing data was inconclusive, it showed that the potential reserves of Alberta were "exceedingly large."<sup>81</sup> Other geologists like Dr. Brokaw and W.C. Spooner supported Hume's statement. Dr. Brokaw remarked that "it is almost certain that the present proven reserves will be increased to many times the present estimates," while W.C. Spooner iterated, "The potential gas reserves of Alberta are unquestionably large."<sup>82</sup> All in all, the hearings led the Commission to conclude that,

Estimating the volume of gas reserves, rather than being an exact science, requires the application of trained judgement to limited fundamental knowledge of underlying conditions. It is evident from even this brief review of methods that the estimation of gas reserves cannot be a precise determination. The results are merely estimates,

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<sup>79</sup> Ibid.; Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board. *Interim Report With Respect To Applications Now Before The Board* (Alberta), 1951, p.53.

<sup>80</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.55, 57.

<sup>81</sup> Ibid., p.55.

<sup>82</sup> Ibid., p.56.

which are continually subject to change as more complete and accurate information concerning the reservoir is obtained.<sup>83</sup>

Although the available data indicated the presence of significant reserves, the exact quantification remained largely uncharted—consequently, the available data on Alberta's natural gas reserves allowed for varying interpretations and perspectives.

The Dinning hearings provided a platform for these various perspectives. In their broadest sense, these perspectives concerned the province's natural gas supply security and economic development. The three companies involved (Western Pipe Lines, Northwest Natural Gas Company, and Westcoast Transmission) proclaimed that a range of benefits would result from natural gas exports. The representatives of independent oil corporations reinforced these viewpoints.<sup>84</sup> The perceived benefits of gas exportation included the stimulated exploration of natural gas, the discovery of additional reserves, substantial recurring operating expenditures on supplies and wages, and royalty payments to the provincial treasury.<sup>85</sup> Julian Garrett, representative of Western Pipe Lines, which aimed to transport gas from Alberta to Winnipeg, elaborated on the pipeline's economic advantages. The project included multi-million-dollar expenditures on labour and materials within the province and several million annual expenditures for gas purchases in Alberta.<sup>86</sup> Garrett concluded that Alberta's gas reserves, as calculated by Western Pipe Lines, would meet his company's needs and satisfy the province's natural gas consumption for 112 years.<sup>87</sup> Faison A. Dixon, the President and Director of Northwest Natural Gas Company, represented Northwest Natural Gas Company and its affiliate, Alberta Natural Gas, which proposed a pipeline from

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<sup>83</sup> Ibid., p.37.

<sup>84</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.325.

<sup>85</sup> Ibid.

<sup>86</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.16.

<sup>87</sup> "Manitoba Scene Of Gas Search," *Edmonton Journal*, p.7.

southern Alberta to the Pacific Northwest.<sup>88</sup> A.F. Dixon referenced the calculations of W.C. Spooner, a consulting geologist from Shreveport, Louisiana, who conducted a survey of Alberta's gas resources for the International Utilities Company to the belief that Alberta possessed very substantial gas reserves.<sup>89</sup> Like Western Pipe Lines, Northwest Natural Gas anticipated that the export of Alberta's natural gas would translate into an inflow of wealth and industry for Alberta.<sup>90</sup> They estimated that out of the \$100,000,000 spent on the pipeline from Alberta to the Pacific Northwest, \$40,000,000 would land in Canada, including \$1,000,000 in salaries within Alberta once the pipeline became operational.<sup>91</sup> Additionally, they projected that propane gas would become available to most farms in Alberta between Edmonton and the United States-Canada border.<sup>92</sup> Lastly, Dixon tried to appeal to Alberta's provincial protectionism by asserting that the proposed amount of natural gas for export to the U.S. over the next 25 years would be less than what had been "wasted" at Turner Valley since the field's discovery.<sup>93</sup> Elaborating on the economic advantages of their projects, each contender provided the otherwise incomplete and contested natural gas picture with their socio-economic interpretation.

Westcoast Transmission similarly asserted, based on information from continuing drilling activities, that its pipeline would generate prosperity for Alberta. In Frank McMahon's brief to the Dinning Commission, he asserts that the development of Alberta's natural gas reserves would,

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<sup>88</sup> "Mid-Continent To Drill Wells In Manyberries And Leduc Fields," *Lethbridge Herald* (Lethbridge, Alb.), Jan. 5, 1951, p.6.; Alan Phillips, "Who Will Win The Great Gas Pipeline Stakes?," *Macleans* (October 1, 1953): p.19, 81.; "Permits Sought to Export Gas," *Calgary Herald* (Calgary, Alb.), Oct.24, 1949, p.1.

<sup>89</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.7-8.

<sup>90</sup> "Export of Gas Would Aid Alta.," *Province* (Vancouver, B.C.), Jan. 11, 1949, p.20.; "Big Chance Seen For New Revenue," *Leader-Post* (Regina, Sask.), Jan. 11, 1949, p.10.

<sup>91</sup> "Big Chance Seen For New Revenue," *Leader-Post*, p.10.

<sup>92</sup> Ibid.

<sup>93</sup> "Turner Valley Gas Waste Scored by N.Y. Businessman," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 11, 1949, p.1.

Stimulate expanding prosperity in the whole of the Northland, and the Province generally. Additional roads will be built, gas would be supplied to communities not now serviced, and would not only attract new industries [...] but encourage expansion of existing industry. Gas would be converted to cheap electricity with all its attendant advantages and assist in further rural electrification. [...] Together with the benefits from the expenditure of large sums of money on pipeline construction and gas well drilling.<sup>94</sup>

In this manner, Mr. McMahon played into the dominant socio-political concerns in Alberta at the time (which had established the Dinning Commission), arguing that Westcoast could provide a secure supply of natural gas to aid the provincial economy.

Unfortunately for the proponents of natural gas export from Alberta, like Westcoast, representatives of smaller cities expressed caution, if not outright opposition, towards the idea. According to them, Alberta's estimated reserves were insufficient, and they believed that exporting gas from the province would hinder Alberta's economic development. Geologist Dr. G.S. Hume had assured Medicine Hat that the city would have enough gas for a "considerable number of years."<sup>95</sup> Medicine Hat had provided its residents with natural gas since 1903 and had gained a reputation, famously described by renowned British author Rudyard Kipling, as having "all hell for a basement."<sup>96</sup> The Town that was "Born Lucky," as Kipling put it, was not willing to rely solely on its luck and demanded a more guaranteed long-term supply.<sup>97</sup>

Calgary, represented by Stanley J. Davies, took an extreme stance, insisting that only proven

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<sup>94</sup> Frank McMahon, *Brief submitted to the Dinning Commission Enquiring Into the Natural Gas Resources of Alberta*, Alberta, February 19, 1949, p.6-7, <http://peel.library.ualberta.ca/bibliography/7128.html>.

<sup>95</sup> "Sees Big Reserve Medicine Hat Gas," *Edmonton Journal*, p.1.; "Medicine Hat Gas Said Good for 200 Years," *Edmonton Bulletin*, p.2.

<sup>96</sup> "Gas For Export," *Red Deer Advocate* (Red Deer, Alb.), Feb. 16, 1949, p.2.; Earle Gray, *Wildcatters*, p.323.; "Our History," *Medicine Hat*, Accessed June 1, 2023, <https://www.medicinehat.ca/en/government-and-city-hall/our-history.aspx>.

<sup>97</sup> "Medicine Hat," *Province of Alberta*, Accessed June 1, 2023, <http://history.alberta.ca/energyheritage/gas/creation-of-an-industry/accidental-industry/medicine-hat.aspx>; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.325-326.

reserves should be considered part of Alberta's total natural gas estimate.<sup>98</sup> He argued that the projected growth of population and industry in Calgary and the city's natural gas needs remained consistently underestimated. Using a recent cold front as evidence, he stated, "All we needed during this recent cold snap was a 30-mile-an-hour wind last Sunday, and we would have been over the peak load limit for Calgary."<sup>99</sup> Other submissions from the city demanded a guaranteed minimum 40-year supply of natural gas to ensure that investments in gas heating equipment and infrastructure would not go to waste.<sup>100</sup> The City of Calgary had experienced a decline in its natural gas supply in 1919 when the Bow Island Field began to fail, and, in the words of Westcoast lawyer D.P. McDonald who reflected on the Dinning Commission, "no one who went through that ordeal had any sympathy at all of exporting gas from the province."<sup>101</sup> Mayor F. Johns of Leduc opposed gas pipeline projects until towns like Leduc were guaranteed an adequate gas supply for domestic and commercial purposes.<sup>102</sup> Alderman Fred J. Mitchell, representing the Union of Alberta Municipalities, presented a brief echoing similar concerns and called for more comprehensive investigations into Alberta's present and future needs. H.R. Milner, representing gas companies in Edmonton and Calgary, emphasized that the Viking-Kinsella field had limited gas reserves, "There is no more gas in the Viking-Kinsella field than is adequately necessary to protect the requirements of the Edmonton company," and export from that field could face severe and justifiable criticism.<sup>103</sup> Milner argued that Turner Valley's capacity to meet the peak load of the Canadian Western system would decline within a decade. He argued that "business principles, not sentimental reasons," should guide decision-making.<sup>104</sup> If the Commission approved the

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<sup>98</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.10.

<sup>99</sup> "Gas Reserve Said Insufficient For Export," *Calgary Herald* (Calgary, Alb.), Jan. 25, 1949, p.1.

<sup>100</sup> "Ibid.

<sup>101</sup> D.p. MacDonald, Interview. *Oil History Project*, p.7.

<sup>102</sup> "Export Of Gas Rapped By C of C," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 5, 1949, p.2.

<sup>103</sup> "Milner Outlines Gas Pipeline For Alberta," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 17, 1949, p.1.

<sup>104</sup> "Huge Gas Reserves, Geologist Declares," *Calgary Herald* (Calgary, Alb.), Jan. 19, 1949, p.13.



export of gas from the province, Milner suggested implementing a two-price system with lower prices for consumers in Alberta.<sup>105</sup> The fact that representatives of smaller cities expressed concern and strong opposition to the export of natural gas from Alberta for political and economic reasons is perhaps not surprising as local municipalities that had long benefitted from their proximity to natural gas reserves. Long-distance natural gas lines would not be widespread until the second half of the 20<sup>th</sup> century.<sup>106</sup>

The towns linked modernity with natural gas usage, arguing that their inability to access natural gas would result in an inability to access the necessities of modern life. Councillor L.H. Fenerty of the City of Calgary questioned whether his city should remain stuck in the past, using a settler-colonial understanding of modernity and a teepee trope to reinforce his statement. He iterated, "Must we stay here in our teepees and take such benefits as we can get from exporting our gas?" His use of the term "teepee" suggests a derogatory view towards Indigenous populations while associating natural gas usage with more modern society.<sup>107</sup> Other towns that lacked access to natural gas were similarly vocal in their opposition to the export of natural gas. A collective brief presented by the towns of Airdrie, Crossfield, Carstairs, Didsbury, Olds, Innisfail, Bowden, and Penhold emphasized that their current and future needs had to be satisfied before the export of natural gas from the province should be allowed. By 1950, there was a growing sense that Alberta was on the cusp of significant economic development. The communities without natural gas feared they would be left behind if they did not have access to this more affordable, cleaner, and efficient "modern" fuel.<sup>108</sup>

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<sup>105</sup> Ibid.

<sup>106</sup> Colin A.M. Duncan and R.W. Sandwell, "Manufactured and Natural Gas," p.313.

<sup>107</sup> "Tell U.S. Stand On Gas Exports," *Edmonton Journal*, p.6.

<sup>108</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.325.

Even neighbouring provinces, stressing the interconnectedness of their prosperity, indirectly supported the idea that a guaranteed natural gas supply could help foster the modernization of their economies. J.L. Phelps, former Saskatchewan Minister of Natural Resources and a member of the Saskatchewan Power Commission made a submission arguing that Saskatchewan and Manitoba should be given preference in any natural gas exports from Alberta because of the provinces' close economic ties.<sup>109</sup> Western Pipe Lines bolstered this belief, arguing that the prairies should receive priority for Alberta's natural gas export. Julian Garrett stated,

First consideration should be given to your neighbouring provinces. This consideration should be given not only in a patriotic sense but in order to help the growth of these other Canadian centres before aid is given to the communities on the other side of the line.<sup>110</sup>

Representatives from British Columbia similarly wanted Vancouver prioritized as an export destination over any American city. In support of exports, B.C. Electric insisted that any gas pipeline should pass through Vancouver first to meet the region's requirements.<sup>111</sup> Bruce Robertson, Vice President and General Solicitor of B.C. Electric Railway expressed similar sentiments.<sup>112</sup> Smith Davidson, General Manager of B.C. Electric Company Limited presented extensive statistics on the ways in which the export of natural gas to B.C. would enhance the complementary nature of the provincial economies. For example, if Alberta's regulatory authorities granted permission to export gas, the Consolidated Mining and Smelting Company's large smelter in Trail, British Columbia, would switch from using coal

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<sup>109</sup> "Priority Asked for Prairie Gas," *Edmonton Journal* (Edmonton, Alb.), Jan. 28, 1949, p.9.; "Sask. Requesting Gas Preference," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 28, 1949, p.12.; "Saskatchewan Backs Plan to Build Pipeline From Alberta to Manitoba," *Star-Phoenix* (Saskatoon, Sask.), Jan. 27, 1949, p.3.

<sup>110</sup> "Wants Canadians Have Gas Priority," *Edmonton Journal* (Edmonton, Alb.), Jan. 14, 1949, p.5.; "Canada First' Policy In Gas Export Urged," *Calgary Herald* (Calgary, Alb.) Jan. 13, 1949, p.13.

<sup>111</sup> "Medicine Hat Gas Said Good for 200 Years," *Edmonton Bulletin*, p.2.

<sup>112</sup> "Gas Priority For This City Asked by BCE," *Vancouver Sun* (Vancouver, B.C.), Jan. 25, 1949, p.8.

from Alberta to natural gas from that province.<sup>113</sup> These narratives invoked a sense of regionalism and opposed prioritizing the export of natural gas from Alberta to the United States.

Westcoast Transmission played into these provincial sentiments. McMahon pledged to develop northern Alberta and reach Vancouver before exporting to the United States, in contrast to Northwest Natural Gas's proposal. He asserted, "It is our firm conviction that in the export of gas from the Province, a Canada First policy should be adopted."<sup>114</sup> Northwest Natural Gas Company submitted a brief to the Dinning Commission strongly opposing Westcoast's proposal, deeming it impractical and costly,

There was no route whereby it would be possible, except at prohibitive cost, to construct a pipeline entirely across British Columbia to the coast, nor would it be certain [...] that it could be maintained in repair throughout the winter months.<sup>115</sup>

Frank McMahon countered these assertions in his brief to the Dinning Commission with the concise statement, "The answer to these suggestions is simple," he said. "We are prepared to do it."<sup>116</sup> Playing into prevailing Canadian concerns about the security of supply, Westcoast promised a line that would supply Canada first.

The potential availability of alternative fuel sources also shaped the narratives on natural gas. Some argued that the discovery of another power or natural gas source would render Alberta's natural gas obsolete. James Walker, the Canadian manager of Northwest Natural Gas Company, argued that with the opening of American gas fields for the supply of the Pacific Northwest, the export of gas from Alberta would become obsolete before pipeline

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<sup>113</sup> "Coast May Get Cheaper Alberta Gas," *Vancouver Sun* (Vancouver, B.C.), Jan. 12, 1949, p.9.; "Alberta Gas May Fuel B.C. Smelter," *Leader-Post* (Regina, Sask.), Jan. 12, 1949, p.19.; "Alberta Natural Gas May Fuel Trail Smelter," *Times Colonist* (Victoria, B.C.), Jan. 12, 1949, p.3.

<sup>114</sup> Ibid., p. 7, 12-13.

<sup>115</sup> Earle Gray, *Wildcatters*, p.108.

<sup>116</sup> Frank McMahon, *Brief submitted to the Dinning Commission*, p.13.

construction had even begun.<sup>117</sup> Similarly, a discovery of new gas supplies in western Montana and Wyoming could halt Alberta's gas plans.<sup>118</sup> Julian Garrett, a representative of Western Pipe Lines, countered this general idea, arguing that an additional discovery of natural gas in Manitoba would not impact his company's proposed pipeline from Alberta to Winnipeg.<sup>119</sup> Others expressed concerns about the influence of Alberta's potential natural gas export on the province's coal industry.<sup>120</sup> Alberta coal producers feared that the export of natural gas to either Winnipeg or the Pacific Northwest would displace Alberta's coal exports.<sup>121</sup> At the concluding sessions of the Dinning Commission in Calgary, domestic coal producers presented two submissions, each warning that mines would have to be closed if the province exported natural gas. V.A. Cooney, representing the Domestic Coal Operators' Association of Western Canada, argued that the proposed pipelines "threaten the stabilization and existence of the Alberta coal industry" and that the export of gas from the province would "disorganize the coal industry of Alberta."<sup>122</sup> W.C. Whittaker from the Western Bituminous Coal Operators' Association stated that gas exports equalled the closure of a significant portion of the industry, causing roughly 2,000 miners to lose their job and substantial revenue losses for Canadian railways.<sup>123</sup>

On the other end of the spectrum, some favoured natural gas export precisely because of potential alternative energy sources. James Walker, the Canadian manager of the Seattle Gas Company, explained that a natural gas line would become obsolete if a cheaper substitute

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<sup>117</sup> "Coast May Get Cheaper Alberta Gas," *Vancouver Sun*, p.9.

<sup>118</sup> "Montana, Wyoming Compete With Alberta Exporting Gas," *Edmonton Journal* (Edmonton, Alb.), Jan. 12, 1949, p.22.; "Pacific Coast Might Get Gas in West U.S.," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 12, 1949, p.1.; "Montana Gas Here Possible," *Province* (Vancouver, B.C.), Jan. 13, 1949, p.21.

<sup>119</sup> "Denies Manitoba Gas Would Affect Pipeline," *Calgary Herald* (Calgary, Alb.), Jan. 14, 1949, p.15.

<sup>120</sup> "Gas Export Declared Threat to Coal Mining," *Calgary Herald*, p.15.

<sup>121</sup> Ibid.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.330. Historian William Kilbourn observes a similar opposition of the Alberta coal industry with respect to the TransCanada Pipeline in the 1950s. William Kilbourn, *Pipeline: Transcanada and the Great Debate, a History of Business and Politics*. (Toronto: Clarke, Irwin, 1970): p.19.

<sup>122</sup> "Gas Export Declared Threat to Coal Mining," *Calgary Herald*, p.15.

<sup>123</sup> Ibid.

for gas was discovered and suggested that Alberta should exploit the fuel now.<sup>124</sup> Walter S. Campbell of Edmonton, president of Wainwright Gas Co., pointed out that Alberta, by the time it depleted its natural gas reserves, would likely have replaced natural gas with another fuel source. As Campbell said, "We may even be using atomic energy in 10 to 20 years."<sup>125</sup> The interplay between natural gas and the availability of alternative fuels, like coal and nuclear energy, therefore shaped stakeholders' understandings of the pipeline proposals.

Ultimately, the Dinning Commission hearings primarily assessed whether Alberta possessed an adequate supply of resources to meet its future needs. The Commission convened for over a month, examined 49 witnesses, and issued a 224 pages report with an appendix on March 8, 1949.<sup>126</sup> According to the Commission's final report, the reserve-to-withdrawal ratio in Alberta was approximately 70:1, indicating a significant amount of available gas reserves relative to current consumption levels. However, the commission anticipated increased consumption would soon reduce the ratio to 50:1.<sup>127</sup> They recommended that the province maintain a reserve ratio of 50:1,

The present and future needs of the people and industries of the province for a period of not less than 50 years should be fully assured before consideration is given to any application for transmission of gas out of the province for sale in other localities, either in Canada or the United States.<sup>128</sup>

They arbitrarily defined the foreseeable future as the time that equaled the period during which Alberta had been using natural gas: the past half-century. However, the commission

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<sup>124</sup> "Export of Gas Would Depend On U.S. Supply," *Calgary Herald*, p.9.; "Milner Outlines Gas Pipeline For Alberta," *Edmonton Bulletin*, p.1.; "Montana, Wyoming Compete With Alberta Exporting Gas," *Edmonton Journal*, p.22.

<sup>125</sup> "Export Of Gas Rapped By C of C," *Edmonton Bulletin*, p.2.; "Chamber of Commerce Against Gas Export," *Edmonton Bulletin* (Edmonton, Alb.), Jan. 5, 1949, p.1.

<sup>126</sup> "Members of the Three-Man," *Calgary Herald*, p.11.

<sup>127</sup> D.P MacDonald, Interview, *Oil History Project*, Oct. 26, 1984, p.12, [https://glenbow.ucalgary.ca/wp-content/uploads/2019/06/PIOHP\\_McDonald\\_Douglas\\_Peter-pt2.pdf](https://glenbow.ucalgary.ca/wp-content/uploads/2019/06/PIOHP_McDonald_Douglas_Peter-pt2.pdf).

<sup>128</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.12.; D.P MacDonald, Interview, *Oil History Project*, p.12.

acknowledged the problems associated with gas estimations and the ultimate inaccuracy embedded within the presented calculations. They noted even a reserve ratio of 50:1 could not be fully guaranteed.<sup>129</sup> Additionally, the Commission advocated for a "Canada-first" policy and reiterated their belief that Alberta's gas reserves would likely increase over time. The assessment relied on abstractions and categorizations of Alberta's natural gas supply and demand, with maps, calculations, and categories like "proven" reserves playing a crucial role. However, ultimately, the conclusions of the Commission were primarily shaped by the social, political, and economic interpretations given to the knowingly flawed calculations.<sup>130</sup> The Dinning Commission set the tone for future hearings on natural gas pipelines to the Pacific Northwest.

#### **1.4. The Alberta Petroleum and Natural Gas Conservation Board**

During the Alberta Petroleum and Natural Gas Conservation Board hearings, numerous experts and issues presented during the Dinning hearings resurfaced.<sup>131</sup> The Conservation Board presided over and established procedures for oil and gas development in Alberta.<sup>132</sup> Amongst those was the Gas Resources Preservation Act of 1948 which proclaimed that large bodies of natural gas should be reserved for provincial usage. As a result, any company that sought to remove natural gas from Alberta had to receive approval from the Conservation Board.<sup>133</sup> Hearings commenced in December 1949 and continued intermittently for over two

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<sup>129</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.14–15. In 1952, the Alberta Natural Gas and Petroleum Conservation Board reduced this ratio to 30: 1. D.P MacDonald, Interview, *Oil History Project*, p.12.

<sup>130</sup> Canada. The Province of Alberta. Natural Gas Commission. (Alberta), 1948, p.56.

<sup>131</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board. *Interim Report With Respect To Applications Now Before The Board* (Alberta), 1951, p.12.

<sup>132</sup> David H. Breen, "Energy Resources Conservation Board," *The Canadian Encyclopedia*, February 07, 2006.

<sup>133</sup> "Natural Gas Removal Permits," *Alberta Energy Regulator*, Accessed October 1, 2023, <https://www.aer.ca/providing-information/data-and-reports/statistical-reports/st98/natural-gas/removal->

years until it published its final report on March 29, 1952.<sup>134</sup> Ian McKinnon chaired the Board's hearings, with D.P. Goodall serving as Deputy Chairman and G.W. Govier as the third Board Member.<sup>135</sup> Throughout this period, the Board dealt with five pipeline applications, namely: Alberta Natural Gas Company, Alberta Natural Gas Grid Ltd., and Northwest Natural Gas Company; Western Pipe Lines Limited and Prairie Transmission Lines Limited; McColl-Frontenac Oil Company Limited and Union Oil Company of California; Canadian Delhi Oil Ltd. and Trans-Canada Pipe Lines Limited; and Westcoast Transmission Company Limited.<sup>136</sup> Initially, the Board heard each applicant separately, but on October 30, 1950, it agreed to hold joint hearings to expedite the application process.<sup>137</sup> It was not until April 1952 that the Alberta legislature tabled the Conservation Board's final recommendations.<sup>138</sup> Comparable to the Dinning Commission, the Alberta Natural Gas and Conservation Board grappled with inconsistent interpretations of the province's natural gas supply and demand. Prevailing uncertainties allowed each applicant to present their interpretations of the uncertain quantities of natural gas. Ultimately, the Conservation Board's final decision relied more on the economic and political interpretations of these inherently

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[permits#:~:text=Alberta%27s%20Gas%20Resources%20Preservation%20Act,a%20permit%20from%20the%20AER.; David Breen, \*Alberta's Petroleum Industry and the Conservation Board\*, p.154.](#)

<sup>134</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.348–350.

<sup>135</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board For Permission To Remove Gas Or Cause It To Be Removed From The Province Under The Provisions Of The Gas Resource Preservation Act* (Alberta), March 29, 1952, p.11, <https://archive.org/details/reportwithrespec00albe/mode/1up?ref=ol&view=theater>.

<sup>136</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board* (Alberta), March 29, 1952, p.7–8.

<sup>137</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board* (Alberta), 1951, p.15.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.348-350.; "Fourth Firm Seeks to Export Alberta Gas," *Calgary Herald* (Calgary, Alb.), Apr. 11, 1950, p.13.; "Gas Export Hearings Resumed," *Province* (Vancouver, B.C.), Apr. 11, 1950, p.10.; "Fourth Application Export Natural Gas," *Lethbridge Herald* (Lethbridge, Alb.), Apr. 11, 1950, p.3.

<sup>138</sup> "Gov't Favors Export Of Gas," *Calgary Herald* (Calgary, Alb.), Apr. 8, 1952, p.1.; "Approval Sought For Gas Exports," *Leader-Post* (Regina, Sask.), Apr. 8, 1952, p.9.; "Alberta Set To Pipe Gas," *Windsor Star* (Windsor, Ont.), Apr. 8, 1952, p.19.; "Legislature Of Alberta Considers Gas Line To B.C.," *Nanaimo Daily News* (Nanaimo, B.C.), Apr. 8, 1952, p.2.; "Fight Due On Export Of Gas," *Vancouver Sun* (Vancouver, B.C.), Apr. 8, 1952, p.2.

flawed, rationalized standardizations than the schematic representations of the province's subterranean gas fields and consumer demand.

Expert witnesses, to the best of their abilities, presented a comprehensive assessment of Alberta's current and future gas supplies and demands. The prevailing system of regulation complicated their efforts. Each of the five companies and the Conservation Board's chief engineer, G.E.G. Liesemer, offered such assessments. The engineers, for the most part, adhered to comparable standards, expressing their findings in cubic feet at a pressure base of 14.4 pounds per square inch and a temperature of 60 Fahrenheit while adhering to Hume's "probable," "possible," or "potential" categories.<sup>139</sup> In its January 20, 1951, interim report, the Conservation Board stressed that such standardized calculations produced an incomplete picture of the established reserves. Insufficient drilling had been completed to conduct accurate calculations, "Comparatively little has yet been done in the Province as a whole."<sup>140</sup> Most drilling that had been completed in Alberta was, as mentioned during the Dinning hearings, completed in search of oil, not gas, leaving many of the gas reservoirs unexplored. The Board noted, "Practically all of our presently known gas reserves were discovered while drilling for oil, and very little attempt has been made to prospect for and develop gas reserves beyond the immediate needs of the presently established utility systems."<sup>141</sup> The government had similarly based its system for establishing and leasing Crown reserves on oil, not gas development. The Natural Gas and Conservation Board permitted one well on every 640 acres in a standardized, checkerboard-like manner. While sufficient for the economic development of oil fields, gas fields generally required the exploration of more significant acreage.<sup>142</sup> In its interim report, the Board concluded that the system for disposing of Crown lands "is not well

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<sup>139</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board*, 1951, p.11-12, p.15.

<sup>140</sup> Ibid., p.11.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid., p.53-54.



suited for gas exploration and development where larger blocks of land are necessary to make development of reserves attractive."<sup>143</sup> Under the present policy, the costs and risks associated with natural gas exploration and transportation partly therefore ran too high, especially given Alberta's strict stance on exports. Few companies risked the costs associated with gas reservoir developments unless a field could satisfy a local market with relative ease.<sup>144</sup> Due to the scarcity of factual data, the companies were left using their best judgment for large parts of their calculations. Two of the quantifications, as a result, only covered part of the province, while the others included a varying number of reserves in their overviews.<sup>145</sup> The categorical division of reserves into "proven," "probable," and "possible" reserves became "one concerning which there was a wide spread of opinion."<sup>146</sup> The existing standardized systems of land management and gas measurements had produced widely diverging estimations of Alberta's natural gas supply and left much open for interpretation.

Calculations of the province's natural gas demand faced similar challenges. The province consumed a significant portion of Alberta's natural gas during the winter months when cold weather and substantial snowfall led to a surge in demand for residential space heating. However, weather patterns would fluctuate during other times, resulting in varying natural gas demands. This made it more difficult to quantify the overall natural gas demand accurately. The industrial usage of natural gas was generally more stable and thus easier to predict as industrial machinery required a more consistent daily amount of gas. The province anticipated that future industrial growth would facilitate a more accurate calculation of the market or load factor (the percentage representing the ratio between average daily and peak

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<sup>143</sup> Ibid., p.59.

<sup>144</sup> Ibid., p.53–54.

<sup>145</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.356–357.

<sup>146</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board*, 1951, p.15.

day demands).<sup>147</sup> However, for now, companies presented widely diverging estimates. Given these uncertainties, Premier Manning announced on January 25, 1951, upon the release of the Conservation Board's interim report, that there was, at that time, insufficient natural gas available to meet Alberta's future needs.<sup>148</sup> In his words, "cannot at this time recommend the granting of a permit to remove gas or cause gas to be removed from the province to any of the applicants."<sup>149</sup> He, however, urged the companies to advance their applications further and pursue the development of natural gas resources. Hearings would resume almost immediately.<sup>150</sup>

Despite Premier Manning's announcement, Westcoast Transmission remained optimistic about their proposal. In a letter to Senator John Wallace de Beque Farris on November 13, 1950, Frank McMahon expressed his belief that Alberta would soon reach a favourable decision, "I do feel that we are sitting in the driver's seat."<sup>151</sup> Westcoast Transmission undertook a smaller side endeavour as the hearings advanced, seeking approval for a shorter pipeline connecting to a comparatively well-established reserve. Their proposal aimed to export 207,165 thousand cubic feet of natural gas annually from the Pouce Coupe field in Alberta to Dawson Creek, British Columbia, for 30 years.<sup>152</sup> Although Pouce Coupe

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<sup>147</sup> Ibid., p.26.

<sup>148</sup> "Natural Gas for B.C. Halted by Alberta Ban," *Province* (Vancouver, B.C.), Jan. 25, 1951, p.1.; "Alberta Halts Gas Pipeline to Coast," *Vancouver Sun* (Vancouver, B.C.), Jan. 25, 1951, p.1.; "Lack Adequate Known Reserves Is Reason Given," *Lethbridge Herald* (Lethbridge, Alb.), Jan. 25, 1951, p.1.; "Alberta Holds Up Gas Exportation," *Times Colonist* (Victoria, B.C.), Jan. 25, 1951, p.1.; "Westcoast Encouraged By Decision," *Calgary Herald* (Calgary, Alb.), Jan. 27, 1951, p.1.; "Ottawa Gas Talks Depend on Alberta," *Vancouver Sun* (Vancouver, B.C.), Jan. 30, 1951, p.11.

<sup>149</sup> "Natural Gas for B.C. Halted By Alberta Ban," *Province*, p.1.

<sup>150</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board*, 1951, p.60.; Earle Gray, *Wildcatters*, p.131-132.

<sup>151</sup> Earle Gray, *Wildcatters*, p.131-132.

<sup>152</sup> "Alberta Gas May Supply Town in B.C.," *Vancouver Sun* (Vancouver, B.C.), Jun. 3, 1950, p.11.; "Public Notices," *Calgary Herald* (Calgary, Alb.), Jun. 5, 1950, p.21.; "Notice," *Calgary Herald* (Calgary, Alb.), Jun. 6, 1950, p.19.; "Oil Firms To Present Case in Gas Pipeline Hearing," *Edmonton Journal* (Edmonton, Alb.), Jun. 7, 1950, p.7.; "Dawson Creek Gasline Sought," *Whitehorse Star* (Whitehorse, Ykn), Jun. 9, 1950, p.7.; "Hearings Postponed; To Fall On Gas Export Applications," *Edmonton Journal* (Edmonton, Alb.), Jun. 10, 1950, p.2.; "Hearing Tuesday On Gas Application," *Edmonton Journal* (Edmonton, Alb.), Jun. 19, 1950, p.18.; "Gas Export Hearing Set," *Vancouver News-Herald* (Vancouver, B.C.), Jun. 20, 1950, p.1.; "Estimates Gas Line Extension

possessed substantial reserves, residents of other communities in Alberta's Peace River area insisted on being supplied first.<sup>153</sup> Despite such local protests, the Manning government accepted the Conservation Board's recommendation and approved Westcoast's Dawson Creek project on July 13, 1950.<sup>154</sup> However, information regarding the more extensive pipeline proposals was less readily available. As a new set of hearings progressed, these, comparable to the Dinning hearings, transformed into a place where people contested their interpretation of the knowingly incomplete standardized assessment of the province's natural gas supply and demand.

Provincial representatives eagerly seized the opportunity to interpret the limited data available from their perspectives. An article in the *Financial Post* in 1950 voiced the concern of many Albertans stating, "Natural gas - the pearl in Alberta's oyster [...] But the big question has been, can you divide up a pearl, share it with others and still have something worthwhile left for yourself?"<sup>155</sup> British Columbia believed Alberta could benefit from sharing its natural gas resources. Mr. Gordon S. Wismer, Attorney General of British Columbia, appeared before the Alberta Petroleum Board to assert that,

We are and have been, ever since the construction of gas pipelines has been under consideration, strongly supporting the proposal that such a line should be built from Northern Alberta into and through British Columbia and thence, if sufficient gas is available, to the Pacific Northwest States of the United States of America.<sup>156</sup>

Such a route, if followed, would ensure that the exported gas would meet British Columbia's needs before those of the United States. The transported natural gas would add an affordable

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Would Involve 1,880,720," *Edmonton Journal* (Edmonton, Alb.), Jun. 21, 1950, p.1.; "Westcoast Transmission Company Limited," *Province* (Vancouver, B.C.), Jun. 22, 1950, p.26.; "Pipe Line Cost Over 1,800,000," *Calgary Herald* (Calgary, Alb.), Jun. 22, 1950, p.19.

<sup>153</sup> "Pipe Line Cost Over 1,800,000," *Calgary Herald*, p.19.

<sup>154</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.351.

<sup>155</sup> "Natural Gas Alberta Problem Child," *Financial Post* (Toronto, Ont.), Apr. 29, 1950, p.28.

<sup>156</sup> H.A. McLean, "Statement to be made by Mr. H.A. McLean on Behalf of the British Columbia Government," Library and Archive Canada RG99, Vol. 6, File 8.

fuel to B.C.'s energy budget, or as B.C.'s statement remarked, it would "relieve the hardships imposed upon such residents and the operation of industry therein arising out of the high cost of fuel oil and coal transported to such centres."<sup>157</sup> Meanwhile, Westcoast Transmission had uncovered increasingly substantial reserves in the Peace River region near the northern borders of Alberta and B.C. Establishing a pipeline through British Columbia would allow the province to tap into these resources, which would otherwise be uneconomical to develop.<sup>158</sup> The B.C. legislature passed a resolution in support of a pipeline from Alberta through B.C. to highlight the provincial standpoint, "Whereas, the interests of Canada as a whole will best be served if natural gas from the Peace River areas of Alberta and British Columbia is transmitted to its closest market, namely, British Columbia and the Pacific Coast."<sup>159</sup> Motivated by their desire to access Alberta's gas reservoirs, provincial representatives, like those from British Columbia, pressured Alberta to approve the export of natural gas to their respective provinces.

In the fall of 1950, corporations grew notably concerned with the time the Petroleum and Natural Gas Conservation Board devoted to its examinations. Eager to commence construction, these corporations urged the Board to deem the estimated reserves as "sufficient" and acknowledge that, while some form of examination was, of course, required, the authorization of an interprovincial or international route would ultimately fall under the jurisdiction of the Board of Transport Commissioners in Ottawa.<sup>160</sup> A group of solicitors for Western Pipe Lines expressed this belief in August of 1950 to the Conservation Board, "the proper place for a detailed examination of these matters is before the Board of Transport

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<sup>157</sup> Ibid.

<sup>158</sup> Ibid.

<sup>159</sup> Ibid.

<sup>160</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board* (Alberta), 1951, p.5.

Commissioners.”<sup>161</sup> Similarly, the Western Canada Petroleum Association submitted a letter on September 20, 1950,

That the Petroleum and Natural Gas Conservation Board be requested to come to a decision at the earliest possible date as to whether the gas requirements of Alberta and the reserves of the Province are such as to warrant the export of natural gas; and that in order to expedite such decision, they confine their enquiries for the present to these questions only.<sup>162</sup>

The Northwest Natural Gas Company also submitted a memorandum to McKinnon, advocating for joint hearings to expedite the proceedings. Companies thus pressured the Board to adopt the existing standardized assessments of the province’s natural gas picture to accommodate certain perceived time constraints.

The national governments of the United States and Canada, moreover, grew increasingly concerned with the duration of the Board's hearings. They feared the potential consequences of a delayed decision, especially the thought of being left without any natural gas supply or market. On September 16, 1950, McKinnon received a letter from N.E. Tanner, Minister of Mines and Minerals, which included a memorandum from Minister of Trade and Commerce C.D. Howe. In the memorandum, Minister Howe disclosed that the Chief of the International Programme of the United States Munitions Board reported a fuel shortage in the U.S. Pacific Northwest, a region crucial for the U.S. war efforts in Korea.<sup>163</sup> If supplies were not imported from Alberta, the United States would start transporting gas from Texas. Mr. Howe cautioned the Conservation Board that this scenario would likely hinder future natural

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<sup>161</sup> Messrs, Milner, Steer, Dyde, Poirier, Martland & Layton to The Petroleum and Natural Gas Conservation Board, August 29, 1950.

<sup>162</sup> Western Canada Petroleum Association to The Petroleum and Natural Gas Conservation Board, September 20, 1950.

<sup>163</sup> Honourable N.E. Tanner, Minister of Mines and Minerals to The Petroleum and Natural Gas Conservation Board, September 16, 1950.

gas developments in Alberta, "I see little prospect of a line being built from Alberta to the Canadian Northwest unless that line can be extended from Vancouver southward to serve the Pacific Coast cities."<sup>164</sup> As a result, Alberta's Minister of Mines and Minerals, N.E. Tanner, urged McKinnon and his colleagues on the Board to expedite the proceedings. Historian David H. Breen uncovered a response from Tanner to Howe, in which he informed him that the Conservation Board would soon approve a pipeline, "Though the Conservation Board has not completed its hearings, I might say that the Government is satisfied that the present proven reserves are sufficient to meet Alberta's requirements."<sup>165</sup> Howe responded that Ottawa's Board of Transport Commissioners would swiftly approve that application.<sup>166</sup> In another comparable back-and-forth, the Canadian ambassador in Washington D.C. spoke of the growing need for gas in Montana and the Pacific Coast for the regions' war efforts and mounting pressure from U.S. officials to expedite the Alberta proceedings. Mr. Howe relayed this information to Premier Manning, who, in response, stated,

It is possible that the report might be modified if we are officially advised by the Government of Canada that natural gas is urgently needed in the interests of national defence in either Montana or the Pacific Northwest, or both.<sup>167</sup>

Facing such behind-the-scenes pressure, the Conservation Board agreed to hold joint hearings starting October 30, 1950, to expedite their work.<sup>168</sup>

In its final report published on March 29, 1952, the Conservation Board provided standardized estimations of Alberta's natural gas supply and demand but noted their flawed

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<sup>164</sup> Ibid. David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.353.

<sup>165</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.355.

<sup>166</sup> Ibid., p.355.

<sup>167</sup> Ibid., p.355–356.

<sup>168</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Interim Report With Respect To Applications Now Before The Board* (Alberta), 1951, p.15.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.348-350.; "Fourth Firm Seeks to Export Alberta Gas," *Calgary Herald*, p.13.; "Gas Export Hearings Resumed," *Province*, p.10.; "Fourth Application Export Natural Gas," *Lethbridge Herald*, p.3.

nature. The report stated that the province's established reserves of natural gas as of December 31, 1951, were estimated at 6.8 trillion cubic feet.<sup>169</sup> However, the Board acknowledged the estimates' inherent uncertainties,

In its review of the new and revised estimates, the Board was not surprised to find wide differences of opinion as to the reserves of individual fields since estimates of partially developed reserves are contingent upon a number of judgment factors (for acreage, thickness, etc.) often differently assessed by competent persons.<sup>170</sup>

The report determined that Alberta's actual natural gas requirements for the 30-year period from January 1, 1952, to December 31, 1981, would likely be closer to 4.2 trillion cubic feet. However, here too, the Board emphasized that this number was merely an estimation that would have to be revised as circumstances unfolded.<sup>171</sup> The report relied on Mr. H. Harries, a Canadian Delhi Oil Ltd and Trans-Canada Pipe Lines Limited consultant, and Mr. F.A. Brownie of Canadian Western Natural Gas Company Ltd. and Northwestern Utilities Ltd., to establish the province's demand. Mr. Harries used census divisions to divide the Province into relatively homogenous regions whose population and resource demand could be compared. He categorized these regions into rural farm populations, rural non-farm populations, and urban areas and assessed their respective gas needs based on domestic and commercial requirements, rural electrification, and industrial needs.<sup>172</sup> Mr. Brownie submitted estimates for 1950, 1960, 1970, and 1980 that adhered to the same three domestic, commercial, and industrial gas demand categories.<sup>173</sup> Westcoast Transmission Company Ltd. submitted an economic survey with two reports: one prepared by Dr. Nathanael Engle, a consulting

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<sup>169</sup> Canada. The Province of Alberta. The Petroleum And Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board For Permission To Remove Gas Or Cause It To Be Removed From The Province Under The Provisions Of The Gas Resource Preservation Act* (Alberta), March 29, 1952, p.6.

<sup>170</sup> Ibid., p.10–11.

<sup>171</sup> Ibid., p.7.

<sup>172</sup> Ibid., p.31–33.

<sup>173</sup> Ibid., p. 31, 34.

economist from the University of Washington, which analyzed the overall economic situation, and another by Link & Nauss Ltd., consulting geologists, which focused on various reserves. Link & Nauss estimated industrial requirements to range between 743.9 billion cubic feet and 1,022.8 billion cubic feet, with an intermediate estimate of 868.4 billion cubic feet. This estimate was approximately 566 billion cubic feet lower than the Conservation Board's estimate. The geologists explained that they struggled to quantify future industrial demand, citing the unpredictability of industrial growth.<sup>174</sup> Westcoast filed this report entitled "Natural Gas and the Economy of Alberta and British Columbia," but it did not make it available for cross-examination.<sup>175</sup> In its final report, the Conservation Board thus presented an overview of Alberta's natural gas supply and demand; however, it simultaneously acknowledged the inherent limitations and flaws associated with these standardizations.

Comparable to the Dinning Commission, the Conservation Board drew conclusions from the aggregate, yet knowingly incomplete, standardized representations of Alberta's natural gas demand and supply picture. It ruled that only Westcoast could export natural gas from the province. The Board relied heavily on the political perspectives of various stakeholders for its judgment. As Breen states, the Board "In the competition of interests, it determined where the balance would rest."<sup>176</sup> From the total established reserves, the Board decided that only the province's northern region contained a surplus amount of gas. Specifically, it deemed 300 cubic feet out of 500 billion as a surplus to the province's requirements from 1952 to 1981. These rested in the fields of Pouce Coupe, Tangent, and

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<sup>174</sup> Ibid., p. 34–35.

<sup>175</sup> Ibid., p. 31, 35.

<sup>176</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.538.



Whitelaw.<sup>177</sup> Although this contradicted Westcoast's estimates (see Figure 3), the Board's calculations were sufficient to justify the company's export permit.<sup>178</sup>

Field	Disposable Gas Reserves—Billions of cubic feet	
	W.C.T.	Board, Dec. 31, 1952
Belloy -----	72.0	One well only—not estimated
Pouce Coupe -----	113.0	60.0
Whitelaw -----	337.0	316.0
Tangent -----	500.0	131.0
Spirit River (Dunvegan-Hamlin Creek) -----	125.0	One well only—not estimated*
Little Smoky -----	5.8	One well only—not estimated
Valley View -----	13.5	13.6
Normandville -----	25.8	3.5
Total -----	1192.1	524.1

A follow-up well recently completed suggested field reserves of some 70 billion cubic feet.

Figure 3: Disposable Gas Reserves: estimates of Westcoast ("W.C.T.") versus those of the Alberta Petroleum and Natural Gas Conservation Board ("Board").

Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, Report With Respect To Applications Now Before The Board, March 29, 1952, P.10.

What Scott would call “legible” abstractions had shaped the Board’s outcome, but political and economic interpretations of Alberta’s estimated natural gas picture played a big, if not more substantial, role. The Board acknowledged this throughout its final report and concluded that natural gas in the Peace River area did not lend itself well to any other function than export,

The Board has considered the representations [...] and recognized the fact, among others, that the Peace River area is remote from other settled areas in the Province and does not lend itself readily to an integrated province-wide gathering and distributing scheme. Accordingly, the Board is of the opinion that it would be to the advantage of the Peace River area, and without danger to the protection of other areas of the

<sup>177</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board*, March 29, 1952, p.7.

<sup>178</sup> *Ibid.*, p. 10.

Province, to permit the applicants to remove gas from the Province subject to stringent conditions for the protection of the Province and the residents in the Area.<sup>179</sup>

Granting Westcoast permission to extract gas from this region would not jeopardize the natural gas supply in other areas of the province. There is an inherently colonial logic to this decision. For southerners, the north was "remote" and therefore its resources were best used elsewhere.<sup>180</sup> On June 16, 1952, the Alberta Petroleum and Natural Gas Conservation Board granted Westcoast Transmission an export permit.<sup>181</sup>

### **1.5. The Board of Transport Commissioners & The U.S. Federal Power Commission**

Following the Alberta hearings, Westcoast sought approval from the two remaining entities: the Federal Board of Transport Commissioners and the U.S. Federal Power Commission.<sup>182</sup>

Approval from the former was required because the pipeline would traverse provincial boundaries and transport natural gas across Canada's borders. Westcoast ultimately obtained approval from the Board of Transport Commissioners relatively quickly.<sup>183</sup> However, Westcoast also needed approval from the FPC to import natural gas into the United States, which required more substantial efforts.

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<sup>179</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board* (Alberta), March 29, 1952, p. 11,

<sup>180</sup> Liza Piper makes similar observations in her work on fisheries. She argues that distant bureaucrats increasingly controlled northern industrial fisheries, undermining the access of local fishing companies and residents to this resource. Elizabeth Piper, *Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2010): p.220.

<sup>181</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.345, 351, 381. The permit was conditional. Westcoast would have to construct its pipeline and start the removal of gas before December 31, 1954. Alberta would ultimately have to postpone this date as Westcoast required more time to gather approval from the U.S. Federal Power Commission. David H. Breen, p.381-382.

<sup>182</sup> "Alberta Gas Verdict Involves BC Pipeline," *Province* (Vancouver, B.C.), Apr. 2, 1952, p.19.; "New Boom Ahead For B.C. Industry," *Vancouver Sun* (Vancouver, B.C.), Apr. 3, 1952, p.2.

<sup>183</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.386.

At the FPC, the Pacific Northwest Pipeline, headed by Ray Fish, president of Fish Engineering Corporation from Houston, Texas, emerged as Westcoast's primary competitor. Mr. Fish had recently completed the Transcontinental Pipeline System from Texas to New York City, and he now sought to supply the Pacific Northwest with gas from the San Juan Basin, an area covering sections of New Mexico, Arizona, Colorado, and Utah. Adding to Westcoast's challenges, Henry Gellert, President of the Seattle Gas Company, positioned himself as a vocal ally of Fish's proposal.<sup>184</sup> Unfortunately for Westcoast, partly because of opposition from Fish and Gellert, the Federal Power Commission's decision took half a decade.<sup>185</sup> The FPC would hear submissions from Westcoast Transmission between June 1952 and June 1954 but ultimately refused to grant Westcoast Transmission Company's American subsidiary, Westcoast Transmission Inc., an import permit for Canadian gas.<sup>186</sup> It was not until November 25, 1955, that Westcoast, in partnership with its previous opponent, Pacific Northwest, received FPC approval for a modified pipeline proposal.<sup>187</sup> Comparable to the Dinning Commission and Alberta Petroleum and Natural Gas Conservation Board hearing, what Scott would call "legible" standardizations of subterranean bodies played a fundamental role in the decision-making process. However, ultimately, especially during FPC discussions, the political and economic meanings attached to these inherently incomplete and flawed simplifications proved the deciding factor.

The brief hearings before the Canadian Board of Transport Commissioners re-enforce the significance of "legible," satisfactory, yet ever-changing quantifications of natural gas for

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<sup>184</sup> "Gas Line Decision in Six Months," *Vancouver Sun* (Vancouver, B.C.), Mar. 2, 1953, p.19.

<sup>185</sup> E. J. Hanson, "Natural Gas in Canadian-American Relations," *International Journal* (Toronto) Vol. 12, No. 3 (1957): p.193.

<sup>186</sup> *Ibid.*, p.191.; "Westcoast Files New Gas Plans," *Province* (Vancouver, B.C.), Mar. 22, 1952, p.21.; "New Proposal By U.S. Firm Features Alberta, B.C. Gas," *Edmonton Journal* (Edmonton, Alb.), Mar. 22, 1952, p.22.; "Peace River Gas Line Killed by U.S. Decision," *Times Colonist* (Victoria, B.C.), Jun. 18, 1954, p.1.; "FPC Ignores Canada's Natural Gas Texas Firm to Serve Pacific Area," *Star-Phoenix* (Saskatoon, Sask.), Jun. 19, 1954, p.2.

<sup>187</sup> Earle Gray, *Wildcatters*, p. 181.

Westcoast's application. In May 1949, roughly at the same time as it filed its application with the Alberta Petroleum and Natural Gas Conservation Board, Westcoast sought permission from the Federal Board of Transport Commissioners in Ottawa to construct its \$100,000,000 natural gas pipeline from the Peace region to Vancouver and export gas across the U.S. border.<sup>188</sup> Seemingly wishing to rely on the work of Alberta, the Board of Transport Commissioners largely awaited the conclusions of the Alberta Petroleum and Natural Gas Conservation Board before making a formal decision on Westcoast's application. Ultimately, this decision came after the Board's hearings, held between June 11 and 13, 1952.<sup>189</sup> Following this brief two-day hearing, the Board in Ottawa ruled in favour of a pipeline from the Peace River but subjected Westcoast to one additional study of the Peace River gas reserves.<sup>190</sup> They commissioned G.S. Hume and Alex Ignatieff to conduct the inquiry, two now well-established figures in these pipeline debates. Hume was the General of Scientific Surveys in the Department of Mines and Technical Surveys then, and Ignatieff was a senior engineer in that same department.<sup>191</sup> Within three months, their findings concluded that the

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<sup>188</sup> "Westcoast Transmission Company Limited," *Vancouver Sun* (Vancouver, B.C.), May 16, 1949, p.13.; "Westcoast Transmission Company Limited," *Province* (Vancouver, B.C.), May 16, 1949, p.28.; "Westcoast Transmission Company Limited," *Calgary Herald* (Calgary, Alb.), May 16, 1949, p.18.; "Westcoast Transmission Company Limited," *Province* (Vancouver, B.C.), May 17, 1949, p.3.; "Westcoast Transmission Company Limited," *Vancouver Sun* (Vancouver, B.C.), May 17, 1949, p.32.; "Westcoast Transmission Company Limited," *Edmonton Journal* (Edmonton, Alb.), May 17, 1949, p.24.; "Westcoast Transmission Company Limited," *Vancouver Sun* (Vancouver, B.C.), May 18, 1949, p.51.; "Westcoast Transmission Company Limited," *Calgary Herald* (Calgary, Alb.), May 18, 1949, p.24.; "Westcoast Transmission Company Limited," *Vancouver Sun* (Vancouver, B.C.), May 19, 1949, p.39.

<sup>189</sup> "Gas Pipe Line Hearing Delayed," *Calgary Herald* (Calgary, Alb.), Sep. 22, 1949, p.29.; "Board Turns Down One Bid For Pipeline From Alberta," *Ottawa Citizen* (Ottawa, ON), Sep. 22, 1949, p.12.; "Turn Down Pipe Line Alternative Studied," *Star-Phoenix* (Saskatoon, Sask.), Sep. 22, 1949, p.1.; "Coast Pipeline Plans Stalled," *Leader-Post* (Regina, Sask.), Sep. 22, 1949, p.21.; "Alternative Application Given Board," *Windsor Star* (Windsor, Ont.), Sep. 22, 1949, p.43.; Earle Gray, *Wildcatters*, p.113-116.

<sup>190</sup> Earle Gray, *Wildcatters*, p.141.; "Hearing On BC-Alberta Pipeline Set Wednesday," *Vancouver News-Herald* (Vancouver, B.C.), Jun. 9, 1952, p.13.; "Conditional Approval For Pipeline," *Times Colonist* (Victoria, B.C.), Jun. 14, 1952, p.1.; "Ottawa To Investigate Alberta Gas Reserves," *Edmonton Journal* (Edmonton, Alb.), Jun. 14, 1952, p.1.; "Survey Of Reserves Will Be Undertaken," *Calgary Herald* (Calgary, Alb.), Jun. 14, 1952, p.1.; "Board 'Optimistic' On Peace Gas Field," *Province* (Vancouver, B.C.), Jun. 14, 1952, p.40.

<sup>191</sup> "Hume Surveys Gas Reserves in Peace," *Province* (Vancouver, B.C.), Jul. 14, 1952, p.29.; "Won't Visit North In Survey Of Gas," *Edmonton Journal* (Edmonton, Alb.), Jul. 14, 1952, p.13.; "Probe Finished Of

Peace River region held approximately 2.5 trillion cubic feet of natural gas, 1.6 trillion cubic feet of which rested in British Columbia. Ironically, it identified Fort St. John in B.C. as the most substantial reserve.<sup>192</sup> Despite Westcoast Transmission's three-year effort to obtain approval from Alberta's regulatory authorities, ongoing explorations thus revealed that British Columbia would become Westcoast's primary gas supplier.<sup>193</sup> Upon Hume and Ignatieff's conclusion, the Board of Transport Commissioners granted a certificate for the construction of the Westcoast pipeline on October 10, 1952. Subsequently, C.D. Howe, the Minister of Trade, issued the required permit for the exportation of natural gas to the U.S.<sup>194</sup> These proceedings highlight the substantial reliance of the Board of Transport Commissioners on establishing quantifications of natural gas reserves in the Peace River area.

Lastly, Westcoast Transmission sought approval from the U.S. Federal Power Commission. Economic and political interpretations of natural gas demand and supply estimates would play a more prominent role during these hearings than they had done in Ottawa. Throughout the FPC's proceedings, Westcoast Transmission addressed the political and economic concerns of American companies and politicians who were hesitant to rely on a foreign company for the nation's energy supply. The Alberta Petroleum and Natural Gas Conservation Board and the Ottawa Board of Transport Commissioners had expressed a similar fear and attached subclauses to Westcoast's permits to protect their interests. These would now exacerbate American concerns.

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Westcoast Gas Reserves," *Province* (Vancouver, B.C.), Jul. 23, 1952, p.19.; "To Survey Gas Reserves," *Quesnel Cariboo Observer* (Quesnel, B.C.), Jul. 24, 1952, p.A12.

<sup>192</sup> Canada. The Board of Transport Commissioners for Canada, *Gas Reserves*, Report Submitted on Behalf of Westcoast Transmission Company Limited by Link & Nauss Ltd. May 31, 1952, p.I, 22. Library and Archive Canada RG99, Vol. 6, File 10.; Earle Gray, *Wildcatters*, p.141.

<sup>193</sup> *Ibid.*, p.141

<sup>194</sup> *Ibid.*; "Decision Seen As Step Forward For Oil Industry," *Calgary Herald*, p.1.; "Peace River Reserves Are Ruled Sufficient," *Edmonton Journal*, p.1.; "Board Approves Gas Pipeline To Vancouver," *Times Colonist*, p.1.; "Gas Pipeline Authorized," p.1.; "One Big Hurdle Is Past," *Quesnel Cariboo Observer*, p.A2.

Initially, Canadian attempts to retain significant control over its natural gas exports complicated Westcoast's FPC application. At early FPC hearings, it became apparent that Alberta and the Canadian federal government had enacted legislation that made the FPC doubt Westcoast's continuity of supply. Alberta decided to reassess its provincial natural gas picture every five years and adjust the amount of gas it awarded to Westcoast accordingly. In addition, Alberta's Conservation Board could divert any natural gas transportation across provincial borders in case of an emergency. On a national level, the Electricity and Fluid Exportation Act obligated Ottawa to review Westcoast's export license annually.<sup>195</sup> Premier Manning refused to adjust Alberta's legislation, even after Frank McMahon pressed him.<sup>196</sup> The Canadian federal government, however, proved willing to amend the Electricity and Fluid Exploration Act in April 1953. Frank McMahon and C.D. Howe, hoped this would address concerns raised at the FPC proceedings.<sup>197</sup>

However, such a scenario did not materialize. Lengthy debates ensued that primarily compared the economic and political implications of natural gas transportation from either the San Juan Basin or the Peace River region. American states disagreed on whether the Pacific Northwest should have access to, what they labelled, the U.S.' "economic heritage." At the time, the Pacific Northwest constituted the only region in the United States without natural gas service.<sup>198</sup> Henry Gellert, President of the Seattle Gas Company, the largest gas company in the state of Washington and one of the primary prospective users of any new gas system,

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<sup>195</sup> "Natural Gas Firms Gang Up," *Province* (Vancouver, B.C.), Mar. 16, 1953, p.17.; "Gas License Opposed at FPC Hearings," *Vancouver Sun* (Vancouver, B.C.), Mar. 4, 1953, p.19.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.387.

<sup>196</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.387.

<sup>197</sup> *Ibid.*, p.388.

<sup>198</sup> N.A. *Memorandum in Respect to the Proposal of Westcoast Transmission Company Limited to Transmit Natural Gas From Natural Gas Fields Situated in the Peace River Areas of Northeastern B.C. and Northeastern Albert to Southern B.C. and the States of Washington, Oregon, and Idaho*, Ca. 1954. UBCSC, WEI, Box. 6, File 8.

was especially vocal in this realm.<sup>199</sup> Gellert remarked in a letter to Pacific Northwest Natural Gas,

Let no one forget that this is the only area of the United States which is not dipping into the national heritage of natural gas. It is unthinkable and inconceivable that the Pacific Northwest, an important political unit of the United States, will permit itself to be deprived of a portion of that birthright.<sup>200</sup>

During the FPC debates, Mr. Gellert directed his frustration, especially at California, which opposed any plan that connected the San Juan region with the Pacific Northwest. California already received gas through the El Paso Natural Gas line from the San Juan area, and they did not believe enough gas existed in the reservoirs to supply another market.<sup>201</sup> At the Federal Power Commission hearings, Charles Shannon acted as an intervenor on behalf of Southern California Gas Company, Southern Counties Gas Company of California, and Pacific Gas and Electric Company to block any movement of Four Corners gas to the Pacific Northwest. Governor Edwin L. Mechem of New Mexico similarly worried that New Mexico would miss out if Pacific Northwest piped gas to the Northwest from his state, "We are interested in seeing that there are ample reserves to take care of the New Mexico requirements."<sup>202</sup> While states disagreed over who should have access to natural gas fields in the southern states, they strongly preferred American natural gas sources. Various American politicians feared Canadians would have too much control over American economies if the FPC approved Westcoast's project.

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<sup>199</sup> Henry Gellert, President of Seattle Gas Company, "Natural gas for the Pacific Northwest" (Statement, September 1952), UBCSC, WEI, Box 7, File 7.; "Mayor, Aldermen on Pipeline Mission," *Vancouver Sun* (Vancouver, B.C.), Oct. 21, 1952, p.3.

<sup>200</sup> Henry Gellert, President Seattle Gas Company. to Mr. Fulton W. Copp, Vice President Northwest Natural Gas Company, June 9, 1952, UBCSC, WEI, Box 7, File 7.

<sup>201</sup> "Breakdown of Statements made by Henry Gellert at Annual Meeting," July 8, 1952, p.1. UBCSC, WEI, Box. 7, File 7.

<sup>202</sup> W.C. Mainwaring, Vice President and Assistant to the President, B.C. Electric Company Limited, "Canadian Natural Gas Supply for the Pacific Northwest" (Address, Spanish Ballroom Olympic Hotel Seattle, Wash., Sept. 1, 1953): p.5. UBCSC, WEI, Box 4, File 14.

Some US politicians worried that the U.S. market could be ignored or, arguably worse, held captive by Canadian economic interests. Mr. Gellert, for instance, argued that Canadians overlooked American concerns, "it would be suicidal for us to accept the position of a "captive" market to our Canadian friends."<sup>203</sup> Prioritizing the supply of natural gas to Vancouver, Mr. Gellert argued that Canadians would hold the American market captive. He based this argument on statements from Westcoast supporters and partners. For instance, A.E. Grauer, President of B.C. Electric, one of Westcoast's distributing companies in Canada, remarked at the Washington State Banking Association in 1953, "The market in British Columbia is not in itself sufficient to support a pipeline from Alberta,".<sup>204</sup> G.L. McMahon (brother of Frank McMahon) of Westcoast confirmed Mr. Gellert's fears when he replied, "No sir" to the question, "It is not financially feasible to carry it to Vancouver alone, is it?"<sup>205</sup> Outside the hearing rooms, Gellert continued his campaign to discredit Westcoast's ability to guarantee the U.S. supply. On the radio, television, and in newspapers, Gellert proclaimed,

The American market – our Pacific Northwest – would dangle at the end of the Canadian pipeline after all Canadian needs were satisfied... We, an American utility, would actually become an economic vassal of a foreign power.<sup>206</sup>

In a period prior to the US's increasing dependence on foreign sources of fossil fuels, these kinds of concerns over energy independence were more common.<sup>207</sup> Governor Thornton of

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<sup>203</sup> A.E. Grauer to Mr. Chas. R. Hetherington, Vice-President Westcoast Transmission Company Limited, June 30<sup>th</sup>, 1953.; Henry Gellert, President of Seattle Gas Company, "Natural gas for the Pacific Northwest" (Statement, September 1952), UBCSC, WEI, Box 7, File 7.

<sup>204</sup> Henry Gellert, President Seattle Gas Company. to Mr. Fulton W. Copp.

<sup>205</sup> Ibid.

<sup>206</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.388.; Henry Gellert, "Third Broadcast on Natural Gas," Radio Stations KJR & Kiro, Seattle, WA: October 9, 1952, at 9:45 p.M. UBCSC, WEI, Box 7, File 7.

<sup>207</sup> During the 1973 Energy Crisis, it became evident that the U.S.'s import restrictions and rising domestic energy demand increased the national energy shortage. As a result, during the 1970s, the U.S. would end import quotas. Nowadays, the U.S. relies on imports for a substantial (but declining) amount of its energy needs. For more information, see: Meg Jacobs, *Panic at the Pump: The Energy Crisis and the Transformation of American Politics in the 1970s* (New York: Hill and Wang, a division of Farrar, Straus and Giroux, 2016): p.39.; "Oil and Petroleum Products Explained," *U.S. Energy Information Administration*, Accessed September 1, 2023,



Colorado, like Mr. Gellert, favoured a gas pipeline that would be "regulated by U.S. agencies, not by Canada."<sup>208</sup> Senator Lester Hunt of Wyoming attempted to take proceedings one step further. However, he failed to persuade the U.S. Senate to amend the Natural Gas Act so that any import or export of natural gas could be declared "inconsistent with the public interest" if the FPC thought it would "result in economic dislocation, unemployment, or injury to competing fuel industry of the U.S."<sup>209</sup> Unlike oil or coal, trains or trucks could not transport natural gas via various routes in barrels or carts. Instead, gas users were at the mercy of a fixed pipeline system, much to American stakeholders' distaste. Natural gas, in this way, transformed from a "mere" fuel source into a politically charged entity.

Fearing Canadian control over American energy supply, some American stakeholders argued that the FPC should only approve the import of Canadian gas if Canada agreed to a new international trade agreement. Canadian politicians sought to counter such statements by drawing on the two nations' long history of international cooperation. Gellert pressed,

in case we get gas from a foreign country like Canada, there shall be a treaty between the two nations guaranteeing to us and to our customers that the gas will cross the border without interruption and without a change in price excepting by permission of the Federal Power Commission of the United States. Otherwise, we would, of course, be at the mercy of foreign laws and regulatory bodies.<sup>210</sup>

He would repeat such sentiments in radio broadcasts.<sup>211</sup> In an attempt to calm such fears, Canadian interests argued that B.C. Electric had been exporting electricity for years to Washington, a new oil line was being completed from Edmonton to that same state, and the

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<https://www.eia.gov/energyexplained/oil-and-petroleum-products/imports-and-exports.php#:~:text=U.S.%20petroleum%20imports%20rose%20sharply,of%20U.S.%20crude%20oil%20import>

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<sup>208</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.389.

<sup>209</sup> Ibid. p.451.

<sup>210</sup> Henry Gellert, President of Seattle Gas Company, "Natural gas for the Pacific Northwest" (Statement, September 1952).

<sup>211</sup> Henry Gellert, "Third Broadcast on Natural Gas."

U.S. was a big importer of nickel, asbestos, uranium and other resources from Canada.<sup>212</sup>

Charles Geuffroy of Portland Gas & Coke Company, a Westcoast supporter, remarked, “Are we economic vassals of Canada because we’re dependent upon that thriving young nation for 90% of our nickel, 75% of our wood pulp, and 80% of our newsprint...?”<sup>213</sup> America's pursuit of a treaty to diminish Canadian control over its energy market persisted until the Free Trade Agreement of 1988.<sup>214</sup> Westcoast and its allies posited the company's plans as a natural extension of the long history of cooperation between the two countries to counter some of the American political-economic concerns.

Simultaneously, Westcoast supporters placed the pipeline in the broader context of the Cold War. They argued that Canadian gas would bolster America’s defence position as the Soviet Union threatened the country and its allies. On March 13, 1953 in the House of Commons, C.D. Howe remarked that Canada merely sought to enhance the energy security of the U.S. Pacific Northwest, something the Joint Industrial Mobilization Committee of the United States and Canada had been pressing the Canadian members of the Committee to do.<sup>215</sup> In the context of the Cold War, the international bonds that Westcoast's project offered would strengthen America’s defence position, something various American officials acknowledged. Among them was Henry H. Fowler, then U.S. Director of Defense Mobilization. In a December 5, 1952, letter to the Hon. Thomas C. Buchanan, Chairman of the FPC, Fowler recalls that the Munitions Board, which preoccupied itself with the production of war materials, had in early 1952 already expressed to the Office of Defense Mobilization its long-existed concern over the dependency of the Pacific Northwest on fuel

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<sup>212</sup> W.C. Mainwaring, Vice President and Assistant to the President, B.C. Electric Company Limited, “Canadian Natural Gas Supply for the Pacific Northwest,” Sept. 1, 1953, p.5.

<sup>213</sup> David H. Breen, *Alberta’s Petroleum Industry and the Conservation Board*, p.388.

<sup>214</sup> *Ibid.*, p.390.

<sup>215</sup> W.C. Mainwaring, Vice President and Assistant to the President, B.C. Electric Company Limited, “Canadian Natural Gas Supply for the Pacific Northwest,” Sept. 1, 1953, p.5.

shipped in by, easy-to-target, tankers. Fowler states that the Munitions Board had concluded that "the provisions of natural gas available in Canada to the Pacific Northwest would meet an existing economic need and would be strategically desirable in the event of hostilities."<sup>216</sup> The American Secretary of the Interior similarly highlighted that the Pacific Northwest was the only U.S. region without a natural gas service. The construction of such a service would help defence efforts in that region. He said, "The construction of an adequate natural gas pipeline and certain other steps will broaden the mobilization base of the regional defence industries."<sup>217</sup> The U.S. also deemed natural gas a good backup fuel if the hydroelectric power grid faulted in the Pacific Northwest region. A report from the Department of the Interior expressed comparable sentiments, arguing that "the danger of hardships on householders and workers of defence industries, in wartime, in the event of interruption of fuel supplies would be considerably reduced."<sup>218</sup> Canadian natural gas was thus viewed through a Cold War national security lens as an asset.

Meanwhile, serious doubts were cast over the sufficiency of the San Juan region's gas supply. Governor Edwin L. Mechem of New Mexico, for instance, during a Governor's Conference in Seattle in the early 1950s, remarked, "The Pacific Northwest Pipeline Corporation has never established the reserve picture to our satisfaction."<sup>219</sup> Dr. Eagle, Director of the Bureau of Business Research at University of Washington, in a 1953 report, expressed similar concern about the illegibility of the San Juan reserves, especially when compared to the Peace River region, "On the basis of actual drilling and official evaluation the Peace River reserves are ample. Scientific evidence on the San Juan fields is not available

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<sup>216</sup> N.A. *Memorandum in Respect to the Proposal of Westcoast Transmission Company Limited* Ca. 1954.

<sup>217</sup> Ibid.

<sup>218</sup> Ibid.

<sup>219</sup> W.C. Mainwaring, Vice President and Assistant to the President, B.C. Electric Company Limited, "Canadian Natural Gas Supply for the Pacific Northwest," Sept. 1, 1953, p.5.

from official sources.”<sup>220</sup> In January 1954, the staff of the FPC filed an exhibit on the quantity of natural gas in the San Juan basin. In their study, the Pacific Northwest Pipeline Corp. would run out of gas following a mere two years of operation. Even if Pacific Northwest could convince the State of New Mexico to change the standardized practice of drilling one well per 320 acres to one per 160 acres, the company would run out of gas within six years.<sup>221</sup> The FPC exhibit moreover explained that the nature of the San Juan Basin complicated their calculations, “In San Juan Basin there is not a single sand layer that can be traced across the field in any direction.”<sup>222</sup> Within these layers, low porosity and permeability and shales, volcanic ash, and coal beds interfered with Pacific Northwest's attempts to quantify the natural gas reservoirs. Pacific Northwest would have to drill 1,940 wells in addition to any dry holes to uncover enough natural gas. Each well, Northwest stated, would cost them roughly \$90,000. Phillips Petroleum, however, filed an exhibit in which it calculated that the wells would, more likely, cost, on average, \$178,000. In response, distributing companies like Portland Gas & Coke said they could not market such gas economically. It led FPC Commissioner Draper to question whether the New Mexico Oil Conservation Commission had “geologists on their Commission or just cowboys” and whether “if they ever came to Washington, they would arrive by train or on horseback.”<sup>223</sup> In early 1954, the standardized systems of estimating natural gas reserves struggled to provide a conclusive answer as to whether sufficient natural gas existed in the San Juan basin to warrant an American pipeline to the Pacific Northwest.

Westcoast, in contrast, argued that the Albertan Peace reserves it sought to tap were too remote to compete with any other markets. The Stanford Research Institute's analysis of

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<sup>220</sup> Ibid.

<sup>221</sup> “Hopes For Peace River Gas Export to U.S. Get Uplift,” *National Post* (Toronto, Ont.), Jan. 23, 1954, p.5.

<sup>222</sup> Ibid.

<sup>223</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.389.

the Peace River iterated that there were ample supplies in the Peace River for Westcoast's plan, "Adequate supplies of gas for the Pacific Northwest exist in northern Alberta and British Columbia."<sup>224</sup> Westcoast similarly argued at its annual meeting that it would draw from non-competitive gas fields in a remote region, "this is strictly a non-competitive area. Unlike the San Juan Basin, where California and other districts went to bid for the gas and will fight very hard to get it, the only outlet is through Westcoast Transmission's line."<sup>225</sup> Such statements further illustrate the colonial mindset that northern resources were "remote" from white-settler communities and thus best transported to southern markets. Westcoast lawyer D.P. McDonald drafted a memorandum in which he established the remoteness of Westcoast's reserves as a great advantage, "The Pacific Northwest markets, therefore, are in the position different than any other market area in North America, of having a major gas producing area linked directly to them, the reserves of which are not subject to withdrawal by other economic gas pipelines."<sup>226</sup> It reiterated the conclusions of the Alberta Petroleum and Natural Gas Conservation Board, which in 1951 had deemed the Peace River reserves suitable for export mainly because they were "remote."<sup>227</sup> Thus, Westcoast used the distance of its reserves from potential gas markets to market its project as a secure supply.

Westcoast's opposition, however, argued that this "remoteness" made the company's pipeline route economically and technically unfeasible. Henry Gellert, for instance, expressed concerns about natural occurrences such as snow and rockslides that could disrupt the gas supply,

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<sup>224</sup> W.C. Mainwaring, Vice President and Assistant to the President, B.C. Electric Company Limited, "Canadian Natural Gas Supply for the Pacific Northwest," p.5.

<sup>225</sup> "Breakdown of Statements made by Henry Gellert at Annual Meeting," July 8, 1952, p.2.

<sup>226</sup> N.A. *Memorandum in Respect to the Proposal of Westcoast Transmission Company Limited* Ca. 1954.

<sup>227</sup> Canada. The Province of Alberta. The Petroleum and Natural Gas Conservation Board, *Report With Respect To Applications Now Before The Board* (Alberta), March 29, 1952, p. 11,

a route difficult to access, subject to dangerous snow and rock slides and therefore to frequent and difficult-to-repair breakages, thus putting us in danger of frequent and long-sustained outages of gas supply. There are many places where there are no roads within 30 miles of the proposed pipeline. [...] In addition, a snowfall of 100 inches during the winter is not unusual in Coquihalla Pass. Two or three years ago, the snow fell to a depth of 200 inches: a snowslide buried a train, overturned a car, filled the valley and climbed part-way up the opposite mountain. [...] Not only that, but part of the proposed route goes through land submerged under water for a considerable portion of the year.<sup>228</sup>

Ford, Bacon & Davis, Inc., a pipeline engineering firm, countered these arguments, reporting that the route was relatively easy, with only about 30 miles of rock work required for the entire pipeline stretch. They also pointed out that another pipeline project, the Trans-Mountain Oil Line Company's line from Edmonton to Vancouver, was crossing the section Gellert labelled "dangerous."<sup>229</sup> They disagreed with Gellert's statement that parts would be "submerged under water." Flood mitigation measures, including a dam on the upper Fraser River, had been implemented in the lower Fraser Valley to prevent such occurrences. In general, the lower Fraser Valley experienced less flooding than the lower Columbia region near Portland, but Gellert's report omitted that section.<sup>230</sup> Lastly, Gellert alleged that the Westcoast line would be longer than the alternatives suggested, which Westcoast contested. The company emphasized that the Westcoast line would be approximately 960 miles instead of the Pacific Northwest line's 1600 miles. The proximity of Westcoast's gas reservoirs to "settled" areas thus became politicized during the Federal Power Commission proceedings,

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<sup>228</sup> "Breakdown of Statements made by Henry Gellert at Annual Meeting," July 8, 1952, p.4.

<sup>229</sup> Ibid.

<sup>230</sup> Ibid.

with different parties interpreting it according to their own national political and economic interests.

On June 18, 1954, the Federal Power Commission (FPC) concluded that the Pacific Northwest Pipeline Corporation could deliver natural gas to the U.S. Pacific Northwest. The FPC favoured it because the pipeline would benefit the Pacific Northwest region and the areas it crossed. It would furthermore encourage the exploitation and development of gas reservoirs in Colorado, Utah, and Wyoming states the project would cross. The FPC thus primarily argued that the security of a gas supply could not be guaranteed if,

the sole source of essential natural gas were through importation from a foreign country without some intergovernmental agreement assuring the continued adequacy of the supply. Otherwise, all control over the production, allocation, and transportation to our border of such natural gas would be in the hands of agencies of foreign governments, whose primary interest would, of necessity, always be in the needs and advantages of their own people and whose judgements and actions would be essentially dependent upon the interests of American consumers.<sup>231</sup>

Convinced of its narratives yet surprised, Westcoast continued to pursue its pipeline.<sup>232</sup> In brief, Westcoast argued that the FPC had based its decisions on political and economic reasons, not a thorough analysis of the presented evidence, as the FPC's conclusions "did not discuss or even refer to the natural gas reserves ... available to the Westcoast project and the deliverability of those reserves."<sup>233</sup> Westcoast asserted that "even a cursory review of

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<sup>231</sup> David H. Breen, *Alberta's Petroleum Industry and the Conservation Board*, p.390.

<sup>232</sup> "Slim Chance Gas Appeal Friday," *Province* (Vancouver, B.C.), Jul. 14, 1954, p.23.; "Westcoast Transmission Attacks Pipeline Ruling," *Province* (Vancouver, B.C.) Jul. 16, 1954, p.21.; "Westcoast Flies Re-Hearing Plea," *Edmonton Journal* (Edmonton, Alb.) Jul. 16, 1954, p.1.; "Court Appeal Next Step For Westcoast," *Vancouver Sun* (Vancouver, B.C.), Aug. 5, 1954, p.11.; "Pipeline Appeal Rejected," *Leader-Post* (Regina, Sask.), Aug. 5, 1954, p.12.; "Westcoast Transmission To Go to Court," *Lethbridge Herald* (Lethbridge, Alb.), Aug. 6, 1954, p.19.; "Westcoast Files Appeal," *Vancouver Sun* (Vancouver, B.C.), Sept. 28, 1954, p.21.; "Nationalism, Politics Said Factor In Gas Decision," *Edmonton Journal* (Edmonton, Alb.), Jun. 19, 1954, p.1.

<sup>233</sup> "Westcoast Transmission Attacks Pipeline Ruling," *Province*, p.21.

Westcoast's gas reserves and deliverability would have compelled the conclusion that the application of Westcoast Inc. should be granted and that the application of Pacific should be denied."<sup>234</sup> Political and economic meanings were attached to natural gas to a large extent, thus shaping the FPC decision.

Ultimately, Pacific Northwest would discover that the San Juan region did not have natural gas reserve sufficient to supply the American Pacific Northwest. On November 25, 1955, the FPC approved a new agreement with Westcoast Transmission to deliver natural gas to the US Pacific Northwest region.<sup>235</sup> Westcoast would transport natural gas from the Peace River region in Alberta and B.C. south to a point near Huntingdon, B.C. There, Pacific Northwest would purchase and transport the gas through the U.S. Pacific Northwest.<sup>236</sup> El Paso Natural Gas would provide Pacific Northwest with additional supplies.<sup>237</sup> "Co-existence is the thing," the *Edmonton Journal* and *Province* argued.<sup>238</sup> At last, in November of 1955, Frank McMahon could start building his long-awaited pipeline dream.<sup>239</sup>

## 1.6. Conclusion

This chapter sought to unpack the tension between "legibility" and "illegibility" during Westcoast's regulatory proceedings in Alberta, at the Federal Board of Transport Commissioners in Ottawa, and during the Federal Power Commission hearings in the U.S. The term "legibility," borrowed from James C. Scott, ultimately refers to the simplification of

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<sup>234</sup> Ibid.

<sup>235</sup> Earle Gray, *Wildcatters*, p.181.

<sup>236</sup> "U.S. Body May Approve Canadian Gas Import Cases," *Edmonton Journal* (Edmonton, Alb.), Jan. 13, 1955, p.16.; "Business Today," *Province* (Vancouver, B.C.), Jan. 13, 1955, p.17.; "It Took 20 Years of Planning and Building To Complete The Westcoast Gas Pipeline In B.C.," *Western Business & Industry* Vol. 34, No. 12 (December 1960): p.42. UBCSC, WEI, Box. 4, File 11.

<sup>237</sup> E. J. Hanson, "Natural Gas in Canadian-American Relations," p.193.

<sup>238</sup> "U.S. Body May Approve Canadian Gas Import Cases," *Edmonton Journal*, p.16.; "Business Today," *Province*, p.17.

<sup>239</sup> Earle Gray, *Wildcatters*, p.181.



natural complex systems so they are easier to control. In the case of Westcoast Transmission's regulatory hearings, such attempts echo through in the graphs, tables, and maps that sought to quantify and visualize inherently incomplete understandings of natural gas supplies and demands. During each set of hearings, natural gas reserves were quantified and sorted into arbitrary, standardized categories like "proven" and "probable" reserves to facilitate decision-making. Legibility played a significant role in each step of Westcoast's regulatory journey.

However, this chapter demonstrates that the narratives employed to interpret these findings determined the hearings' outcomes. Natural gas was not merely viewed in numbers or abstractions as a fuel source but intertwined with notions of modernity and security. During the Dinning Inquiry and the hearings of the Alberta Petroleum and Natural Gas Board, stakeholders were primarily concerned with the economic well-being of Alberta. Whether Alberta possessed an adequate supply of natural gas to safeguard the "modernity" of the province was at the heart of this debate. Each stakeholder presented their standardized overviews of the province's natural gas reserves and demand and their narrative interpretations to either support or discredit this assertion. Ultimately, the province determined that a 50-year natural gas supply satisfied provincial needs. It granted Westcoast a permit to export natural gas from the northeastern region of the province, the Peace River reservoirs. They considered this area too "remote" to economically exploit in any other way than as part of a more extensive pipeline system such as Westcoast's. In Alberta, while standardized "legible" overviews of natural gas played a substantial role, decisions were ultimately primarily based on the political and economic meanings imbued in them.

More covertly, the hearings subjected natural gas to settler-colonial understandings of natural resource utilization. Stakeholders adhered to a white settler understanding of "modernity," equating it with industrialization and exploiting natural resources. Some participants were even concerned that, without adequate natural gas, Alberta would remain in

an Indigenous or “backward” state. In addition, only resources “remote” from most white settlements were deemed eligible and valuable for export.

Expanding on such narratives, the "legible" overviews of the natural environment were juxtaposed with expressions of fear and modernity during the proceedings of the Federal Board of Transport Commissioners in Ottawa and the Federal Power Commission in the United States. Ottawa swiftly approved Westcoast's application, seemingly relying on the discussions held in Alberta. The Board only requested an updated quantification of the Peace River reserves. This chapter thus wishes to provide a more nuanced understanding of the importance of “legibility,” as Scott calls it. The chapter does not argue that “legibility” played no part in the regulatory hearings.

At the Federal Power Commission, Americans proved reluctant to hand over any control over their energy supply. Since natural gas could only be transported through pipelines, the end-users were at the mercy of those closest to natural gas reservoirs, which various American actors deemed undesirable. Supporters of Westcoast countered their fears by asserting that Canadian supplies would enhance the energy security of the U.S. Pacific Northwest, the only region in the United States without a gas supply. Especially in the context of the Cold War and American war production, participants in the FPC hearings posited the region's lack of natural gas as worrisome. Comparable to the hearings in Alberta, stakeholders presented the remoteness of the Peace River reservoirs as both an advantage and a challenge. Westcoast argued that the reservoirs' location made them non-competitive, while its opposition contended that the pipeline route would be costly and too technologically challenging. Ultimately, despite indications that the alternative proposal offered by the Pacific Northwest lacked sufficient supplies, the FPC initially disapproved of Westcoast's project. To a significant extent, the FPC relied on the political and economic understandings of natural gas presented at its hearings.

Lastly, this chapter shows that the intrinsic nature of natural gas reservoirs and exploration costs fueled the production and heightened the significance of these narratives. Challenges such as water intrusion in natural gas fields made it difficult to quantify the fuel reserves accurately. Additionally, mapping an entire natural gas field remained an expensive undertaking, particularly without guaranteed future returns. These costs and uncertainties forced engineering firms, geologists, transmission companies, and regulatory officials to accept at least a certain extent of "illegibility." This illegibility created a more prominent need and space for interpretation and the production of political-economic understandings of natural gas.

This chapter demonstrated that "legible" understandings of natural gas demand and supply were inherently incomplete because of the nature of natural gas and the costs associated with its production. As a result, narrative arguments that equated natural gas with modernity, security, and progress played critical roles in adopting the fossil fuel in the mid-20th century. The ensuing chapter analyzes how the various understandings of natural gas development produced in hearing and board rooms fared when pipeline construction commenced.

## **Chapter 2: Knowledge Production: the construction, maintenance, and expansion of the**

### **Westcoast system.**

#### **2.1. Introduction**

In 1955, hefty pipeline machinery roared into the rolling hills, river valleys, and mountain passes of the northern interior of British Columbia and northeastern Alberta. It took Westcoast Transmission Company Limited over half a decade to acquire regulatory approval for its pipeline dream, but in 1955 construction finally started. Within roughly two years, the company cleared the pipeline right-of-way and cut, welded, wrapped, coated and buried the pipeline in the ground.<sup>1</sup> In early August 1957, in B.C.'s Pine Pass, crews welded the last sections of Westcoast's main system together. Especially compared to the decade-long regulatory approval process, the construction episode constituted a minor fraction of the company's lifespan, so minimal that the company's founder, Frank McMahon, labelled it "almost an anti-climax."<sup>2</sup> Nevertheless, the period reveals how well Westcoast Transmission's plans, drafted in southern head offices, and defended in southern regulatory hearings, fared in northern environments. This chapter asks to what extent the natural environment shaped or influenced the plans and operations of companies, engineers, and crews.

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<sup>1</sup> "Westcoast's Line Is Now Complete," *Province* (Vancouver, B.C.), Aug. 9, 1957, p.13.; "Final Weld Made Thursday On Alberta-Coast Gas Line," *Edmonton Journal* (Edmonton, Alb.), Aug. 9, 1957, p.1.; "Westcoast Pipeline Now Complete," *Chilliwack Progress* (Chilliwack, B.C.), Aug. 14, 1957, p.12.; "Gas Pipe Gets Fibre Glass Overcoat," *Quesnel Cariboo Observer* (Quesnel, B.C.), Jul 12, 1956, p.B1.; "Set Up Camp For Pipeline," *Edmonton Journal* (Edmonton, Alb.), Apr 28, 1956, p.15.; "Natural Gas On the Way," *Province* (Vancouver, B.C.), May 1, 1956, p.64.; "Natural Gas Will Soon Be Here," *Vancouver Sun* (Vancouver, B.C.), May 31, 1956, p.21; "Seen Above," *Quesnel Cariboo Observer* (Quesnel, B.C.), Jul 12, 1956, p.C12.

<sup>2</sup> Frank McMahon, "Address at the University of Toronto," (Speech, Toronto, ON, Oct 24, 1960), UBCSC, WEI Box 12, File 1.

The chapter explores the bond between, on the one hand, the company, its engineers, and construction crews, and on the other, the environments and their inhabitants through which they laid a natural gas pipeline. It specifically focuses on the creation of knowledge and the role of the local in that process. The chapter engages with two interrelated environmental history debates; one asks whether industrialization weakens the ties between humans and nature and the other on the role of the local in knowledge production.

Environmental historians William Cronon and Richard White figure prominently in the first. They collectively argue that industrial capitalism distanced humans from the natural world, something this work contests. In *Nature's Metropolis*, Cronon argues that through human engagement with the natural world, an "artificial nature that people erect" superimposed itself over an "original, prehuman nature."<sup>3</sup> Borrowing terms from Marx and Hegel, he calls these "second" and "first" nature.<sup>4</sup> Cronon acknowledges that it is impossible to separate one from the other so rigidly but continues to utilize both terms, seemingly indicating that industrial capitalism destroys the natural world or is imposed upon it. In *The Organic Machine*, Richard White furthers this declensionist interpretation of industrialization. Based on the premise that humans know nature through labour, White argues that the industrialization of the Columbia River in Washington weakened the "link between our work and nature's work."<sup>5</sup> Machines, for instance, replaced jobs, shattering the day-to-day connection humans had to the natural world.<sup>6</sup> This chapter aligns with more recent scholarship in environmental history, like that of Liza Piper, who have challenged these declensionist narratives.<sup>7</sup> In *The Industrial Transformation of Subarctic Canada*, Piper argues

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<sup>3</sup> William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York, NY: W. W. Norton, 1991): p. XVII.

<sup>4</sup> Ibid.,: p. XVII.

<sup>5</sup> Richard White, *The Organic Machine* (New York: Hill and Wang, 1995): p.4.

<sup>6</sup> Ibid.

<sup>7</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2010).

that industrial activities in the large lake regions of northern Canada did not superimpose a new version of nature or weaken humans' ties to the natural world. Instead, nature and industrial activities adapted to one another, producing new, not weakened, "material and cultural" relationships.<sup>8</sup> This chapter offers a case study of a natural gas pipeline project that demonstrates the ways in which industrial infrastructure both shaped and was shaped by nature.

Situated within this more extensive debate on industrialization and humanity's connection to nature is a discussion on the interplay between knowledge and the natural environment. This chapter argues that the construction of the Westcoast system depended on a firm understanding of and continuing engagement with the local environmental knowledge. It contests parts of James C. Scott's *Seeing Like a State* and aligns with environmental historians Liza Piper, Tina Loo, and Meg Stanley. In *Seeing Like a State*, as Chapter 1's introduction partly explains, Scott argues that state actors used established scientific practices, or what Scott calls "techne," to erect large industrial projects or "mega-projects." These projects – in Scott's case, scientific forestry, city planning and agriculture – failed because they neglected "metis," or an understanding of the local that can only be derived from a continuing close engagement with place. Scott defines "metis" as "a wide array of practical skills and acquired intelligence in responding to a constantly changing natural and human environment."<sup>9</sup> Responding to Scott, the work of scholars like Piper, Loo, Stanley, and historian Joy Parr ultimately challenged the idea that "seeing like a state" meant ignoring the local. Instead, as their respective studies of mining, transportation, and fishing companies in the Canadian Subarctic and damming the Peace River show, industrialization firmly embedded itself in the local. Piper refers to this with the term "assimilation," "People used industrial fuels and

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<sup>8</sup> Ibid., p.10.

<sup>9</sup> James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, CT: Yale University Press, 2020): p.313.

technologies to assimilate nature."<sup>10</sup> Loo and Stanley call it “an intense engagement with place” and uncover that the “environmental and social changes that ensued from dam-building were a result of the presence, not the absence, of this local knowledge.”<sup>11</sup> Joy Parr argues that Canadian, state-driven mega-projects remade landscapes, altering residents’ “embodied knowledge” or their bodily understanding of and sensory relation to place.<sup>12</sup> While reinforcing the arguments of these authors, this chapter unpacks the interlacing of the construction of Westcoast's pipeline system and the environment in which the company embedded it. It offers a private-sector case study, whereas other scholars have mostly looked at state-sponsored projects.

It questions *how* such engagement with place took place. In doing so, this chapter challenges the notion that there are fixed boundaries between formalized practices or scientific knowledge and local knowledge, and it critically examines the prevailing perception of local knowledge as inherently positive. Occasionally building on Scott's work, scholars in various disciplines - history, anthropology, and geology - have explored the notion of "local knowledge." Some scholars have explicitly denounced the dichotomy between "metis" and "techne," arguing that their research subjects blended both together in response to their ever-changing surroundings.<sup>13</sup> The geographer Ankit Kumar labels this "improvisation" or "making do under challenging circumstances."<sup>14</sup> For Loo and Stanley, "high modernist local knowledge" best captures how outsiders – in their case, engineers of the Peace River dams –

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<sup>10</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.3.

<sup>11</sup> Tina Loo and Meg Stanley, “An Environmental History of Progress: Damming the Peace and Columbia Rivers,” *The Canadian Historical Review* Vol. 92, No. 3 (2011): p.399, 407.

<sup>12</sup> Joy Parr, *Sensing Changes: Technologies, Environments, and the Everyday, 1953-2003* (Vancouver: UBC Press, 2010).

<sup>13</sup> Anja Nygren, “Local Knowledge in the Environment–Development Discourse: From Dichotomies to Situated Knowledges,” *Critique of Anthropology* Vol. 19, No. 3 (1999): p.267–288.; Ankit Kumar, “Between Metis and Techne: Politics, Possibilities and Limits of Improvisation,” *Social & Cultural Geography* Vol. 22, No. 6 (2021): p.786.

<sup>14</sup> Ankit Kumar, “Between Metis and Techne,” p.786.

had to adapt their formalized training in real time to their place of implementation.<sup>15</sup> The authors also use the terms "tacit" knowledge, a "knack for problem-solving," and, at one point, a "feel for what works" to describe this process.<sup>16</sup> Loo and Stanley traced such tacit knowledge through intellectual and social networks until it became standardized, teachable practices, highlighting the fluidity of the boundary between the local and generalizable knowledge.<sup>17</sup> For the purposes of clarity, this chapter will refer to the intermixing of established practices and embodied, tacit knowledge negotiated within a particular local environment as "local knowledge." It acknowledges that this terminology choice may oversimplify the nuances and complexities inherent in the alternate, yet comparable, terms used to indicate local knowledge in its various shapes and forms. It unpacks the idea of "local knowledge" in the context of constructing, maintaining, and expanding the Westcoast Transmission natural gas system.

Terms like "embodied knowledge" and "having a knack for" generally have a positive connotation in the previously described works that reveal a certain respect for the local, superior mastery or skill. Scott goes as far as to say that a better attuning of "metis" knowledge could prevent big industrial projects from failure.<sup>18</sup> Loo and Stanley exhibit more caution, but not with respect to knowledge about locales themselves. Instead, the scholars label such understandings "concerns" when they become established work practices or solutions to problems that corporations use to construct mega-projects elsewhere, "big dams didn't just destroy places; they also de-territorialized and globalized them by turning situated knowledge about locales into work experience, problems, and case studies that travelled, informing development in other parts of the world."<sup>19</sup> Piper similarly identifies the

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<sup>15</sup> Tina Loo and Meg Stanley. "An Environmental History of Progress," p.410, 414.

<sup>16</sup> Ibid., p.405.

<sup>17</sup> Ibid., p.420.

<sup>18</sup> James C. Scott, *Seeing Like a State*, p.7.

<sup>19</sup> Tina Loo and Meg Stanley. "An Environmental History of Progress," p.421.



commodification of the "local" as a significant concern, "Although initial resource location and extraction relied upon knowledge and assimilation of local nature, the decision that these resources would be marketed to the south ensured that ties to lake ecosystems would be severed to create marketable commodities."<sup>20</sup> Piper does highlight various concerns with the production of local knowledge, such as the marginalization of "Native fisheries" on the great lakes and the harmful waste that closed mines left behind.<sup>21</sup> However, due to the scholar's scope, such conclusions are critical yet sometimes second to Piper's overarching argument on commodification. Parr instead reveals the generally troubling effect of megaprojects on local attachments to place. She speaks of "deep internal disturbances people weathered, as their historically specific sensing bodies retrofitted," because of industrial ventures.<sup>22</sup> Instead of focusing on the affected local population, this chapter analyzes the dangers of local knowledge production for construction crews and builds on Parr's work. It uncovers that hazards were vital to industrial endeavours' results and their creation, mainly because crews interacted with local environments. The chapter unpacks Piper's arguments on the marginalization of Indigenous practices in a different context.

The history of Westcoast Transmission shows that the positivity associated with "local knowledge" warrants caution as asymmetrical power relations propelled what constituted such understandings during the construction of the company pipeline system. The chapter therefore partly relies on the firmly established scholarship on Indigenous knowledge production in a white-settler context. Examining a Canadian context, anthropologist Julie Cruikshank unravels how local knowledge is developed through colonial interactions or "is produced during human encounters, rather than "discovered"," in the Mount Saint Elias

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<sup>20</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.284.

<sup>21</sup> Ibid., 286.

<sup>22</sup> Joy Parr, *Sensing Change*, p.189.

ranges.<sup>23</sup> Anthropologist Paul Nadasdy studied the integration of Kluane's understandings in Euro-North American perspectives and reached comparable conclusions.<sup>24</sup> Instead of focusing on the inclusion of Indigenous understandings, this chapter reveals Westcoast's conscious attempts to ignore Indigenous knowledge. Given my background as a white European who did not interact with the affected populations, this chapter does not adopt Indigenous perspectives but focuses on Westcoast's processes instead.

The chapter contains two main arguments. First, for the success of Westcoast's construction and maintenance operations, the company's crews had to adjust established practices to their local conditions. It reveals that British Columbia and Alberta's ever-changing and surprise-filled environments forced Westcoast Transmission and its crews to reinvent its blend of formalized practices and tacit understandings continuously. Second, the local knowledge they produced was often rooted in trial-and-error and a glorification of hazard and was shaped by settler-colonial practices. The company adopted a rather ad-hoc, trial-and-error or improvisational approach to pipeline construction. Westcoast and the crews partly accepted hazards for economic reasons – the Westcoast crews had to work in challenging circumstances with limited resources at their disposal– but also stemmed from a desire to "conquer" or "overcome" nature and a certain level of pride associated with doing so. White-settler understandings of what constituted knowledge ultimately shaped Westcoast's pipeline system's construction, maintenance, and expansion. Indigenous groups were generally excluded or merely consulted through third-party agents, like state officials. By questioning the relatively static nature of the boundaries between established and embodied practices and the, at times, uncritical celebration of local knowledge, the chapter seeks to

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<sup>23</sup> Julie Cruikshank, *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination* (Vancouver: UBC Press, 2014): p.4.

<sup>24</sup> Paul Nadasdy, *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal– State Relations in the Southwest Yukon* (Vancouver: UBC Press, 2003): Chapters 2 and 3.; The Kluane Nation is in today's Canadian Yukon, "About KFN," *Kluane First Nation*, Accessed Apr 9, 2023, <https://kfn.ca/about-kfn/>.

provide a nuanced understanding of the diverse ways in which knowledge is constructed and valued within the communities impacted by the pipeline and how that construction of knowledge produced environmental change.

It is structured chronologically, commencing with an exploration of the surveying and clearing of the right-of-way before delving into the construction of Westcoast's mainline system in the second half of the 1950s and concluding with an analysis of Westcoast's maintenance and expansion activities in the 1960s and 1970s.

## **2.2. Surveying and Securing the Right-of-Way**

Well before completing its regulatory hearings, the company started preliminary work on its proposed natural gas pipeline from the Peace River region in northern Alberta and British Columbia down to the Canadian and U.S. Pacific Northwest. In April 1949, Prime Minister Louis St. Laurent and his Liberal government passed the *Pipelines Act*. This federal legislation provided Westcoast Transmission with the necessary guidelines to scout and plot its pipeline route.<sup>25</sup> The company dispatched surveyors to report on the suitability of the land for construction and the general response from local communities. The surveyors ultimately adapted their ways to local environmental conditions and the practices of local white settlers. However, they refrained from abiding by the ways of the Indigenous communities in the region. Instead, they relayed their messages through colonial institutions such as the

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<sup>25</sup> “Canada’s first *Pipelines Act* was passed in 1949. This federal legislation created guidelines and safety requirements for how and where pipelines were built.” Nathan Baker, “Pipelines In Canada,” *The Canadian Encyclopedia*, Last Edited Jun. 10, 2021, <https://www.thecanadianencyclopedia.ca/en/article/pipeline>.; “Pipeline Technology,” *Government of Alberta*, Accessed Apr. 13, 2023, <http://www.history.alberta.ca/energyheritage/oil/the-leduc-era-1947-to-1970s/scientific-advances-and-pipeline-technology/pipeline-technology.aspx>.; Gordon Robert Lyall, ““They Smashed it Right Through Our Reserve”: The Problem of Settler Consultation for Infrastructure on Chawathil IR4,” *B.C. Studies* No. 207 (2020): p.80.

Department of Indian Affairs and the churches, keeping Indigenous consultation to a minimum and ignoring Indigenous environmental knowledge.

The Westcoast Transmission company effortlessly secured its right-of-way from local, white-settler residents. In 1949, the company dispatched surveyors Mr. Grogan and Mr. J.O. Maberry to consult with the residing residents between Prince George and Vancouver, B.C.<sup>26</sup> They contacted what they considered “leading citizens” to draw support for the proposed pipeline route.<sup>27</sup> Unfortunately, the consulted archival records in Vancouver and Ottawa revealed little about these authoritative figures. However, historian Gordon R. Lyall uncovered that Edward Shirton, the editor of the *Hope Standard*, was among them.<sup>28</sup> In their communications with Westcoast leadership, the two surveyors speak of “arrangements to furnish all weekly local newspapers along the route with news of our progress.” One can, therefore, safely presume that they approached other figures of the local press as well.<sup>29</sup> The surveyors distributed informative booklets on the Westcoast pipeline amongst the news outlets and to any other interested parties. Revealing that the company's development of natural resources would raise the standard of living and result in the “greatest benefit to all,” the brochure informed the citizens of the pipeline’s national economic importance and progress.<sup>30</sup> White settler communities eagerly received the news of a proposed natural gas pipeline. In a memorandum to Westcoast chairman George McMahon the two surveyors

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<sup>26</sup> The two surveyors passed through the communities of “Prince George, Red Rock, Hickson, Strachnaber, Cinema, Moose Heights, Quesnel, Dragon, Kersley, Australian, Alexandria, Marquette, MacAllister, Soda Creek, Williams Lake, 150 Mile House, 100 Mile House, 70 Mile House, Clinton and Cache Creek.” They then continued to Vancouver by passing through “Kamloops, Savana, Cache Creek, Ashcroft, Martel, Spence’s Bridge, Lytton, Falls Creek, Boston Bar, Yale, Hope” and “Chilliwack.” Mr. J.O. Maberry, “Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia,” Memorandum to Mr. George McMahon, May 19, 1949, UBCSC, WEI, Box 6, File 16.

<sup>27</sup> Mr. J.O. Maberry, “Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia.”

<sup>28</sup> Gordon Robert Lyall, ““They Smashed it Right Through Our Reserve,”” p.81.

<sup>29</sup> Mr. J.O. Maberry, “Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia.”

<sup>30</sup> Westcoast Transmission Company Limited, “Natural Gas For the People of Northern Alberta and British Columbia,” p.2, UBCSC, WEI, Box 6, File 16.; Mr. J.O. Maberry, “Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia.”

Grogan and Maberry spoke of nothing but support for the Westcoast line, "The people exhibited a great deal of interest and I feel we have their full cooperation. Many of them asked why we should go to the trouble to try to interest them in something they would support without their efforts."<sup>31</sup> The surveyors would then ask the citizens for their political support, urging them to elect "a stable government," meaning "those who will be favourable to our cause when the proposal for the pipeline arises in provincial political circles."<sup>32</sup> Mr. Maberry and Mr. Grogan confidently reported that the white, settler communities from Prince George Williams Lake, Cache Creek, and Vancouver supported Westcoast's endeavours and would back them politically in the upcoming 1949 provincial election.<sup>33</sup>

The Westcoast Transmission Company and the two surveyors recognized that they required a level of Indigenous support but refrained from consulting them directly. In 1949, when Maberry and Grogan completed their survey trip, it was a ground-breaking provincial election year. The Indigenous residents of British Columbia could cast their ballots for the very first time. Therefore, their attitudes towards the projected Westcoast pipeline carried at least a certain weight.<sup>34</sup> Westcoast Transmission, as was customary then for big energy corporations, opted for minimal consultation, communicating solely through the federal Department of Indian Affairs (DIA).<sup>35</sup> As Maberry explains to George McMahon in a memorandum:

You, of course, know that the Indians will vote this year for the first time. We made no direct contact with these people but were given to understand that the rank and file

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<sup>31</sup> Mr. J.O. Maberry, "Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia."

<sup>32</sup> Ibid.

<sup>33</sup> Ibid.

<sup>34</sup> That year, Dr. Frank Calder, a Nisga'a Chief would become the first Indigenous member of the British Columbia Legislative Assembly. "1949 - First Indigenous Person is Elected to the Legislative Assembly," *Legislative Assembly of British Columbia*, Accessed September 1, 2023, <https://www.leg.bc.ca/dyl/Pages/1949-First-Indigenous-Person-Elected-to-the-Legislative-Assembly.aspx>.

<sup>35</sup> Westcoast Transmission Company Limited, *25 Years of Energy: The Westcoast Story* (1982): p.8. Library and Archives Canada, OCLC 13401214.; Gordon Robert Lyall, "'They Smashed it Right Through Our Reserve,'" p.81.

of the Indian race will be influenced to a great degree by their local priest or head of the Roman Catholic Church. It is suggested that our message should be carried to this group sometime between now and the provincial election date.<sup>36</sup>

Corporate publications from the 1980s confirm that Westcoast Transmission primarily operated through public institutions, stating that “Westcoast worked closely with the federal Indian Affairs Department that held meetings with Chiefs and Councillors of various Indian Bands.”<sup>37</sup> In more recent years, Lyall had the privilege of working with some of the affected Indigenous communities, especially the Stó:lō people of the Chawathil (pronounced "Shi-Wa-Thill") First Nation, known prior to 1988 as the Hope First Nation, on the IR4 reserve and neighbouring communities.<sup>38</sup> Located roughly 140 miles east of Vancouver in the Fraser Valley near Hope, the residents of these communities recall the arrival of the Westcoast company in 2017 interviews with Lyall. Mr. Ron John, Chief in the 1970s, remarks that Westcoast had not consulted the communities.<sup>39</sup> The Westcoast company did offer “quite a bit” of money, “\$1,00 per rod,” which came down to roughly forty dollars per acre for the width of the pipe.<sup>40</sup> Ultimately the Hope Band accepted this financial compensation, but only after negotiating the price. Band council members and Chief Oscar D. Peters had heard it rumoured that Westcoast was offering them an "unreasonably low" price.<sup>41</sup> The DIA reported to the Canadian Bechtel Company Limited company, contracted by Westcoast to put the pipeline through the Fraser Valley, that in the No. 4 reserve, they had "some difficulty in obtaining permission from the Hope Band of Indians."<sup>42</sup> Eventually, they came to an

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<sup>36</sup> Mr. J.O. Maberry, “Survey of Westcoast Transmission Gas Pipe Line Route in British Columbia.”

<sup>37</sup> Westcoast Transmission Company Limited, *25 Years of Energy*, p.8.

<sup>38</sup> Gordon Robert Lyall, “They Smashed it Right Through Our Reserve,” p.68, 82.; “Chawathil First Nation,” *British Columbia Assembly of First Nations*, Accessed Apr. 20, 2023, <https://www.bcafn.ca/first-nations-bc/lower-mainland-southwest/chawathil-first-nation>.

<sup>39</sup> Gordon Robert Lyall, “They Smashed it Right Through Our Reserve,” p.82.; “Chawathil First Nation.” *British Columbia Assembly of First Nations*.

<sup>40</sup> Gordon Robert Lyall, “They Smashed it Right Through Our Reserve,” p.82.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

agreement in which the Hope Band would control the "clearing and burning the slash," but, according to the community, Bechtel Limited never awarded this work.<sup>43</sup> Comparable scenarios unfolded in adjacent Indigenous communities.

Westcoast Transmission communicated solely through the DIA with the Seabird Island community, neighbours of the Hope Band, overlooking the preferred environmental practices of the Indigenous people in the process. The Westcoast Company acquired a gas pipeline easement across the territory, sixty feet in width. The Indigenous community accepted this at a rate of \$1 per lineal rod, an amount the DIA would later deposit in the band funds. Members of Seabird Island could use Westcoast's right-of-way for agricultural purposes but had to keep it clear of any structures. To clear the right-of-way, Bechtel Limited contracted F.J.G. Johnson and Associates Ltd. and C.D. Schultz Ltd., who set out to cut down 14,000 pieces of timber. Bechtel compensated Seabird Island \$140 for their lost timber, or \$10 per thousand board feet, and deposited it to the Band fund.<sup>44</sup> The Indian Affairs Branch handled any individual damage claims or concerns that followed Westcoast's operation until January 1957, when the Seabird Island community signed a standard release form in which they waived the right to make any future claims concerning this particular operation.<sup>45</sup> Lyall, however, uncovered that the Seabird Island community had hoped that Bechtel Company Ltd. would allow "at least half the workers to be Stó:lō" on the slash pile. Out of twelve, only two of them were.<sup>46</sup> DIA superintendent Mr. Letcher sent the Seabird Island Indian Reserve a message in mid-April 1957 in which he recommended they contact Canadian Bechtel Limited at Hope concerning hayseed. He believed a pasture mix, like hay, would be the best option for

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<sup>43</sup> Ibid.

<sup>44</sup> J.C. Letcher, Superintendent New Westminster Indian Agency, *Cheque For Loss of Timber on Seabird Island Indian Reserve*, Jan. 11, 1957, Library and Archives Canada, Vancouver, Accession No. 13300, File Westcoast Transmission Gas Line.

<sup>45</sup> Westcoast Transmission Company Limited, *Damage Release: Seabird Island Indian Reserve, New Westminster Agency*, Jan. 9, 1957, Library and Archives Canada, Vancouver, Accession No. 13300, File Gas line Right of Way.

<sup>46</sup> Gordon Robert Lyall, "They Smashed it Right Through Our Reserve," p.82.

the cleared land.<sup>47</sup> Such statements indicate that Mr. Letcher felt like his knowledge of the local environment superseded that of its long-time Indigenous residents. In these manners, Westcoast Transmission refrained from adapting its practices to local Indigenous communities. Instead, it chose to work through the DIA, further cementing colonial practices.

Westcoast Transmission, at times, felt forced to adapt to local Indigenous understandings of the environment, but it let the DIA handle this on its behalf. A superintendent of the Department of Indian Affairs, J.C. Letcher, informed residents of the Cheam Indian Reserve, near Rosedale, B.C., in late April 1955 that the Westcoast pipeline would be crossing Reserves No. 1 and 2. As Mr. Letcher writes, "Permission has been granted by the Department for the necessary surveys to be carried out, so do not be concerned if you see these people working," promising proper compensation for any "improved lands affected."<sup>48</sup> The Cheam Band, however, did not feel their land was "improved" to the best of the company's abilities. Following a strong complaint by the Cheam Band, the New Westminster Indian Agency contacted Canadian Bechtel in late March 1956. The contractor had been burying stumps instead of burning them. The Band argued that the stumps would not properly rot if buried, forming an impending danger. Writing to Bechtel Ltd., Mr. Letcher states:

The Band are strongly protesting the action of the contractor and intends that the buried stumps should be dug up and burned as if left buried in the ground, they will never rot and, therefore will create a hazard at some future date.<sup>49</sup>

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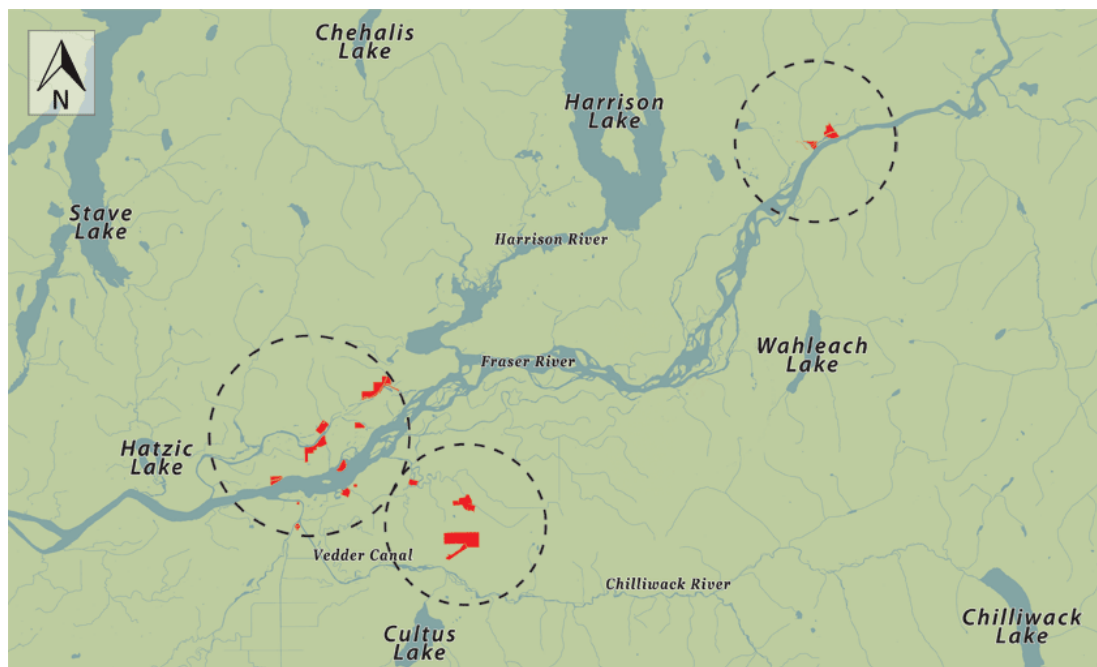
<sup>47</sup> J.C. Letcher, Superintendent New Westminster Indian Agency, "Seabird Island Indian Reserve," Memorandum to Mr. Vincent Harris, Seabird Island Indian Reserve, Apr. 15, 1957, Library and Archives Canada, Vancouver, Accession No. 13300, File Westcoast Transmission Gas Line.

<sup>48</sup> J.C. Letcher, Superintendent New Westminster Indian Agency, "Cheam Indian Reserve," Memorandum to Mr. Albert Douglas, Cheam Indian Reserve, Apr. 21, 1955, Library and Archives Canada, Vancouver, Accession No. 13300, File Gas line Right of Way.

<sup>49</sup> J.C. Letcher, Superintendent New Westminster Indian Agency, "West Coast Transmission Gas Line – Cheam I.R. #1," Memorandum to Canadian Bechtel Ltd., Mar. 27, 1956, Library and Archives Canada, Vancouver, Accession No. 13300, File Gas line Right of Way.



Unfortunately, it is unclear whether they burned the stumps as the archive held no further communication between the parties. The incident and those in the Stó:lō communities reveal that Westcoast Transmission did not attune their pipeline project directly to local Indigenous understandings of the environment. Instead, as was the practice at the time, the company chose to work within the established colonial system, relying on church and settler government authorities to mediate their communication with Indigenous leaders. (see Figure 4 for Stó:lō communities).



*Figure 4: A current map of the six first nations of the Stó:lō xwexwilmexw Treaty Association in the Fraser Valley.*

“Interactive Map,” Stó:lō Xwexwilmexw Treaty Association, Accessed October 1, 2023, <https://www.sxta.bc.ca/about-us/sxta-villages/interactive-map/>.

Westcoast Transmission hired white local representatives to generate community support for its natural gas transmission project. Westcoast hired British Columbia-born Bernie Guichon for its Right-of-Way Department and used his reputation and social network to

further its plans.<sup>50</sup> Right-of-way agents were often the first to discuss the Westcoast project with residents, and their first impressions could translate into either support or animosity. As the company explains in its newsletter, "This first contact is vital because it helps to dispel any possible antagonism to the project and gives the Land Department an indication of their future reception."<sup>51</sup> Coming from the region, Mr. Guichon possessed the local authority and knowledge to negotiate with landowners. His family owned one of B.C.'s most renowned ranches, the Guichon Cattle Company nestled in the Nicola Valley.<sup>52</sup> In the words of Mr. Guichon himself,

In the boonies, nobody knew what a really big gas pipeline was, so I was going around explaining it to the local fish and wildlife officer, the owners of ranches, the mayors, the senior citizens who held land. We avoided a lot of problems by listening to a lot of people. I had the advantage that a lot of them knew my name and knew my dad. On the other hand, I had a reputation to keep up. The Guichons had a pretty good name in British Columbia, and I had to look after that, to shave in the morning and look at myself and remember I was a Guichon, and I had to tell these people the truth.<sup>53</sup>

Westcoast Transmission utilized the knowledge and local reputations of white settlers like Mr. Guichon to build community support for its big pipeline project. Westcoast would continue to rely on Mr. Guichon's reputation and social network after the mainline had been completed, for instance, when preparing for the company's extension to the Milligan-Peejay fields.<sup>54</sup>

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<sup>50</sup> Westcoast Transmission Company Limited, "The Right-of-Way Agent, 'Advance Man' for the Pipeline," *Pipeline* Vol. 2, No. 8 (November 1964): p.3, UBCSC, WEI, Box 11, File 39.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.; Peter C. Newman, *Continental Reach: the Westcoast Energy Story* (Vancouver: Douglas & McIntyre, 2002): p.45.; John Douglas Belshaw, "Guichon, Joseph," in *Dictionary of Canadian Biography*, Vol. 15, University of Toronto/Université Laval, accessed September 12, 2023, [http://www.biographi.ca/en/bio/guichon\\_joseph\\_15E.html](http://www.biographi.ca/en/bio/guichon_joseph_15E.html).

<sup>53</sup> Peter C. Newman, *Continental Reach*, p.45–46.

<sup>54</sup> Westcoast Transmission Company Limited, "Landowners of Great Importance," *Pipeline* Vol. 10 (January 1970): p.6. UBCSC, WEI, Box 11, File 42.

Right-of-way agents established first contact with property owners, but survey crews scouted and marked the pipeline's rights-of-way.<sup>55</sup> Local environmental conditions shaped these efforts. Survey crews had to traverse the grain-growing fields of the Peace River country, the low elevations of the Pine Pass in the Rocky Mountains, reaching heights of 3,300 feet above sea level. Moving south, they marked the pipeline route through the dense forests of the Prince George and Quesnel areas, the cattle ranges of Williams Lake and the rolling grasslands of the Cariboo country. From there on, the route reached Savona and Merritt, slightly more dry but still important ranching country. The pipeline route then turned west to the Coquihalla Pass in the Cascade Mountain Range, where it climbed to 4,510 feet before it descended to the town of Hope and the sea-level farming areas of the Fraser Valley (see Figure 1.).<sup>56</sup> These routes were, at times, impossible to access by car, forcing survey crews to continue a foot or horseback. Archival photos reveal their efforts to traverse unpaved roads, cross fields, and overcome obstacles like fallen trees and river crossings. Horses and firewood facilitated their journey, and nature, thereby, hampered and helped their work (Image 3-6).<sup>57</sup>

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<sup>55</sup> Westcoast Transmission Company Limited, "The Right-of-Way Agent," p.3.

<sup>56</sup> Westcoast Transmission Company Limited, "The Story of a Pipeline," Ca. 1958, UBCSC, WEI, Box 11, File 5.; Westcoast Transmission Company Limited, *25 Years of Energy: The Westcoast Story* (1982): p.8.

<sup>57</sup> "Survey and Scenic: Surveyors at Boston Bar Creek near Coquihalla Canyon, B.C., Jul. 27, 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1636.; "Survey and Scenic: Loon Lake. Ca. 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1649.; "Survey and Scenic: Miscellaneous and Unidentified Surveys. 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1656.; "Survey and Scenic: Miscellaneous and Unidentified Surveys. 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1664.



*Image 3: Surveying the right of way.*

"Survey and Scenic: Surveyors at Boston Bar Creek near Coquihalla Canyon, B.C., Jul. 27, 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1636.



*Image 4: Natural obstacles complicated the surveying of the right of way.*

"Survey and Scenic: Loon Lake. Ca. 1955," Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1649.





*Image 5: Surveying the right-of-way.*

“Survey and Scenic: Miscellaneous and Unidentified Surveys. 1955,” Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1664.



*Image 6: To survey the right-of-way officials had to overcome natural obstacles, often using horses to aid their efforts.*

“Survey and Scenic: Miscellaneous and Unidentified Surveys. 1955,” Photograph, 1955, UBCSC, WEI, Photo Box 7, File 1656.

Aerial exploration and photography complemented this close interaction with the local environment.<sup>58</sup> Distances shrunk, and the tough-to-reach subarctic environments of northern British Columbia were suddenly easily within reach as bush planes mapped out the pipeline's route from the air.<sup>59</sup> Piper observes similar tendencies in the Canadian northwest's large lakes.<sup>60</sup> The surveyors were in close contact with their natural surroundings on the ground. However, up in the air, they cleared the natural world of signs of Indigenous lives, local wildlife patterns, and century-old trapper routes.<sup>61</sup> Understandings produced "distance" from those that ultimately lived on the land. In this way, Westcoast's aerial surveys, could form the basis of, or at least complement, the knowledge produced in closer physical contact with the environment.

When it became time to clear the rights-of-way, Westcoast Transmission again relied upon the knowledge of local white settlers. Thomas (Tommy) Wilde, a horse wrangler and big game guide in the Peace River region, was among them.<sup>62</sup> Known as the "Pack-Horse King" of the north, Mr. Wilde owned a 2,000-acre ranch 40 miles north of Fort St. John with 150 pack horses. His knowledge of the area and horses had aided various petroleum projects, including the Canol oil pipeline in 1943. With a 20-horse outfit, Mr. Wilde "blazed a trail" for the first leg of the Westcoast pipeline in 1953. In the winter of 1955-56, he accepted another Westcoast "brushing" contract to clear a 60-foot right-of-way.<sup>63</sup> He was assigned 120 miles of route from his property near Fort St. John to Azouetta Lake in the Pine Pass. The job would require 500 men, or so Wilde said, and would be hampered in winter by 40-foot-deep snow, which would only melt in the middle of summer.<sup>64</sup> Local settler residents, knowledge, and

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<sup>58</sup> Westcoast Transmission Limited, "The Story of A Pipeline."

<sup>59</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.37.

<sup>60</sup> Ibid., p.36-37.

<sup>61</sup> Ibid., p.38.

<sup>62</sup> "B.C. Guide Gets Pipeline Job," *Calgary Herald* (Calgary, Alb.), Dec. 7, 1955, p.1.; "1,000,000 Contract Let," *Star-Phoenix* (Saskatoon, Sask.), Dec. 8, 1955, p.23.

<sup>63</sup> "Pack Horse King' Happy, Sees Biggest Year Ahead," *Windsor Star* (Windsor, Ont.), Jun. 18, 1957, p.15.

<sup>64</sup> "B.C. Guide Gets Pipeline Job," *Calgary Herald*.

natural conditions together facilitated the pipeline-laying process

To clear the rights-of-way, Westcoast Transmission complemented the knowledge of local officials with that of large, well-established pipeline contractors. These primarily viewed the natural environment not as a source of knowledge or something with which to adapt their knowledge to but as an obstacle they must conquer. While awaiting regulatory approval, Westcoast contracted Canadian Bechtel Limited on Jan. 1, 1955, to serve as its project manager.<sup>65</sup> The company started clearing the right-of-way later that year.<sup>66</sup> Bechtel Ltd. was a well-established American firm that had built other energy pipelines in Canada, such as the Trans Mountain oil pipeline which commenced operations just two years prior in 1953. Bechtel also constructed dams, including the Hoover Dam, and the company was involved in other engineering and construction projects worldwide.<sup>67</sup> In their own words, "By 1958, Bechtel completed 2,000 projects in 40 states and 30 countries on six continents."<sup>68</sup> The company was renowned for its ability to "conquer" natural obstacles to clear the way for big energy projects. *Maclean's* unpacks Bechtel's attitude towards nature in the late 70s using the following phrase, "Every hour of every day a Bechtel company somewhere is damming a river, smashing down a forest, gouging out a mine, laying down a pipeline or otherwise rearranging the earth's surface."<sup>69</sup> Westcoast contracted other established, more local, companies like Sovereign Construction & Engineering Co. Ltd. from Prince George to assist with the clearing efforts in certain sections.<sup>70</sup> Westcoast hired these companies because they had completed comparable projects in other sections of the country or continent. In line with

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<sup>65</sup> Westcoast Transmission Company Limited, *25 Years of Energy: The Westcoast Story* (1982): p.7.; Peter C. Newman, *Continental Reach*, p.35.

<sup>66</sup> "Pipeline Work Gets Started," *Star-Phoenix* (Saskatoon, Sask.), Jan. 14, 1956, p.4.

<sup>67</sup> Peter C. Newman, *Continental Reach*, p.50.

<sup>68</sup> "History," *Bechtel*, Accessed May 20, 2023, <https://www.bechtel.com/about-us/history/#1950>.

<sup>69</sup> Walter Stewart, "Bulldozers, Inc.," *Maclean's*, Jun. 28, 1976, <https://archive.macleans.ca/article/1976/6/28/bulldozers-inc>.

<sup>70</sup> Sovereign Construction & Engineering Co. Ltd. worked on the section from Cuisson Creek to Hixon, and Westcoast also awarded them the contract to clear the right-of-way from Hixon to Pine Pass. "Sovereign Gets Bigger Contract," *Quesnel Cariboo Observer* (Quesnel, B.C.), Apr. 19, 1956, p.B1.

its hired companies, Westcoast would speak of “obstacles” and “conquering” the natural environment when it described or recalled the construction of its pipeline system in the company newsletter.<sup>71</sup> Local natural environment thus often transformed into obstacles and economic opportunities that had to be efficiently and expediently overcome.

Ultimately, however, contractors had to adapt their clearing schedules, at least to some extent, to local weather conditions and environmental obstacles. Registered firms of timber cruisers evaluated the timber on the right-of-way and had to handle the marketable timber they encountered in accordance with any arrangements made with the owners of the land.<sup>72</sup> For the clearing efforts, Caterpillar tractors and bulldozers were vital. Bulldozers would carve a way through forests, followed by tractors. The Caterpillar machines had special forklift attachments that could lift the trees and brush and dump them on one of the clearing fires.<sup>73</sup> This combination of brute force allowed contractors to clear roughly one mile of Westcoast's right-of-way daily.<sup>74</sup> Hindering rock faces were cleared with dynamite, and obstructive forests were chopped down.<sup>75</sup> As a result, the introduction of natural gas infrastructure initially enhanced the use of, and reliance on, fossil fuel-powered machinery, facilitating a greater consumption of fossil fuels. Surveying and clearing crews could work throughout the winter even though, at times, deep snow prevented some of the heavy clearing equipment from operating.<sup>76</sup> Bechtel Ltd. Contractors, therefore, aimed to carry out a significant portion of the

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<sup>71</sup> Westcoast Transmission Company Limited, “The Mighty Fraser Conquered Anew,” *Pipeline* Vol. 4, No. 4 (April 1974): p.1. UBCSC, WEI, Box. 11, File 44.; Westcoast Transmission Company Limited, “The Story of Gas,” *Pipeline* Vol. 5, No. 7 (July 1967): p.12. UBCSC, WEI, Box. 11, File 41.; “Milligan-Peejay: ‘It was Standard for the North’,” *Pipeline* Vol. 9 (December 1969): p.3. UBCSC, WEI, Box. 11, File 42.

<sup>72</sup> “Pipeline Activity Resumes,” *Chilliwack Progress* (Chilliwack, B.C.), Jan. 18, 1956, p.16.; “Big Pipeline Project Underway,” *Quesnel Cariboo Observer* (Quesnel, B.C.), Jan. 19, 1956, p.C7.; “Huge Pipeline Project From The Peace,” *Red Deer Advocate* (Red Deer, Alb.), Feb. 1, 1956, p.11.; “Westcoast 'almost ready' to Start Laying Gas Pipeline,” *Province* (Vancouver, B.C.), Mar. 10, 1956, p.5.; “100 Miles Cleared For Westcoast Line,” *Calgary Herald* (Calgary, Alb.), Mar. 12, 1956, p.32.

<sup>73</sup> “Forklift Beat Paul Bunyan's Time,” *Quesnel Cariboo Observer* (Quesnel, B.C.), Nov. 8, 1956, p.B11.

<sup>74</sup> *Ibid.*

<sup>75</sup> “Natural Gas Pipeline Progress Increases,” *Gazette* (Grand Forks, B.C.), Apr. 25, 1957, p.12.

<sup>76</sup> “Crews Move Ahead On B.C. Gasline,” *Times Colonist* (Victoria, B.C.), Mar. 23, 1956, p.6.; “First Section,” *Province* (Vancouver, B.C.), Dec. 19, 1955, p.26.



rough clearing along its 210-mile stretch through the central interior during the winter of 1955. This schedule allowed Bechtel to be ready for ditching when the frost was out of the ground in early spring.<sup>77</sup> Archival photos reveal that axes and chainsaws accompanied this heavy machinery while clearing the right-of-way as big machinery only sometimes fit on the demarcated path (see Images 7-8).<sup>78</sup> While they relied extensively on big machinery and brute force, their local surroundings forced Bechtel Ltd. to adapt.

Westcoast relied upon the knowledge of local white settlers and large contractors to survey and clear the right-of-way. Although the major companies had to adapt to some extent to the local environmental conditions, they primarily viewed the natural environment as an obstacle. They accepted the knowledge of local white residents of the local environments. In contrast, while they engaged with Indigenous communities, they did so through governmental institutions like the DIA. They perceived Indigenous communities primarily as obstacles, almost part of the landscape, and overlooked their cultural ties to the natural environment while they, as was accepted practice at the time, neglected to consult them properly.

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<sup>77</sup> "Bechtel Office Is Opened Here," *Quesnel Cariboo Observer* (Quesnel, B.C.), Dec. 8, 1955, p.B1.; "Bechtel To Build 210 Miles," *Quesnel Cariboo Observer* (Quesnel, B.C.), Dec. 15, 1955, p.C6.

<sup>78</sup> "500 Men Working On Westcoast Pipeline Job," *National Post* (Toronto, Ont.), Mar. 1, 1956, p.11.; "Route Slashed For Gas Pipeline," *Vancouver Sun* (Vancouver, B.C.), Mar. 17, 1956, p.11.; Westcoast Transmission Company Limited, "Busy Year For Westcoast," *The Westcoast News*, Vol. 1, No. 1, Jan.-Feb. 1958, p.3, UBCSC, WEI Box 11, File 38.; "Construction – Historic: [Crew clearing bush]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1312.; "Construction – Historic: [Crew clearing bush]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1315.



*Image 7: Clearing the right-of-way required heavy machinery.*

“Construction – Historic: [Crew clearing bush],”  
 Photograph, 1956, UBCSC, WEI, Photo Box 7,  
 File 1312.



*Image 8: At times, clearing the right-of-way required axes and chainsaws.*

“Construction – Historic: [Crew clearing bush],”  
 Photograph, 1956, UBCSC, WEI, Photo Box 7,  
 File 1315.

### 2.3. Mainline Construction

With the 60-foot-wide right-of-way identified and cleared of trees, rocks, and debris, construction crews gathered throughout British Columbia and northwestern Alberta to trench and lay the Westcoast pipeline, as well as erect the necessary compressor, meter, and processing stations. The initial blueprints and engineering schemes for these pipelining endeavours came from the combined efforts of well-established North American firms known for their pipelining experience. To an extent, they supplanted their existing knowledge in a novel environment, but that environment ultimately forced them to adapt their established procedures. This section examines the diverse ways labour became progressively interconnected with the local environments through which the Westcoast pipeline passed. In the process, colonial patterns and power relations shaped whose knowledge would be accepted and validated while constructing Westcoast's mainline.



*Image 9: Pipe in transit. Pipe was transported to holding locations along the right-of-way to prepare for construction.*

“Pipe in Transit: Transporting Pipe By Train,”  
Photograph Ca. 1956, UBCSC, WEI, Photo Box  
7, File 1720.



*Image 10: Ditching a trench for the pipeline.*

“Construction – Historic: Ditcher,” Photograph 1956, UBCSC, WEI, Photo Box 5, File 1109.



*Image 11: Construction on a hillside.*

“Construction – Historic: Construction Up A Hill, Pine River Area,” Photograph Ca. 1956, UBCSC, WEI, Photo Box 5, File 1194.



*Image 12: Welding the pipe segments together.*

*“Construction – Welding,” Photograph Ca. 1957, UBCSC, WEI, Photo Box 5, File 789.*



*Image 13: Pipe is carefully bent to follow the route.*

*“[Pipeline Construction],” Photograph, 195?, UBCSC, WEI, Photo Box 5, File 714.*





*Image 14: Coating the pipeline (likely with coal tar epoxy) for protection.*

“Construction – 1956-1957: [Coating pipes],” Photograph Ca. 1956, UBCSC, WEI, Photo Box 7, File 1771.

Westcoast Transmission retained the previously mentioned Canadian Bechtel Limited to serve as project manager of the immense pipeline design, construction, and logistics job.<sup>79</sup> Ford, Bacon & Davis joined Canadian Bechtel as Westcoast's primary engineering consultant. As a well-established American defence contractor, Bechtel had worked on, among others, the Manhattan Project at Oak Ridge.<sup>80</sup> Together, the three firms fashioned a managerial team with Westcoast's Frank McMahon, D.P. McDonald, Charles Heterinton, Ted Megas

<sup>79</sup> Westcoast Transmission Company Limited, *25 Years of Energy*, p.7.; Peter C. Newman, *Continental Reach*, p.35.

<sup>80</sup> “Final Bulletins,” *Times Colonist* (Victoria, B.C.), Jan. 28, 1955, p.2.; Earle Gray, *Wildcatters: The Story of Pacific Petroleums and Westcoast Transmission* (Toronto: McClelland and Stewart, 1982): p.209.; “80 Years of Engineering In Louisiana,” *The Monroe News-Star* (Monroe, Louisiana), Jul. 2, 1976, p. 47.

(treasurer) and Lloyd Turner (public relations), Canadian Bechtel's Sif Bechtel Jr., R.L.

Hamilton, H.F. Waste, and J.V. Chambers, and Charles Whittlesley, president of Ford, Bacon & Davis.<sup>81</sup> Canadian Bechtel then assembled a consortium of experienced contractors to build

the different sections of the line. Mannix Limited of Calgary, whose owner Frederic C.

Mannix would earn a reputation as one of Canada's "greatest builders," worked on the

southern 120 miles of the line.<sup>82</sup> Dutton-Williams Brothers Limited, from Tulsa, Oklahoma,

completed the northern end, and Canadian Bechtel and Conyers Construction Company took

on the approximately 420 miles left in the middle.<sup>83</sup> The companies would ditch, bend, and

weld the pipeline sections together, wrap the line for protection, and test and bury it (see

Image 9 - 14.).<sup>84</sup> Renowned for their 'brute-force' capacities, these well-established firms

brought their outsider expertise to Canadian soil and had to adapt it to the local environment,

instead of being able to force themselves through it.

When it came to constructing the Westcoast mainline, place created practice.

Contractors adapted their operations to the soil quality, especially in the boreal region where

muskeg and permafrost reigned. The National Research Council of Canada defined muskeg in

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<sup>81</sup> Earle Gray, *Wildcatters: The Story of Pacific Petroleum and Westcoast Transmission* (Toronto: McClelland and Stewart, 1982): p.209.; "Huge Pipeline Project From The Peace," *Red Deer Advocate*, p.11.; Start Gas Mains In Three Weeks, Quesnel Cariboo Observer (Quesnel, B.C.), Jul. 4, 1957, p.C7.; "Set Up Camp For Pipeline," *Edmonton Journal*, p.15.; "First Westcoast Section Completed," *Calgary Herald* (Calgary, Alb.), Dec. 17, 1956, p.12.; "First Leg Completed," *Leader-Post* (Regina, Sask.), Dec. 17, 1956, p.15.; "First Pipeline Section Finished," *Quesnel Cariboo Observer* (Quesnel, B.C.), Dec. 20, 1956, p.E2.; "First Leg of Coast Pipeline Reported Basically Complete," *Star-Phoenix* (Saskatoon, Sask.), Dec. 24, 1956, p.6.; "Work Finished For First Leg B.C. Gas Line," *Gazette* (Montreal, Que.), Dec. 25, 1956, p.19.;

<sup>82</sup> Earle Gray, *Wildcatters*, p.209.; "Frederick C. Mannix One of Canada's Great Builders," *Canada West Foundation*, Accessed May 11, 2023, <https://cwff.ca/about-us/our-history/fredmannix/>.

<sup>83</sup> Earle Gray, *Wildcatters*, p.209.; Westcoast Transmission Company Limited, *List of Contractors – Westcoast Transmission Pipeline Project*, N.A., UBCSC, WEI Box 6, File 26.

<sup>84</sup> "Pipe in Transit: Transporting Pipe By Train," Photograph Ca. 1956, UBCSC, WEI, Photo Box 7, File 1720.; "Construction – Historic: Ditcher," Photograph 1956, UBCSC, WEI, Photo Box 5, File 1109.; "Construction – Historic: Construction Up A Hill, Pine River Area," Photograph Ca. 1956, UBCSC, WEI, Photo Box 5, File 1194.; "Construction – Welding," Photograph Ca. 1957, UBCSC, WEI, Photo Box 5, File 789.; "[Pipeline Construction]," Photograph, 195?, UBCSC, WEI, Photo Box 5, File 714.; Westcoast Transmission Limited, "The Story of A Pipeline."; "Construction – 1956-1957: [Coating pipes]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1771.; E. Bud Senkowski, "Meeting Demands of Gas Exploration: The Evolution of Pipeline Coating," *KTA*, Accessed June 23, 2023, <https://kta.com/kta-university/evolution-pipeline-coatings/>.

1960 as "terrain composed of a living organic mat of mosses, sedges and/ or grasses, with or without tree growth and underlain by a usually highly compressible mixture of partially decomposed and disintegrated organic material, commonly known as "peat" or "muck".”<sup>85</sup> Liza Piper calls it a “nurturing [...] environment for mosses and other acid-loving vegetation.”<sup>86</sup> Westcoast employees, in turn, described it as a "swampy wasteland.”<sup>87</sup> During the winter, this muskeg, with its high water table, transformed into a firm, icy soil that facilitated the travel of heavy machinery.<sup>88</sup> Piper observes a similar utilization of frozen muskeg, or “ice roads” as the author calls it, for the transportation of machinery in other parts of Subarctic Canada.<sup>89</sup> Drilling and seismic crews eagerly took advantage of the sub-zero temperatures and adopted a "do it now" attitude in the freezing winter months.<sup>90</sup> Following the spring breakup, muskeg transformed into what the company called "a treacherous quagmire" that could trap unwary truck drivers and swallow tractors whole.<sup>91</sup> Corduroy roads provided the only safe corridor for tracked equipment over this challenging terrain.<sup>92</sup> Once in the muskeg, summertime meant being swarmed by mosquitoes and other insects while relying on concocted modes of transportation, including horses, power-driven canoes, land-rovers and at times "the old reliable 'shanks ponies'," or one's own legs, to get to the pipeline jobs.<sup>93</sup> A

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<sup>85</sup> Ivan C. MacFarlane, “Muskeg Research: A Canadian Approach,” *National Research Council of Canada* (1958): p.638, Accessed Apr. 18, 2023, <https://onlinepubs.trb.org/Onlinepubs/hrbproceedings/38/38-032.pdf> ; J. Terasmae, "Muskeg." *The Canadian Encyclopedia*, Last Edited Oct. 5, 2018.

<sup>86</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.28.

<sup>87</sup> Westcoast Transmission Company Limited, “The New Frontier,” *Pipeline* Vol. 2, No. 5 (August 1964): p.5, UBCSC, WEI Box 11, File 38.

<sup>88</sup> “Drillers Do It Now," Operate 250 Units," *Calgary Herald* (Calgary, Alb.), Jan. 11, 1956, p.41.; “First Leg of Coast Pipeline Reported Basically Complete,” p.6.; “Work Finished For First Leg B.C. Gas Line,” *Gazette*, p.19.

<sup>89</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.29.

<sup>90</sup> “Drillers Do It Now," Operate 250 Units," *Calgary Herald*, p.41.; “First Leg of Coast Pipeline Reported Basically Complete,” *Star-Phoenix*, p.6.“Work Finished For First Leg B.C. Gas Line,” *Gazette*, p.19.

<sup>91</sup> Westcoast Transmission Company Limited, “The New Frontier.”; “US Hearings Delay Gas Pipeline Start,” *Province* (Vancouver, B.C.), Aug. 8, 1955, p.16.

<sup>92</sup> Westcoast Transmission Company Limited, “The New Frontier.”; Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.237.; “Construction – Beaver River: Near Beaver River A-2 location,” Photograph, 1971, UBCSC, WEI, Photo Box 3, File 269.

<sup>93</sup> “Peace River Scene of Oil Search,” *Times Colonist* (Victoria, B.C.), Aug. 31, 1955, p.53.



tracked vehicle with a backhoe scooped out a canal, and long sections of welled-together pipe would be floated in the channel, which automatically filled with water from seepage.<sup>94</sup> The crews often resided in trailer-style construction camps that had to be elevated considerably above ground level to prevent their radiating heat and softening the ground beneath them and drawing them in.<sup>95</sup> The soil, free from muskeg, in the pipeline's more southern and interior regions, was easier traversed in fall and spring.<sup>96</sup> Subject to extensive seasonal variations in the ground conditions, the contractors established seasonal construction cycles and practices that shaped the pace and duration of construction work, increasingly interlacing labour with the place.

Permafrost also significantly influenced this process. This type of soil underlays much of the muskeg in the north, hindering drainage and leading to moisture buildup in the muskeg areas.<sup>97</sup> The distribution of permafrost is determined by climatic conditions and the composition of the active soil layer or the layer of soil above the permafrost that thaws and freezes, depending on the season.<sup>98</sup> Damage to the permafrost could threaten the integrity of the Westcoast pipeline and further complicate the construction processes. For instance, rapid thawing of the permafrost could compromise the soil's stability, thus risking the pipeline's integrity. Consequently, construction crews needed to exercise great caution to prevent any

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<sup>94</sup> Westcoast Transmission Company Limited, "Efficiency Even In Muskeg," *Pipeline* Vol. 9, No. 4 (June 1969): p.7, UBCSC, WEI, Box 11, File 42.

<sup>95</sup> Westcoast Transmission Company Limited, "The New Frontier," *Pipeline* Vol. 2, No. 5 (August 1964): p.5, UBCSC, WEI Box 11, File 38.; Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.237.

<sup>96</sup> "First Work Set On B.C. Gas Line," *Times Colonist* (Victoria, B.C.), Sep. 24, 1955, p.13.; "Plan Start On Gas Line Oct. 1," *Star-Phoenix* (Saskatoon, Sask.), Sep. 24, 1955, p.24.; "Work Starting Soon on Long Gas Pipeline, British Columbia," *Lethbridge Herald* (Lethbridge, Alb.), Sep. 26, 1955, p.14.; "Pipeliners Go North In Spring," *Quesnel Cariboo Observer* (Quesnel, B.C.), Sep. 29, 1955, p.C9.

<sup>97</sup> J. E. Brown. "6. Muskeg and Permafrost" In *Muskeg and the Northern Environment in Canada* edited by N.W. Radforth and C.O. Brawner (Toronto: University of Toronto Press, 1977): p.148.; Westcoast Transmission Company Limited, "The New Frontier," *Pipeline* Vol. 2, No. 5 (August 1964): p.5, UBCSC, WEI Box 11, File 38.; Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.29.

<sup>98</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada*, p.29.; Leah K Clayton et al., "Active Layer Thickness as a Function of Soil Water Content," *Environmental Research Letters* Vol. 16 (2021): p.2.

harm to the permafrost during the construction phase.<sup>99</sup> In general, thermal disturbance of the right-of-way also contributed to permafrost degradation and thaw settlement, which necessitates remedial action. One such remedy involves infilling the sagged sections with fill while ensuring adequate pipeline protection from damage.<sup>100</sup> Overall, managing the crews' interaction with permafrost was paramount to ensure the Westcoast pipeline's successful construction and long-term viability.

Often, as Westcoast explains, standard operating procedures and practices had to be discarded to navigate either frozen or muskeg soil. An early 1960s newsletter reflects on construction in this type of soil and says, "in building pipelines, plants and compressor stations in this country, conventional methods and practices are often cast aside."<sup>101</sup> Employees resorted to axes when their big machinery could not continue and adjusted their proceedings to the local muskeg conditions.<sup>102</sup> The Westcoast Company was the first company to build a big-inch natural gas pipeline in the ever-changing conditions of the northern and interior environments of British Columbia.<sup>103</sup> As journalist Peter C. Newman remarks, "An entire company was learning its business on the job."<sup>104</sup> Ed Phillips, future company president, would reflect on the construction of the line and sum up this point well,

Westcoast people have something to brag about. They derive their unique pipelining skills from two circumstances: The early projects were generally under-financed, and the final costs had to be well below the same type of job elsewhere. And the pipeline traversed every type of terrain – permafrost, small glaciers, timbered mountains, high-water-table valleys, arid prairie, fertile flats, orchard country, granite cliffs of Pine

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<sup>99</sup> James M. Oswell, "Pipelines in Permafrost: Geotechnical Issues and Lessons," *Canadian Geotechnical Journal* Vol. 48, No. 9 (2011): p.1425.

<sup>100</sup> Ibid., p.1412–1431.

<sup>101</sup> Westcoast Transmission Company Limited, "The New Frontier," p.5.

<sup>102</sup> Ibid.

<sup>103</sup> Peter C. Newman, *Continental Reach*, p.63.

<sup>104</sup> Ibid., p.64.

Pass and the Coquihalla, raging rivers and the seismically active Fraser Valley. The topography, from the height of the Pacific Coast Mountains to sea level, was as tough as the geography.<sup>105</sup>

In addition to established practices, local knowledge and human ingenuity were thus integral to the completion of the Westcoast mainline.

The unpredictability of the weather significantly disrupted the carefully planned seasonal construction cycles of Westcoast pipeline crews, further emphasizing the local environmental challenges they encountered during their construction process. Extremely harsh winter conditions impeded the construction of the natural gas line on countless occasions.<sup>106</sup> During the winter of 1955, heavy rains made cutting out the necessary trenches on most of Westcoast's right-of-way almost impossible.<sup>107</sup> In the spring of 1956, recurring wet weather bogged the operation down again.<sup>108</sup> Ensuing fine weather conditions, then again, accelerated the construction process in September 1956 to such an extent that Canadian Bechtel Ltd. broke the "most pipeline laid in one day," with 12,600 feet in the Prince George area.<sup>109</sup> At the end of 1956, the first 120-mile-long section successfully crossed the Rocky Mountain Pine Pass an entire construction season ahead of schedule.<sup>110</sup> On a more day-to-day basis, the Westcoast Transmission's seasonal construction schedules were at the mercy of sudden harsh snowfalls, heavy rains, and mild winter conditions. Westcoast's Northern Division's Superintendent of Operations, John Stewart, remarked at the annual meeting of the Fort Nelson Chamber of Commerce in 1964 on the matter, "Gas systems don't run on their

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<sup>105</sup> Ibid., p.63.

<sup>106</sup> "Westcoast 'almost ready' to Start Laying Gas Pipeline," *Province*, p.7.; "100 Miles Cleared For Westcoast Line," *Calgary Herald*, p.32.

<sup>107</sup> "It's Your Business," *Vancouver Sun* (Vancouver, B.C.), Nov. 5, 1955, p.14.

<sup>108</sup> "Pipeline Work on Schedule," *Quesnel Cariboo Observer* (Quesnel, B.C.), Aug. 9, 1956, p.C9.

<sup>109</sup> "Westcoast Completes One-Third Of Line," *Calgary Herald* (Calgary, Alb.), Sep. 10, 1956, p.14.; "One Third of Gas Line Completed," *Vancouver Sun* (Vancouver, B.C.), Sep. 10, 1956, p.19.

<sup>110</sup> "First Leg Completed," *Leader-Post*, p.15.; "Westcoast Line 70% Completed," *National Post* (Toronto, Ont.), Jan. 5, 1957, p.20.

own, they require trained personnel, and they have to be as completely flexible as the weather itself."<sup>111</sup> This pattern would continue during the maintenance and expansion of the pipeline project.<sup>112</sup>

Aiming to increase their profit margins, contractors at times disregarded the close connection between weather and work. Near Hope, B.C., about 75 men walked off the Westcoast Transmission natural gas project. Their contractors had refused to compensate them with two-hour "show-up" wages for the days when heavy rain had forced their activities to a stop. Sixty heavy equipment operators, entitled to such compensation as part of their union agreement with the International Operating Engineers Union, walked off. Fifteen mechanics sympathetically joined them.<sup>113</sup> Overall, the union seems to have acknowledged the intricate dance between labour and local weather conditions.

System tests brought crews, labour, and place even closer. Contractors harnessed local water supplies to assure the line's integrity in a "hydrostatic test." Such a test begins with "pigging," a process where tubular scrapers, nicknamed "pigs" for the squealing noises they emit, are pushed through a section to clear the pipeline from any residue and rubble.<sup>114</sup> Once cleared, natural bodies of water were often tapped to fill the pipeline with water.<sup>115</sup> Westcoast

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<sup>111</sup> Westcoast Transmission Company Limited, "Gas Systems Need People," *Pipeline* Vol. 2, No. 3 (June 1964): p.7, UBCSC, WEI Box 11, File 38.

<sup>112</sup> Westcoast Transmission Company Limited, "Meet a Pipeliner," *Pipeline* Vol. 3, No. 11 (November 1965): p.7, UBCSC, WEI Box 11, File 39.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 2 (February 1966): p.7, UBCSC, WEI Box 11, File 40.; Westcoast Transmission Company Limited, "Snow Revives Memories of Winter," *Pipeline* Vol. 4, No. 7 (July 1974): p.2, UBCSC, WEI Box 11, File 44.; Westcoast Transmission Company Limited, "PNGAS Fights Back from Disaster," *Pipeline* Vol. 8, No. 7 (December 1978): p.3, UBCSC, WEI Box 11, File 45.; Westcoast Transmission Company Limited, "Pipeline Nears Completion," *Pipeline* Vol. 8, No. 10 (October 1968): p.2-3, UBCSC, WEI Box 11, File 41.

<sup>113</sup> "75 Walk Off Pipeline Job," *Vancouver Sun* (Vancouver, B.C.), Oct. 25, 1956, p.50.

<sup>114</sup> "Testing Assures Flow," *Province* (Vancouver, B.C.), May 31, 1957, p.66.; Peter C. Newman, *Continental Reach: the Westcoast Energy Story*, p.53. "Westcoast Transmission Company Limited, Crews Busy in Fraser Valley," *Pipeline* Vol. 9 (June 1969): p.10, UBCSC, WEI, Box 11, File 42.; "Don't Be Alarmed By Loud Noise," *Hope Standard* (Hope, B.C.), Jul. 2, 1970, p.1.

<sup>115</sup> "Construction – Historic: Water Running Through Welded Pipeline," Photograph, Ca. 1956, UBCSC, WEI, Photo Box 7, File 1218.; "Construction – Historic: Water Running Through Welded Pipeline, Looking South at Nicola River, M.p. 528.8, Jan. 12, 1957," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1220.; "Construction – Historic: Water Running Through Welded Pipeline, 30" Pipe at Dead Man's Creek, Near

hired Craig and Ralston Construction Co. Ltd. to complete these tests on some 400 miles of its pipeline, from Davie Lake north of Prince George to Huntingdon on the U.S.-Canada border.<sup>116</sup> W.C. "Bill" Ralston, the "hard-driving 44-year old" Company President, explains the operation as follows, "We blow up the pipe with water or air pressure to 1170 pounds per square inch which is actually much more than the pipe would be required to take."<sup>117</sup> Red dye in the water made it easier to detect any leaks.<sup>118</sup> To ensure the pipeline's safety, the construction process had to be intricately integrated with its surroundings, incorporating water bodies and air pressures to detect any potential leaks.

Craig & Ralston was a well-established Canadian firm headed by a "veteran pipeliner" with a highly experienced crew that relied on previous pipelining experience. The company head, Mr. Ralston, remarked that every one of his crew had experience in the pipeline industry.<sup>119</sup> Nevertheless, they, too, were susceptible to local weather conditions. The crew of experienced men often found themselves knee-deep in mud.<sup>120</sup> Nevertheless, their determination and competence enabled them to complete the project a month ahead of schedule, highlighting their successful close interaction with local environmental conditions.<sup>121</sup> During the construction, water served as a stringent test for the pipeline system, revealing potential errors. In 1957, pipeline ruptures became a recurrent issue in the

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Savona, B.C., August 1956," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1221.; "Construction – Historic: Water Running Through Welded Pipeline, Coquihalla," Photograph, Ca. 1956, UBCSC, WEI, Photo Box 7, File 1222.; "Construction – Historic: Water Running Through Welded Pipeline," Photograph, Ca. 1956, UBCSC, WEI, Photo Box 7, File 1223-1226.; "Construction – Historic: Water Running Through Welded Pipeline, Coquihalla River, Looking Downstream," Photograph, Ca. 1956, UBCSC, WEI, Photo Box 7, File 1227.; "Construction – Historic: Water Running Through Welded Pipeline, [Coquihalla River Crossing Near Hope, B.C., February 1956]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1228-1231.; "Construction – Historic: Water Running Through Welded Pipeline," Photograph, Ca. 1956, UBCSC, WEI, Photo Box 7, File 1232, 1234-1236.

<sup>116</sup> "Spread Contractor Lauds Canadian Personnel," *Province* (Vancouver, B.C.), Oct. 8, 1957, p.16.

<sup>117</sup> "Testing Assures Flow," *Province* (Vancouver, B.C.), May 31, 1957, p.66.

<sup>118</sup> Westcoast Transmission Company Limited, "New Record Set By Determined Crew," *Pipeline* Vol. 5 No. 7 (July 1967): p.3., UBCSC, WEI, Box 11, File 41.

<sup>119</sup> "Spread Contractor Lauds Canadian Personnel," *Province*, p.16.

<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

Chilliwack district. One such incident involved a test that nearly cost the lives of four crew members. Despite their efforts to control the water flow, the forceful impact led to pipeline rupture, causing a massive 30-foot hole between Banford and Gibson roads in the town.<sup>122</sup>

Bernie Guichon recalls the day a test nearly killed four crew members.

The four men were manning the valve to let this water through more slowly. When that wall of water hit, there was nothing they could do. It opened up the trap just like it was made of toilet paper. They could have drowned; that they weren't seriously hurt, you can't explain. One man lost a tooth. There was an Italian truck driver with a tanker truck to catch the methanol. He was sitting in his truck, and the wall of water carried him out into the lake at the bottom of the hill. The methanol, of course, wasn't caught, and it flowed out into the lake, too.<sup>123</sup>

In sum, the experience of Craig & Ralston's crew demonstrates their expertise and ability to navigate the challenges posed by local environmental conditions and their need to do so. In addition, it demonstrates their vulnerability in the face of the natural forces the pipeline was harnessing.

As they constructed the Westcoast pipeline, the company and its construction crews essentially erased the local Indigenous communities from the construction process and the local environments in which they became entangled. Indigenous people were, for instance, starkly absent during the construction of the mainline. They only took on a few positions in construction crews. Indigenous people may be absent from the source material more so than they were absent from the crews. However, interviews conducted between Lyall and the Hope Band indicate otherwise. The DIA assured the Band that Bechtel would "give all consideration to hiring the Hope Band," but Bechtel Ltd. never hired any of the community's

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<sup>122</sup> "Natural Gas Brings Worried Frowns In Chilliwack- Abbotsford All Smiles," *Chilliwack Progress* (Chilliwack, B.C.), Nov. 7, 1956, p.1.

<sup>123</sup> Peter C. Newman, *Continental Reach*, p.54.

workers. They refrained from signing a "permanent easement" while waiting for their job contracts. However, they never came. Instead, the community received a memo that advised the band councils that "the Company can, of course, expropriate if necessary." On August 22, 1955, the Chawathil council felt forced to agree to the construction of the Westcoast pipeline on their land.<sup>124</sup> During interviews, a member of the Hope Band explained to Lyall that her father, who remembered the pipeline construction, told her that the construction crews "just came in and did their thing."<sup>125</sup> The journalist Peter C. Newman does mention a "crew of local native men" in his work, but their size and the duration of their jobs goes unmentioned.<sup>126</sup> Indigenous communities were thus largely excluded from construction efforts.

The utilization of colonial narratives to comprehend and promote the construction of the mainline underscores the type of knowledge and relationship with the land that Westcoast deemed significant. The company's portrayal of the northern sections of the line as a "new country" that was "dotted with the relics of past disappointments and failure" exemplifies its perspective regarding the region and its historical context.<sup>127</sup> It thereby refrains from acknowledging the role of previously completed infrastructure projects like the Alaska Highway.<sup>128</sup> Westcoast called the Peace region a "new frontier" where the last colonial struggles would occur, and the last part of Canada would connect to the southern, developed areas.<sup>129</sup> It was not until the company developed its natural resources that the natural environment of these regions fulfilled its purpose: "Today... because of an abundance of natural resources, it is a land of opportunity on the threshold of a major industrial

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<sup>124</sup> Gordon Robert Lyall, "They Smashed it Right Through Our Reserve," p.83.

<sup>125</sup> Ibid., p.82-83.

<sup>126</sup> Peter C. Newman, *Continental Reach*, p.56.

<sup>127</sup> Westcoast Transmission Company Limited, "Expansion To The Far North," *Pipeline* Vol. 2, No. 5 (August 1964): p.4. UBCSC, WEI, Box 11, File 38.

<sup>128</sup> "Alaska Highway," *Government of Canada*, Accessed September 2, 2023, <https://www.canada.ca/en/public-services-procurement/services/infrastructure-buildings/bridges-docks-dams/alaska-highway.html>.

<sup>129</sup> Westcoast Transmission Company Limited, "Expansion To The Far North."

development program."<sup>130</sup> The company would conclude that "Now the Peace is isolated no longer."<sup>131</sup> The mainline system was perceived as a significant component of broader colonial projects in Canada, a subject that will be delved into in the subsequent chapter. This perception influenced the type and form of knowledge that was utilized and valued throughout the pipeline's construction.

The pipeline was completed on August 8, 1957, and went into service on October 7, 1957.<sup>132</sup> The opening ceremonies on that day reinforced the colonial image associated with the transmission pipeline, perpetuating the notion that external entities had and should have arrived to try and impose their perspectives and methods for handling local environments. The southern guests were unfamiliar with the northern conditions in which the pipeline was laid. Roughly three hundred V.I.P. guests were transported from southern Canadian cities to Fort St. John in thirteen planes (Image 15).<sup>133</sup> Snow had fallen on the then-most northerly point of the gas pipeline the night before, and eight-foot drifts roamed the area.<sup>134</sup> Many of the guests were unfamiliar with the northern climate, as an employee of the company recalled, "We knew a lot of the guests wouldn't be prepared for the cold weather." They, therefore, had to outfit them with fleece-lined coats and rubber boots.<sup>135</sup> Following a champagne breakfast on

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<sup>130</sup> Ibid.

<sup>131</sup> Westcoast Transmission Company Limited, "The Story of a Pipeline."

<sup>132</sup> Westcoast Transmission Company Limited, "To Our Shareholders," *Annual Report 1957*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, "Westcoast Goes on Steam," *Pipeline* Vol. 7, No. 5 (November 1977): p.1, UBCSC, WEI Box 11, File 45.

<sup>133</sup> Westcoast Transmission Company Limited, "Westcoast Goes on Steam," p.1.; "Opening Ceremonies: People Arriving In Fort St. John, B.C. On Fleet Of Chartered Planes To Celebrate The Completion Of The Peace River Pipeline," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1524, 1526.; "Opening Ceremonies: People At Airport After Arriving In Fort St. John, B.C. To Celebrate The Completion Of The Peace River Pipeline," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1527.; "Opening Ceremonies: Hotel Vancouver Luncheon To Celebrate The Completion Of The Peace River Pipeline," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1529-1531.; "Opening Ceremonies: McMahon brothers, (lr): John, Frank, and George Hotel Vancouver Luncheon to Celebrate the Completion of the Peace River Pipeline," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1535-1536.

<sup>134</sup> Westcoast Transmission Company Limited, "Westcoast Goes on Steam," p.1.; Earle Gray, *Wildcatters*, p.222.

<sup>135</sup> Westcoast Transmission Company Limited, "Westcoast Goes on Steam," p.1.



the plane, the planes landed in the northern town.<sup>136</sup> Charter buses transported them to the McMahon Plant at Taylor Flats, where cardboard had been spread out over the rough, wintery soil in the shape of pathways for the visitors. An official valve-opening ceremony took place on the second day of festivities. "everything ready to turn the switch?" asked Premier W.A.C. Bennett, "All Set," and the premier pulled the lever that would substantially change the province's energy supply picture.<sup>137</sup> The unprepared southern guests, the champagne, and the general showmanship of the endeavour form a stark contrast with the muddy, harsh construction conditions of the pipeline and further cement this idea of the pipeline as a colonial project.

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<sup>136</sup> Earle Gray, *Wildcatters*, p.222-223.

<sup>137</sup> Westcoast Transmission Company Limited, "Westcoast Goes on Steam," p.1.; Westcoast Transmission Limited, Official Opening of Westcoast Transmission Company Limited By Hon. W.A.C. Bennett, Premier of British Columbia (Program, 1957) UBCSC, WEI Box 6, File 25.



*Image 15: Guests arrive by charter plane for the opening ceremony.*

“Opening Ceremonies: People Arriving In Fort St. John, B.C. On Fleet Of Chartered Planes To Celebrate The Completion Of The Peace River Pipeline,” Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1525.

From the perspective applied in this section on the construction of the Westcoast system, knowledge is a dynamic process; it is created in, legitimized, and adapted to an ever-changing environment. It is also an intimate, relational process in which the local is a place where understandings are produced, and human-nature relations reworked. In the process, the pipeline became increasingly connected with the local environments through which the company laid it. However, outside influences, previous experiences, and larger colonial

understandings of the natural environment significantly influenced the shape and nature of this dynamic interplay.

## **2.4. Maintenance and Expansion**

The completion of the mainline in 1957 marked the onset of a new period in the company's history, characterized by maintenance and expansion. However, the maintenance and expansion crews continued to rely on a feedback-loop approach, adjusting their established understandings of the natural environment as they continued to engage with it. Throughout the years, the pipeline crews would lay the pipeline and then observe nature's response. This response arrived in various forms, such as explosions, erosion, water intrusion, thermal expansion, and vegetation encroachment on the right-of-way. The crews would respond to these challenges to the best of their abilities. They thus continuously learned from prior episodes, utilizing that knowledge to improve their future operations. The subsequent sections shed light on this process, revealing that it was only sometimes structured but heavily reliant on a trial-and-error system. Additionally, the glorification of hazards, partly driven by a need to accommodate cost restrictions, played a pivotal role, effectively transforming local areas into testing sites where crews integrated novel insights with established practices. Despite the risks involved, this approach allowed Westcoast to navigate the complexities of expanding and maintaining its operations amidst the dynamic interplay between human actions and the ever-changing natural environment.

The ensuing sections examine several significant maintenance and expansion initiatives to illustrate these arguments. These initiatives encompassed the Yoyo pipeline in the late 1960s, the 1970 Pacific Northern Gas line spanning from Prince George to Prince Rupert, and the water intrusion incident in the Amoco gas fields in 1973. These examples underscore that the enduring success of the Westcoast Transmission pipeline was heavily

reliant on a willingness to engage in trial-and-error systems and improvised activities involving hazards, all while staying adaptable to the pipeline's natural surroundings.

In 1966, construction workers relied on experiential knowledge from previous local environmental conditions to address what initially began as a manufacturing error on the Yoyo-Sierra-Kotcho pipeline (Yoyo-Pipeline). At that time, Westcoast undertook a comprehensive expansion program to meet its growing demands.<sup>138</sup> The Yoyo-Pipeline, a \$16 million project, consisted of a 24-inch, 66-mile-long secondary gathering line extending to the Yoyo region of northeastern British Columbia, played a critical role in these expansion plans.<sup>139</sup> However, the pipeline failed its initial tests as multiple line sections ruptured.<sup>140</sup> A foreman recalls, "I've seen areas with 400 feet of line blown out of the ground, split right open and twisted like a rope."<sup>141</sup> The supplied steel pipes, provided by Canadian Phoenix Steel & Pipe Ltd., were found to be defective. Despite financial constraints, the company continued its repair efforts; as Westcoast president Frank McMahon stated, "We don't have any money. Repair it, it'll work next time."<sup>142</sup> Eventually, Westcoast abandoned the pipeline after repeated efforts to repair and test it between November 1967 and January 1969. A new line was constructed alongside it to replace the faulted line, with financial assistance from Westcoast's export partner El Paso. The line became operational on Apr. 1, 1969.<sup>143</sup>

Crews also relied on existing knowledge of local environments, although this only sometimes guaranteed success. During the summers of 1967 and 1968, crews endured challenging conditions as they spent several months testing the Yoyo system, as mentioned in

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<sup>138</sup> Westcoast Transmission Company Limited, "To the Shareholders," *Annual Report 1967*, p. 3. UBCSC, WEI, Box 7, File 14.; "Hope To Complete Refinery By Fall," *Edmonton Journal* (Edmonton, Alb.), Feb. 1, 1960, p.3.; "Pipeline To Fort Nelson Seen Likely," *Gazette* (Montreal, Que.), Mar. 29, 1960, p.17.

<sup>139</sup> Westcoast Transmission Company Limited, "To the Shareholders," *Annual Report 1967*, p. 3.

<sup>140</sup> Peter C. Newman, *Continental Reach*, p.64.

<sup>141</sup> *Ibid.*, p.65.

<sup>142</sup> *Ibid.*

<sup>143</sup> Westcoast Transmission Company Limited, "Financial Review," *Annual Report 1969*, p.12. UBCSC, WEI, Box 7, File 14.; Peter C. Newman, *Continental Reach*, p.67.

the Company newsletter, "working in the mud, muskeg, mosquitoes, black-flies and no-see-ums to test the gathering lines."<sup>144</sup> The harsh realities of the environment became evident when three vehicles got simultaneously stuck in the muskeg during the summer of 1967. Corduroy roads were constructed to advance their efforts (see Image 16).<sup>145</sup> Surrounded by mosquitoes and mud, the Company newsletter writes that the crews were "many times [...] tempted to turn back."<sup>146</sup> Westcoast pursued legal action against the pipeline manufacturer for the defective line, leading to a subsequent settlement between the parties.<sup>147</sup> The faulty Yoyo line, while a technical error, illustrates the company's need to work closely with and adapt its operations to local conditions while relying on existing knowledge and producing novel insights. As financial resources were scarce, the latter involved many trial-and-error and ad hoc solutions.

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<sup>144</sup> Westcoast Transmission Company Limited, "Into the Muskeg Again," *Pipeline* (July 1968): p. 4. UBCSC, WEI, Box 11, File 41.

<sup>145</sup> Westcoast Transmission Company Limited, "New Record Set By Determined Crew," *Pipeline*, p. 3.; Westcoast Transmission Company Limited, "New Record Set By Determined Crew," *Pipeline*, p. 3.

<sup>146</sup> "Ibid.

<sup>147</sup> "Westcoast Transmission Sues Pipe Maker," *Gazette* (Montreal, Que.), Jul. 10, 1969, p.19.; "Westcoast Sues Steel Firm Over Pipe," *Nanaimo Daily News* (Nanaimo, B.C.), Jul. 10, 1969, p.2.; "\$13 Million Law Suit Faces Canadian Phoenix," *Albertan* (Calgary, Alb.), Jul. 10, 1969, p.24.



*Image 16: Crew with a "cat" machine trapped in the mud they encountered during their work on the Yoyo line.*

Westcoast Transmission Company Limited, "New Record Set By Determined Crew," *Pipeline*, Vol. 5 No. 7 (July 1967): P. 3, UBCSC, WEI, Box 11, File 41.

This pattern of ingenuity and adaptability can also be observed in later episodes of the pipeline's history. As El Paso provided financial assistance to replace the Yoyo junction, Westcoast faced an excess gas supply without a functioning pipeline to transport it through. Before the Yoyo failure, Westcoast engaged in "take-or-pay" contracts for that line. This contractual arrangement obligated Westcoast to pay its gas producers for the natural gas, regardless of whether an operational pipeline existed to transport it. In the late 1960s, a proposed pipeline from Prince George to Prince Rupert offered a potential solution.<sup>148</sup> The pipeline would be partially owned and supplied by Westcoast Transmission Company Ltd., receiving gas from the company's supply line at Summit Lake, north of Prince George.<sup>149</sup> A

<sup>148</sup> "Natural Gas Service Through To The Coast," *Interior News* (Smithers, B.C.), Feb. 26, 1969, p.8.; Peter C. Newman, *Continental Reach*, p.68.; "Gas Line Sought To Prince Rupert," *Edmonton Journal* (Edmonton, Alb.), Jun. 18, 1966, p.50.; "Hearings On Pipeline In July," *Province* (Vancouver, B.C.), Jun. 18, 1966, p.22.; "PUC Plans Hearings In Terrace," *Nanaimo Daily News* (Nanaimo, B.C.), Jun. 18, 1966, p.16.

<sup>149</sup> "\$30 Million Gas Pipeline Start Set," *Times Colonist* (Victoria, B.C.), May 4, 1966, p.3.; "New Gas Pipeline Expected In North," *Province* (Vancouver, B.C.), May 4, 1966, p.1.; "Central B.C. Gas Supply Planned," *Calgary Herald* (Calgary, Alb.), May 5, 1966, p.65.; "Prince Rupert Pipeline Slated," *Province* (Vancouver, B.C.), May 5, 1966, p.16.

subsidiary, Pacific Northern Gas Ltd., would manage the overall operation of the system.<sup>150</sup>

The pipeline was intended to serve a region Westcoast referred to as "an awakening giant," known for its pulp and paper mills, mines, smaller industrial ventures, and various commercial and residential users.<sup>151</sup> Pacific Northern Gas Ltd. would bill its first customers in January 1969.<sup>152</sup> The construction of this Pacific Northern pipeline system, while ultimately successfully tested, one more, Westcoast's crew's ingenuity, adaptability, and willingness to accept certain improvised solutions.

The line's construction encompassed a range of challenging pipelining terrains, requiring the crews to respond swiftly and often improvise solutions to address unfolding issues. The terrain from Summit Lake to Prince Rupert presented a mixture of agricultural pastures, mountains, swamps, and rivers. The company acknowledged the difficulty of the terrain, and Keith Irwin, who served as the land agent and construction inspector on the project and later operated the line for fourteen years, referred to the section from Terrace to Prince Rupert as "the world's worst pipeline country."<sup>153</sup> The company estimated that \$36 million would be needed to construct the pipeline across the challenging terrain, but they only managed to raise \$28 million on the stock market. Consequently, Frank McMahon reportedly directed the company's engineers to redesign the line to fit the budget. In certain sections that were particularly difficult to cross, where they would have typically buried the entire pipeline,

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<sup>150</sup> Burns Bros. & Denton Limited, "Westcoast Transmission Company Limited: An Investment Study," A.E. Smith Investment Research Department (July 1968): p.3, UBCSC, WEI, Box 10, File 17.; Westcoast Transmission Company Limited, "Pacific Northern Bills First Customer," *Pipeline* Vol. 9, No. 1 (January 1969): p.8, UBCSC, WEI, Box 11, File 42.

<sup>151</sup> Robert G. Jennings, "Westcoast Transmission Company Limited, McLeod, Young, Weir & Company Limited (May 21, 1971): p.7. UBCSC, WEI, Box 10, File 17.; Westcoast Transmission Company Limited, "Gas For A New Empire," *Pipeline* (August 1968): p.2-4, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, "Pacific Northern," *Annual Report 1970*, p.5, UBCSC, WEI, Box 7, File 15.

<sup>152</sup> Westcoast Transmission Company Limited, "The Snowmobile... It's Making Winter the Best Season Of the Year," *Pipeline* Vol. 9, No. 1 (January 1969): p.8, UBCSC, WEI, Box 11, File 42.; "Gas Utility Will Extend Service North," *National Post* (Toronto, Ont.), Oct. 12, 1968, p.9.

<sup>153</sup> Westcoast Transmission Company Limited, "Stringing Pipe: A New Way," *Pipeline* (August 1969): p.3, UBCSC, WEI, Box 11, File 41.; Peter C. Newman, *Continental Reach*, p.68.

they opted to keep it above ground.<sup>154</sup> The unfolding of a series of ad hoc solutions to accommodate the financial constraints and the difficult terrain of the pipeline route ensued. Through interviews with Westcoast employees, journalist Peter C. Newman uncovered that the pipeline, hung by cables of cliffs in certain sections, was secured to trees and large rocks on various slopes and left some pipe floating in swampy muskeg lands.<sup>155</sup> In addition to these improvised measures, the crews relied on established practices such as using helicopters to transport pipelines to remote areas and utilizing large industrial machines that could transport supplies and crews through muskeg.<sup>156</sup> Westcoast would conclude that it was a line “fraught with problems” that “faced many difficulties.”<sup>157</sup> The areas between Summit Lake and Prince Rupert served as a testing ground for improvised practices. An amalgamation of different approaches allowed them to navigate the construction process effectively while working within the financial limitations of the project.

The Amoco incident of 1973 is a noteworthy example of the vulnerability of Westcoast's system to the surrounding environment. In the fall of 1973, complications arose when Amoco Canada Petroleum Company Ltd., a gas producer affiliated with Westcoast, experienced water intrusion into the producing formations of the Beaver River and Pointed Mountain fields.<sup>158</sup> Westcoast had deemed the Pointed Mountain field a highly productive natural gas reservoir, comparable in significance to the Turner Valley discoveries of the early

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<sup>154</sup> Peter C. Newman, *Continental Reach*, p.68–69.

<sup>155</sup> Ibid.

<sup>156</sup> Westcoast Transmission Company Limited, “Muskeg Vehicles Key To Operation,” *Pipeline* Vol. 9, No. 3 (March 1969): p.9, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, “Helicopter Company Formed,” *Pipeline* Vol. 9 (October 1969): p.5, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, “Cover Picture: Stan Adams Skilled,” *Pipeline* (August 1968): p.2, UBCSC, WEI, Box 11, File 41.

<sup>157</sup> Westcoast Transmission Company Limited, “Stringing Pipe: A New Way,” *Pipeline*, p.3.

<sup>158</sup> Westcoast Transmission Company Ltd., “Gas Shortage Forces Temporary Shut-Down of 8B,” *Pipeline News* Vol. 4, No. 9 (September 1974): p.3., UBCSC, WEI, Box. 11, File 44.; Westcoast Transmission Company Ltd., “Availability of Natural Gas,” *Annual Report 1973*, p.4. UBCSC, WEI, Box. 7, File 15.



20<sup>th</sup> century.<sup>159</sup> Westcoast relied heavily on the approximately 330 million cubic feet of natural gas per day supplied by these fields for its operations.<sup>160</sup> The unexpected water intrusion led to the curtailment of approximately 130 million cubic feet of natural gas daily and a significant supply shortage. Despite drilling two new wells and remedial work on the existing seven wells in these fields, the gas output did not increase significantly.<sup>161</sup> The water forced the unforeseen curtailment of approximately 130 million cubic feet of natural gas per day from its largest single supplier in the region. This curtailment made it impossible for Westcoast to meet its export commitments at the start of the winter heating season.<sup>162</sup> Westcoast sought additional supplies from alternative fields, as well as from Alberta and Southern Gas Co Ltd. However, a peak-day shortage persisted at 277 million cubic feet throughout 1974.<sup>163</sup> After experiencing a significant loss of approximately 30 percent of its total gas supply, Westcoast faced persistent curtailments for six years. This prolonged period of vulnerability reveals that their system remained susceptible to environmental conditions, despite any adaptations they may have made.<sup>164</sup>

Initially, Westcoast intended to distribute the shortage equally among its customers. However, its primary Canadian customers, B.C. Hydro, and Inland Natural Gas, launched a campaign against this approach and ultimately pressured the provincial government to adopt a

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<sup>159</sup> Peter C. Newman, *Continental Reach*, p.104.; *In 1914, substantial oil and gas reserves were discovered in the Turner Valley region of Alberta. This discovery marked a crucial milestone for western Canada and the nation, as it was the first major oil strike in fifty years. The implications of the Turner Valley findings were far-reaching as they greatly influenced the industrial growth of the nation as well as served as a catalyst for the exploration and exploitation of natural resources in other parts of the country.* “Turner Valley Gas Plant National and Provincial Historic Site,” *University of Calgary*, Accessed Jun. 1, 2023, <https://alberta.preserve.ucalgary.ca/sites/turner-valley-gas-plant-national-and-provincial-historic-site/>.; David Finch, *Hell’s Half Acre Early Days in the Great Alberta Oil Patch* (Surrey, BC: Heritage House, 2005): p.9–89.

<sup>160</sup> Westcoast Transmission Company Ltd., “Availability of Natural Gas.”

<sup>161</sup> Westcoast Transmission Company Ltd., “Gas Supply,” *Annual Report 1974*, p.16–17, UBCSC, WEI, Box. 7, File 15.

<sup>162</sup> *Ibid.*; Westcoast Transmission Company Ltd., “Availability of Natural Gas.”

<sup>163</sup> Westcoast Transmission Company Ltd., “Gas Supply,” *Annual Report 1974*, p.16–17.; Westcoast Transmission Company Ltd., *Press Release* (Vancouver, B.C., Oct. 24, 1973), UBCSC, WEI, Box. 11, File 22.

<sup>164</sup> Ed Phillips, *Guts and Guile: True Tales from the Backrooms of the Pipeline Industry* (Vancouver: Douglas & McIntyre, 1990): p.40.

"B.C. First" strategy.<sup>165</sup> Consequently, Westcoast had to curtail gas exports to the United States, much to the disappointment of American consumers, affirming energy security concerns raised in the original FPC hearings in the 1950s.<sup>166</sup> On peak days, U.S. customers received less than half of their contracted supply, leading to significant repercussions. For instance, industries such as pulp mills and cement plants had to temporarily lay off approximately 150,000 workers due to the fuel shortage.<sup>167</sup> Edward Phillips of Westcoast further believes the episode influenced the negotiations and content of the Free Trade Agreement between Canada and the U.S.A. as it discusses natural gas curtailments of this type.<sup>168</sup> The curtailments by Amoco and the wide-ranging international consequences that ensued illustrate the vulnerability of Westcoast's system to environmental factors. This incident highlights the imperative for Westcoast to adapt its policies and operations in response to its intricate interactions with its natural surroundings.

As evidenced by the three previous incidents, Westcoast frequently faced challenges while attempting to adapt established practices to new environments. The company's interaction with sour gas further exemplifies its reliance on a trial-and-error approach, which entailed significant hazards. Over the years, Westcoast gained an interest in various gas-treating plants, including those in Saratoga, Alberta, and Fort St. John, B.C.<sup>169</sup> These plants aimed to remove hydrogen sulphide (H<sub>2</sub>S) and carbon dioxide from sour gas, making it suitable for pipeline transportation. Sour gas is colourless and highly flammable, and in high

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<sup>165</sup> Peter C. Newman, *Continental Reach*, p.104.

<sup>166</sup> Westcoast Transmission Company Ltd., "Availability of Natural Gas," *Annual Report 1973*, p.4, UBCSC, WEI, Box. 7, File 15.; Westcoast Transmission Company Ltd., "Availability of Natural Gas.," Westcoast Transmission Company Ltd., "Gas Supply," *Annual Report 1974*, p.16–17.; Westcoast Transmission Company Ltd., "New Gas Connections," *Annual Report 1976*, p.6–7, UBCSC, WEI, Box. 7, File 16.

<sup>167</sup> Ed Phillips, *Guts and Guile*, p.40-41.

<sup>168</sup> Ibid., p.41.; *The Canada-U.S. Free Trade Agreement*, 1988, Article 904: Other Export Measures, p.146-147 (entered into force Jan. 1, 1989).

<sup>169</sup> Westcoast Transmission Company Limited, "Saratoga Processing Company Limited," *Annual Report 1961*, UBCSC, WEI, Box. 7, File 13.; Westcoast Transmission Company Limited, "Ultra-Modern Gas Treating Plant at Fort Nelson," *Pipeline* Vol. 2, No. 5 (August 1964): p.8, UBCSC, WEI, Box. 11, File 38.

concentrations, H<sub>2</sub>S can lead to knockouts or even fatalities if inhaled substantially.<sup>170</sup> In the latter half of the twentieth century, local concerns over sour gas in northern Alberta and B.C. would lead to conflict between residents, the oil and gas industry, and regulatory authorities.<sup>171</sup> Nowadays the medical field has widely established that prolonged exposure to lower doses can cause respiratory illnesses.<sup>172</sup> In a newsletter from late 1964, the company reported that it equipped these gas-treating facilities with alarms and an emergency shut-down system.<sup>173</sup> However, Westcoast was the first in Canada to operate a sour gas gathering system, and the implementation of a secure processing system went in a trial-and-error manner. Ron Murphy, technical service specialist, recalls from his days at the sour gas plants that they “had a lot to learn about sour gas.”<sup>174</sup> In the initial season, everyone, including himself, encountered knockouts due to a lack of familiarity with the gas and inadequate safety measures, “we were new to masks,” Murphy recounts.<sup>175</sup> Through experience, they learned to adapt, but Murphy recalls a dangerous episode during which he passed out due to a mask malfunction, eventually discovering the correct procedure to handle such situations. In his words,

I bent down to pick up a 26-inch-long pig, and it caused the mask to fall away from my face, and I got a whiff behind the mask. I had gotten a whiff and was backing away

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<sup>170</sup> “Sour Gas,” *Alberta Energy Regulator*, Accessed Jun. 2, 2023, <https://www.aer.ca/providing-information/by-topic/sour-gas>.

<sup>171</sup> Wendy Stuek, “Wiebo Ludwig, Polarizing Figure in the Oil Patch, Dies at 70,” *Globe And Mail*, April 9, 2012, <https://www.theglobeandmail.com/news/national/wiebo-ludwig-polarizing-figure-in-the-oil-patch-dies-at-70/article4099057/>; David Staples, “Who Is Wiebo Ludwig? A Thunder Storm Wrapped In The Flesh Of A Man. Part 1,” *Edmonton Journal*, January 8, 2010, <https://edmontonjournal.com/news/local-news/who-is-wiebo-ludwig-part-1>; “Wiebo Ludwig, The Making Of An Eco-Warrior,” *CBC News*, April 9, 2012, <https://www.cbc.ca/news/canada/wiebo-ludwig-the-making-of-an-eco-warrior-1.1240294>; “Gas Seeps Into Stoney Wells, Engineer Says,” *Calgary Herald*, December 3, 1988, p.3.; Peter Hepher, “Sour Gas and Sickness,” *Calgary Herald*, September 23, 1982, p.6.

<sup>172</sup> Bassam Doujaiji and Jaffar A. Al-Tawfiq, “Hydrogen Sulphide Exposure in an Adult Male,” *Ann Saudi Med* Vol. 30, No. 1 (Jan-Feb. 2010): p. 76, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850187/>.

<sup>173</sup> Westcoast Transmission Company Limited, “Ultra-Modern Gas Treating Plant at Fort Nelson,” *Pipeline*, p.8.

<sup>174</sup> Peter C. Newman, *Continental Reach*, p.55.

<sup>175</sup> *Ibid.*

from the danger zone – and the next thing I knew, my partner was taking my air pack off. I'd passed out, and he'd come to rescue me. We learned that, in that situation, what you did was open an air valve and blow the gas out from behind your mask – but we gained that knowledge by getting knocked down and monkeying around and figuring out how not to have something happen again.<sup>176</sup>

After this first season, Murphy asserts there were no gassings for nine to ten years.<sup>177</sup>

However, many new personnel joined after a decade, and the incidents started again. Murphy states, "We didn't pass our schooling down effectively enough, so there was another cycle of three or four people that got gassed and knocked out until we got the teaching right."<sup>178</sup> This episode highlights the integral role of trial-and-error systems in Westcoast's operations, the contribution of hazards to the company's success, and the difficulty of transforming experiential knowledge into established practices.

## **2.5. Conclusion**

This chapter discusses the knowledge used and produced to survey and secure the Westcoast main line's right-of-way. It illustrates that white-settler practices, often produced outside the regions in which the pipeline was build, largely shaped this process while the company representatives merely engaged with local Indigenous communities through government institutions. Substantial, direct involvement of Indigenous communities was lacking. Westcoast did use and accept white, local understandings of the region and used these to its advantage.

The chapter's second section unravels how Westcoast's mainline construction crews

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<sup>176</sup> Ibid.

<sup>177</sup> Ibid.

<sup>178</sup> Ibid.

adapted their practices to their natural surroundings, becoming increasingly interconnected with their local environments. They learned how to work in muskeg and permafrost and relied on water bodies for testing. However, Westcoast's crews and operations remained vulnerable to the unpredictability of the weather, accidents, and changing soil patterns. This section shows that knowledge creation constituted a dynamic, relational process through which local environments became places where novel insights are generated, adapted, and added. Colonial perspectives and power dynamics dictated whose knowledge the company and crews prioritized and integrated into the construction process.

The final section, which focuses on the maintenance and expansion of Westcoast's system during the 1960s and 1970s, shows that local knowledge predominantly relied on trial-and-error systems and an almost celebratory approach to risk and risk-taking. This approach to learning and problem-solving had substantial implications for the safety and efficiency of the construction crews' operations.

This chapter serves as a case study and uses the context of a natural gas pipeline owned by a private enterprise to reinforce the findings of some environmental historians such as Liza Piper, Joy Parr, Meg Stanley, and Tina Loo, who primarily concentrated on public, and often hydroelectric, developments in Canada. By building on their insights, the chapter challenges the prevailing positive associations often linked with the concept of "local knowledge." The chapter's central argument is that despite its apparent advantages, local knowledge, while firmly rooted in local environments, was frequently shaped by colonial practices and a glorification of risk and hazard. This chapter emphasizes the need for those working on energy transitions to adopt a nuanced and critical understanding of local knowledge to prevent the perpetuation of colonial power dynamics and practices and to ensure the safety of crews and the local environment. The ensuing chapter further explores how the dynamics of colonialism and employees' socio-ecological relations shaped

Westcoast's energy transition in the mid-20th century. It focuses on the permanent staff that kept the company's pipeline operational instead of the primarily temporary construction workers on which Westcoast relied for the construction and expansion of its pipeline infrastructure.

## **Chapter 3: Negotiating Identities**

### **3.1.Introduction**

“I am now going to turn on the gas,” British Columbia premier W.A.C. Bennett announced in 1957 as he pulled a lever to open the flow of natural gas from the B.C. and Alberta Peace River region to a point near Huntingdon on the Canada-United States boundary (Image 17).<sup>1</sup> Along the way, the gas reached its distribution companies, Inland Natural Gas Co Ltd. and British Columbia Electric Co Ltd., and at the international border, fed the American Pacific Northwest Pipeline Corporation.<sup>2</sup> Over the years, Westcoast would expand its mainline system as demand for natural gas surged until, by 1980, it had grown to include five processing plants and seventeen compressor stations in the interior and northern regions of B.C.<sup>3</sup> These plants and stations required a permanent staff to maintain the flow of natural gas. Many operators, technicians, and engineers who took up these positions relocated their lives for Westcoast and brought or started a family in existing towns along the pipeline route. In 1980, 490 out of 772 employees resided outside Vancouver, or “elsewhere in British Columbia,” as the company put it.<sup>4</sup> This chapter extends the analyses of socio-ecological relations generated and adapted by Westcoast beyond the regulatory hearings and the construction of the line; this chapter analyzes how Westcoast’s more permanent staff created

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<sup>1</sup> Westcoast Transmission Company Limited, “Westcoast Goes on Stream,” *Pipeline* Vol. 7, No.7 (November 1977): p.2, UBCSC, WEI Box. 7, File 45.

<sup>2</sup> Westcoast Transmission Company Limited, “To Our Shareholders,” *Annual Report 1957*, UBCSC, WEI Box. 7, File 13.

<sup>3</sup> Westcoast Transmission Company Limited, “System and Capacity,” *Fact Card 1980*, UBCSC, WEI Box 11, File 24.; Westcoast Transmission Company Limited, “Saratoga Processing Company Limited,” *Annual Report 1961*, UBCSC, WEI Box 11, File 24.

<sup>4</sup> Westcoast Transmission Company Limited, “System and Capacity,” *Fact Card 1981*, UBCSC, WEI Box 11, File 24.

a sense of home and belonging in these, to them often novel, environments. In the process, it elaborates on the interplay between these families and the themes of settler-colonialism and energy transitions that run through this dissertation.



*Image 17: "Opening Ceremonies: Hotel Vancouver luncheon to celebrate the completion of the Peace River pipeline -- W.A.C. Bennett turns lever with A.E. Grauer (left) and Frank M. McMahon watching," Photograph, 1957, UBCSC, WEI, Photo Box 7, File 1532.*



The focus is on the settler towns along the company's mainline in British Columbia, the most extensive section of the Westcoast system and the one most prominently featured in the consulted archives in Ottawa, online, and at the University of British Columbia. This chapter therefore consciously neglects the gathering lines that reach into the Northwest Territories (constructed in 1972) and Alberta's Peace region (part of the original system), focusing instead on B.C. towns including Fort Nelson, Fort St. John, Chetwynd, Dawson Creek, McLeod Lake, Merritt, Hope, and Chilliwack (see Figure 5).<sup>5</sup>



*Figure 5: Map of Westcoast system map with compressor stations and key town.*

Westcoast Transmission Company  
Limited, Annual Report 1970.

<sup>5</sup> Westcoast Transmission Company Limited, "System and Capacity," *Fact Card 1980*.; Westcoast Transmission Company Limited, "Trunk Line Extension to Fort Nelson," *Annual Report 1961*, UBCSC, WEI Box 11, File 24.; Westcoast Transmission Company Limited, "Fort Nelson Region," *Annual Report 1962*, UBCSC, WEI Box 11, File 24.; Enbridge, *Westcoast Energy Inc. Pointed Mountain Pipeline Abandonment Project*, (Alberta: February 2, 2002), Accessed May 4, 2023, [https://docs2.cer-rec.gc.ca/11-eng/11isapi.dll/fetch/2000/90464/90550/90718/4198906/4198907/4295517/4203083/C17537%2D2\\_Application\\_to\\_Abandon\\_%2D\\_A8A6T8.pdf?nodeid=4203636&vernum=-2](https://docs2.cer-rec.gc.ca/11-eng/11isapi.dll/fetch/2000/90464/90550/90718/4198906/4198907/4295517/4203083/C17537%2D2_Application_to_Abandon_%2D_A8A6T8.pdf?nodeid=4203636&vernum=-2).

The limited literature on the Westcoast Transmission pipeline only marginally addresses the experiences of Westcoast's employees in the northern and interior regions of British Columbia. However, the shift to large-scale natural gas usage in the province would not have been possible without these employees' contributions. A reliable, and thus marketable, natural gas supply requires compressor and meter stations and possibly gas processing plants. Compressor stations are used to maintain the pressure in the natural gas system, which drops naturally due to such factors as friction and elevation differences. Employees are needed to monitor and respond to these pressure changes.<sup>6</sup> The staff at metering stations record the volume, temperature, and pressure of the natural gas at points where gas enters and exit the Westcoast system. In addition, they counter any undesired deviations.<sup>7</sup> Processing plant personnel use a system of chemical treatments to purify natural gas from wells. They remove unwanted chemicals in raw gas, including hydrogen sulphide, to produce "sweet gas" that meets market standards, at times selling the extracted chemicals as by-products.<sup>8</sup> The contributions of these Westcoast employees facilitated the companies' system and B.C.'s transition to large-scale natural gas usage. However, the limited literature on the Westcoast Transmission pipeline does not address the experiences and contributions of

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<sup>6</sup> "Understanding Natural Gas Compressor Stations," *PennState Extension*, March 26, 2015, <https://extension.psu.edu/understanding-natural-gas-compressor-stations>.

<sup>7</sup> "Meter Station Technical Description," *NOVA Gas Transmission Ltd. NGTL West Path Delivery* 2022, Accessed September 3, 2023, [https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90550/554112/3901587/3930580/3931099/C06605%2D22\\_Attachment\\_4\\_%2D\\_Meter\\_Station\\_Technical\\_Description\\_%2D\\_A7G0R5.pdf?nodeid=3933544&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90464/90550/554112/3901587/3930580/3931099/C06605%2D22_Attachment_4_%2D_Meter_Station_Technical_Description_%2D_A7G0R5.pdf?nodeid=3933544&vernum=-2;); "Natural Gas Meter Stations," TC Energy, Accessed September 2, 2023, <https://www.tcenergy.com/siteassets/pdfs/discover-energy/transcanada-natural-gas-meter-stations-canada.pdf>.

<sup>8</sup> [Footnote also appears in dissertation Introduction but is copied here for clarity purposes] Westcoast for instance designed the Fort Nelson Gas Treating plant, located 15 miles south of the town to process high pressure gas and transform it from "sour" to "sweet" gas appropriate for domestic, commercial, and industrial use. In 1964, the plant had a capacity to treat 200 million cubic feet of raw gas per day. Using firstly a hot potassium carbonate treating process and secondly a monoethanolamide (M.E.A.) treating process, acid gas components, hydrogen sulphide, and carbon dioxide were removed from sour gas to produce sweet gas. The remaining sweet gas would be water-saturated and, to prevent water from condensing during the gas' transportation to market, dried in de-hydrators before entering the main transmission system. Westcoast Transmission Company Limited, "Ultra-Modern Gas Treating Plant at Fort Nelson," *Pipeline* Vol. 2 No. 5 (August 1964): p.8, UBCSC, WEI, Box 11, File 38.

Westcoast's employees in the northern and interior regions of British Columbia. Rather than offering an in-depth exploration of the lives of these individuals, journalists such as Earle Gray and Peter C. Newman focused on the politicians, corporations, and prominent figures involved in Westcoast's regulatory hearings and Company boardroom decisions.<sup>9</sup> As a result, an analysis of most of the company's employees is missing.

Concentrating on B.C., this chapter builds on the existing literature on the high modernism and "northern vision" of W.A.C. Bennett, Premier of British Columbia between 1952 and 1972 (see Image 18.).<sup>10</sup> Through B.C. Premier W.A.C. Bennett's "northern vision," which revolved around bringing the final frontier, the North, the region's long overdue "modernity," settler conceptions of what it meant to be "modern" became inextricably tied to the manipulation of the region's nature. In the 1950s, when W.A.C. Bennett became premier, British Columbia's interior and northern regions remained remote from the metropolitan Lower Mainland.<sup>11</sup> During the war, projects like the Alaska Highway and the Northwest Staging Route had increased settler activity in the north.<sup>12</sup> However, much of the highways, power grids, and railway connections in interior and northern B.C. left much to be desired, and many towns, as acclaimed B.C. artist Emily Carr remarked, prevailed as "self-contained universes."<sup>13</sup> Vowing to integrate all regions of British Columbia into one thriving whole,

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<sup>9</sup> See, for example, Earle Gray, *Wildcatters: the story of Pacific Petroleums and Westcoast Transmission* (Toronto, ON: MacClelland and Stewart, 1982); Ed Phillips, *Guts and Guile: True Tales from the Backrooms of the Pipeline Industry* (Vancouver: Douglas & McIntyre, 1990): p.19; McKenzie Porter, "Frank McMahon's Five Lucky Lives," *Maclean's* (Jan. 5, 1957): p.14.

<sup>10</sup> "1952 - W.A.C. Bennett, B.C.'s Longest Serving Premier, is Elected," *Legislative Assembly of British Columbia*, Accessed June 03, 2023, <https://www.leg.bc.ca/dyl/Pages/1952-WAC-Bennett-BCs-Longest-Serving-Premier-Elected.aspx>;

<sup>11</sup> Jean Barman, *The West Beyond the West: A History of British Columbia* (Toronto: University of Toronto Press, 2007): p.287-288.; Roger Keene, *Conversations with W.A.C. Bennett* (Toronto: Methuen, 1980): p.51-53.

<sup>12</sup> In the wake of the World War, only a rough highway connected Prince George to the metropolitan southern region of B.C. It took until 1952 for the Pacific Great Eastern (PGE) Railway to connect with the town. No road construction took place north of Prince George until the Hart Highway was constructed in 1952. The highway between Prince George, Jasper and Edmonton would not be completed until the 1960s. - Ken Coates, "The Power to Transform: The Kemano Power Project and the Debate about the Future of Northern British Columbia," *Journal of Northern Studies* Vol. 1, No. 2 (2007): p.32.

<sup>13</sup> Emily Carr qt. In Jean Barman, *The West Beyond the West*, p.287.

W.A.C. Bennett articulated a “northern vision.” The premier explained his motivation, “Canada is as broad as the U.S [...] but only half an inch deep. Until we push up from the border, we just won’t go anywhere.”<sup>14</sup> His vision set out to transform B.C.’s social structure and development, boosting northern communities’ growth cloaked in a newly framed sense of modernization and colonialism.<sup>15</sup>

The vision promised to harness the forests, rivers, and fossil fuels beyond the boundaries of the Lower Mainland for the industrial development and expansion of the province. Environmental historian Tina Loo describes Bennett’s attitude in the following manner, “For W.A.C. Bennett, [...] A free, running river was wasteful [...] Properly harnessed, however, a river’s energy could be put to work powering industrial development and expansion.”<sup>16</sup> *Time* explained in 1966 that it was about “turning the wilderness into a thriving nation. In practice, Bennett’s vision translated into heavy investments in highway and railway infrastructure in the 1950s, facilitating significant spending on energy infrastructure, primarily hydroelectricity, in the 1960s.”<sup>17</sup> High modernist projects, like the Peace River and Columbia dams, embodied his political views as they harnessed the natural environment for the province’s industrial development.<sup>18</sup> High modernism is an ideology identified by environmental historian James C. Scott (see Introduction). It is characterized by an unshaken faith in the ability of science and technology to carefully manage and master natural

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<sup>14</sup> Ibid., p.281.; “Canada Surging to Nationhood,” *Time* Vol. 88, No. 14 (Sept 30, 1966): p.34.

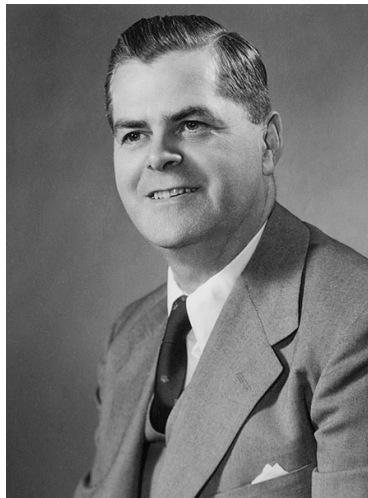
<sup>15</sup> Donald E. Blake, Richard Johnston, and David J. Elkins, *Two Political Worlds: Parties and Voting in British Columbia* (University of British Columbia Press, 1985): p.21.; David J. Mitchell, *W.A.C. Bennett and the Rise of British Columbia* (Vancouver, B.C.: Douglas and McIntyre, 1983): p.189.

<sup>16</sup> Tina Loo, “People in the Way: Modernity, Environment, and Society on the Arrow Lakes,” *BC Studies* Vol. 142 (2004): p.161–196.

<sup>17</sup> Jean Barman, *The West Beyond the West*, p. 280.; Lawrence D. Taylor, “The Bennett Government’s Pacific Northern Railway Project and the Development of British Columbia’s ‘Hinterland.’” *BC Studies* Vol. 175, No. 175 (2012): p.35.; John R. Wedley, “A Development Tool: W.A.C. Bennett and the PGE Railway,” *BC Studies* Vol. 117, No. 117 (1998): p.29-50; Stephen G. Tomblin, “The Pacific Great Eastern Railway and W.A.C. Bennett’s Defense of the North,” *Journal of Canadian Studies* Vol. 24, No. 4 (1990): 29-40.; Donald E. Blake, Richard Johnston, and David J. Elkins, *Two Political Worlds*, p.3.

<sup>18</sup> Tina Loo, “People in the Way,” p.162.; Meg Stanley, *Voices from Two Rivers: Harnessing the Power of the Peace and Columbia* (Vancouver/ Toronto: Douglas & McIntyre, 2010): p.1-3.

environments for progressively increasing social and economic wealth.<sup>19</sup> As part of W.A.C. Bennett's high modernism and his ideas on the province's northern destiny, modernity and high-energy consumption went hand in hand. The first section of this chapter argues that Bennett's provincial vision of the interior and northern regions of B.C. underpinned the lives and identities of Westcoast families, mainly because the Westcoast company also ascribed to it.



*Image 18: W.A.C. Bennett*

“1952 - W.A.C. Bennett, B.C.'s Longest Serving Premier, is Elected,” Legislative Assembly of British Columbia, Accessed June 03, 2023, <https://www.leg.bc.ca/dyl/Pages/1952-WAC-Bennett-BCs-Longest-Serving-Premier-Elected.aspx>.

The existing academic literature on high modernism in British Columbia focuses mainly on state-sponsored and hydroelectric projects over private, industrial developments,

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<sup>19</sup> James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, (New Haven, CT: Yale University Press, 2020), p. 5.; Jonathan Peyton, *Unbuilt Environments: Tracing Postwar Development in Northwest British Columbia* (Vancouver: UBC Press, 2017): p.90.; Meg Stanley, *Voices from Two Rivers*, p.3.

arguably because states leave behind often publicly available and substantial paper trails.<sup>20</sup> Loo and Stanley's article "An Environmental History of Progress" focusses on dams in B.C. and argues that the projects relied on a particular type of high modernist knowledge that was produced through a close engagement with place (see also Chapter 2).<sup>21</sup> Complicating the idea that high modernist projects bring about prosperity, Tina Loo shows in her article on the damming of the Peace River that the project brought about social and environmental dislocation as it changed the ways in which residents of the region, including Indigenous communities, experienced and sensed their natural surroundings.<sup>22</sup> Focusing on a hydroelectric project that never materialized, Jonathan Peyton argues the Stikine and the Iskut Rivers were not dammed because various groups including the Indigenous Tahltan and environmentalists, successfully presented understandings of the river that were alternative to high modernist interpretations.<sup>23</sup> The prevailing scholarship on high modernist projects thus primarily engages with public ventures. A notable exception to this rule has been historian Ken Coates's work on Alcan's private hydro project on the Nechako River near Kitimat, which Coates argues served as a "declaration that the North could have a new and very different future."<sup>24</sup> This chapter adds to the existing debates on high modernism, primarily publicly funded, dams in B.C. an analysis of a private, fossil fuel venture. It shows that high modernist megaprojects were not solely the domain of the state but were also led by private

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<sup>20</sup> Patrick McCully, *Silenced Rivers: The Ecology and Politics of Large Dams, Enlarged and Updated* (London: Zed Books, 2001). Sean McCutcheon, *Electric Rivers: The James Bay Project* (Montreal, QC: Black Rose, 1991); Brittany Luby, *Dammed: The Politics of Loss and Survival in Anishinaabe Territory* (Winnipeg, MB: University of Manitoba Press, 2020)

<sup>21</sup> Tina Loo and Meg Stanley, "An Environmental History of Progress: Damming the Peace and Columbia Rivers," *The Canadian Historical Review* Vol.92, No. 3 (2011): p.399–427.

<sup>22</sup> Tina Loo, "Disturbing the Peace: Environmental Change and the Scales of Justice on a Northern River," *Environmental History* Vol.12, No. 4 (2007): p.895-896.

<sup>23</sup> Jonathan Peyton, *Unbuilt Environments*, p.90, 111.

<sup>24</sup> Ken Coates, "The Power to Transform," p.31-50.

The Alcan project involved the damming of the Nechako River Canyon, but also the construction of a tunnel, generating plant, and company town. In his work Coates shows that, as time unfolded and new sentiments, including increased environmental and Indigenous ones arose in the latter half of the 20th century, the public wrestled with its attitude towards the project.

corporations working in partnership with public actors to achieve a common vision.

As Westcoast required a staff for its processing plants, and compressor and meter stations, the company changed the pattern and nature of settler communities along its line.<sup>25</sup> The second section of this chapter engages with the historiography on the creation of energy company communities, especially those located in interior and northern B.C., to grasp how Westcoast families established a sense of home in the interior and provincial North. Various works showcase how industries drove the development of energy industry communities.<sup>26</sup> Notable amongst environmental historians is Kate Brown's *Plutopia* which argues that residents of the plutonium towns of Richland (U.S.) and Ozersk (Russia) felt so content in their contaminated communities because of the prosperous and community-oriented lives that plutonium companies generated.<sup>27</sup> Historian Mark Fiege highlights the close connection between community building and nature in Los Alamos, where atomic scientists hiked, biked, and rode horseback together.<sup>28</sup> Historian David Quiring uses examples of resource communities in northern Saskatchewan, like Uranium City, to show how the development of such towns tied northern regions to provincial southern areas, expanding a white-settler colonial presence in the area.<sup>29</sup> With respect to B.C., Meg Stanley's work *Voices from Two Rivers* speaks of the comradery, parties, sports, and friendships that prevailed in company

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<sup>25</sup> Ken Coates, "The Power to Transform," p.34.

<sup>26</sup> Neil White, *Company Towns: Corporate Order and Community* (Toronto: University of Toronto Press, 2012).

<sup>27</sup> Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (Oxford: Oxford University Press, 2013): p.3-4.

Russel B. Orwell approaches the topic of plutonium towns from a labour history perspective. He, too, speaks of the allure of jobs, housing, and education that employers offered but also argues that employees actively opposed certain dangers where they could. - Russell B. Orwell, *At Work in the Atomic City: A Labor and Social History of Oak Ridge, Tennessee* (Knoxville, TN: University of Tennessee Press, 2004).

<sup>28</sup> Mark T. Fiege, *The Republic of Nature an Environmental History of the United States* (Seattle: University of Washington Press, 2012): p.288, 297.

<sup>29</sup> Quiring, David M. (David Menno). *CCF Colonialism in Northern Saskatchewan Battling Parish Priests, Bootleggers, and Fur Sharks*. Vancouver, B.C: UBC Press, 2004. p.XVII-XVII.; For a historic overview of Uranium City see M.K. McCutcheon and R. G. Young, "The Development of Uranium City," *The Canadian Geographer* Vol. 1, No. 4 (1954): p.57-62.

towns near the Peace River and Columbia damming projects.<sup>30</sup> As opposed to earlier camps or boom towns that housed lumberjacks and miners, Stanley finds that these high modernist communities were primarily planned.<sup>31</sup> This chapter adds a natural gas company analysis to these works on atomic energy and hydroelectricity towns. It argues that the nature of natural gas drove the creation of a system of communities, as Westcoast had to transport the fuel through a pipeline system complete with compressor and metering stations. While each Westcoast community along the line had to be negotiated within the specific environment in which it was located, they also relied on an overarching sense of community that tied northern and southern identities together to serve a common entity: the Westcoast natural gas pipeline.

Westcoast families therefore largely overlooked Indigenous ties to the land. Instead, they tried to create a white-settler lifestyle reminiscent of other settler communities. The chapter builds on the idea of geographers Andrew Baldwin, Laura Cameron that white normativity is articulated through the natural environment of the land north of the sixtieth parallel, "nature is an important resource in the articulation of whiteness."<sup>32</sup> The ensuing analysis shows that negotiations of "whiteness" also occurred as part of Westcoast's expansion into the northern and interior sections of B.C., not just the Canadian Arctic. Sociologists Luis L.M. Aguiar and Tina I.L. Marten arrived at comparable conclusions in their study of Kelowna. They argue that the B.C. government, to foster provincial economic growth, engineered towns to become a predictable space for whiteness, with well-paying jobs for those willing to serve the more extensive capitalist-Canadian system concentrated in the south.<sup>33</sup> Inspired by these works, the ensuing analysis unravels how, stimulated by their

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<sup>30</sup> Meg Stanley, *Voices from Two Rivers*, p.5, 89, 94-97, 98, 213.

<sup>31</sup> *Ibid.*, p.213.

<sup>32</sup> Andrew Baldwin, Laura Cameron, and Audrey Kobayashi, "Where Is the Great White North? Spatializing History, Historicizing Whiteness," in eds *Rethinking the Great White North Race, Nature, and the Historical Geographies of Whiteness in Canada* (Vancouver: UBC Press, 2011): p.7.

<sup>33</sup> Luis L.M. Aguiar and Tina I.L. Marten, "Shimmering White Kelowna and the Examination of Painless White Privilege in the Hinterland of British Columbia," in eds *Rethinking the Great White North Race, Nature, and the*



employer, Westcoast employees expressed and formed their identities throughout the province, all the way into the Peace River region in the northeastern part of the province. It argues that Westcoast and Westcoast communities negotiated a white-settler lifestyle in an environment from which they had largely removed an Indigenous presence.

Engaging with existing academic debates on settler-colonialism, and community and identity creation, this chapter argues that Westcoast, by bridging the distance between B.C.'s natural gas fields and southern markets with its pipeline and stations, also bridged a cultural distance between the metropolitan south and the "rugged" interior and northern regions of British Columbia, further cementing a colonial presence in these areas. It studies the interplay between employment, identity, and the natural environment in the context of provincial energy transitions.

The chapter first delves into B.C.'s provincial and Westcoast leadership's "visions" of British Columbia's development. It argues that Westcoast considered and portrayed itself as *the* catalyst of Bennett's northern development plan. The company asserted that its "big inch" pipeline would bring industrialization and modernity to the provincial North. Second, the chapter argues that Westcoast employees tried to impose a white-settler lifestyle in their respective regions, but that the natural environment had its own dynamics, compelling Westcoast families to negotiate their identities within their natural surroundings. Their identities were characterized and shaped by white-settler ideals as well as local environmental factors. Third, this chapter argues that Westcoast Transmission used its charitable contributions to schools, events and what they called "modern living" to accommodate its employees and justify its colonial extension into the interior and northern regions of B.C. The company presented its efforts as "improvements" of previously considered "backward"

regions, further cementing a colonial presence in these areas. Lastly, the company and Westcoast families took pride in the types of life they cultivated. These lifestyles combined the comforts of modern living with access to a "rugged" natural environment filled with wildlife, fish, and adventure.

The archival collections did not contain the exact number of people working for Westcoast in these towns for the years prior to 1980. Data on employees' family composition and size was even more challenging to uncover. The Company newsletter, *The Westcoast News*, which became the *Pipeline* in the early 1960s, contained segments like "Welcome Aboard," "New Appointments," and "Spot News from Our Correspondents," that give some indication for both, but the information is fragmentary. The newsletters received regular updates from towns along the line, but correspondents arbitrarily decided what to include, and they likely omitted much information on family life and composition. Census data reveals how much populations along the pipeline grew, but Westcoast was only one of many companies that moved into the interior and the North. Frank McMahon himself, in fact, remarked on this matter in a 1960 speech,

There are some 10,000 new wage-earners in this area. Not all of them work on our pipeline. They are employed not only in the gas and oil business but in all sorts of other secondary businesses and industries that have been established in the area in recent years.<sup>34</sup>

This chapter is therefore more an exploration of how Westcoast families negotiated their identities and sense of belonging within interior and northern British Columbia than a quantitative analysis.

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<sup>34</sup> Frank McMahon, "Address at the University of Toronto," (Speech, Toronto, ON, Oct. 24, 1960), UBCSC, WEI Box 12, File 1.

### 3.2. Re-Imagining "the North."

A provincial vision of the interior and northern regions of B.C. underpinned the lives and identities of Westcoast families, mainly because the Westcoast company also ascribed to it. Westcoast aligned well – if not perfectly – with Bennett's high modernist approach to provincial development and fit neatly within the premier's "northern vision." Westcoast Transmission's natural gas pipeline was not born out of Premier Bennett's visionary mind but did garner his support (see Image 19).<sup>35</sup> The company offered a project unparalleled in size and technological might: Canada's first big-inch natural gas pipeline and the first gas processing plant in British Columbia, located in Taylor.<sup>36</sup> In a 1950 company publication the company, similar to W.A.C. Bennett, considered resources "wasteful" unless developed.<sup>37</sup> Produced during Westcoast's regulatory hearings in Alberta, the document stated, "Undeveloped resources are frozen assets contributing nothing to the present and do no more than occupy space unless they are put to work to serve human needs."<sup>38</sup> Westcoast, moreover, claimed that the company "opened up" the North, arguing in 1966 that "There is no doubt that it was this industry that sparked today's rush to the north [...], the construction of rail lines and highways, and a new northern economy."<sup>39</sup> Moreover, "Westcoast [...] brought an industrial revolution to the north and the benefits of natural gas service to most of the

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<sup>35</sup> "Bennett's – p.G.E. Trip to Fort St. John, Aug 31, 1956: [Frank McMahon (left) and W.A.C. Bennett viewing pipeline construction]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1369.

<sup>36</sup> "Westcoast Energy Inc.," University of British Columbia Special Collections, Accessed May 20, [https://rbsearchives.library.ubc.ca/uploads/r/university-of-british-columbia-library-rare-books-and-special-collections/4/6/46c7bf0a153292f58a4e3a62b46d25ceaaae2e930b0c6fee347dff38bb06be49/Westcoast\\_Energy\\_Inc.pdf](https://rbsearchives.library.ubc.ca/uploads/r/university-of-british-columbia-library-rare-books-and-special-collections/4/6/46c7bf0a153292f58a4e3a62b46d25ceaaae2e930b0c6fee347dff38bb06be49/Westcoast_Energy_Inc.pdf).

<sup>37</sup> Tina Loo, "People in the Way," p.162.; Westcoast Transmission Company Limited, "Natural Gas in Alberta and B.C. And its Development for the Benefit of Canada 1950," 1950, p.19, UBCSC, WEI, Box 11, File 4.

<sup>38</sup> Westcoast Transmission Company Limited, "Natural Gas in Alberta and B.C. And its Development for the Benefit of Canada 1950," 1950, p.19.

<sup>39</sup> Westcoast Transmission Company Limited, *Natural Gas and Oil Resources of Northeastern B.C.*, March 1966, p.1. UBCSC, WEI, Box 10, File 15.

populous southern section of the province in 1957."<sup>40</sup> In the 1940s, the U.S. completed the Alaska Highway segment of B.C., which "opened up the northeast region," according to historian Jean Barman.<sup>41</sup> In the late 1950s, the B.C. government also started the extension of the PGE railway north, reaching the Peace River in 1958.<sup>42</sup> The extent to which Westcoast single-handedly opened up the North, as the company appeared to claim at times, is therefore debatable. However, these statements allude to Westcoast's connection to Bennett's ideas about northern development, resource exploitation, and modernization.



*Image 19: Frank McMahon (left) and W.A.C. Bennett (right) viewing Westcoast's pipeline construction in 1956.*

"Bennett's – P.G.E. Trip to Fort St. John, Aug 31, 1956: [Frank McMahon (left) and W.A.C. Bennett viewing pipeline construction]," Photograph, 1956, UBCSC, WEI, Photo Box 7, File 1369.

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<sup>40</sup> Westcoast Transmission Company Limited, "Busy Year for Westcoast," *The Westcoast News*, Vol. 1, No. 1, (Jan-Feb. 1958): p.3. UBCSC, WEI, Box 11, File 38.

<sup>41</sup> Jean Barman, *The West Beyond the West*, p.278.

<sup>42</sup> Stephen G. Tomblin, "The Pacific Great Eastern Railway and W.A.C. Bennett's Defense of the North," p.35.

In line with Bennett's vision, Westcoast strung together northern resources and southern markets, greatly stimulating resource exploration and the migration of labourers to the provincial interior and North.<sup>43</sup> The provincial treasury benefitted from the company's payments of Crown mineral rights and royalties. Municipalities, in turn, received property taxes on Westcoast's facilities. On a national scale, Westcoast improved Canada's balance of payment by selling large quantities of gas to the United States and reducing dependencies on coal and oil imports.<sup>44</sup> While not part of Bennett's public projects, Frank McMahon's private venture aligned with the premier's northern vision: the development of northern resources for the benefit of the province.

Westcoast's northern development had a colonial undertone, typified by the company's continued usage of the labels, "frontier" and "frontier development" for its operations.<sup>45</sup> The company propagated a settler colonial view of resource extraction and settlement in which they partly would transform a once isolated and remote area into a settled, "modern" part of Canada. In these ways, Westcoast completely overlooked the existence of Indigenous communities and, indirectly, demarcated their ways of life as 'backward.' In company publications, Westcoast claimed credit for transforming "cities and villages into modern, comfortable communities."<sup>46</sup> The company especially blessed the towns closest to their compressor stations and processing plants, like Fort St. John or Chilliwack, "Around these locations – all sparsely settled until the coming of the pipeline- small, modern

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<sup>43</sup> Westcoast Transmission Company Limited, "Export of Additional British Columbia Gas By Westcoast Transmission Company Limited," Memorandum, November 1967, p.3, UBCSC, WEI, Box 11, File 22.

<sup>44</sup> Westcoast Transmission Company Limited, "Natural Gas in Alberta and B.C. And its Development for the Benefit of Canada 1950," p.18.; Westcoast Transmission Company Limited, "From the President – The Role of Gas and Oil," *Pipeline* Vol. 4, No. 8 (August 1966): p.2, UBCSC, WEI, Box 11, File 40.; Frank McMahon, "Address at the University of Toronto."

<sup>45</sup> Westcoast Transmission Company Limited, "Natural Gas in Alberta and B.C. And its Development for the Benefit of Canada 1950," p.17.;

<sup>46</sup> Westcoast Transmission Company Limited, *Natural Gas and Oil Resources of Northeastern B.C.*

communities are now growing up.”<sup>47</sup> A hotel was allegedly constructed in Fort St. John because Frank McMahon got tired of sleeping in a barn whenever other travellers had booked the limited, existing accommodation in the town. He is said to have turned to his then-executive assistant, Doug Owen, for the following conversation,

"Do you know anything about running a hotel?"

“No,” said Doug.

“You’d better learn fast, you’re in it.” Frank answered. So Doug built the 1 million Frontier Inn and sold it off after it was running smoothly.”<sup>48</sup>

The hotel's name is emblematic of the company's colonial attitude. In many towns, inadequate housing existed for the arrival of Westcoast's employees, "Because we were opening up a new area, we also had to provide housing for the permanent employees of our plants and system. We built 2.7 million worth of houses.”<sup>49</sup> The company created a "suburb" in McLeod Lake for 16 families working at Station 3, with modern homes.<sup>50</sup> The Company newsletter heralded this as the start of a new era or a “symbol of progress at “new” McLeod’s Lake is Westcoast Station No.3.”<sup>51</sup> Their presence, moreover, made other investors confident of the towns' potential; as the Company newsletter puts it, "Fort Nelson is a B.C. community destined to go places, and it confidently invites investors and industrialists to inspect the area and assess the opportunities that exist in this rich resource-land.”<sup>52</sup> Westcoast’s operations prompted award-winning business columnist for *Vancouver Sun* (and future federal Minister of Energy, Mines, and Resources), Pat Carney, to visit Fort Nelson in 1968 and state, "Fort Nelson looks brand

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<sup>47</sup> Westcoast Transmission Company Limited, “The Westcoast Story,” *Annual Report 1957*, UBCSC, WEI, Box 7, File 13.

<sup>48</sup> “For the Men of Decisions,” *Hugh C. MacLean Publication*, August 1960. UBCSC, WEI, Box 4, File 10.

<sup>49</sup> Frank M. McMahon, “On The Natural Gas Industry” (speech, Toronto University, Toronto, ON, Oct 24, 1960), UBCSC, WEI, Box 12, File 1.

<sup>50</sup> Westcoast Transmission Company Limited, “B.C.’s First Trading Post Near Station 3, Catches Up With Civilization,” *Pipeline* Vol. 1, No. 3 (July-August, 1958): p.13, UBCSC, WEI, Box 11, File 38.

<sup>51</sup> *Ibid.*

<sup>52</sup> Westcoast Transmission Company Limited, “A Decade of Progress,” *Pipeline* Vol. 8 No. 5 (May 1968): p.3. UBCSC, WEI, Box 11, File 41.

new today, and most of it is," she said. From 300 persons twelve years ago there are now 3,000 "mainly dependent on the natural gas industry brought by Westcoast."<sup>53</sup> The company thus boasted that it brought "modernity" and "progress," even a "new" era and "future" to a previously undeveloped region with limited potential.

Frank McMahon even became known as "the man who made the rail extension possible" to the Peace region.<sup>54</sup> The rhetoric surrounding the railway extension in 1958 combined the idea that Westcoast opened the frontier, connected Vancouver to its hinterland, and brought the northern regions of B.C. their long-awaited modernity.<sup>55</sup> Frank McMahon explained that Westcoast had brought the railway to the northern regions of B.C. In a statement to the Borden Commission, a 1957 to 1958 national inquiry into the state of Canada's energy resources, he, for instance, remarked that the "Extension of the Pacific Great Eastern Railway from Prince George to the Peace River was made possible by the sulphur, gasoline, and other freight revenue provided by the Westcoast project."<sup>56</sup> It had opened up the province's "last frontier," or as the company put it in a publication of Westcoast's history,

With the completion of the Pacific Great Eastern Railway to Fort St. John, North America's last great frontier – a land rich in natural resources, blessed with the soil and climate to make it the granary and the "truck farm" of the populous south – has now, at long last, reached its destiny.<sup>57</sup>

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<sup>53</sup> Westcoast Transmission Company Limited, "Fort Nelson, Secure in its Future," *Pipeline* Vol. 8 No. 11 (November 1968): p.3. UBCSC, WEI, Box 11, File 41.

<sup>54</sup> Stuart Keate, "The Man Behind the Railway," *Victoria Daily Times* (Victoria, B.C.), Oct 6, 1958.

<sup>55</sup> Ibid.; Larry Evans, "The Pacific Great Eastern comes to Fort St. John," *The Alaska Highway News*, May 2, 2019, <https://www.alaskahighwaynews.ca/opinion/larry-evans-the-pacific-great-eastern-comes-to-fort-st-john-3503949>; "Early Gas Market Development: [Men filling railway car with "Natural gas arrives in British Columbia" sign]," Photograph, 1957, UBCSC, WEI, Photo Box 3, File 350- 353.

<sup>56</sup> Frank McMahon, "Statement to the Borden Commission," Apr 21, 1958, UBCSC, WEI, Box 3, File 27.; "Canada. Royal Commission on Energy funds," *University of Calgary*, Accessed Jun 2, <https://searcharchives.ucalgary.ca/canada-royal-commission-on-energy-fonds>.

<sup>57</sup> A "truck farm" refers to a farm that produces vegetable for market. Cambridge Dictionary, Accessed December 3, 2023, s.v. "truck farm," <https://dictionary.cambridge.org/dictionary/english/truck-farm>; Westcoast Transmission Company Limited, "Welcome to the Peace River Country!" *The Story of A Pipeline*, Ca. 1958, UBCSC, WEI, Photo Box 11, File 5.

The railway extension to the Peace is emblematic of Westcoast's various narratives used to justify its expansion into the provincial North; it brought modernity to a previously underdeveloped region.

Overall, Westcoast brought an allure of hope, progress, and development to the North, and its employees felt this. As well-known *Vancouver Province* columnist Himie Koshevoy chronicles, in the area, an atmosphere of "pioneering" that was both "exciting and engaging" remained after the arrival of Westcoast, and "People of Fort Nelson, Dawson Creek, Fort St. John, and all the other centres have a feeling that they're shaping a new section of the world and this makes their speeches, even directed at you, evangelistic."<sup>58</sup> Frank McMahon remarked in a 1960 speech, "What has happened in this part of the North is that the frontier of a few years ago has been pushed back. The area, which was once so isolated and remote, has been transformed into a settled, residential part of Canada."<sup>59</sup> In McLeod Lake, the staff seemed happy, with reportedly few eager to move from the area, which they believed had "an unlimited future."<sup>60</sup> In the company's eyes, Westcoast was helping "the beginning of a bright new future for their town."<sup>61</sup> The company was a steward of modernity and bearer of hope for the interior and northern regions of B.C. Westcoast families grew into extensions of such narratives.

### **3.3. Westcoast Identities and the Natural Environment**

Westcoast employees and their families played an essential part in the actualization of the company's vision. To operate the company's stations, Westcoast's permanent staff settled in

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<sup>58</sup> Westcoast Transmission Company Limited, "Fort Nelson, secure in its future," *Pipeline*, p.4.

<sup>59</sup> Frank McMahon, "Address at the University of Toronto."

<sup>60</sup> Westcoast Transmission Company Limited, "Plant in the Midst of Growing North," *Pipeline* Vol. 9 No. 2 (February 1969): p.5, UBCSC, WEI Box 11, File 42.

<sup>61</sup> Westcoast Transmission Company Limited, "Fort Nelson, Yesterday and Today," *Pipeline* Vol. 2, No. 5 (August 1964): p.10, UBCSC, WEI Box 11, File 38.



existing towns along the gas line, such as Fort St. John, Chetwynd, McLeod Lake, and Quesnel.<sup>62</sup> These Westcoast employees often relocated with their families or started families in these towns. Each of these individuals and communities had to adapt their personal or communal identities to their new natural surroundings. Through their participation in sports teams, activities like ice-fishing, and social gatherings, Westcoast families gradually intertwined their identities with their natural surroundings. Most employees identified with a white settler lifestyle, including its sporting and social cultures. They tried to align their lives with white cultural ideals and practices to create a sense of home. Their local, natural environments presented both obstacles and opportunities in this endeavour.

Following white-settler sports practices, Westcoast families transformed the Rocky Mountains, neighbouring hills, and plains into a winter-sport lovers' paradise. They filled snow days along the line with skiing, tobogganing, sleighing, skating, cross-country skiing, and snowshoeing.<sup>63</sup> The cold weather turned ponds into skating rinks near Prince George, where "roaring" fires kept the non-skaters and coffee warm.<sup>64</sup> One employee at McLeod Lake remarked that "not a weekend goes by that the hills are not covered with tobogganers, sleighers, and flying saucers."<sup>65</sup> In the freezing months, the town of Australia was the proud owner of a "lighted outdoor skating rink."<sup>66</sup> The Westcoast families, many identifying as "skiing enthusiasts," took it upon themselves to transform the areas around their towns into

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<sup>62</sup> Westcoast Transmission Company Limited, "System and Capacity," *Fact Card 1980.*; Westcoast Transmission Company Limited, "Saratoga Processing Company Limited," *Annual Report 1961.*

<sup>63</sup> "Natural Landscapes," *B.C. Tomorrow*, Nov. 21, 2017, <https://www.bctomorrow.ca/blog/natural-landscapes>.; Westcoast Transmission Company Limited, "News From Along the Pipeline," *The Westcoast News*, Vol. 1, No. 1, (Jan-Feb. 1958): p.10, UBCSC, WEI, Box 11, File 38.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 2 (February 1966): p. 7, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 1 (January 1966): p. 7, UBCSC, WEI, Box 11, File 40.

<sup>64</sup> Westcoast Transmission Company Limited, "Spot News ... From Our Correspondents," *Pipeline* Vol. 2, No. 9 (Dec. 1964): p. 8, UBCSC, WEI, Box 11, File 39.

<sup>65</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 2 (February 1966): p.7, UBCSC, WEI, Box 11, File 40.

<sup>66</sup> Westcoast Transmission Company Limited, "Call it Caribooitis," *Pipeline* Vol. 9, No. 8 (November 1969): p.7, UBCSC, WEI, Box 11, File 42.

ski slopes. The hill behind Australian's Station 5 made anyone look like "a natural" while youngsters turned a small hill into a "maze of sleigh runs."<sup>67</sup> Steadily, Westcoast families helped transform the surrounding hills to accompany a predominantly white pastime.<sup>68</sup> In Canada, Indigenous communities had been utilizing skis (as well as sleighs and ice skates) for decades, and Scandinavian immigrants had introduced skiing as a sport to settler Canadians in the 19<sup>th</sup> century. However, it only blossomed as a white settler sport in the wake of the Second World War and technological advances around the same time.<sup>69</sup> In Fort Nelson, to the delight of the local ski club, Westcoast company offered its machinery to clear the trees at the ski hill near Mile 304.<sup>70</sup> Aided by their employer, Westcoast families altered the natural environment of towns like McLeod Lake and Australian to their liking.

The company and its employees emphasized the modern conveniences of places such as indoor sport centres. The Quesnel hockey rink is especially emblematic of this. The employees in Quesnel used their natural gas expertise to produce an "all-season" rink in 1966. Previously, the building's general heating system had to be off to maintain rinks with natural ice. However, with the help of Westcoast's "modern fuel," they overcame hockey spectator discomfort. Spectators no longer had to endure the "unbearable" coldness of older rinks. In "modern arenas, like Quesnel's," ice machines produced the ice, and gas-fired infrared heaters kept the spectators warm without damaging the ice.<sup>71</sup> While the company extensively

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<sup>67</sup> Westcoast Transmission Company Limited, "News From Along the Pipeline," *The Westcoast News*, p.10.

<sup>68</sup> Andrew Denning, *Skiing into Modernity: A Cultural and Environmental History* (Oakland, CA: University of California Press, 2015).

<sup>69</sup> John Fry, *The Story of Modern Skiing* (Hanover, NH: University Press of New England, 2006): p.IX-XI.; David Mittelstadt, *Calgary Goes Skiing: The Story of the Calgary Ski Club* (NanOOSE Bay, B.C.: Heritage House Publishing, 2000): p.2.; Emma Vitale, Jacob A. Rasmussen, Bjarne Grønnow, Anders J. Hansen, Morten Meldgaard, and Tatiana R. Feuerborn, "An Ethnographic Framework for Identifying Dog Sledding in the Archaeological Record," *Journal of Archaeological Science* 159 (2023): p.1-10.; Michael A. Robidoux, *Stickhandling through the Margins: First Nations Hockey in Canada* (Toronto: University of Toronto Press, 2020).

<sup>70</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 3 (March 1966): p.7, UBCSC, WEI Box 11, File 40.

<sup>71</sup> Westcoast Transmission Company Limited, "Comfortable Hockey Arenas Available With Natural Gas," *Pipeline* Vol. 4, No. 11&12 (November-December 1966): p.3, UBCSC, WEI, Box 11, File 40.

elaborated on the Quesnel's rink in its newsletter, Westcoast families also constructed other rinks. For instance, Westcoast's senior warehouse manager built a rink in Hope right across from the company warehouse to overcome what the town's correspondent called "one of the major problems with hockey," finding a suitable skating rink when temperatures climb above zero degrees Celsius.<sup>72</sup> Westcoast families used these artificial climates to adapt their natural surroundings to their desires and understanding of "modernity."

During the summer, golf proved a popular pastime (see Image 20). Westcoast's corporate archive at the University of British Columbia contains a box with close to twenty-five photos of just employees on golf courses.<sup>73</sup> The sport also featured prominently in the company newsletters.<sup>74</sup> An extensive body of literature argues that sports are a reflection, enactment, and extension of social and cultural practices.<sup>75</sup> Golf is no different, and works like historian Elizabeth L. Jewett's *Behind the Greens*, have established the settler-colonial

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<sup>72</sup> Westcoast Transmission Company Limited, "Safe to Be Raffled For Arena Funds," *Pipeline* Vol. 10, No. 5 (May 1970): p.8, UBCSC, WEI, Box 11, File 42.

<sup>73</sup> "1973 Sports – Golf: Vancouver Golf Tournament," Photograph, 1973, UBCSC, WEI, Photo Box 6, File 747.; "Sports – Golf: Chuck Starr golfing in Fort St. John (Pipeline News, June 1969)," Photograph, 1968, UBCSC, WEI, Photo Box 6, File 730.; "Sports – Golf: Neil Laidlaw golfing in Fort St. John (Pipeline News, June 1969)," Photograph, 1969, UBCSC, WEI, Photo Box 6, File 731.; "Sports – Golf: Pipe 'N Gas Club Tournament, Birch Bay, Jun. 20, 1964," Photograph, 1964, UBCSC, WEI, Photo Box 6, File 732-739.; "Sports – Golf: Vancouver Golf Tournament," Photograph, 1973, UBCSC, WEI, Photo Box 6, File 740-754.

<sup>74</sup> Westcoast Transmission Company Limited, "Vancouver Staff Golfs Daily," *The Westcoast News*, Vol. 1, No. 3, (July-August. 1958): p.15, UBCSC, WEI, Box 11, File 38.

Westcoast Transmission Company Limited, "Along the Pipeline... From Our Correspondents," *The Westcoast News*, Vol. 1, No. 4, (September-October. 1958): p.11, UBCSC, WEI, Box 11, File 38.

<sup>75</sup> See, for instance, the following works on Canadian sports history: Morris Kenneth Mott, *Sports in Canada: Historical Readings* (Toronto, ON: Copp Clark Pitman, 1989).; Nancy B. Bouchier and Ken Cruikshank, "'Sportsmen and Pothunters': Environment, Conservation, and Class in the Fishery of Hamilton Harbour, 1858–1914," *Sport History Review* Vol. 28, No. 1 (1997): p.1–18.; William Humber, *Diamonds of the North: A Concise History of Baseball in Canada* (Toronto, ON: Oxford University Press, 1995).; Frank Cosentino, *Afros, Aborigines and Amateur Sport in Pre World War One Canada* (Ottawa, ON: Canadian Historical Association, 1998).; Bruce Kidd, *The Struggle for Canadian Sport* (Toronto, ON: University of Toronto Press, 2017).; Richard S. Gruneau and David Whitson, *Hockey Night in Canada: Sport, Identities, and Cultural Politics* (Toronto, ON: University of Toronto Press, 1993).; Varda Burstyn, *The Rites of Men: Manhood, Politics, and the Culture of Sport* (Toronto, ON: University of Toronto Press, 1999).; Allen Guttman, *Games and Empires: Modern Sports and Cultural Imperialism* (New York, NY: Columbia University Press, 1994).; Elizabeth Liane Jewett, "Behind the Greens: Understanding Golf Course Landscapes in Canada, 1873-1945" (University of Toronto, 2015)

nature of golf courses.<sup>76</sup> From the late 19<sup>th</sup> century onward, Jewett explains, Canadians tried to replicate the traditional, Scottish and British golf courses and their associated behavioural norms. As elucidated by Lewitt,

Canadian golf course landscapes were produced by a tension between the desires of the dominant golf culture to reproduce Scottish and British playing fields with particular aesthetic design principles and the ecological conditions specific to this country and its geographies.<sup>77</sup>

In these manners, white settler Canadians used golf to connect with a well-established, colonial sporting culture.<sup>78</sup> Along the line, towns organized regular golf tournaments such as the Oilmen's Golf Tournament in Fort St. John and a Ladies' Tournament in Kamloops.<sup>79</sup> As early as 1958, the Vancouver office embarked on a golf trip with sixty-three players and nearly as many supporters to the Birch Bay resort just south of the U.S.-Canada border. It would be the first of an annual tournament.<sup>80</sup> The southern location of the tournament presented an opportunity to connect with the various southern cultural centres of whiteness. Along the line, golf allowed Westcoast families to connect as well as an established sense of "whiteness."

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<sup>76</sup> Elizabeth Liane Jewett, "Behind the Greens: Understanding Golf Course Landscapes in Canada, 1873-1945," p.2.

<sup>77</sup> Ibid.

<sup>78</sup> Ibid., p.11.

<sup>79</sup> Westcoast Transmission Company Limited, "Along the Pipeline... From Our Correspondents," *The Westcoast News*, p.11.; Westcoast Transmission Company Limited, "New Faces – New Positions," *Pipeline* Vol. 2, No. 7 (October 1964): p. 12, UBCSC, WEI, Box 11, File 39.

<sup>80</sup> Westcoast Transmission Company Limited, "Vancouver Staff Golfs Gaily," *The Westcoast News*, Vol. 1, No. 3, (July-August. 1958): p.15, UBCSC, WEI, Box 11, File 38.



*Image 20: Golf allowed families and colleagues to connect along the line.*

"Sports – Golf: Pipe 'N Gas Club Tournament, Birch Bay, Jun. 20, 1964," Photograph, 1964, UBCSC, WEI, Photo Box 6, File 734.

The golf course itself functioned as an extension of colonial practices, as it required the natural environment to conform to a standardized European ideal.<sup>81</sup> When Westcoast expanded into the interior and northern regions of British Columbia, some towns already had a well-established golfing history. Among all the courses, the one in Prince George best reveals the interaction between colonial practices and local environments. Founded by two Scottish immigrants in the 1920s, the course has well-established colonial ties.<sup>82</sup> Before the 1950s, the golf course encompassed an “abandoned” tract of land adjacent to an Indigenous cemetery. Disregarding the Indigenous ties to the land, the community designated the cemetery a “natural hazard,” an obstacle, on the golf course. A June 1928 issue of *Golf*

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<sup>81</sup> Elizabeth Liane Jewett, “Behind the Greens: Understanding Golf Course Landscapes in Canada, 1873-1945” (University of Toronto, 2015): p.2.

<sup>82</sup> “History Of the Prince George Golf Club,” *Prince George Golf & Curling Club*, Accessed Jul. 28, 2022, <https://www.pgolfandcurling.com/uploads/2020%20Golf/Documents/History%20Of%20the%20Prince%20George%20Golf%20Club.pdf>.

*Illustrated* used colonial terms like "Siwashes" or "savages" to describe the "obstacle."<sup>83</sup> The magazine narrated how residents tried to adjust the natural environment to established white, cultural, sporting practices:

The golf course is as rough and primeval as its surroundings. By dodging through the bush, [...] The few open patches of alleged grass are so cut up with ravines, deep potholes, and hillocks that there is not a level ten yards on the whole area. The grass grows long and deep. Weeds and small bushes abound in profusion.<sup>84</sup>

The course followed the Fraser River, a strong current that tended to swallow golf balls. Local wildlife traversed the course, including a moose and its calf and "yelping" coyotes.<sup>85</sup>

Traditional golf grass would not grow, so residents of Prince George designed the course using a mixture of coarse sand and crude oil.<sup>86</sup> Prince George eventually relocated its original course on Apr. 10, 1947, to establish the "high-class course" it desired.<sup>87</sup> This revised course continued to serve Westcoast families. Other Westcoast towns similarly tried to adjust an established sport to their environmental surroundings. In Fort Nelson, residents struggled to find flat terrain in the early 20<sup>th</sup> century.<sup>88</sup> In 1958, Station #5 personnel found it challenging to maintain its golf course as the grass would not grow.<sup>89</sup> In 1967, one Westcoast employee described McLeod Lake's Station #3's golf course as having "rather a nice layout, provided no one is using the driveway while the golfers are shooting across."<sup>90</sup> Natural environments, with their general lack of suitable space and environmental conditions, forced employees to

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<sup>83</sup> "Golf in the Frozen North," *B.C. Golf House*, Aug. 3, 2015, <http://www.bcgolfhouse.com/golf-in-the-frozen-north>.

<sup>84</sup> "Golf in the Frozen North," *B.C. Golf House*.

<sup>85</sup> "History Of the Prince George Golf Club," *Prince George Golf & Curling*.

<sup>86</sup> "Golf in the Frozen North," *B.C. Golf House*.

<sup>87</sup> *Ibid.*

<sup>88</sup> "Early Nelson, BC Golf," *B.C. Golf House*, Aug. 2, 2022, <http://www.bcgolfhouse.com/early-nelson-bc-golf>.

<sup>89</sup> Westcoast Transmission Company Limited, "Report From Station 5," *Pipeline* Vol. 1, No. 5 (November-December 1958): p. 9, UBCSC, WEI, Box 11, File 38.

<sup>90</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 5 No. 5 (May 1967): p.12, UBCSC, WEI, Box 11, File 40.

adjust their white, settler sporting culture but simultaneously provided an opportunity to connect to that culture.

Westcoast's stations in the North were situated in relatively remote locations and far apart. Sports tournaments bridged the distance between each white-settler hub, further cementing a sense of a northern white-settler community. The bonspiel, an event featuring a series of curling competitions, was a notable example of such a unifying experience. The affair was a well-established sporting tradition for Westcoast families, and it can be traced back to 1958 and the first company newsletter. The inaugural Westcoast and Pacific Petroleum's bonspiel took place in Fort Nelson at the end of February 1958.<sup>91</sup> Quesnel hosted subsequent editions, where the local curling rink became known as the "home of the Westcoast Bonspiel."<sup>92</sup> Over time, the sport's popularity among Westcoast families transformed the rink until it contained four sheets of ice, a concession stand, and a full-width bar.<sup>93</sup> Twenty-six rinks and 104 players participated in the eighth annual bonspiel of 1966, "many of whom had not seen each other since this time last year," the company newsletter states.<sup>94</sup> The bonspiel was highly anticipated, and the quantity of participating rinks increased significantly over the years. It was a rare occasion for employees from across the province to come together and have fun; as the newsletter remarked, "It is one of the few times in the year when employees from all over the province can get together to just enjoy themselves."<sup>95</sup> Westcoast members occasionally participated in the Commercial Curling League bonspiel, and each town, including towns like McLeod Lake and Prince George, organized annual

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<sup>91</sup> Westcoast Transmission Company Limited, "Fort St. John," *The Westcoast News*, Vol. 1, No. 5, (November-December. 1958): p.11, UBCSC, WEI, Box 11, File 38.

<sup>92</sup> "Westcoast 'Spiel Here On Saturday," *Quesnel Cariboo Observer* (Quesnel, B.C.), Feb. 5, 1959, p.B4.; "Australian," *Quesnel Cariboo Observer* (Quesnel, B.C.), Feb. 12, 1959, p.C6.; "Pipeline 'Spiel Proves Popular," *Quesnel Cariboo Observer* (Quesnel, B.C.), Feb. 12, 1959, p.B4.

<sup>93</sup> Westcoast Transmission Company Limited, "New Home for Westcoast Bonspiel," *Pipeline*, Vol. 4, No. 1 (Jan. 1966): p.4, UBCSC, WEI, Box 11, File 40.

<sup>94</sup> Westcoast Transmission Company Limited, "McKinnon Rink to Victory," *Pipeline* Vol. 4, No. 2 (Feb. 1966): p.4-5, UBCSC, WEI, Box 11, File 40.

<sup>95</sup> Ibid.

bonspiels.<sup>96</sup> The Westcoast newsletter frequently mentioned that a "Westcoast team" or multiple "Westcoast teams" attended these events.<sup>97</sup> "Curling season," as the newsletter liked to call winter, bridged the geographical gaps between the Westcoast families living along the pipeline.<sup>98</sup>

The names of curling clubs and those of other sports and social clubs served as symbolic representations of the established connections between the pipeline communities. Seemingly banal names served as expressions of collective identity and further intertwined employees' sense of self with their occupation, each other, and the natural surroundings. For instance, in Fort Nelson, the hockey team named itself "Gassers," and the social club "Polaris," likely referencing the town's northern location.<sup>99</sup> In Calgary, Westcoast employees curled at the "Petroleum Curling Club" and joined the soirees and Christmas parties of the "Pipe and Gas and Oil Club."<sup>100</sup> In 1958, the Vancouver office established its social club, "Pipe 'n Gas," whose membership grew to 173 in 1978.<sup>101</sup> Membership was open to all employees for a monthly fee of one Canadian dollar, offering a range of "fun functions for

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<sup>96</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4 No. 3 (March 1966): p.8, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "7<sup>th</sup> Annual Bonspiel," *Pipeline* Vol. 2 No. 2 (February 1965): p.6, UBCSC, WEI, Box 11, File 39.

<sup>97</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4 No. 3 (March 1966): p.8.

<sup>98</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 9 (November 1969): p.9, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4 No. 5 (May 1966): p.11, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4 No. 10 (October 1966): p. 11, UBCSC, WEI, Box 11, File 40. Westcoast Transmission Company Limited, "Bonspiel News," *Pipeline* Vol. 5 No. 1 (January 1967): p.4, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Hernstedt to Victory in Quesnel Bonspiel," *Pipeline* Vol. 5 No. 3 (March 1967): p. 6-7, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 5, No. 3 (March 1967): p.11, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Fort St. John," *The Westcoast News*, p.11.

<sup>99</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 10 (October 1966): p. 11, UBCSC, WEI, Box 11, File 40.

<sup>100</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4 No. 2 (February 1966): p.7, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 5, No. 2 (February 1967): p.12, UBCSC, WEI, Box 11, File 40.

<sup>101</sup> Westcoast Transmission Company Limited, "Pipe 'n Gas," *The Westcoast News*, Vol. 1, No. 4, (September-October. 1958): p.5, UBCSC, WEI, Box 11, File 38.; Westcoast Transmission Company Limited, "Vancouver Staff Picnic Planned – Belcarra Park on Indian Arm Near Vancouver For the Pipe 'N Gas Club," *Pipeline* Vol. 8, No. 4 (May 1968): p.3, UBCSC, WEI, Box 11, File 45.



members and their families,” as they put it.<sup>102</sup> The club's inaugural was a Halloween masquerade dance, and over the years, the club created numerous opportunities for employees and their families to come together in a shared space (Image 21).<sup>103</sup> The names of these clubs are, to an extent, mnemonic of the families' connections to place and occupation.

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<sup>102</sup> Westcoast Transmission Company Limited, “Pipe ‘N Gas “Clubbers,” What Are You Up To?,” *Pipeline* Vol. 8, No. 4 (August 1978): p.3, UBCSC, WEI, Box 11, File 45.

<sup>103</sup> As alluded to in the introduction, Kate Brown identifies similar community building activities in her book *Plutopia* as does Meg Stanley in her work on the Peace and Columbia River dams. Kate Brown, *Plutopia*, p.121-122, 264; Meg Stanley, *Voices from Two Rivers*, p.5, 89, 94-97, 98, 213.; Westcoast Transmission Company Limited, “Pipe ‘N Gas, Head Office Social Club Goes Active,” *Westcoast News* Vol. 1, No. 4 (September-October 1958): p.5, UBCSC, WEI, Box 11, File 38.; “Pipe ‘N Gas Club Olde Time Dance,” *Pipeline* Vol. 3, No. 4 (April 1965): p.5, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Pipe N Gas,” *Pipeline* Vol. 4, No. 7 (July 1966): p.12, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Vancouver Staff Picnic Planned,” *Pipeline* Vol. 8, No. 5 (May 1968): p.10, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, “Vancouver Softball In First Place,” *Pipeline* (Summer 1971): p.9, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, “’78 Golf Trophy Goes to Don Hunter – Pipe ‘N Gas Club Annual,” *Pipeline* Vol. 8, No. 6 (November 1978): UBCSC, WEI, p.1, Box 11, File 45.; Westcoast Transmission Company Limited, “Club Executive Meets,” *Pipeline* Vol. 10, No. 2 (May 1980): p.6, UBCSC, WEI, Box 11, File 46.; Westcoast Transmission Company Limited, “New T-Shirts From Pipe ‘N Gas Club “Naturally Gassed,”” *Pipeline* Vol. 10, No. 3 (July 1980): p.4, UBCSC, WEI, Box 11, File 46.



*Image 21: Dances and events, like this Halloween Party, offered opportunities for employees and their families to come together in a shared space and connect.*

"Awards, Meetings, Parties (Westcoast): Halloween Party" 1958," Photograph, 1958, UBCSC, WEI, Photo Box 8, File 1747.

Westcoast families generally overlooked the Indigenous inhabitants of their surrounding areas, such as the various Dene, Blueberry River community, or the Lheid li T'enneh close to Prince George (see Figure 6 for a map of First Nations in British Columbia or consult the interactive map in the footnote).<sup>104</sup> An example of this disconnection is that Westcoast families used resources of great cultural importance to the local Indigenous communities, such as berries and fish, for their hobbies and domestic economy. Indigenous communities use berries for a wide variety of purposes, including nutrition, dyes, medicine,

<sup>104</sup> For interactive map: "First Nations in B.C.," *British Columbia Assembly of First Nations*, Accessed Jun. 1, 2023, <https://www.bcafn.ca/first-nations-bc/interactive-map/>; "British Columbia – First Nations Communities," *Government of Canada*, Accessed Jun. 1, 2023, <https://www.rcaanc-cirnac.gc.ca/eng/1605796533652/1605796625692/>; "Lheidli T'enneh First Nation," *Lheidli T'enneh First Nation*, Accessed June 01, 2023, <https://www.lheidli.ca/about/our-story/>; "Our Story," *Blueberry River First Nation*, Accessed Jun. 1, 2023, <https://blueberryfn.com/about-us/>.

and ceremony.<sup>105</sup> Salmon, similarly, is of great importance of the spiritual and cultural identity of many Indigenous communities in B.C.<sup>106</sup> In Fort Nelson, 1967 proved a bountiful year for berry-picking. The company's local correspondent reported, "Almost everyone has a basement full of jars and raspberries and huckleberries of which there was an abundance this year. I can guess that there will be a lot of bread and jam consumed over the winter months."<sup>107</sup> The experience illustrates how settlers overlooked Indigenous ties to the land while trying to establish a sense of home.

The Westcoast families eagerly used their natural resources for entertainment, expanding their settler presence. Westcoast's personnel ventured into rivers, lakes, and forests, searching for trophy fish, moose, and bears. Hunting for moose and deer at McLeod Lake was a common activity, where "most people have been out to bag moose and deer they've had to settle for grouse."<sup>108</sup> Employees lamented the end of hunting season with a bittersweet poem in a 1958 company newsletter, "Hunting season is over, the guns are put away. And plenty of

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<sup>105</sup> Janelle Marie Bajker, "Do Berries Listen? Berries as Indicators, Ancestors, and Agents in Canada's Oil Sands Region," *Ethnos* Vol. 86, No. 2 (2021): p.273–294.; Nancy J. Turner, "Indigenous Peoples' Knowledge and Traditional Management of Berries In Northwestern North America British Columbia," *ResearchGate* (January 2023),

[https://www.researchgate.net/publication/366921113\\_Indigenous\\_Peoples%27\\_Knowledge\\_and\\_Traditional\\_Management\\_of\\_Berries\\_In\\_Northwestern\\_North\\_America\\_British\\_Columbia](https://www.researchgate.net/publication/366921113_Indigenous_Peoples%27_Knowledge_and_Traditional_Management_of_Berries_In_Northwestern_North_America_British_Columbia).; C.J. Armstrong, A.C. Miller, p. M. Ritchie, and D. Lepofsky, "Historical Indigenous Land-Use Explains Plant Functional Trait Diversity," *Ecology and Society* Vol. 26, No. 2 (2001): p.6, <https://doi.org/10.5751/ES-12322-260206>.

<sup>106</sup> "Salmon Culture of the Pacific Northwest Tribes," *Columbia River Inter-Tribal Fish Commission*, Accessed October 2, 2023, <https://critfc.org/salmon-culture/tribal-salmon-culture/#:~:text=Salmon%20are%20part%20of%20our,human%20and%20all%20other%20life>.; "Salmon and Indigenous Fisheries," *Government of Canada*, Accessed October 2, 2023, <https://www.dfo-mpo.gc.ca/campaign-campagne/wild-salmon-saumon-sauvage/abor-autoc-eng.html>.; Douglas C. Harris, *Fish, Law, and Colonialism: The Legal Capture of Salmon in British Columbia* (Toronto, ON: University of Toronto Press, 2001).

<sup>107</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 5 No. 8 (August 1967): p.9, UBCSC, WEI, Box 11, File 41.

<sup>108</sup> Westcoast Transmission Company Limited, "News From Along the Pipeline," *The Westcoast News*, p.10.; Westcoast Transmission Company Limited, "Along the Pipeline... From Our Correspondents," *The Westcoast News*, Vol. 1, No. 4, (September-October. 1958): p.11, UBCSC, WEI, Box 11, File 38.

powder was burnt every single day."<sup>109</sup> Employees also sent the newsletter hunting reports from Lac La Hache, Australian, and Willow flats, where the community spoke of a hunting season that left "venison and moose in nearly every deep freeze."<sup>110</sup> Fishing also received significant attention in the company newsletter. Employees spoke of a "fishing season," shared their catches and promoted their local fishing derby.<sup>111</sup> Some employees' identities intertwined with hunting to such an extent that they acquired nicknames like Bill (Bring Home the Bacon) and "Moose" Henry.<sup>112</sup>

Westcoast families expressed a desire to consume and grow fruits and vegetables reminiscent of white settler culture. However, many of these could not naturally grow in their surroundings, and they turned to greenhouse production. Starting in the late 1960s and 1970s, employees started the construction of greenhouses in their gardens. By 1969, finding a house without a greenhouse in Fort Nelson was uncommon. The presence of these greenhouses brought Westcoast families, at times, a sense of joy and comfort. The company newsletter, for instance, reported that a resident's two-foot tomato plants "cheered us all up" during a particularly bad wave of influenza.<sup>113</sup> In addition to greenhouse gardening, some employees took up wine-making as a hobby, even without access to vineyards. They purchased pre-prepared ingredients in cans, bottles, or packages and mixed them to create wine. They delved into wine books, formed clubs, and spent evenings together, often gathered around

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<sup>109</sup> Westcoast Transmission Company Limited, "Report From Station 5," *The Westcoast News*, p.9.; Westcoast Transmission Company Limited, "Ode to Hunters At Station 5," *The Westcoast News*, Vol. 1, No. 5, (November-December. 1958): p.11, UBCSC, WEI, Box 11, File 38.

<sup>110</sup> "Spot News," *Pipeline* Vol. 4 No. 2, February 1966, p.7, UBCSC, WEI, Box 11, File 40.

<sup>111</sup> Westcoast Transmission Company Limited, "Along the Pipeline... From Our Correspondents," *The Westcoast News*, Vol. 1, No. 4, (September-October. 1958): p.11, UBCSC, WEI, Box 11, File 38.; Westcoast Transmission Company Limited, "Spot News ... From Our Correspondents," *Pipeline* Vol. 2, No. 6 (September 1964): p. 8, UBCSC, WEI, Box 11, File 39.

<sup>112</sup> Westcoast Transmission Company Limited, "Spot News... From Our Correspondents," *Pipeline* Vol. 2, No. 8 (November 1964): p. 8, UBCSC, WEI, Box 11, File 39.

<sup>113</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* (April 1970): p.11, UBCSC, WEI, Box 11, File 42.

fermentation vessels, engaging in a hobby that reminded them of European living.<sup>114</sup> In the words of a Westcoast family,

It's funny, [...] but up until a couple of years ago we didn't like wine. Then all of a sudden we did [...] we have one or maybe two glasses with dinner, but many people we know use wine in the Continental manner – with every meal and throughout the evening.<sup>115</sup>

These hobbies that also formed part of the domestic economy, and the associated transformation of the environment, allowed Westcoast families to connect to characteristically white, settler or European food and drink cultures.

Collectively, Westcoast families tried to establish "modern" homes in the interior and northern regions of British Columbia. They equated such lives with white settler ideals. The families actively participated in sports, reshaped their environments, and constructed modern subdivisions. Partly through Westcoast's efforts, makeshift homes hastily assembled to accommodate the influx of Westcoast workers were replaced with permanent community structures.<sup>116</sup> For instance, in 1958, a couple in Hope transitioned from their "white trailer" to a new home in the Silver Creek subdivision.<sup>117</sup> In that same year, the company constructed a 192-house subdivision for its employees in Fort St. John as part of a housing plan that aimed to accommodate the reportedly 300 Westcoast workers in the Peace region.<sup>118</sup> In 1963, Westcoast built twenty-two houses near Station 2 for employees, emphasizing their modern traits; the company newsletter remarked, "The homes will be comfortable, three-bedroom

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<sup>114</sup> Westcoast Transmission Company Limited, "Wine," *Pipeline* (Spring 1971): p.5, UBCSC, WEI, Box 11, File 42.

<sup>115</sup> Ibid.

<sup>116</sup> Westcoast Transmission Company Limited, "Modern Homes For Station Personnel," *Pipeline*, Vol. 1, No. 10, (June 1963): p.2, UBCSC, WEI, Box 11, File 38.

<sup>117</sup> Westcoast Transmission Company Limited, "Along the Pipeline," *The Westcoast News*, Vol. 1, No. 5 (November-December 1958), p.11, UBCSC, WEI, Box 11, File 38.

<sup>118</sup> Maury Gwynne, "Enterprise in Action," N.A. (Nov. 29, 1959): p.12, UBCSC, WEI, Box 6, File 16.

bungalows with full basements and attached garages.”<sup>119</sup> In McLeod Lake, the company newsletter reported the creation of a "ready-made suburb" comprising "modern homes" for sixteen families working at Station 3. The article's title, "B.C.'s First Trading Post, Near Station 3, Catches Up with Civilization," illustrates the company's colonial, expansionary mindset.<sup>120</sup> The piece equates Westcoast's endeavours with "civilization" and calls the town before the company's arrival "backward." Similarly, in the late 1960s, Pat Carney visited Fort Nelson and characterized the town as "brand new."<sup>121</sup> She observed that the town had a "livable and pleasant" atmosphere with suburban-style houses that showed elements of ranch-style architecture.<sup>122</sup> The company and Westcoast families' efforts to construct subdivisions and greenhouses, and establish sports clubs and social organizations, reflect a desire to replicate a lifestyle reminiscent of the metropolitan south. These actors attempted to extend white settler cultural ideals to create a sense of home in a novel environment but often had to adapt to local environmental conditions.

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<sup>119</sup> Westcoast Transmission Company Limited, "Modern Homes for Station Personnel," *Pipeline*, p.2.

<sup>120</sup> Westcoast Transmission Company Limited, "B.C.'s First Trading Post, Near Station 3, Catches Up With Civilization," *Pipeline*, Vol. 1, No. 3, (July-August 1958): p.12–13, UBCSC, WEI, Box 11, File 38.

<sup>121</sup> Westcoast Transmission Company Limited, "Fort Nelson – Secure in its Future," *Pipeline*, Vol. 8, No. 11, (November 1968): p.4, UBCSC, WEI, Box 11, File 41.

<sup>122</sup> Westcoast Transmission Company Limited, "Fort Nelson – Secure in its Future," *Pipeline*, p.4.

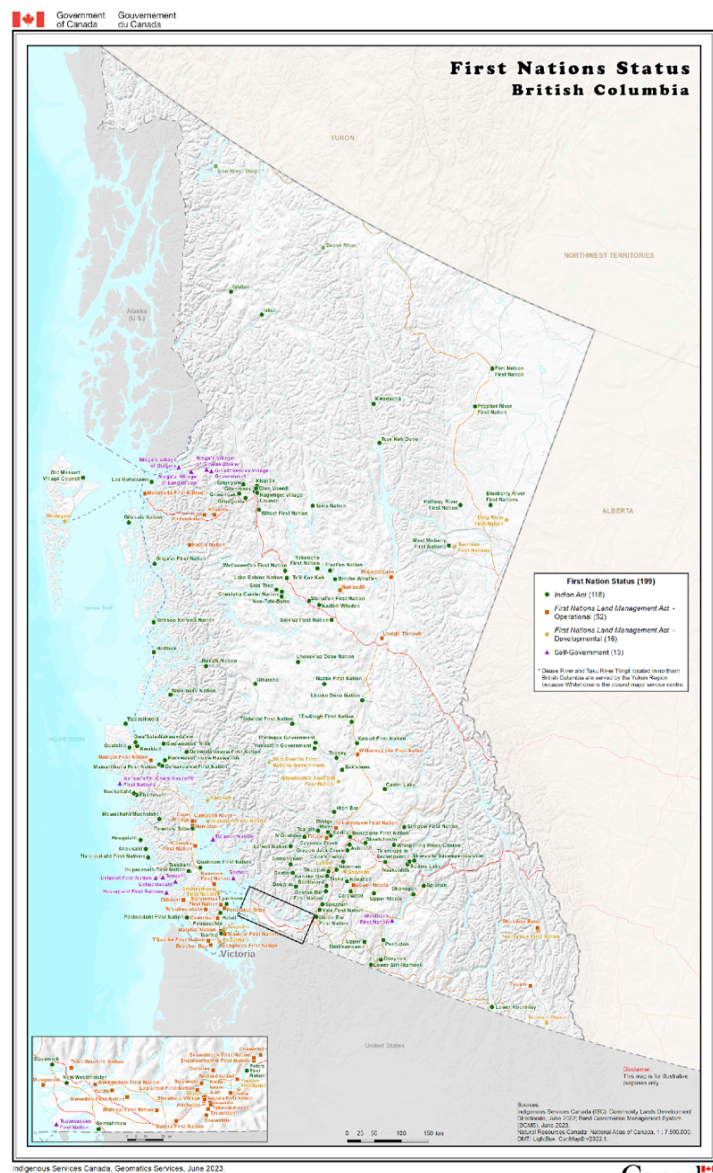


Figure 6: First Nations B.C.

Government of Canada, “Indigenous Peoples and Lands: British Columbia,” Accessed May 2, 2023, <https://www.rcaanc-cirnac.gc.ca/eng/1605796533652/1605796625692>.

### 3.4. Company Involvement

The Westcoast Transmission Company actively supported its employees' attempts to establish a sense of home, community, and belonging in the towns along its pipelines. The company used its financial resources to foster what it called "modern" communities. It contributed to

schools, roads, and recreational centers (see Image 22.).<sup>123</sup> It also helped establish a school in McLeod Lake and ski lift towers in Fort St. John, donated flags and awards to events, scout centers, and sports facilities, and organized an educational film program for children of Westcoast families in towns along the line.<sup>124</sup> In these ways, Westcoast aided the expansion of white settler culture into the interior and north of British Columbia.



*Image 22: "New payrolls, new industries and new communities follow the development of the natural gas industries. A few of the modern homes built to house Westcoast's personnel are pictured"*

*Westcoast Transmission Company Limited.  
"The Story of a Pipeline." Ca. 1958. UBCSC,  
WEI, Box 11, File 5.*

The company strategically positioned itself as a "good steward" of the region to justify its efforts. In addition to financing projects, it portrayed itself as a caretaker of people's well-being. Westcoast initiated safe driving programs, scholarships, and accident-prevention

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<sup>123</sup> Westcoast Transmission Company Limited. "The Story of a Pipeline." Ca. 1958. UBCSC, WEI, Box 11, File 5.; Westcoast Transmission Company Limited, *Annual Report 1973*, p.9, UBCSC, WEI, Box 11, File 38.

<sup>124</sup> Westcoast Transmission Company Limited, "B.C.'S First Trading Post, Near Station 3, Catches Up With Civilization," *Westcoast News* Vol. 1, No. 3 (July-August 1958): p.13, UBCSC, WEI, Box 11, File 38.; Westcoast Transmission Company Limited, "Child's Own Theatre," *Pipeline* Vol. 5 No. 3 (March 1967): p.4, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "Big Bam," *Pipeline* Vol. 10 (April 1970): p.4, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, "Spot News," *Pipeline*, p.12.; Westcoast Transmission Company Limited, "Westcoast Saddle Presented," *Pipeline* (Spring 1971): p.13, UBCSC, WEI, Box 11, File 42.



campaigns. It warned its employees of wide-ranging dangers, including hydroplaning and aerosol sprays, allegedly because the company wanted to “have you with us a little longer.”<sup>125</sup> The company newsletter portrayed physical health as a significant Westcoast concern in the 1970s.<sup>126</sup> A 1972 newsletter article, in line with broader trends in the healthcare sector at the time, warned employees of the dangers of smoking, stating, “Trying to quit? Here are some tips to help you beat the smoking habit.”<sup>127</sup> The company also promoted health campaigns for tuberculosis and other chest ailments in 1975 and 1976. The company's Industrial Relations Division organized a mobile X-ray unit outside the Vancouver Westcoast building. Although Westcoast arranged the unit for its personnel, neighbouring offices of B.C. Telecom and IBM also took advantage of the service. Eighty-one Vancouver employees received an X-ray screening, and plans were made for the unit to tour northeastern B.C. the following year. This tour provided free X-rays to all Westcoast employees. This initiative was part of a Provincial Health Program and supplemented similar services at local Health Units throughout British Columbia.<sup>128</sup> In 1980 the Westcoast company's Industrial Relations Division started a “Health

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<sup>125</sup> Westcoast Transmission Company Limited, “When Does Your Car Become A Hydroplane?,” *Pipeline* Vol. 3, No. 3 (March 1965): p.7, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Those Aerosol Sprays Can Be Dangerous!,” *Pipeline* Vol. 3 No. 2 (February 1965): p.5, UBCSC, WEI, Box 11, File 39.

<sup>126</sup> Westcoast Transmission Company Limited, “Health Notes For You And Your Family,” *Pipeline* Vol. 10, No. 3 (July 1980): p.4, UBCSC, WEI, Box 11, File 46.; Westcoast Transmission Company Limited, “Mobile X-ray Unit Checks H.O. Staff,” *Pipeline*, Vol. 5, No. 9 (December 1975): p.4, UBCSC, WEI, Box 11, File 44.; Westcoast Transmission Company Limited, “Health Notes: Flu Vaccine. If You Need To Be Protected This Winter,” *Pipeline*, Vol. 10, No. 4 (September 1980): p.7, UBCSC, WEI, Box 11, File 46. Westcoast Transmission Company Limited, “Extended Health Benefits,” *Pipeline* Vol. 5 No. 3 (March 1975): Attachment, UBCSC, WEI, Box 11, File 44.

<sup>127</sup> Westcoast Transmission Company Limited, “Trying To Quit? Here Are Some Tips To Help You Beat The Smoking Habit,” *Pipeline* Vol. 2, No. 4 (July 1972): p.N.A., UBCSC, WEI, Box 11, File 43.; Philip Decicca and Logan McLeod, “Smoking in Canada,” In *Life-Course Smoking Behavior: Patterns and National Context in Ten Countries*, eds. Dean R. Lillard and Rebekka Christopoulou (Oxford: Oxford University Press, Incorporated, 2015): p.31.; R. Cunningham, *Smoke and mirrors: The Canadian Tobacco Wars* (Ottawa, ON: International Development Research Centre, 1996).; Carmen Chai, “50 Years After Historic Report, Canadian Officials Reflect On Anti-Smoking Efforts,” *Global News*, Jan. 10, 2014, Accessed Aug. 1, 2022, <https://globalnews.ca/news/1074275/50-years-after-history-making-report-canadian-officials-reflect-on-anti-smoking-efforts/>.; G.J. Isabelle, *Report of the Standing Committee on Health, Welfare and Social Affairs on Tobacco and Cigarette Smoking*. Ottawa, 1969.

<sup>128</sup> Westcoast Transmission Company Limited, “Mobile X-ray Unit Checks H.O. Staff,” *Pipeline*, p.4.

Note” column in which they answered employees’ health concerns.<sup>129</sup> Even the Pipe 'N Gas club at the Vancouver office embraced the health-consciousness of its employer and printed T-shirts for its running group with the pun "naturally gassed."<sup>130</sup> Westcoast portrayed itself as a caring steward through these health and safety campaigns.

The company regarded its employees as personifications of this good stewardship and actively sought to shape their behaviour per its corporate image. It encouraged employees to volunteer and participate in public organizations, as highlighted in its newsletter,

Westcoast is proud of its people, particularly its people who have been and still are involved in the quality of life in the communities along the pipeline. While Westcoast has set the example and aided the establishment of schools, hospitals and recreational centres. It is the people who have given their time to serve on local councils, boards and committees.<sup>131</sup>

They also pushed them to donate to charitable organizations and affiliated clubs. The company argued, "Giving is no longer an act, but a state of mind."<sup>132</sup> The Pipe 'N Gas club gathered donations for various organizations, including Sunny Hill Hospital for Children. Westcoast Transmission participated in the Terry Fox Marathon of Hope and encouraged employees to donate blood to the blood bank. The company occasionally extended its help internationally through initiatives like the “Cup of Milk Fund.” That fund supported welfare work in Hong Kong, Korea, and India.<sup>133</sup> One notable small-scale initiative was the

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<sup>129</sup> Westcoast Transmission Company Limited, “Health Notes For You And Your Family,” *Pipeline*, p.4.

<sup>130</sup> Ibid.

<sup>131</sup> Westcoast Transmission Company Limited, *Annual Report 1973*, p.9, UBCSC, WEI, Box 7, File 15.

<sup>132</sup> Westcoast Transmission Company Limited, “Share the United Way,” *Pipeline* Vol. 4 No. 8 (August 1966) p.3, UBCSC, WEI, Box 11, File 40.

<sup>133</sup> Westcoast Transmission Company Limited, “Spot News,” *Pipeline* Vol. 3, No. 12 (December 1965): p.7, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Charity Notes,” *Pipeline* Vol. 4, No. 2 (February 1966): p.8, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Employees Bleed Regularly,” *Pipeline* Vol. 9, No. 1 (January 1969): p.9, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, “Children Benefit From Pipe 'N Gas Club Generosity,” *Pipeline* Vol. 5 No. 9 (December 1975): p.3, UBCSC, WEI, Box 11, File 44.; Westcoast Transmission Company Limited, “Lady Luck Smiles on Lori,” *Pipeline* Vol. 9 No. 4 (August 1979): p.2, UBCSC, WEI, Box 11, File 45.;

company's call for donations to the Vancouver Aquarium. This tourist attraction in Stanley Park switched to natural gas in the mid-1960s, and donations were consequently sought from Westcoast employees, as they now had a small stake in the Aquarium's success.<sup>134</sup>

Westcoast's most substantial charitable contributions went to the United Appeal or United Way, a federated network of non-profit organizations that addressed various community-related concerns, including unemployment, homelessness, and senior engagement. Westcoast facilitated an annual United Appeal campaign and allowed employees to participate through a payroll deduction plan.<sup>135</sup> As the company put it in 1967,

In our affluent society, we often overlook the problem of our neighbour. We're doing well, we're healthy, we enjoy a high living standard, and we can provide an education for our children. But how about those not in our circumstances? Those with mental illnesses? The retarded children? The leaderless delinquent youth? And those suffering from other ailments and human problems? In many cases, they can't help themselves; they need our help.<sup>136</sup>

Westcoast and its employees won multiple awards from the United Appeal for their generosity.<sup>137</sup> By incentivizing its employees to support charitable initiatives, Westcoast

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Westcoast Transmission Company Limited, "Employees/ Westcoast Aid Marathon Of Hope," *Pipeline* Vol. 10, No. 5 (Christmas 1980): p.4, UBCSC, WEI, Box 11, File 46.

<sup>134</sup> Westcoast Transmission Company Limited, "Expansion At Vancouver Public Aquarium," *Pipeline* Vol. 3, No. 11 (November 1965): p.7, UBCSC, WEI, Box 11, File 39.

<sup>135</sup> Westcoast Transmission Company Limited, "The United Appeal," *Pipeline* Vol. 4 No. 8 (August 1967): p.2, UBCSC, WEI, Box 11, File 41.

<sup>136</sup> Ibid.

<sup>137</sup> Westcoast Transmission Company Limited, "Give a Little More," *Pipeline* Vol. 3, No. 9 (September 1965): p.6, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "Share the United Way," *Pipeline*, p.3.; Westcoast Transmission Company Limited, "The United Appeal," *Pipeline*, p.2.; Westcoast Transmission Company Limited, "Share the United Way," *Pipeline* Vol. 4 No. 8 (August 1967): p.8, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, "United Appeal awards to Westpac and Westcoast," *Pipeline* Vol. 8 No. 2 (February 1968): p.5, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, "Westpac Given 'Bar' by Appeal," *Pipeline* Vol. 9 No. 1 (January 1969): p.9, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, "People Caring and Helping," *Pipeline* Vol. 9 (August 1969): p.2, UBCSC, WEI, Box 11, File 42.; Westcoast Transmission Company Limited, "Westcoast Qualifies for Third Gold Award," *Pipeline* Vol. 10 (February 1970): p. 8, UBCSC, WEI, Box 11, File 42.

demonstrated its commitment to community welfare and social responsibility to justify its involvement in B.C. communities, and its employees functioned as an extension thereof.

The “Highway Courtesy” program was a similar attempt. The company implemented the Highway's Courtesy program to cultivate active and engaged citizenry on the roads. The plan rewarded “acts performed beyond the call of duty on the roads and highways of our province.”<sup>138</sup> The rationale behind this initiative was that Westcoast personnel, due to their frequent travels along the Westcoast pipeline, possessed extensive knowledge of the province's highways and terrain that could benefit those on the road needing assistance. According to the company, “We in Westcoast, who live and drive from one end of the province to the other, have a good knowledge of the highways and travel conditions at all seasons, and we should use this information to help others when they are in doubt or when they need aid.”<sup>139</sup> The program specifically targeted the ways employees handled themselves and others on the highway. The company's president emphasized the program’s importance,

When we see a motorist in trouble – it could be an elderly couple with a flat tire or someone in a severe accident – we should be ready to give any assistance we can. It takes only a few minutes to help change a tire, and it doesn't take much longer to phone for an ambulance or a doctor. But these acts can mean a great deal to our fellow travellers in trouble, and they are something that will be appreciated by them for a long time.<sup>140</sup>

Participation in the Highway's Courtesy program involved the written description of a performed highway act of courtesy to the company's headquarters. If accepted, the Vancouver

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<sup>138</sup> Westcoast Transmission Company Limited, “From The President. An Award For Highway Courtesy,” *Pipeline* Vol. 3, No. 7 (July 1965): p.2, UBCSC, WEI, Box 11, File 39.

<sup>139</sup> “Westcoast Transmission Company Limited, “From The President. An Award For Highway Courtesy,” *Pipeline*, p.2.

<sup>140</sup> Ibid.

office would reward the “hero” with twenty-five dollars and a certificate.<sup>141</sup> The company newsletter published some of the recipient's stories. For instance, one woman wrote a letter in 1967 to thank the men that dug her car out of the snow, “Two of your men [...] offered to bring out their truck to help us. Finding that we were into the snow too far for this, they got out their shovels and proceeded to dig me out. Believe me, this would have been quite a feat!”<sup>142</sup> Other reported acts of courtesy included heroic stories of employees assisting drivers with engine trouble, stranded in bad weather, and a rescue mission of four men stuck inside a flipped vehicle in a ditch.<sup>143</sup> Over time, Westcoast started labelling this kind of behaviour as classic northern driving behaviour, “It's part of the unwritten highway code of the north that one motorist will stop to help another if he appears to be in difficulty.”<sup>144</sup> By promoting and incentivizing acts of highway courtesy, the company sought to instill a culture of compassion and responsibility among its employees, ultimately contributing to a better public image for Westcoast Transmission.

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<sup>141</sup> Ibid.

<sup>142</sup> Westcoast Transmission Company Limited, “In Appreciation Of Courtesy,” *Pipeline* Vol. 5, No. 3 (March 1967): p.10, UBCSC, WEI, Box 11, File 40.

<sup>143</sup> Westcoast Transmission Company Limited, “An Award For Highway Courtesy,” *Pipeline* Vol. 3 No. 8 (August 1965) p.4–5, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “From the president. An Award for Highway Courtesy,” *Pipeline*, p.2.; Westcoast Transmission Company Limited, “First Highway Courtesy award,” *Pipeline* Vol. 3 No. 10 (October 1965) p.7, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Award for Neil Tilitzky,” *Pipeline* Vol. 4, No. 1 (January 1966): p.5, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Good for The Image,” *Pipeline* Vol. 4 No. 9, (September 1966): p.5, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Courtesy in the North,” *Pipeline* Vol. 4 No. 10 (October 1966): p.7, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Highway Courtesy Highly Contagious,” *Pipeline* Vol. 8 No. 11 (November 1968): p.9, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, “Highway Courtesy Wins Praise For Chantree,” *Pipeline* Vol. 1 No. 3 (February 1971): p.6, UBCSC, WEI, Box 11, File 43.; Westcoast Transmission Company Limited, “Westcoast Samaritan Makes Front Page News,” *Pipeline* Vol. 3 No. 8 (August 1973): p.4, UBCSC, WEI, Box 11, File 43.; Westcoast Transmission Company Limited, “Pipeliners Always Ready To Extend A Helping Hand,” *Pipeline* Vol. 4 No. 4 (April 1974), p.4, UBCSC, WEI, Box 11, File 44.; Westcoast Transmission Company Limited, “Saratoga Men Aid Stranded Campers,” *Pipeline* Vol. 6, No. 5 (November 1976): p.1, UBCSC, WEI, Box 11, File 44.

<sup>144</sup> Westcoast Transmission Company Limited, “A Friend In Need Is A Friend Indeed,” *Pipeline* Vol. 7, No. 5 (November 1977): p.3, UBCSC, WEI, Box 11, File 45.

In certain instances, Westcoast Transmission sought to influence its employees' behaviour for financial gain. They tied together employees' political vote, financial success, and the company's operations.<sup>145</sup> During B.C.'s provincial election in early December of 1964, Westcoast, for instance, remarked, "The results will have a direct effect upon the welfare and progress of all of us."<sup>146</sup> Additionally, in 1970, the company newsletter emphasized the importance of free enterprise and advocated for a tax reform that would lower the corporate income tax.<sup>147</sup> In some instances, Westcoast went beyond shaping its employees' voting behaviour and tried to sway the vote of the entire province. During a provincial election, Frank McMahon cautioned that a defeat of the ruling Social Credit Party would endanger a natural gas and oil development program of \$450,000,000 and 10,000 potential jobs, "ten thousand jobs are waiting for B.C. workers."<sup>148</sup> His statements drew criticism from politicians like Pat O'Neal, Secretary-Treasurer of the B.C. Federation and some considered them a threat to democracy.<sup>149</sup> Mr. Harding, the CCF member for Kaslo-Slocan, stated, "This man threatened the voters of this province that if they voted CCF, it meant the end of so many jobs and hundreds of millions of dollars in capital expenditures."<sup>150</sup> The Social Credit Party won the election, but the 10,000 jobs were not created. In response,

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<sup>145</sup> Westcoast Transmission Company Limited, "From The President, Voting... A Privilege And A Duty," *Pipeline* Vol. 3, No. 10 (October 1965): p.2, UBCSC, WEI, Box 11, File 39.

<sup>146</sup> Westcoast Transmission Company Limited, "From The President, Voting Is A Responsibility," *Pipeline* Vol. 2, No. 8 (November 1964): p.2, UBCSC, WEI, Box 11, File 39.

<sup>147</sup> Westcoast Transmission Company Limited, "Your Future Is Tied To Business," *Pipeline* (Winter 1971): p.10, UBCSC, WEI, Box 11, File 42.

David Crane, "50% Rate Might Start At Incomes Of 30,000," *Globe & Mail* (Toronto, Ont.), Oct. 6, 1970, UBCSC, WEI, Box 12, File 1.

Frank McMahon, "Submission To The Royal Commission On Taxation," *Westcoast Transmission Company Limited*, N.A., UBCSC, WEI, Box 4, File 14.

<sup>148</sup> "Fewer Jobs," *Nanaimo Daily News* (Nanaimo, B.C.), Dec. 6, 1961, p.12.; "Ten Thousand Jobs," *C.C.F. News* (Vancouver, B.C.), Jan. 25, 1961, UBCSC, WEI, Box 3, File 33.

<sup>149</sup> "B.C. Liberals Charge Gas Firm-Socred Link," *Edmonton Journal* (Edmonton, Alb.), Sep. 24, 1963, p.2.; "Fewer Jobs," *Nanaimo Daily News*, p.12.; "Jobless Picket McMahon Office," *Vancouver Sun* (Vancouver, B.C.), Jan. 18, 1961, p.2,6.; "Jobless Picket McMahon Offices," *Calgary Herald* (Calgary, Alb.), Jan. 19, 1961, p.5.; "We Want Jobs," *Times Colonist* (Victoria, B.C.), Jan. 19, 1961, p.5.; "Why No Paving In My Riding? Demands CCFer," *The Times Colonist* (Victoria, B.C.), Feb. 3, 1961, UBCSC, WEI, Box 3, File 33.

<sup>150</sup> "Why No Paving In My Riding? Demands CCFer," *The Times Colonist*.

approximately fifty unemployed people staged a protest outside Westcoast's Vancouver office, demanding employment (see Image 23).<sup>151</sup> The incident raised questions about the company's relationship with the Social Credit government, the consulted archives contained no indication that Westcoast faced repercussions for its actions.



*Image 23: Federation of Unemployed picketing outside the company headquarters in Vancouver, January 1961.*

*"Picketing Westcoast Transmission: B.C. Federation of Unemployed pickets Frank McMahon, Jan. 18, 1961" Photograph, 1961, UBCSC, WEI, Photo Box 4, File 571.*

At times, Westcoast became almost indispensably intertwined with the communities in which its employees resided. According to Westcoast's 1973 annual report, the company, in the shape of property and business taxes, often functioned as one of, if not the primary source

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<sup>151</sup> "Jobless Picket McMahon Office," *Vancouver Sun* p.2, 6.; "Jobless Picket McMahon Offices," *Calgary Herald*, p.5.; "We Want Jobs," *Times Colonist*, p.5.; "Picketing Westcoast Transmission: B.C. Federation of Unemployed pickets Frank McMahon, Jan. 18, 1961," Photograph, 1961, UBCSC, WEI, Photo Box 4, File 571-583.

of tax revenue for smaller municipalities.<sup>152</sup> Gas sales provided the provincial government with a substantial income through royalties, taxes, and land sales.<sup>153</sup> Although it is challenging to quantify the complete extent of the company's contribution with the consulted archival material, Westcoast's annual reports give some indication. Between 1957 and 1965, the company's "Taxes Payable," or the amount of money Westcoast owed in federal, provincial and municipal taxes, increased from \$255,268 to \$507,947.<sup>154</sup> In 1960, in a speech for the University of Toronto, Frank McMahon announced that the Government of B.C. had received over \$60 million from petroleum leases, rentals and royalties. McMahon emphasized the novelty of this income for the province, "new revenue, from a source that yielded no dollar before the Westcoast project began."<sup>155</sup> By 1976, the petroleum and natural gas industry had grown into the provincial treasury's largest industrial contributor. Furthermore, Westcoast ranked as the third-largest contributor overall when considering all contributions. Only personal income taxes and social services taxes exceeded the company's contribution.<sup>156</sup> In this manner, Westcoast cemented its presence in especially the interior and northern regions of British Columbia.

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<sup>152</sup> Westcoast Transmission Company Limited, "Pipeline For People," *Annual Report 1973*, p.1., UBCSC, WEI, Box 7, File 15.; Westcoast Transmission Company Limited, *On Export of Additional British Columbia Gas*, Memorandum, November 1967, UBCSC, WEI, Box 11, File 22.

<sup>153</sup> Westcoast Transmission Company Limited, *Natural Gas in Alberta and B.C. and its Development for the Benefit of Canada* (1980): p.18, UBCSC, WEI, Box 11, File 4.; Westcoast Transmission Company Limited, "From the President: The Role of Gas and Oil," *Pipeline* Vol. 4, No. 8 (August 1966): p.2, UBCSC, WEI, Box 11, File 40.

<sup>154</sup> Westcoast Transmission Company Limited, *Annual Report 1958*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1959*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1960*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1961*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1962*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1963*, UBCSC, WEI, Box 7, File 13.; Westcoast Transmission Company Limited, *Annual Report 1964*, UBCSC, WEI, Box 7, File 14.; Westcoast Transmission Company Limited, *Annual Report 1965*, UBCSC, WEI, Box 7, File 14.

<sup>155</sup> Frank McMahon, "Talk on Natural Gas Industry," (speech at University of Toronto, ON, Oct. 24, 1960), UBCSC, WEI Box 12, File 1.

<sup>156</sup> Westcoast Transmission Company Limited, "Gas Industry Is Largest Industrial Contributor to Provincial Treasury," *Pipeline*, Vol. 6, No. 5, (October 1976): p.2, UBCSC, WEI, Box 11, File 44.



Notably, in 1973, the B.C. government started earning from its newly founded British Columbia Petroleum Corporation (BCPC).<sup>157</sup> Before, Westcoast purchased gas from producers, transported it, and sold it to distribution companies based on long-term contracts. In the early 1970s, various producer contracts were expiring. New contracts would have to be negotiated at higher prices to incentivize further exploration. Westcoast required new exploration to meet its growing delivery obligations and to account for the natural gas lost in the Amoco fields due to water intrusion (see Chapter 2).<sup>158</sup> In addition, Westcoast struggled to acquire approval from the National Energy Board (NEB), the federal organization tasked with monitoring and regulating international and inter-provincial components of Canada's energy industries, for the looping of its pipeline, while its current system needed to be revised to meet U.S. demand.<sup>159</sup> Meanwhile, with limited capacity to alter its export contracts, Westcoast sold natural gas at prices far below those of alternative fuels, resulting in significant losses.<sup>160</sup> Squeezed between buyers and sellers while struggling financially, Westcoast sold its 120 purchaser contracts with 80 producers to the public, Crown corporation, B.C. Petroleum. From then on, Westcoast would buy its gas at a set price by the B.C. government.<sup>161</sup> The price difference between BCPC's buying and selling price went to the provincial government.<sup>162</sup> In

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<sup>157</sup> "It's Tough, But We'll Try, Says Gas Boss," *Province* (Vancouver, B.C.), Oct. 13, 1973, p.4.; "Hardly A New Principle," *Province* (Vancouver, B.C.), Oct. 17, 1973, p.4.; "Sales Hike Westcoast Profits," *Vancouver Sun* (Vancouver, B.C.), Nov. 8, 1973, p.37.; "Westcoast Net Profit Jumps 49 Per Cent," *Province* (Vancouver, B.C.), Nov. 9, 1973, p.23.; "B.C. Gas Takeover May be Foretaste of Things To Come," *Edmonton Journal* (Edmonton, Alb.), Nov. 16, 1973, p.6.

<sup>158</sup> Earle Gray, *Wildcatters*, p.276-277.; W.B. Wheeler, *Institutional Review Westcoast Transmission* (Pemberton Securities Limited, June 1976): p.1-3, UBCSC, WEI, Box 10, File 17.;

<sup>159</sup> "Westcoast Transmission's Ed Phillips Stalled by deadlock in B.C./U.S. Price Talks," *B.C. Business Magazine* (August 1980): p.18-19, UBCSC, WEI, Box 4, File 10.

<sup>160</sup> Earle Gray, *Wildcatters*, p.277.

<sup>161</sup> *Ibid.*, p.278.; John N. Nassikas, "The Energy Dimensions in United States-Canadian Relations," (Speech, Palm Beach, FL, Oct. 15, 1974): p.3, UBCSC, WEI Box 12, File 3.; Norman R. Gish, "The Regulatory Environment "New Challenges of Declining Growth"," (Speech, Toronto, ON, Sep. 12, 1977): p.9, UBCSC, WEI Box 12, File 3.; Westcoast Transmission Company Limited, "B.C. Petroleum Corporation Agreement," *Annual Report 1973*, UBCSC, WEI Box 7, File 15.

<sup>162</sup> "Westcoast Transmission's Ed Phillips Stalled by deadlock in B.C./U.S. Price Talks," p.17-22.

addition, BCPC acquired 13.5 percent of Westcoast's common stock. The B.C. government in this manner firmly established its stake in the natural gas industry.<sup>163</sup>

Westcoast Transmission strongly impacted the creation of individual and collective identities within the interior and northern regions of British Columbia. The company employed strategies to validate its presence in these areas and secure its and the region's economic success, often becoming crucial to local economies and increasing its contribution to the provincial treasury.

### 3.5. The New Frontier

The Westcoast company and Westcoast families embraced the identities they had negotiated with their surrounding natural environment, often with pride. They portrayed life in the interior and north of B.C. as rugged and modern and attributed themselves to a pioneering spirit.<sup>164</sup> This narrative aligned with the perception of the North as a challenging but exciting environment that offered adventure, hunting, and a close connection with nature. Himie Koshevov, a columnist for the *Vancouver Province*, captured the essence of the region's frontier spirit, "Fort Nelson, Dawson Creek, Fort St. John, and all the other centres have a feeling that they're shaping a new section of the world and this makes their speeches, even directed at you, evangelistic."<sup>165</sup> Westcoast reinforced this sentiment with advertisements that glorified the region's frontier heritage. These advertisements referenced Lillooet's gold-bearing creeks, valorized B.C.'s Hudson Bay Company history, and called

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<sup>163</sup> Westcoast Transmission Company Limited, "Summary of Address to Shareholders by Kelly H. Gibson Chairman of the Board & Chief Executive Officer," *Pipeline* Vol. 4, No. 4 (April 1974): supplement, UBCSC, WEI, Box 11, File 44.

<sup>164</sup> Westcoast Transmission Company Limited, "Move North for Stone Sheep," *Pipeline*, Vol. 4, No. 8, (August 1966): p.8, UBCSC, WEI, Box 11, File 40.

<sup>165</sup> Westcoast Transmission Company Limited, "Fort Nelson – Secure in its Future," *Pipeline*, p.4.

Fort Nelson the “new frontier.”<sup>166</sup> In these manners, the advertising campaign aimed to evoke the romanticized sense of excitement and possibility often associated with the frontier era.

Key to this “new frontier” lifestyle was access to nature. Advertisements featured in a local fish and game magazine extensively promoted the abundant hunting opportunities in the region. The Westcoast company marketed the Cariboo as a region with “thousands of square miles of wilderness” to explore.<sup>167</sup> Fort Nelson promised “good all season” hunting with a wide array of game, including sharp-tailed grouse, moose, caribou, mountain goats, and grizzly bears.<sup>168</sup> The advertisements also highlighted fishing in Muncho Lake and an abundance of big game in Stone Mountain. The company newsletter in various editions labelled the Alaska Highway the “adventurer’s highway” and a gateway to a sportsman’s paradise.<sup>169</sup> Westcoast promised cool waters with fish and adventures.<sup>170</sup> “Adventure awaits,” stated company advertisements that aimed to entice tourists to visit the communities Westcoast had helped develop.

In addition to nature and adventure, the company also boasted the region’s modern facilities. A company-sponsored advertisement described Prince Rupert as a “gateway to one of North America’s great fish-producing areas” and a “modern, comfortable city.”<sup>171</sup> Westcoast boasted that the town was easily accessible by highway, plane, or cruise ship.<sup>172</sup> An article in the *Prince George Citizen* entitled “City Sophistication in an Open Necked

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<sup>166</sup> Westcoast Transmission Company Limited, “Move North for Stone Sheep,” *Pipeline*, p.8.; Westcoast Transmission Company Limited, “Room To Swing a Cow By The Tail,” *Pipeline*, Vol. 2, No. 3, (June 1964): p.4, UBCSC, WEI, Box 11, File 38.

<sup>167</sup> Westcoast Transmission Company Limited, “Room To Swing a Cow By The Tail,” p.4..

<sup>168</sup> Westcoast Transmission Company Limited, “Move North for Stone Sheep,” *Pipeline*, p.8.

<sup>169</sup> Ibid.; Westcoast Transmission Company Limited, “Room To Swing a Cow By The Tail,” p.4.

<sup>170</sup> Westcoast Transmission Company Limited, “Grizzly Bear or Grouse,” *Pipeline*, Vol. 4, No. 9 (September 1966): p.10, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “Move North for Stone Sheep,” *Pipeline*, p.8.; Westcoast Transmission Company Limited, “Room To Swing a Cow By The Tail,” *Pipeline*, p.4.

<sup>171</sup> Westcoast Transmission Company Limited, *Pipeline*, Vol. 8, No. 12 (December 1968): p.12, UBCSC, WEI, Box 11, File 41.

<sup>172</sup> Westcoast Transmission Company Limited, *Pipeline*, Vol. 8, No. 12, p.12.

Shirt" shed light on the lifestyle of Fort St. John residents. Despite having access to modern conveniences like a supermarket, sidewalks, and residential subdivisions, the article characterized them as "hardy, informal, outdoorsmen."<sup>173</sup> The Westcoast company promised well-maintained tourist facilities in the "modern city" of Fort St. John and labelled Dawson Creek a "prosperous, lively town with new motels and hotels, regular bus and air service."<sup>174</sup> Advertisements portrayed the Cariboo region as an ideal destination for hunters and families with "guest ranches, campsites, and modern towns."<sup>175</sup> The Westcoast Transmission Company and its employees had fostered a paradoxical hinterland identity that was both rugged and modern. It was part of southern white settler culture and part of the North, yet distinct from either.

### **3.6.Conclusion**

This chapter analyzes how Westcoast families negotiated their identities and sense of belonging within the interior and northern environments of British Columbia and the role the employer played in this effort. The first section of the chapter studies the political and corporate "visions" that facilitated their endeavours. It argues that Westcoast Transmission aligned itself with the "high modernism" and "northern vision" of B.C.'s Premier W.A.C. Bennett. This vision tied large-scale energy infrastructure and an expansion into the interior and northern regions of B.C. to ideas of modernity and progress.

Westcoast families became extensions of Bennett's northern vision as they negotiated their communal identities through sports, hobbies, and social gatherings. To create a sense of

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<sup>173</sup> "Fort St. John- Oldtimer in Years But Youngster in Spirit," *Prince George Citizen* (Prince George, B.C.), Oct. 4, 1961, p.10.

<sup>174</sup> Westcoast Transmission Company Limited, "Move North for Stone Sheep," *Pipeline*, p.8.; Westcoast Transmission Company Limited, "Grizzly Bear or Grouse," *Pipeline*, p.10.

<sup>175</sup> Westcoast Transmission Company Limited, "Room To Swing a Cow By The Tail," *Pipeline*, p.4.

home, Westcoast families largely adhered to white-settler ideals of modernity and set out to adjust their environments accordingly. Subdivisions, golf courses, and greenhouses became visible, tangible evidence of their attempts. However, the natural environment often forced Westcoast families to adapt their ideals and adopt an adjusted form of southern white settler living.

Westcoast Transmission actively supported community development in the interior and north of B.C. It funded schools, infrastructure projects, and community events. The company also propagated the "modern living" it had brought to the interior and northern regions of British Columbia to justify its extension into the region. It cared about its employees' health, funded community initiatives, and awarded monetary rewards for friendly and helpful behaviour on the highway. In these ways, Westcoast tried to mould its employees in accordance with its desired corporate image of a responsible and caring steward of interior and northern British Columbia and further justify its activities.

The company and Westcoast families boasted the lifestyles they had cultivated, which offered the comforts of modern living within a "rugged" environment filled with wildlife and adventure. In doing so, Westcoast families negotiated a distinct sense of identity within their natural environments. It was both southern, metropolitan, and northern, but still distinct. The next chapter adopts a gender lens to further elaborate on the interplay between identity and Westcoast's endeavours.

## **Chapter 4: Gendering Gas**

### **4.1.Introduction**

The preceding chapter illuminated how Westcoast's expansion into the interior and northern regions of British Columbia increasingly blurred the boundaries between employees' personal lives, work, identity, and natural gas. This chapter builds on that exploration of energy and identity by analyzing Westcoast's historical development through a gender lens. The focus is on the establishment of Westcoast's natural gas operations and the marketing of natural gas. The chapter argues that the fossil fuel company's success rested on "traditional" gender tropes like the strong, courageous man, knowledgeable husband, attractive secretary, and caring yet mildly unintelligent housewife. Gender stereotypes and discrepancies went hand in hand with natural gas production. Historians Kathleen Canning's and Joan W. Scott's definition of gender is adopted. According to Canning, gender is "a category of social analysis that denotes the relational character of sexual differences" and is, as Scott remarks, a term that "rejects biological explanation" but instead refers to "cultural constructions"—the entirely social creation of ideas about appropriate roles for women and men." Consequently, gender is "a social category imposed on a sexed body."<sup>1</sup>

The ensuing sections engage with the vast body of knowledge that combines scholarship on gender, industrialization, nature, and marketing. The chapter's first section engages with studies of gender and the domination of nature, and works on frontier masculinity. It unpacks gender norms, especially masculinity, during the construction of the

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<sup>1</sup> Kathleen Canning, *Gender History in Practice: Historical Perspectives on Bodies, Class & Citizenship* (Ithaca, N.Y.: Cornell University Press, 2006): p.4.; Joan Scott, "Gender: A Useful Category of Historical Analysis," in eds. *Coming to Terms: Feminism, Theory, Politics* by Elizabeth Weed (London: Routledge, 2013): p.84.

Westcoast system. Academics have long linked large-scale infrastructure projects like mines and rigs to a masculine desire to "conquer" the "feminine" earth. Environmental historian Carolyn Merchant's work has been particularly influential in this realm. In her book *Death of Nature*, she reveals that nature has historically been considered kind, nurturing, as well as violent and chaotic, both of which were rendered female characteristics. During the Scientific Revolution, the latter characteristic gained prominence. Humans increasingly sought to rationalize, quantify, and mechanize a world they viewed as volatile, chaotic, and needing better understanding and control. As Chapter 1 relates, anthropologist James C. Scott would perhaps call this an attempt to increase the world's "legibility."<sup>2</sup> These searches for order paved the way for many large-scale infrastructure projects that had previously been halted by, as Merchant puts it, "cultural constraints,"

The image of the earth as a living organism and nurturing mother had served as a cultural constraint restricting the actions of human beings. One does not readily slay a mother, dig into her entrails for gold or mutilate her body, although commercial mining would soon require that. As long as the earth was considered to be alive and sensitive, it could be considered a breach of human ethical behaviour to carry out destructive acts against it.<sup>3</sup>

In search of control, as Canadian academic William Leiss writes, nature became the female "to be dominated and violated."<sup>4</sup> Scholars like Melina Pereira Savi and ecofeminist Greta Gaard, therefore, argue that the same systems oppress nature and women, "oppressions such as those based on [...] gender [...] [are] the same ideology which sanctions the oppression of

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<sup>2</sup> Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (San Francisco: Harper & Row, 1980): p.2.

<sup>3</sup> Carolyn Merchant, *The Death of Nature*, p.3.

<sup>4</sup> William Leiss, *The Domination of Nature* (Montreal, CA: McGill-Queen's University Press, 1994): p. XIII.

nature."<sup>5</sup> Leiss acknowledges that such phrases as “oppression,” “mastery of nature,” or “domination of nature” are somewhat ambiguous.<sup>6</sup> This chapter uncovers the production of a masculine ideal while constructing the Westcoast natural gas system to address this ambiguity.

It is argued, in the chapter's first section, that such an ideal borrows traits from what scholars have identified as "frontier masculinity," "rural masculinity," and "the cowboy myth." These masculinities pertain to a romanticized understanding of “wilderness” experiences, which features rugged, self-sufficient men capable of actively subordinating their natural environments.<sup>7</sup> Whether colonial settlers, farmers, or cowboys, each of these archetypes envisioned nature as a tool to demonstrate their mental and physical strength and masculinity. By successfully baring and withstanding the obstacles and fears associated with, often remote and "wild," natural environments, they would become "true" men.<sup>8</sup> Geographers Jo Little and Michael Leyson find this ideal among rural men as do sociologists Hugh Campbell, Michael Bell, and Margaret Finney.<sup>9</sup> Sociologists Anahita and Mix find it in Alaska's wilderness, Gloria Miller in the oil industry, and Wright and Kimmel see it in the glorification of the cowboy as a man who “moves in a world of men in which daring, bravery and skill are constantly tested.”<sup>10</sup> This chapter contends that during Westcoast's construction,

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<sup>5</sup> Greta Gaard, "Living Interconnections with Animals and Nature," in eds. *Ecofeminism: Women, Animals, Nature* by Greta Gaard (Pennsylvania, PA: Temple University Press, 1993): p.1.; Melina Pereira Savi, "The Anthropocene (and) (in) the Humanities: Possibilities for Literary Studies," *Estudos Feministas* Vol. 25, No. 2 (2017): p.949.

<sup>6</sup> William Leiss, *The Domination of Nature*, p.167.

<sup>7</sup> Sine Anahita and Tamara L. Mix, "Retrofitting Frontier Masculinity for Alaska's War Against Wolves," *Gender & Society* Vol. 20, No. 3 (2006): p.334.

<sup>8</sup> Jo Little and Michael Leyshon, "Embodied Rural Geographies: Developing Research Agendas," *Progress in Human Geography* Vol. 27, No. 3 (2003): p.264.

<sup>9</sup> Ibid.; Hugh Campbell, Michael Bell, and Margaret Finney, *Country Boys: Masculinity and Rural Life* (University Park, PA: Pennsylvania State University Press, 2006).

<sup>10</sup> Michael S. Kimmel, "The Cult Of Masculinity: American Social Character And The Legacy Of The Cowboy," In eds. *Beyond patriarchy: Essays By Men On Pleasure, Power, And Change* by Michael Kaufman (Toronto, Canada: Oxford University Press, 1987): p.239.; Gloria E. Miller, "Frontier Masculinity in the Oil Industry: The Experience of Women Engineers," *Gender, Work, and Organization* Vol. 11, No. 1 (2004): 47–



the men involved idealized a form of masculinity that shows traits from all three archetypes of masculinity. This idealized masculinity valorized a rugged, strong individual with a disposition to win. The ultimate construction worker aimed to conquer the natural frontier of interior and northern British Columbia for industrialization, the sake of "modernity," and to earn a living, but likely also to validate this sense of masculinity.

This chapter places that masculine ideal in the context of resource developments and energy transitions. Labour historians have long acknowledged the link between masculine ideals and resource extraction.<sup>11</sup> In 1987, Ian W. Radforth, wrote about the masculine nature of "bushworkers" or "woodsmen," as he calls them, in Ontario's timber camps, stating "the bush camp was a male world, suffused in every respect with a keen sense of masculinity."<sup>12</sup> Similarly, historian Richard Mackie characterized the camps where loggers in the Comox Valley, on Vancouver Island, lived as "isolated, masculine, and temporary."<sup>13</sup> Gordon H. Hak uncovered in his historical account of Fordism in B.C.'s forest industry that small forest industry operators favoured and pushed for an ideology of "independence, resourcefulness, integrity, and masculinity," against a backdrop of private property and competitive capitalism.<sup>14</sup> Occupied with labour concerns such as unionization, gender remains a secondary theme in these works. Hak acknowledges this, stating "gender [...] camp life, and the social dynamics of the shop floor are not fully developed themes."<sup>15</sup> Historian Adele Perry has provided an in-depth gender analysis of frontier life in B.C. Her book *On the Edge of Empire* places it in the context of colonialism and resource extraction, analyzing the friction

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73.; Sine Anahita and Tamara L. Mix, "Retrofitting Frontier Masculinity for Alaska's War Against Wolves," p.332–353.

<sup>11</sup> Donald McKay, *The Lumberjacks* (Toronto, Montreal: McGraw-Hill Ryerson Limited, 1978).

<sup>12</sup> Ian Walter Radforth, *Bushworkers and Bosses: Logging in Northern Ontario, 1900-1980* (Toronto, Ont: University of Toronto Press, 1987): p.8.

<sup>13</sup> Richard Mackie, *Mountain Timber: the Comox Logging Company in the Vancouver Island Mountains* (Winlaw, B.C: Sono Nis Press, 2009): p.32.

<sup>14</sup> Gordon H. Hak, *Capital and Labour in the British Columbia Forest Industry*, (Vancouver: UBC Press, 2007): p.139-140.

<sup>15</sup> Ibid..4.

between the racially diverse and homosocial frontier masculine culture, and B.C.'s white heteronormative societal expectations of the late 20<sup>th</sup> century.<sup>16</sup> This chapter builds on this existing scholarship, partly extending Perry's analysis of resource extraction and colonialism into the 21<sup>st</sup> century. It, moreover, places the homosocial camps in the larger context of an energy transition, tracing the various ways in which frontier masculine ideals were adapted and transformed to not just harvest but also market a fuel source.

The role of women and femininity receives more attention in this chapter as well than in the works on the timber industry. The construction of Westcoast's natural gas facilities relied on a particular type of masculinity cultivated in an environment relatively devoid of femininity. Women did manage to secure certain positions within Westcoast's corporate structures, predominantly as secretaries and clerks. However, despite their presence in the company, their opportunities for advancement within the corporate hierarchy were restricted.

Westcoast Transmission also perpetuated gender disparities while marketing natural gas as a "modern" fuel. Following the construction phase, Westcoast's marketing agents adopted transformed versions of "frontier masculinity" to promote the sale of natural gas and gas appliances. In these versions, traditional housewives accompany the once rugged pioneer, and he transforms into the ideal "breadwinner." They portray women and men in heteronormative families in "traditional" spheres, the women in the kitchen and the men on the couch or behind the barbecue. Women pose, smile, and appear in awe, while men repair, study, or relax in Westcoast Transmission's various promotional campaigns. Countless works discuss the use of gender in marketing strategies, like sociologist Erving Goffman's *Gender and Advertisements*, which includes a detailed analysis of the ways in which women's eyes and hands, as opposed to men's, are positioned in advertisements, or media studies scholar

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<sup>16</sup> Adele Perry, *On the Edge of Empire: Gender, Race, and the Making of British Columbia, 1849-1871* (Toronto: University of Toronto Press, 2001).

Steve Craig's edited collection *Masculinity and the Media*.<sup>17</sup> The gendered marketing of natural gas appliances is only marginally mentioned in such studies. A work that does include various references is historian Joy Parr's *Domestic Goods*, which studies the "design, production, promotion and consumption of furniture and appliances" in Canada in the wake of the world wars.<sup>18</sup> Parr references a handful of gas appliances, including a washer and stove. However, her work's broader scope leaves limited room for a more detailed analysis of the marketing of natural gas appliances. The latter sections of this chapter build on this existing literature on the marketing of natural gas while wondering to what extent natural gas, which the company portrayed as the bringer of a "new era," a hallmark of "modernity," and the key to "good living," relied on traditional gender norms for its success.

In general, Canadian scholarship on gender and energy is limited. Historians Abigail Harrison and Ruth Sandwell completed one of the few existing publications. Their edited collection introduces how women impacted and intertwined their identities with the energy sector as female educators, home economists, and oil workers.<sup>19</sup> Their work focuses on women and energy prior to the twentieth century, but Harrison and Sandwell provided clues to the locations of women's voices in archival material whose content is male dominated.<sup>20</sup>

Chiefly, this chapter brings together scholarship on energy and gender in the context of natural gas development in British Columbia between 1950 and 1980. It investigates the gender dynamics prevalent in three interconnected spheres: the construction sites, the internal workings of the company's offices and stations, and Westcoast's marketing endeavours. The chapter delves into these three domains in two distinct sections: the first section focuses on

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<sup>17</sup> Erving Goffman, *Gender Advertisements* (Cambridge, Mass: Harvard University Press, 1979).; Steve Craig, *Men, Masculinity, and the Media* (Newbury Park: Sage, 1992).

<sup>18</sup> Joy Parr, *Domestic Goods: The Material, the Moral, and the Economic in the Postwar Years* (Toronto, CAN: University of Toronto Press, 1999).

<sup>19</sup> Abigail Harrison Moore and Ruth Sandwell, "Women and Energy," *RCC Perspectives: Transformations in Environment and Society*, 2020.

<sup>20</sup> Abigail Harrison Moore and R.W. Sandwell, *In a New Light: Histories of Women and Energy* (Montreal, Que.: McGill-Queen's University Press, 2021): p.5.

the supply of natural gas, encompassing the construction of Westcoast's facilities and its corporate operations, while the second section centers on the marketing strategies employed for natural gas.

The chapter firstly argues that the construction of the Westcoast system presented a 'harsh' environment in need of strong, self-reliant, and determined men with a disposition to win.<sup>21</sup> Masculine desires to "conquer nature" combined with a romanticized understanding of "frontier living" and a desire for wealth, fueled the colonial expansion of Westcoast (see Chapter 2) into the interior and north of British Columbia. While exceptions to the rule existed, most construction areas were deemed unsuitable spaces for women, a perspective that the glorification of vice in general, and especially the (ab)use of alcohol, bolstered.

Secondly, it is contended that Westcoast's corporate workplaces, such as the company's headquarter on Georgia Street, Vancouver, or its meter stations along the line, provided women opportunities within the boundaries of prevailing societal gender norms. Women occupied a select group of positions, and while the company provided them with the illusion of freedom, prevailing corporate norms and practices dimmed and controlled women's presence on the work floor.

Lastly, this chapter asserts that Westcoast's varying marketing campaigns combined a cultural ideal of "good living" with the sexualization and domestication of women's bodies. The presence of natural gas at Westcoast's role in the Pacific National Exhibition (PNE) is a case study for these phenomena. The PNE is an annual fair in Vancouver that showcases British Columbia's creations to its visitors.<sup>22</sup> Overall, this chapter argues that Westcoast

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<sup>21</sup> Martha Wörsching, "Race to the Top; Masculinity, Sport, and Nature in German Magazine Advertising," *Men and Masculinities* Vol. 10, No. 2 (October 2007): p.203.

<sup>22</sup> David Breen and Kenneth Coates, *The Pacific National Exhibition: An Illustrated History* (Vancouver, B.C.: University of British Columbia Press, 1982): p.1. – the Fair received the name Pacific National Exhibition after the Second World War. – Mackenzie M. Elizabeth, "The PNE Prize Home: Tradition And Change," Ph.D. Diss. (University of British Columbia, 2005): p.5.; "History & Legacy," *Pacific National Exhibition*, Accessed June 1, 2023, <https://www.pne.ca/about-us/history-legacy/>.

Transmission propagated and relied on traditional gender roles to construct and maintain its pipeline system and sell natural gas. It emphasizes the significance of gender in energy transitions, a crucial factor prominent historians or energy transitions like Wrigley, Mitchell, and Jones have overlooked (see Introduction).

It ought to be noted that the women and men in this chapter are almost exclusively white. Therefore, phrases like "traditional gender roles" refer to hegemonic ideals of male, white breadwinners and female white housewives. The consulted archival material silenced the voices of women, especially Indigenous women. While this chapter opts for an analysis of those men and women that are, albeit scarcely, mentioned in the consulted archives, it hopes that a scholar with access to more time and alternative resources adds to this work. This chapter utilizes the non-inclusive labels of men and women as mnemonics to reference the company and its employee's adherence to a binary understanding of gender in the archival material. It acknowledges recent shifts in recognition but also that much progress is still required.

## **4.2. Gendering the Supply of Gas**

Westcoast Transmission's eventual supply of natural gas to households required a complex system involving various actors like gas producers, construction crews, distributing companies, stenographers, boardroom members, accounting machine operators, and others. The subsequent sections use a gender lens to analyze two parts of that larger endeavour: the construction of Westcoast's natural gas infrastructure and the company's operational activities in its corporate headquarters. It argues that Westcoast's supply of natural gas and operational activity relied heavily on traditional gender norms.

#### 4.2.1. Masculinity and Construction

During the construction of Westcoast Transmission's main natural gas system in the late 1950s (see Chapters 1 and 2), men negotiated a type of frontier masculinity within an understanding of their surrounding natural environment. Tested and honed by the strenuous, often remote, environments of interior and northern British Columbia, the workers, company, and newspapers grew to idolize pioneering men who courageously overcame the challenges of the land. Newspapers and company newsletters spoke of the hazardous, "rugged" yet "beautiful scenery" that Westcoast entered.<sup>23</sup> The *Edmonton Journal* revered the men of northern B.C. who found themselves in "a rough country, in the process of being tamed by rough men."<sup>24</sup> Editors notably portrayed the Coquihalla pass, the highest point of elevation for the pipeline and the most difficult to cross, as the ultimate test of men's masculinity, as illustrated by the aptly titled *Vancouver Sun* article, "Rugged Coquihalla Pass Tough On Men and Pipeline Equipment."<sup>25</sup> Men transformed the interior and, especially, northern British Columbia, with their sparse settlements, into "the last frontier" (see also Chapter 3).<sup>26</sup>

Papers labelled the regions a "frontier," a "vast, isolated land," "vast, impenetrable fastnesses" still untouched by the "modern" man.<sup>27</sup> It required a type of colonial conquering

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<sup>23</sup> Westcoast Transmission Company Limited, "The Story of A Pipeline," Ca. 1958, UBCSC, WEI, Box. 11, File 5.; Westcoast Transmission Company Limited, "Room to Swing a Cow By The Tail," *Pipeline* Vol. 2, No. 3 (June 1964): p.4, UBCSC, WEI, Box. 11, File 38.; Westcoast Transmission Company Limited, "Plant in Midst of Growing North," *Pipeline* Vol. 9, No. 2 (February 1969): p.5, UBCSC, WEI, Box. 11, File 41.; Westcoast Transmission Company Limited, "The Casual Comfortable Country," *Pipeline* Vol. 4, No. 5 (May 1966): p.4, UBCSC, WEI, Box. 11, File 41.; "The 1,400 Mile Gas Pipeline," *Canada the Growth of A Great Nation* (July 1976): p.80, UBCSC, WEI, Box. 4, File 20.

<sup>24</sup> "... Pipeline From the Peace," *Edmonton Journal* (Edmonton, Alb.), Mar. 1, 1963, p.27.

<sup>25</sup> "Canada's Pipeline System Now A 6,000-Mile Network," *Calgary Herald* (Calgary, Alb.), Aug. 29, 1957, p.40.; "Rugged Coquihalla Pass Tough On Men and Pipeline Equipment," *Vancouver Sun* (Vancouver, B.C.), Oct. 7, 1957, p.22.; Westcoast Transmission Company Limited, "Welcome to the Fabulous Peace River Country!," *The Story of A Pipeline*, ca. 1958, UBCSC, WEI, Box. 11, File 5.

<sup>26</sup> "Kiernan Calling," *Chilliwack Progress* (Chilliwack, B.C.), Oct. 16, 1957, p.10.; "Roads, Pipe, Rail, Open Up the Peace," *Vancouver Sun* (Vancouver, B.C.), Oct. 7, 1957, p.21.

<sup>27</sup> "Peace River Scene of Oil Search," *Times Colonist* (Victoria, B.C.), Aug. 31, 1955, p.53.; "Rugged B.C. Yields to Line," *Windsor Star* (Windsor, Ont.), Aug. 30, 1957, p.17.; "Story of Great Peace River Area Much

and modernization that only tough, determined men could bring.<sup>28</sup> The *Edmonton Journal* described the people in Fort Nelson, for instance, in the following manner, “As on any frontier, the people are rough, ready and willing to wrestle the future to a fall” (See Image 24).<sup>29</sup> The regions promised richness for those who overcame the natural obstacles in their path. The soils contained “much undeveloped wealth,” a “treasure chest of natural resources” awaiting exploitation.<sup>30</sup> However, uncovering that wealth was a process not for the faint of heart but destined for men, not women, as the *Vancouver Sun* explains, “It’s a man’s country with high skies, wide horizons, harsh and forbidding to the weakhearted. But it is also a land of wealth, rich beyond the dreams of a Midas for the men with the vision and courage to wrest it away.”<sup>31</sup> A company publication from 1954 puts it even more clearly:

When a traveller, regardless of his place of origin, moves north into B.C. from Prince George, he knows without a doubt he is in a rough pioneer country. He can see with his own eyes the hundreds of thousands of undeveloped acres – acres which could produce food, surrender minerals to the explorer or produce the magic commodity of natural gas and/ or oil. Here lies the undeveloped wealth of North America. But it puts forward a grim façade for those who doubt their own ability. This obviously is a country only for those who have boundless faith in their own ability – and the stuff to take the rough ride this country can hand out at a moment's notice. Fortunes have been made and lost in this country – lives have been ruined, and men have turned back in discouragement after investing all they had – money, grit and hope. But the wealth is

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Older Than History of B.C.,” *Vancouver Sun* (Vancouver, B.C.), Jul. 14, 1958, p.93.; “New-Found Resources Mean New Life For North,” *Gazette* (Montreal, Que.), Jan. 23, 1960, p.21.; “Oldest White Settlement Still Wears Frontier Dress,” *Star-Phoenix* (Saskatoon, Sask.), Oct. 5, 1961, p. 26.

<sup>28</sup> “Kiernan Calling,” *Chilliwack Progress*, p.10.; “Roads, Pipe, Rail, Open Up the Peace,” *Vancouver Sun*, p.21.

<sup>29</sup> “... Pipeline From the Peace,” *Edmonton Journal*, p.27.

<sup>30</sup> “These Provinces Strive For More Industrialization,” *National Post* (Toronto, Ont.), May 28, 1955, p.68.; “Gas Supply Cut; Mercury 10 Below,” *Star-Phoenix* (Saskatoon, Sask.), Dec. 13, 1965, p.1.; “Big Gas Failure Averted,” *Province* (Vancouver, B.C.), Dec. 13, 1965, p.33.

<sup>31</sup> “Roads, Pipe, Rail, Open Up the Peace,” *Vancouver Sun*, p.21.

there, and the men who have the courage necessary are developing it – and preparing this country for generations to come.<sup>32</sup>

The construction of the Westcoast Transmission system intertwined itself with an idealized form of frontier masculinity that revolved around ruggedness, empty lands, and the promises of wealth for those who dared taunt it.



*Image 24: "Rugged" men working on the pipeline.*

"Construction – Gathering Systems: Buick Creek to Nig Creek 16" line, contractor's field camp including kitchens, dining rooms, washrooms and bunkhouses, with VHF portable radio tower in foreground," Photograph 1960, UBCSC, WEI, Photo Box 5, File 858.

Men were especially masculine if they dominated nature with an allure of ease. This masculine ideal translated into a "casual" approach to the hardship of northern construction work and living that journalist Peter C. Newman describes in the following manner,

Along the line, the work of getting the pipe into the ground, then preparing it for operation was dirty and dangerous. The massive equipment could crush a man in a

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<sup>32</sup> Maury Gwynne, "Pacific Petroleum Ltd. Enterprise in Action," November 29, 1959, UBCSC, WEI, Box. 6, File 16.



second; it could bog down in swamps; it could slide out of control on the sides of hills or riverbanks. To build the aerial spans that Westcoast invented for the major river crossings required the men to dance along the suspended pipe like ironworkers installing steel beams for a skyscraper.<sup>33</sup>

Yet a crew member explained to Newman that this "rugged" B.C. land was no harder to cross than any other.<sup>34</sup> Entering the region in the mid-1950s from far-away places like Texas, Wyoming, and Pennsylvania or other Canadian provinces like Alberta and Ontario, employees labelled it a "good pipelining" country.<sup>35</sup> A Saskatchewan paper reported that one of the Westcoast superintendents sighed with relief when he finished the welding job in 1957, "No, this isn't the toughest line I've been on," he said while slapping away mosquitoes, "I've seen worse in Virginia." "But it's been bad enough lately."<sup>36</sup> The frontier man upheld this allure of ease during challenging tasks even though the machines were heavy and loud and the terrain hard to "conquer."<sup>37</sup> Courageousness and an allure of ease defined the Westcoast frontier man (see Image 25).

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<sup>33</sup> Peter C. Newman, *Continental Reach: the Westcoast Energy Story* (Vancouver: Douglas & McIntyre, 2002): p.52.

<sup>34</sup> Ibid., p.42–43.

<sup>35</sup> Ibid., p.42; "He 'Drug Up On a 'Wobble'," *Province* (Vancouver, B.C.), Oct. 8, 1957, p.12.; "Biggest Frontier in the World," *Vancouver Sun* (Vancouver, B.C.), Aug. 1, 1964, p.13.

<sup>36</sup> "Legends Scuttled As Pipelines Traverse Wilderness in B.C.," *Star-Phoenix* (Saskatoon, Sask.), Sep. 10, 1957, p.6.

<sup>37</sup> Westcoast Transmission Company Limited, *25 Years of Energy: The Westcoast Story* (1982): p.7, Library and Archives Canada, OCLC 13401214.



*Image 25: Men balancing high above a river to string the Westcoast pipeline across.*

“Aerial Crossings – Shelley: [Pipe being threaded through hangers],” Photograph 1956, UBCSC, WEI, Photo Box 2, File 129.

During construction, the employees' living conditions further cemented the frontier-masculine ideal. the structure and shape of camps appear to have been adapted to the varying requirements of construction jobs and the natural environments in which they occurred. Reminiscent of the logging accommodations described by labour historians like Maynard, Radforth, Hak, McKay, and Mackie, the pipeline operation used a combination of bunkhouses and tents to house crews along the right-of-way.<sup>38</sup> While mapping the pipeline's right of way, surveyors often resided in towns but sometimes stayed in construction camps.<sup>39</sup> Lodging in

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<sup>38</sup> Donald McKay, *The Lumberjacks.*; Richard Mackie, *Mountain Timber.*; Gordon H. Hak, *Capital and Labour in the British Columbia Forest Industry, 1934-74.*; Ian Walter Radforth, *Bushworkers and Bosses.*; Steven Maynard, “Rough Work and Rugged Men: The Social Construction of Masculinity in Working-Class History,” *Labour* (Halifax) Vol. 23, No. 23 (1989): p.159–169.

<sup>39</sup> “Pipeline Engineers Here Overnight,” *Quesnel Cariboo Observer* (Quesnel, B.C.), Aug. 28, 1952, p.A6.

northern towns like Fort St. John remained limited. Even in 1964, the company newsletter labelled the Fort Nelson area a “lonely region.”<sup>40</sup> At times, Construction camps started as tent encampments in which men might share sleeping quarters and reside in bunk beds. They had a common area in which they enjoyed meals together and socialized.<sup>41</sup> In other instances, the crews resided in trailers, especially those who brought girlfriends or wives. Peter C. Newman, following interviews with various Westcoast employees, concludes in his work *Continental Reach*

the men’s wives and sweethearts travelled with them like the camp followers of some medieval army. While the single men stayed in hotels, the families shared encampments of vacation trailers migrating as part of a mobile rearguard to the construction spreads burrowing into near-empty hinterlands.<sup>42</sup>

Some experienced construction workers, who moved between pipeline projects and companies, brought their own trailers.<sup>43</sup> This happened, for instance, in Quesnel in 1957.<sup>44</sup> At the Taylor Processing Plant construction site, Westcoast contracted Canus Service Ltd. to supply housing and food for the workers in the late 1950s. Each of Canus Service's aluminum trailers housed six men in bunkbeds and was organized in an orderly street around the mess hall.<sup>45</sup> For some projects, the crews resided in towns. They moved trailers to an allotted area to house the remaining employees if lodging was limited.<sup>46</sup> While varied, living conditions remained far from a comfortable, traditional family home (see Image 26.-27.).<sup>47</sup>

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<sup>40</sup> Westcoast Transmission Company Limited, “Expansion to the Far North,” *Pipeline* Vol. 2, No. 5 (August 1964): p.4, UBCSC, WEI, Box. 11, File 38.

<sup>41</sup> “Pipeline Engineers Here Overnight,” *Quesnel Cariboo Observer*, p.A6.

<sup>42</sup> Peter C. Newman, *Continental Reach*, p.44.

<sup>43</sup> “Bechtel Office Is Opened Here,” *Quesnel Cariboo Observer* (Quesnel, B.C.), Dec. 8, 1955, p.B1.

<sup>44</sup> *Ibid.*

<sup>45</sup> “Times Have Changed - Beans And Bully Not Modern, Fare,” *Vancouver Sun* (Vancouver, B.C.), Oct. 7, 1957, p.21.; “Canus- ‘the best - and lots of it’,” *Province* (Vancouver, B.C.), Oct. 8, 1957, p.14.

<sup>46</sup> “Award First Pipeline Contract,” *Lethbridge Herald* (Lethbridge, Alb.), Dec. 2, 1955, p.2.; “Bechtel Office Is Opened Here,” *Quesnel Cariboo Observer*, p.B1.

<sup>47</sup> “Construction – Gathering Systems: Buick Creek to Nig Creek 16” line, contractor’s field camp including kitchens, dining rooms, washrooms and bunkhouses, with VHF portable radio tower in foreground,” Photograph



*Image 26: Example of a construction camp with trailers.*

"Construction – Gathering Systems: Buick Creek to Nig Creek 16" line, contractor's field camp including kitchens, dining rooms, washrooms and bunkhouses, with VHF portable radio tower in foreground," Photograph 1960, UBCSC, WEI, Photo Box 5, File 858.



*Image 27: Example of a construction camp with tents.*

"Construction – 1956-1957: Cleland-Kent (Western) Ltd. Photographs taken during construction of the Westcoast Transmission Company Limited mainline in 1956 and 1957," Photograph 1956-1957, UBCSC, WEI, Photo Box 8, File 2698.

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1960, UBCSC, WEI, Photo Box 5, File 858.; "Construction – 1956-1957: Cleland-Kent (Western) Ltd. Photographs Taken During Construction Of The Westcoast Transmission Company Limited Mainline In 1956 And 1957," Photograph 1956-1957, UBCSC, WEI, Photo Box 8, File 2698.

A photo of a logging camp included in Gordon H. Hak, *Capital and Labour in the British Columbia Forest Industry, 1934-74*, p.189 shows a striking resemblance to the tent encampments used during the construction of the Westcoast Transmission natural gas pipeline system.

Construction crews valorized vice during off-work hours, adding to the image of construction sites as only suitable for a particular type of man. With little entertainment in the North, they often resorted to drinking, smoking, and card games. In the words of Peter C. Newman, the men “smoked hand-rolled cigarettes lit with raspy Zippos, chewed tobacco and drank rye whisky or navy rum.”<sup>48</sup> The workers often had ample funds for gambling. Operating engineers and pipefitters made as much as \$1,800 a month, and it was rare to meet anyone who made less than \$600.<sup>49</sup> As a reporter for the *Province* writes, “Now at eight o'clock in the drizzly evening, the majority of them are playing poker, and the stakes and pots are kingsize.”<sup>50</sup> Fort St. John even housed several men from New Orleans, Tulsa, and Fort Worth who travelled with the pipeliners and earned a living playing cards.<sup>51</sup> Liquor and bars appeared at the heart of northern towns like Fort Nelson. In the early 1960s, there were three pubs and three cocktail bars in the town of 3,000 permanent residents, which would go up to around 5,000 people during winter construction seasons. A reporter who visited the town in 1963 writes that an interviewee recalled,

These two fellows had had a disagreement over something or other [...] They decided to settle it by going three rounds. [...] I don't know what math they used to figure out the rounds, but the final results came out all confused and then a fight really started.

The judges were slugging each other, and everybody got into the act, with a real donnybrook underway.<sup>52</sup>

The same reporter was amazed by an “old-timer” who could drink any glass of beer or liquor while standing on his head.<sup>53</sup> A writer for *Vancouver Sun* similarly embarked on a “voyage of

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<sup>48</sup> Peter C. Newman, *Continental Reach: the Westcoast Energy Story*, p.44

<sup>49</sup> “It's Aces - Back to Back,” *Province* (Vancouver, B.C.), Aug. 24, 1957, p.15.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*

<sup>52</sup> “... Pipeline From the Peace,” *Edmonton Journal* (Edmonton, Alb.), Mar. 1, 1963, p.27.

<sup>53</sup> *Ibid.*

discovery in the interior” and chronicled his visit to the Peace River area, which at the time housed Peace River Dam construction workers but also numerous pipeline employees,

the only diversion for the masses of single men seems to be drink. If I could single out one scene that freezes in my memory to describe this north country, it would be a glimpse, in the late afternoon, of the antiseptic cavern of the beer parlor in the only hotel in Chetwynd. Dozens of men sitting at the tiny tables, often by themselves, massive boots laced past their ankles, their shiny hard hats glinting from the overhead neon, solemnly drinking fizzy beer while the infernal wired-music rasps out The Skaters Waltz.<sup>54</sup>

The crews continued previous resource encampments’ homosocial, drink, and vice traditions. Adele Perry observes in her study on gender and B.C. colonialism in the 19th century that “Drink, like rough work, was indelibly marked on British Columbia’s homosocial culture” in backwoods camps.<sup>55</sup> Similarly, McKay and Maynard identify drinking and card games as illustrative of the “masculine culture” in lumbering camps.<sup>56</sup> Continuing such traditions during the construction of the Westcoast natural gas system, the absence of entertainment in interior and northern environments transformed vice into an intrinsic part of frontier masculinity.

Manliness, although only able to exist as a counterpart of femininity, was therefore, to a large extent, constructed in a space largely devoid of settler women. It relied on the domination of, on the one hand, feminine nature and the other Indigenous communities. The *Vancouver Sun* wrote about Westcoast's natural gas endeavours infringing on something inherently female, "Man has harnessed natural gas and reaped the benefits, but it was Mother

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<sup>54</sup> "Biggest Frontier in the World," *Vancouver Sun* (Vancouver, B.C.), Aug. 1, 1964, p.13.

<sup>55</sup> Adele Perry, *On the Edge of Empire*, p.40.

<sup>56</sup> Donald McKay, *The Lumberjacks*, p.9, 222, 247.; Steven Maynard, "Rough Work and Rugged Men," p.166.

Nature who produced it."<sup>57</sup> Westcoast company's vice-president D.P. McDonald considered the soil in the Peace region, as he wrote in a late 1954 letter to B.C. premier W.A.C. Bennett, "virgin," like an untouched woman.<sup>58</sup> Virgin in this context refers both to the femininity of the land, as well as the land's untouched potential. Newspapers and company documents thereby erased Indigenous communities like the Dane-zaa in the Peace region, or the Stó:lō, mentioned in Chapter 2, who had been there for generations from the regions it sought to develop, especially in the 1950s, when Westcoast started to gain its footing.<sup>59</sup> Only through domination, suffering, and courageousness was a man able to assert his masculinity. This understanding of masculinity fostered the idea that Westcoast's construction in the north of British Columbia required only a particular type of man.

#### **4.2.2. Girls in Blue**

Men dominated construction spaces, but women also contributed to Westcoast's settler expansion into the interior and north of British Columbia. Women accompanied their husbands, partners, and lovers and managed to make homes in areas that lacked the comfort and amenities that southern settlers enjoyed (see also Chapter 3). Remoteness both facilitated and limited women's opportunities. A Mrs. Anderson moved to Taylor Flats, where her husband worked in the gas plant. She recalled that all women "objected to mud, dust and mosquitoes, lack of recreation facilities for their youngsters and a long walk to school. High rents and poor shopping were among other complaints."<sup>60</sup> Others, like Mary Worobetz and Margaret Lally, used their distance from metropolises to their advantage. Mrs. Worobetz

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<sup>57</sup> "Weight, Heat Distills Gas," *Vancouver Sun* (Vancouver, B.C.), Oct. 7, 1957, p.22.

<sup>58</sup> D.p. McDonald to the Honorable W.A.C. Bennett, August 13, 1954. UBCSC, WEI, Box. 6, File 8.

<sup>59</sup> "Our History," *Doig River First Nation*, Accessed September 1, 2023, <https://doigriverfn.com/about/history/>; "First Nation Engagement," *Peace River District*, Accessed September 1, 2023, <https://prrd.bc.ca/fne/>.

<sup>60</sup> "Frontier North Country, Land Of Opportunities for Women," *Star-Phoenix* (Saskatoon, Sask.), Jun. 21, 1958, p.10.

worked as a restaurant manager and host at a hotel at Taylor Flats. In a year, she was able to open a coffee shop on the Alaska Highway, something she struggled to do in the city. In her words, "Can't make a living in the cities."<sup>61</sup> Mrs. Lally, or "Ma" Murray, assisted in the creation of a series of community newspapers in, among others, Fort St. John. Her husband and "Ma" founded *Alaska Highway News* in the 1940s, with what remains its motto, "The only newspaper in the world that gives a tinker's damn about the North Peace."<sup>62</sup> In a male-dominated field, "Ma" covered local news with her signature wit and style until her passing.<sup>63</sup> While the consulted archival material showed no apparent connection to Westcoast, Mrs. Murray wrote about the Peace region when Westcoast Transmission was active, from the late 1950s to the 1980s.<sup>64</sup> The absence of settler infrastructure provided some women chances not found in the more metropolitan south.

The company offered women employment in essential yet non-managerial roles, such as secretaries, stenographers, clerks, and integrator operators.<sup>65</sup> The computer processing department, for instance, while headed by a man, employed women as "Accounting Machine Operators," a job that involved, among other things, making computer punch cards.<sup>66</sup> As the company newsletter reported, female employees sometimes left upon marriage, "Another part of the measurement team has decided married life is better than work."<sup>67</sup> However, many appear to have stayed longer.<sup>68</sup> When they mentioned employees who happened to be female,

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<sup>61</sup> Ibid.

<sup>62</sup> Tim Shoults, "Sea To Sky History: The Newspapering Pioneer Behind The Journalism Awards," *Squamish Chief*, May 26, 2022, Accessed August 15, 2022, <https://www.squamishchief.com/in-the-community/sea-to-sky-history-the-newspapering-pioneer-behind-the-journalism-awards-5409716>.

<sup>63</sup> Ibid.

<sup>64</sup> Jean R. O'Clery, "Margaret Teresa Murray," *The Canadian Encyclopedia*. Historica, Last Edited March 03, 2015, <http://www.thecanadianencyclopedia.ca/en/article/margaret-teresa-murray>.

<sup>65</sup> Westcoast Transmission Company Limited, "All the Girls In Blue," *Pipeline* Vol. 5, No. 5 (May 1967): p. 9, UBCSC, WEI, Box 11, File 40.

<sup>66</sup> Westcoast Transmission Company Limited, "Computers and Westcoast," *Pipeline* Vol. 4, No. 10 (October 1966): p.8–9, UBCSC, WEI, Box 11, File 40.

<sup>67</sup> Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 6 (June 1966): p.11, UBCSC, WEI, Box 11, File 40.

<sup>68</sup> Ibid.



the company newsletter generally referenced their gender. "Whoever heard of a mail girl?" jokingly remarked the Westcoast newsletter, adding, "Other than female girls, our mail girl is just about the most important cog in our office machine."<sup>69</sup> Newsletter editors headed a personal profile on an employee, "Girl On The Go," and enjoyed calling the company's female staff "Westcoast's girls."<sup>70</sup> Those in the Vancouver main office became known as "Girls in Blue," named after the colour of their 1967 self-designed uniform (see Image 28). The female employees in the office had designed and initiated the creation of these uniforms themselves.<sup>71</sup> While Westcoast permitted the "girls" certain liberties and the female employees occupied essential roles in Westcoast's operations, their roles remained restricted.



*Image 28: The "Girls in Blue" on the roof of the Vancouver office in their new, blue, uniforms.*

Westcoast Transmission Company Limited, "All the Girls In Blue," *Pipeline* Vol. 5, No. 5 (May 1967): P. 9, UBCSC, WEI, Box 11, File 40.

As much as the construction of the Westcoast pipeline system relied on a particular type of frontier masculinity, the head office operated based on a rather traditional, white

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<sup>69</sup> Westcoast Transmission Company Limited, "A Mail Girl?" *Pipeline* Vol. 8, No. 3 (March 1968): p. 5, UBCSC, WEI, Box 11, File 41.

<sup>70</sup> Westcoast Transmission Company Limited, "Girl On The Go," *Pipeline* Vol. 7, No. 12 (December 1967): p. 6, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, "New Service Pin For Westcoast," *Pipeline* Vol. 6, No. 11 (November 1967): p. 6, UBCSC, WEI, Box 11, File 41.; "Lyn and Kathy "Switch On" for Westcoast," *Pipeline* Vol. 9, (August 1969): p. 9, UBCSC, WEI, Box 11, File 42.

<sup>71</sup> Westcoast Transmission Company Limited, "All the Girls In Blue," *Pipeline*, p. 9.

settler understanding of femininity. The company actively expected its female employees to be visually and auditorily "pleasant." This attitude was evident in the corporate education that Westcoast valued for its female as opposed to its male employees. Men's education focused on vocational skills, whereas women preoccupied themselves with appearance and social skills. In the summer of 1963, at Memorial Coliseum in Oregon, "gas men" attended a three-day Pacific Northwest Gas Measurement short course. The organizers filled the mornings with lectures and the afternoons with workshops, while Westcoast sponsored the opening lecture.<sup>72</sup> In 1967, men also partook in industry-sponsored training, like the Gas Plant Operator's course, organized by the Petroleum Industry Training Service, Department of Education of the Province of Alberta. The extensive course covered areas of natural gas operations, from exploration to field processing to maintenance and control instrumentation. The men had to complete an average of 250 hours of home study and partake in lectures, films, and field trips.<sup>73</sup> At conferences, male employees were allowed to speak, not just listen. In 1965, Mr. Al Green, for instance, delivered a paper entitled "Natural Gas Pipeline System Expansion Programme in the Far North Country" to the Pacific Coast Gas Association Transmission Conference in Las Vegas, Nevada. Mr. Sid Gray spoke at the Pacific Northwest Purchasing Agent's Conference in Spokane, Washington, "Improving Profits through Better Purchasing by Measuring Purchasing Performance."<sup>74</sup> In contrast, in 1966, the 19 female employees of Westcoast's Vancouver office joined 475 female employees from other regional corporations at a "Personality in Business" seminar at the Bayshore Inn. Organized by the National Secretaries Association (Vancouver chapter) and the Dartnell Institute of Chicago,

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<sup>72</sup> Westcoast Transmission Company Limited, "Gas Men Attend Lectures At Memorial Coliseum – Short Day Course On Gas Measurement," *Pipeline* Vol. 1, No. 11 (July 1963): p.6, UBCSC, WEI, Box 11, File 38.

<sup>73</sup> Ibid.; Westcoast Transmission Company Limited, "Basic Instrumentation Correspondence Course," *Pipeline* Vol. 5, No. 10 (October 1967): p.8, UBCSC, WEI, Box 11, File 41.

<sup>74</sup> Westcoast Transmission Company Limited, "Green, Gray Address Conference," *Pipeline* Vol. 3, No. 4 (April 1965): p.5, UBCSC, WEI, Box 11, File 39.

the event featured lectures such as “25 characteristics bosses dislike,” “how to look like a million (on a budget),” and “How to do a better job of meeting the public.”<sup>75</sup> This evidence is primarily derived from the company's newsletters which boosted notable aspects but did not cover the full extent of the employee education system. However, those parts that the company did include detailed men's education focused on vocational training and women's in appeasing their superiors and the public.

In the early 1960s, the company did set up funds for extended, non-gender-specific educational programs. The company President, R.B. Stewart, stated,

I would like to encourage all employees to take advantage constantly of every opportunity to extend their horizons through further study. Your supervisor or the personnel department can advise you and give you assistance in whatever educational task you set for yourself, whether it is study by mail, new courses, or even formation of a study club.<sup>76</sup>

The company could arrange regular payroll deductions to cover the costs of specific company-sponsored courses. The company promised to refund fifty percent of the costs if it approved the course.<sup>77</sup> From the 1950s to the 1970s, employees eagerly partook in courses and training. The company reported that over 45 percent of those working for Westcoast and its subsidiaries Westpac and Saratoga engaged with the program in 1966.<sup>78</sup> Their gender was not included in the archival records. The Westcoast Transmission Educational Scholarship and the company's summer program targeted the children of its employees, asserting,

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<sup>75</sup> Westcoast Transmission Company Limited, “Spot News,” *Pipeline*, p. 11.

<sup>76</sup> Westcoast Transmission Company Limited, “From the President – Back to School,” *Pipeline* Vol. 2, No. 6 (September 1964): p.2, UBCSC, WEI, Box 11, File 39.

<sup>77</sup> Westcoast Transmission Company Limited, “Back to School,” *Pipeline* Vol. 2, No. 8 (November 1964): p.5, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Back to School: The Continuing Challenge,” *Pipeline* Vol. 4, No. 1 (January 1966): p.3, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company Limited, “More On “The Continuing Challenge,”” *Pipeline* Vol. 4, No. 9 (September 1966): p.4, UBCSC, WEI, Box 11, File 40.

<sup>78</sup> Westcoast Transmission Company Limited, “Back to School: The Continuing Challenge,” *Pipeline*, p.3.

"Education is important in our increasingly complex world, and all our children, whether they win these awards or not, should be encouraged to improve their academic qualifications."<sup>79</sup>

"Many [...] sons and daughters of Westcoast employees" took part in these programs.<sup>80</sup> While some of its educational programs were open to all genders, sexism prevailed in the corporate sphere, as the earlier paragraph on employment opportunities reveals, as well as the ensuing sections on women in marketing.

### **4.3.The Gendered Marketing of Gas**

Just like the supply of natural gas, the marketing and generation of demand for natural gas also heavily relied on traditional gender norms. Women were often depicted in marketing materials as housewives, emphasizing their role in domestic settings. On the other hand, men were positioned as experts and authoritative figures, projecting a sense of expertise and control in relation to natural gas. By promoting these gendered images and their associations, Westcoast sought to equate these ideals with a “modern” ideal of “good living.” This marketing approach aimed to reinforce the perception that adopting natural gas and its associated appliances represented a modern and desirable lifestyle, but one where women and men both played their traditional roles.

#### **4.3.1. “Good Living”**

Traditional gender roles would play a prominent part in Westcoast's marketing strategy, which at its core promised a new, modern way of life. In the 1960s, Westcoast Transmission

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<sup>79</sup> Westcoast Transmission Company Limited, “Scholarship Award Plan For Next Year,” *Pipeline* Vol. 9, No. 4 (April/ May 1969): p.2, UBCSC, WEI, Box 11, File 42.

<sup>80</sup> Westcoast Transmission Company Limited, “Students At Work As Summer Assistants,” *Pipeline* (Winter 1971): p.4, UBCSC, WEI, Box 11, File 42.

realized that an assured continuation of business required a marketing effort, and it decided to recruit all its employees and their families for its public relations team. Before that time, Westcoast did not have to deal with what historian Christopher Jones calls the boosting of demand in his work on energy transitions. Jones argues that supply played a crucial role in U.S. energy transitions, stating, "America's first energy transitions were often driven by supply rather than by demand."<sup>81</sup> Westcoast initially had high demand for natural gas. As Chapter 1 and the Introduction outlined, the Pacific Northwest eagerly awaited Westcoast natural gas supply.<sup>82</sup> In 1962, Westcoast asserted in a publication prepared on behalf of the Canadian Gas Association that "Customers look to the gas company for homemaking advice. Graduate home economists usually head up this work, conducting cooking schools and demonstrations of interest to women. They are active in radio and T.V. work."<sup>83</sup> Around 1964, the company launched a new marketing phase, focusing on increasing consumer demand and establishing a marketing team, suggesting supply was now driving the transition to natural gas consumption in BC. The company appointed Don Duguid as Manager of Market Development in 1964 in what they alleged to be "a new approach to growth by our company." His task was twofold, "Promotion of greater natural gas sales by the Utilities who purchase gas from Westcoast" and "Creation and development of new markets for our natural gas."<sup>84</sup> Competing with both oil and electricity, Don Duguid argued,

We must make every citizen in our province familiar with our product and its advantages, and we must connect every new load possible. It's a big job, but far from

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<sup>81</sup> Christopher F. Jones, *Routes of Power: Energy and Modern America* (Cambridge, Massachusetts: Harvard University Press, 2014): p. 5.

<sup>82</sup> Canada, *The Province of Alberta, Natural Gas Commission. Enquiry into the Reserves and Consumption of Natural Gas in the Province of Alberta.* (Alberta), 1949, p.95-96.; David H. Breen, *Alberta's Petroleum Industry and the Conservation Board* (Edmonton: University of Alberta Press, 2000): p.319-322.

<sup>83</sup> Westcoast Transmission Company Limited, "The People Of Distribution," *The Story of Natural Gas*, 1962, p.17, UBCSC, WEI, Box 11, File 8.

<sup>84</sup> Westcoast Transmission Company Limited, "Market Development," *Pipeline* Vol. 2, No. 3 (June 1964): p.3, UBCSC, WEI, Box 11, File 38.

impossible. The competition from the electrical industry and oil industry is very strong, but natural gas is the most reliable and highest-quality fuel of the three.<sup>85</sup>

Don Duguid tried to recruit all of Westcoast's personnel as his "marketing team" to make people chose natural gas.

The company newsletter aided this effort. In recurring articles and messages from the company President, Westcoast tied the success of its product to the identity and economic well-being of its employees. A 1964 issue of Westcoast's newsletter reads, "From our personal point of view, Westcoast's success is important because it means security for our families. This success will be determined by how well we achieve our fundamental objective – selling natural gas," and "As employees, we have a direct and very personal interest in promoting the use of gas."<sup>86</sup> The company asked employees to switch to natural gas through a "natural gas appliance incentive program" and become real-life examples of the company's product.<sup>87</sup> The program applied to all permanent employees of Westcoast as well as Saratoga Processing Company Limited, one of the company's subsidiaries. It aimed to "give everyone an opportunity to become better acquainted with natural gas, and through this acquaintanceship to become promoters of the perfect fuel."<sup>88</sup> The company President made a special statement in the company newsletter on the topic, asserting,

Natural gas is the perfect fuel, and we who are in the natural gas business should be the loyal exponents of its abilities and uses. [...] it has not always been possible for us to use gas. [...] In order to overcome these problems and place all employees in the position of being able to convert to gas and use [...] your management has adopted a

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<sup>85</sup> Westcoast Transmission Company Limited, "Market Development," *Pipeline*, p.3.

<sup>86</sup> Ibid.

<sup>87</sup> Westcoast Transmission Company Limited, "Westcoast Employees – Do You Want To Earn Up To \$25 For Promoting The Perfect Fuel?," *Pipeline* Vol. 2, No. 8 (November 1964): p.6, UBCSC, WEI, Box 11, File 39.

<sup>88</sup> Westcoast Transmission Company Limited, "Attention All Westcoast And Saratoga Employees – Natural Gas Appliance Incentive Program," *Pipeline* Vol. 2, No. 7 (October 1964): p.3, UBCSC, WEI, Box 11, File 39.

policy whereby it will provide assistance in purchasing natural gas appliances and in getting natural gas service. [...] It is aimed at making each and every one of us an all-out promoter of natural gas. If we take advantage of this policy, we will help create a new awareness of natural gas and its many great advantages among our friends and associates.<sup>89</sup>

The plan outlined what it considered “reasonable costs” for conversion and made funds available for space heaters, clothes dryers, water heaters, and more. Recipients of these, the company stated, could purchase “deluxe models.”<sup>90</sup> The company promised to finance new gas appliances for employee houses that already had gas service. Westcoast offered a five-year, interest-free company loan to facilitate this. Payroll deductions of at least ten dollars a month were available for those interested, or the total amount could be paid in cash right away. The plan covered appliances ranging from outdoor lighting to heaters, incinerators, and dryers.<sup>91</sup> The company reasoned that if every employee converted their home to natural gas, Don Duguid would no longer be the only marketing official of the Westcoast company; all employees and their families join him.<sup>92</sup>

Other than incentivizing employees to convert to natural gas, the company trained employees to market gas and offered monetary rewards to employees who aided their friends, neighbours, and families in their transition to “the perfect fuel.”<sup>93</sup> In 1964, Westcoast prepared a program to teach all company employees the necessary “tools” to sell gas appliances. Don Duguid taught the training, starting in early July at the Vancouver office and

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<sup>89</sup> Westcoast Transmission Company Limited, “From The President: Change Over To The “Perfect Fuel”,” *Pipeline* Vol. 2, No. 7 (October 1964): p.2, UBCSC, WEI, Box 11, File 39.

<sup>90</sup> Westcoast Transmission Company Limited, “Attention All Westcoast And Saratoga Employees – Natural Gas Appliance Incentive Program,” *Pipeline*, p.3.

<sup>91</sup> *Ibid.*

<sup>92</sup> Westcoast Transmission Company Limited, “Market Development,” *Pipeline*, p.3.

<sup>93</sup> Westcoast Transmission Company Limited, “Easy Money,” *Pipeline* Vol. 3, No. 10 (October 1965): p.6, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Conversions To Natural Gas – The Perfect Fuel,” *Pipeline* Vol. 4, No. 10 (October 1966): p.5, UBCSC, WEI, Box 11, File 40.

continuing in Hope, Savona, Station 5, Prince George, Station 3, and Fort St. John. It featured an educational movie, presentation on the advantages of natural gas as a fuel and left attendees with an armful of flyers and booklets on natural gas. The company aimed the program at employees and their wives and families.<sup>94</sup> "Why was this important?" the company magazine asked and answered, "Because if each employee becomes a "salesman" the Westcoast salesforce becomes 300 enthusiastic people."<sup>95</sup> Employees would receive rewards for their sales efforts. Anyone who convinced someone outside the company to add or convert a domestic or commercial heating furnace to natural gas would receive ten dollars, five dollars for the addition or conversion of a domestic or commercial water heater and natural gas range or natural gas clothes dryer, and twenty-five dollars for an employee who managed to convince someone to do both.<sup>96</sup> In 1965, the company upped the last rewards to forty dollars.<sup>97</sup> A quantitative overview of employees' level of engagement with the program was outside the consulted archival material, but the company newsletter repeatedly reported success stories. The newsletter, for instance, presented gas selling as a straightforward endeavour and emphasized the success of an employee who earned \$60 by persuading his neighbours to switch to natural gas: "That's easy money, and YOU can earn extra cash for Christmas, too."<sup>98</sup> Another employee earned a sixty-dollar reward when they convinced someone to install a gas-fired swimming pool heater and gaslights and others to purchase a

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<sup>94</sup> Westcoast Transmission Company Limited, "Learn About Natural Gas," *Pipeline* Vol. 2, No. 4 (July 1964): p.3, UBCSC, WEI, Box 11, File 38.

<sup>95</sup> Ibid.

<sup>96</sup> "Westcoast Employees – Do You Want To Earn Up To \$25 For Promoting The Perfect Fuel?," *Pipeline* Vol. 2, No. 8 (November 1964): p.6, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "Gas Sales – Every Employee's Business," *Pipeline* Vol. 3, No. 3 (March 1965): p.3, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "Spot News," *Pipeline* Vol. 4, No. 2 (February 1966): p.7, UBCSC, WEI, Box 11, File 40.

<sup>97</sup> Westcoast Transmission Company Limited, "A Question For Westcoast Employees: Are Your Friends And Neighbors Using An Old-Fashioned Fuel?," *Pipeline* Vol. 3, No. 6 (June 1965): p.6–7, UBCSC, WEI, Box 11, File 39.

<sup>98</sup> Westcoast Transmission Company Limited, "Easy Money," *Pipeline*, p.6.



gas furnace and water heater.<sup>99</sup> One employee even convinced an owner and contractor of apartment blocks to purchase heating and water heating for his next 205-suite apartment block in Burnaby.<sup>100</sup> In such manners, employees functioned as an extension of the company's marketing efforts.

At its core, Westcoast's marketing strategy promised a life of comfort and "good living" for all. Linking energy and modernity together, the company sold a vision of the future, an idealized life people should strive for and feel they deserve. In a company article entitled "Good Living," Westcoast alluded to this cultural ideal,

Gas and Good Living Go Together – the convenience of modern gas cooking – the economy of gas clothes drying – the luxury of continuous, plentiful hot water – all the advantages of all the other gas appliances which make living, indoors and out, the pleasant, happy experience you want. You can have them all so easily today with gas (see Figure 7)<sup>101</sup>

Gas was what "you want." Around the house, it could power anything from an air conditioner to a built-in oven. As a raw material, the fuel had, according to a company publication, over 26,000 uses that each promised to help generate those modern, comfortable lives. Natural gas helped the steel maker, the glass blower, the baker, the chemist, hospitals and more.<sup>102</sup> It was the "perfect fuel" for prime quality, economic cement, an essential commodity for B.C.'s growing industries and in the Okanagan Valley, the fuel turned arid land into areas of prolific growth, "Irrigation water pumps driven by natural gas engines are converting the arid wastelands of North America into productive fruit and vegetable growing areas."<sup>103</sup> Westcoast

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<sup>99</sup> Ibid.

<sup>100</sup> Westcoast Transmission Company Limited, "Conversions To Natural Gas – The Perfect Fuel," *Pipeline* Vol. 4, No. 10 (October 1966): p.5, UBCSC, WEI, Box 11, File 40.

<sup>101</sup> Westcoast Transmission Company Limited, "Good Living," *The Story of Natural Gas*, 1962, p.32.

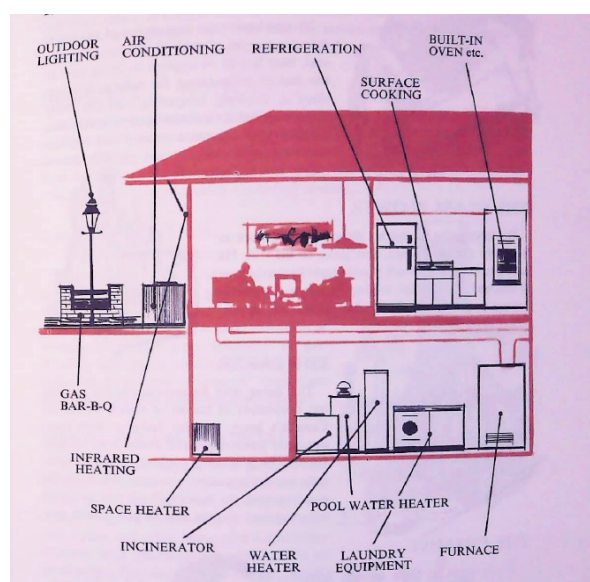
<sup>102</sup> Ibid., p.22–23.

<sup>103</sup> Westcoast Transmission Company Limited, "Gas "Perfect Fuel" For Irrigation," *Pipeline* Vol. 3, No. 2 (February 1965): p.3, UBCSC, WEI, Box 11, File 39.

made natural gas indispensable in any part of modern life; as Westcoast asserts in a 1962 marketing booklet,

Gas helps to bake, process and mould the bricks, glass, cement, and steel that go into your house – the tires and enamel on your car – the buttons on your coat. Paint, varnish, and roofing all use gas in manufacture. Gas cures tobacco, roasts coffee and nuts, dehydrates fruit and vegetables and dries lumber. Almost everywhere, gas makes a contribution to good living.<sup>104</sup>

Natural gas and an idealized version of modern living went hand in hand, or so the company branded its product.



*Figure 7: “An introduction to good living ... the outdoor light with its gracious appeal, the air conditioner, refrigerator, built-in oven and surface cooking unit – the furnace, water, heater, clothes, dryer, incinerator – outdoor barbecue, infrared outdoor heating.”*

Westcoast Transmission Company Limited, “People Who Make Gas Equipment,” *The Story of Natural Gas*, 1962, P.21, UBCSC, WEI, Box 11, File 8.

<sup>104</sup> Westcoast Transmission Company Limited, *The Story of Natural Gas*, 1962, p.1, 28.

The alleged "good living" had several key characteristics, including altering the time spent outside.<sup>105</sup> Previously only available to residents in warmer climates, the introduction of infra-red gas heaters and lights allowed Canadians living in colder climates to enjoy what Westcoast called a "modern" pleasure; patio living.<sup>106</sup> Gas appliances, such as a mobile infra-red grill, barbecue and outdoor heater, promised to create pleasant outdoor environments. Patios, ads repeatedly promised, would be as comfortable in April and October as in July.<sup>107</sup> The company advertised,

Natural gas is the greatest boon to outdoor living since the invention of the patio. In Vancouver, where it is sometimes known to be cool on summer evenings, natural gas infra-red heaters, natural gas barbecues and natural gas lights are making outdoor living, eating and entertaining more practicable and more fun. If you haven't had your steak broiled on a gas barbecue, or you haven't warmed up at an outdoor gas heater, you've missed a modern treat.<sup>108</sup>

Linking modernity to patio life, Westcoast newsletters called in the dawn of the "Gas Light Era" with "year-round patio living with natural gas."<sup>109</sup>

"Modern living" could be suited to consumers' tastes and space.<sup>110</sup> In an article entitled "Compact Is the Word For Gas," Westcoast explained that a fully gas-equipped home required less than 240 cubic feet of gas appliances, leaving ample room for whatever else a family desired (see Image 30).<sup>111</sup> As a company brochure puts it, the appliances themselves

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<sup>105</sup> Westcoast Transmission Company Limited, "World's Greatest Fuel," *Pipeline* Vol. 3, No. 4 (April 1965): p.3, UBCSC, WEI, Box 11, File 39.

<sup>106</sup> Westcoast Transmission Company Limited, "Year-Round Patio Living With Natural Gas," *Pipeline* Vol. 3, No. 6 (June 1965): p.3, UBCSC, WEI, Box 11, File 39.

<sup>107</sup> Westcoast Transmission Company Limited, "Facts You Want to Know," *The Story of Natural Gas*, 1962, p.28.

<sup>108</sup> Westcoast Transmission Company Limited, "Year-Round Patio Living With Natural Gas," *Pipeline*, p.3.

<sup>109</sup> Ibid.

<sup>110</sup> Ibid.

<sup>111</sup> Westcoast Transmission Company Limited, "Compact Is The Word For Gas," *The Story of Natural Gas*, 1962, p.24.

could be tweaked according to taste too, "fit any kitchen and any pocketbook."<sup>112</sup> Natural gas lights came in different shapes and sizes and could be dimmed to suit any occasion; as *Pipeline* wrote, "Gaslights heighten the enchantment of festive occasions with interesting shadows and a warm golden glow. They are useful as well as decorative, operating when other lighting sources fail."<sup>113</sup> These innovative appliances were available to the ordinary consumer and the commercial, restaurant, hotel, and large-property owner. The company newsletter explained, "The decorative nature of natural gas is not restricted to gas lamps on the patio or front lawn. Gas-fed luau torches dramatize approaches to restaurants, hotels, and apartment blocks."<sup>114</sup> Gas appliances provided consumers with an, according to Westcoast, unparalleled ability to express their taste (Figure 8).

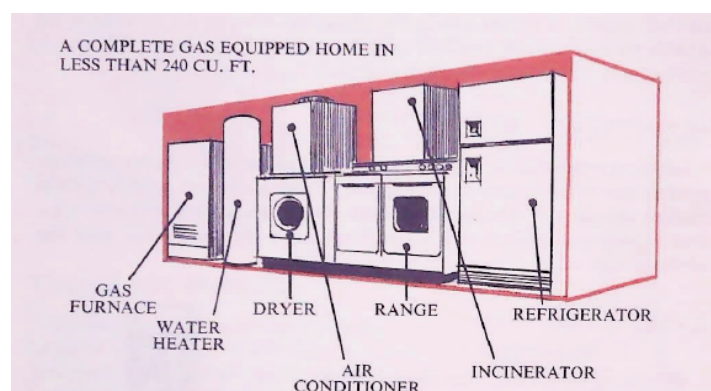


Figure 8: Using diagrams like this one, Westcoast argued that "compact is the word for gas" in its marketing publications.

Westcoast Transmission Company Limited, "Compact Is The Word For Gas," *The Story of Natural Gas*, 1962, P.24, UBCSC, WEI, Box 11, File 8.

Added to all these aspects of modern living were the fuel's high efficiency and the fact that it was readily available. Unlike wood or coal, natural gas required no storage or

<sup>112</sup> Ibid.

<sup>113</sup> Westcoast Transmission Company Limited, "Gaslights Twinkle A Merry Christmas," *Pipeline* Vol. 3, No. 12 (December 1965): p.8, UBCSC, WEI, Box 11, File 39.

<sup>114</sup> Westcoast Transmission Company Limited, "Year-Round Patio Living With Natural Gas," *Pipeline*, p.3.

preparation as buried pipes connected the consumer to the gas wells, "No packaging – and no storage by the consumer is required. No advance purchase is necessary. Gas flows continuously, minute by minute, second by second, available instantly as required. No two-way traffic, no traffic jams interfere," the company explained.<sup>115</sup> Gas furnaces, Westcoast propagated, were "always ready to go" in a reliable manner.<sup>116</sup> "It's completely controllable," argued the company as it captioned photos of cakes and recipes with "unmatched temperature control makes natural gas the perfect fuel for baking a cake" and "ideal recipes for instantly controllable and adjustable gas cooking."<sup>117</sup> The fuel was readily available and easily controlled and promised unparalleled efficiency. The heat value of gas is measured in British Thermal Units (B.T.U.), the amount of heat required to raise the temperature of one pound of water at the temperature that water has its greatest density. One cubic foot of natural gas contains 1000 B.T.U., which is a high heating efficiency and why Westcoast labelled gas British Columbia's "most important source of energy."<sup>118</sup>

Inside the home, this alleged "perfect fuel," however, posed some dangers, concerns which the company quickly sought to address and mitigate. Natural gas in its original state generally lacks odour, making it nearly impossible to detect compared to coal or wood. The company, therefore, added an odour, a potent, sulphur-like smell, to natural gas to allow consumers and service technicians to detect any concerns. Natural gas, moreover, burns

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<sup>115</sup> Westcoast Transmission Company Limited, "Economics of Gas," *The Story of Natural Gas*, 1962, p.29.

<sup>116</sup> Westcoast Transmission Company Limited, "World's Greatest Fuel," *Pipeline* Vol. 8, No. 7 (July 1968): p.5–6, UBCSC, WEI, Box 11, File 41.; Westcoast Transmission Company Limited, "Miracles For Modern Living – With Gas," *Pipeline* Vol. 2, No. 4 (July 1964): p.3, UBCSC, WEI, Box 11, File 38.

<sup>117</sup> Westcoast Transmission Company Limited, "Smart Girls Cook With Modern Gas," *Pipeline* Vol. 2, No. 3 (June 1964): p.8, UBCSC, WEI, Box 11, File 38.; Westcoast Transmission Company Limited, "Unmatched Temperature Control Makes Natural Gas The Perfect Fuel For Baking A Cake Or Melting Tons Of Metal," *Pipeline* Vol. 3, No. 3 (March 1965): p.3, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "The People Who Know Gas," *The Story of Natural Gas*, 1962, p.22–23.; Westcoast Transmission Company Limited, "World's Greatest Fuel," *Pipeline*, p.5–6.; Westcoast Transmission Company Limited, "Convenient Uses For The Low Temperature Gas Oven," *Pipeline* Vol. 2, No. 4 (July 1964): p.6, UBCSC, WEI, Box 11, File 38.

<sup>118</sup> Westcoast Transmission Company Limited, "Facts You Want to Know About Natural Gas," *The Story of Natural Gas*, 1962, p.25, UBCSC, WEI, Box 11, File 8.

cleaner than coal or wood without smoke or soot, "When natural gas burns, it gives off only carbon dioxide and water vapour – the same chemicals we exhale when we breathe."<sup>119</sup> A company article ran,

Do You Know! Natural Gas Has No Odor,

Pure natural gas is odourless. A chemical odorant is added as a safety precaution. It can be detected well before 1% of gas is present in the air. So potent is this odorant that less than a teacup of it will odorize all the gas you normally burn for household uses during a full year!<sup>120</sup>

The Westcoast company highlighted several striking tests to prove this safety. One newsletter cited a study that put four men in a room with a constant 25 percent gas versus 75 percent air ratio. They poured gas in that room for two continuous hours and showed no ill effects of the gas. They concluded that gas was very much like water, a little in the room and you would be fine, fill the room with it and you will drown. As they put it, "In a rare circumstance ... with most or all of the air in a room replaced with gas ... a person could suffocate from lack of oxygen. The same could happen with your head underwater. But neither water nor natural gas are poisonous." (see Image 31)<sup>121</sup> In another segment, Westcoast similarly asserted that animals could live for months in air consisting of 25% natural gas without showing any signs of effect.<sup>122</sup> Westcoast explained in its marketing campaigns: a safe fuel burned in safe appliances that had passed the diligent, rigorous, and "gruelling" tests of the Canadian Gas Association.<sup>123</sup> Operating natural gas appliances was, in fact, so safe that a child could do it.

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<sup>119</sup> Ibid.

<sup>120</sup> Westcoast Transmission Company Limited, "Do You Know Gas Has No Odor!," *Pipeline* Vol. 2, No. 6 (September 1964): p.6, UBCSC, WEI, Box 11, File 39.

<sup>121</sup> Westcoast Transmission Company Limited, "Do You Know: Natural Gas Facts No. 1," *Pipeline* Vol. 2, No. 3 (June 1964): p.6, UBCSC, WEI, Box 11, File 38.

<sup>122</sup> Westcoast Transmission Company Limited, "Facts You Want to Know About Natural Gas," *The Story of Natural Gas*, 1962, p.25.

<sup>123</sup> Westcoast Transmission Company Limited, "People Who Make Sure Gas Is Safe," *The Story of Natural Gas*, 1962, p.30.

The company magazine featured children grilling on a gas-fired barbecue, illustrating its ease of operation.<sup>124</sup> The company newsletter explained that natural gas water heaters would respond to "the simple turn of a tap," and the installation of natural gas engines would be "a simple one." Even the "total energy system," a power unit which supplied the heating, cooling, and electrical needs for a building, was "simple."<sup>125</sup> Simple, safe, and efficient, Westcoast left no concern unaccounted for.



*Image 29: Experiment where the air in a room was partially replaced with gas while men played cards.*

Westcoast Transmission Company Limited, "Do You Know!"  
Pipeline Vol. 2, No. 3 (June 1964): P6, UBCSC, WEI, Box  
11, File 38.

Outside the home, natural gas promises to improve air quality by reducing the air pollution associated with burning coal and wood. It was marketed as the logical solution to air pollution, starting around the late 1960s when British Columbia founded an anti-pollution board to deal with this growing problem. Westcoast proudly claimed in its newspaper that natural gas resolved fog-forming in cities. As homeowners switched from coal and wood, and industries started switching to fossil fuels, the once "darkening" and "dense, dirty, grey,

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<sup>124</sup> Westcoast Transmission Company Limited, "Learn About Natural Gas," *Pipeline*, p.3.

<sup>125</sup> Westcoast Transmission Company Limited, "From The President - Foresight," *Pipeline* Vol. 3, No. 2 (February 1965): p.2, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "Gas "Perfect Fuel" For Irrigation," *Pipeline*, p.3.; Westcoast Transmission Company Limited, "Total Energy at The Bay," *Pipeline* Vol. 8, No. 10 (October 1968): p.5, UBCSC, WEI, Box 11, File 41.

opaque blanket" skies cleared up thanks to the "cleanest fuel of all," as the company liked to put it, natural gas. While today producers portray natural gas as a "bridge fuel" to address climate change and reduce global emissions, the marketing of natural gas in the 1960s also portrayed the energy source as a cleaner fossil fuel. "Pollution control will pay dividends in our own health and the growth of our province in the future," the company newsletter stated in an article "Gas Fights Pollution."<sup>126</sup> Natural gas assured that booming growth and industrial development would not cost city dwellers their clear skies as natural gas could deliver both.<sup>127</sup>

Westcoast fostered a cultural ideal of what modern life ought to be. Natural gas was intrinsic to this promise of "good living," which combined wealth and industrial growth with more space for personal preferences, increased control over energy usage and cooking temperatures, and improved air quality.<sup>128</sup> However, this alleged "modern living" relied on traditional gender roles.

#### 4.3.2. "Smart Girls Cook with Gas"

Westcoast Transmission tried to sell specific gas innovations, like cooking appliances, by appealing to the white, settler ideals of the male breadwinner and the female housewife in the kitchen. The company promised housewives "superb" rice if they cooked it on gas which was "instantly controlled."<sup>129</sup> The German American actress Marlene Dietrich, known for

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<sup>126</sup> Westcoast Transmission Company Limited, "Gas Fights Pollution," *Pipeline* Vol. 5, No. 3 (March 1967): p.2, UBCSC, WEI, Box 11, File 40.

<sup>127</sup> Scholars have traced concerns about smoke from coal and wood burning in Canadian cities back to the 1920s and 1930s. Smoke pollution significantly diminished when these cities switched to alternatives like natural gas. Owen Temby and Joshua MacFadyen, "Urban Elites, Energy, and Smoke Policy in Montreal During the Interwar Period," *Urban History Review* Vol.45, No. 1 (2016): p.37–49. <https://doi.org/10.7202/1042294ar>; Owen Temby, "Trouble in Smogville: The Politics of Toronto's Air Pollution During the 1950s," *Journal of urban History* Vol.39, No. 4 (2013): 669–689.

<sup>128</sup> Westcoast Transmission Company Limited, "World's Greatest Fuel," *Pipeline*, p.3.

<sup>129</sup> Westcoast Transmission Company Limited, "Cooking With Gas," *Pipeline* Vol. 2, No. 2 (May 1964), UBCSC, WEI, Box 11, File 38.



movies like *Witness For The Prosecution* (1957), *Touch Of Evil* (1958), and *Judgment At Nuremberg* (1961), was used as a spokesperson for natural gas on a few occasions after she published a book with an ABC of her “wit, wisdom, and recipes.”<sup>130</sup> At C, she spoke to women about “Cooking,” which she called a natural need for women. In her words, “It is natural that a woman should cook. Her inborn mother instinct wants to feed. Her real motherhood makes it imperative that she should cook.”<sup>131</sup> A true mother, they argued, would cook with natural gas. The company newsletter reinforced this statement using the “authority” of male, professional chefs, “90 percent of all professional chefs agree with Miss Dietrich that gas is the ideal fuel for cooking.”<sup>132</sup> The August 1965 edition of the company newsletter featured a chef and the caption, “Professional chefs specify natural gas in their kitchen. Only with natural gas can they be sure of accurate heat control for their recipes.”<sup>133</sup> Some marketing strategists went as far as to link women’s intelligence to natural gas. If they used it, they were considered “smart,” indirectly stating that not using gas was a mistake. The company newsletter also featured a recurring series of recipes throughout 1964 with such treats as “Quick French Bread,” “Ham loaf,” and “plum glazed spareribs,” that started with the statement “Smart Girls Cook with Modern Gas.”<sup>134</sup> Being a proper mother, an intelligent woman, and a good housewife required natural gas, at least, according to Westcoast.

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<sup>130</sup> Westcoast Transmission Company Limited, “Marlene Dietrich Prefers Gas For Cooking,” *Pipeline* Vol. 2, No. 6 (September 1964): p.5, UBCSC, WEI, Box 11, File 39.; Marlene Dietrich, *Marlene Dietrich's ABC: Wit, Wisdom, And Recipes* (Lexington, KY: The University Press of Kentucky, 1962): p. 54–55.

<sup>131</sup> Marlene Dietrich, *Marlene Dietrich's ABC*, p.54.

<sup>132</sup> Westcoast Transmission Company Limited, “Marlene Dietrich Prefers Gas For Cooking,” *Pipeline*, p.5.; Westcoast Transmission Company Limited, “Facts You Want to Know,” *The Story of Natural Gas*, 1962, p.28.; Westcoast Transmission Company Limited, *N.A.*, 196-, UBCSC, WEI, Box 11, File 6.

<sup>133</sup> Westcoast Transmission Company Limited, “Professional Chefs Specify Natural Gas In Their Kitchen,” *Pipeline* Vol. 3, No. 8 (August 1965): p.2, UBCSC, WEI, Box 11, File 39.

<sup>134</sup> Westcoast Transmission Company Limited, “Smart Girls Cook With Modern Gas,” *Pipeline* Vol. 2, No. 3 (June 1964): p.8, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Smart Girls Cook With Modern Gas,” *Pipeline* Vol. 3, No. 2 (February 1965): p.7, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Smart Girls Cook With Modern Gas,” *Pipeline* Vol. 3, No. 3 (March 1965): p.7, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, “Smart Girls Cook With Modern Gas,” *Pipeline* Vol. 3, No. 4 (April 1965): p.7, UBCSC, WEI, Box 11, File 39.

Changing what a kitchen should be, women especially were promised more time away from their household duties, as the company magazine asserted,

GAS RANGES THAT DO EVERYTHING BUT EAT! The modern and versatile gas ranges on the market today work overtime to make sure that the housewife doesn't have to 'slave over a hot stove' for hours every day. Unattended, these new ranges will roast the meat to perfection, watch over the saucepans, and brew the coffee... and it's all done with gas naturally.<sup>135</sup>

Gas stoves almost all had a "burner-with-a-brain" that maintained the correct cooking temperature.<sup>136</sup> The company promised women could cook meals in a fraction of the time with the ease and efficiency of gas appliances. Cleaning, too, required less time, as food would no longer scorch or stick to a pan and doors, and parts of ovens and broilers could be removed and rinsed with ease.<sup>137</sup> It was the era of the smart burner and the time for the "living-kitchen." Such a kitchen was "so much more than a place to cook."<sup>138</sup> As the company newsletter explains,

Today's gas appliances blend into this sort of living, not only in their new colours and styling and the way they make work easier but in their functioning as well. Saving you work in your kitchen, they give you more time to enjoy yourself. With natural gas in your kitchen, you can have an oven that thinks for itself, burners that can't overheat, and new cooking ideas like indoor barbecues. Compact gas appliances fit into small

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<sup>135</sup> Westcoast Transmission Company Limited, "Gas Ranges That Do Everything But Eat," *Pipeline* Vol. 2, No. 6 (September 1964): p.5, UBCSC, WEI, Box 11, File 39.

<sup>136</sup> Ibid., "p.N.E. Prize Home – "All-Gas" For Modern Living," *Pipeline* Vol. 3, No. 8 (August 1965): p.3, UBCSC, WEI, Box 11, File 39.;

<sup>137</sup> Westcoast Transmission Company Limited, "Look What Gas Is Doing Now!," *Pipeline* Vol. 2, No. 9 (December 1964): p.3, UBCSC, WEI, Box 11, File 39.

<sup>138</sup> Westcoast Transmission Company Limited, "Today's [Gas] Kitchen Is So Much More Than Just A Place To Cook!," *Pipeline* Vol. 2, No. 6 (September 1964): p.4–5, UBCSC, WEI, Box 11, File 39.

places, turning most of the area over to you for the work and the fun of a real LIVING KITCHEN.<sup>139</sup>

Natural gas promised the comfort of a kitchen with modern appliances that removed odours, smoke, and grease and blended nicely with the design of the rest of the room and the house. Westcoast Transmission thus used natural gas appliances to introduce new cultural expectations of the time and quality of time women spend in kitchens.

It is a different question whether women had or believed they had more time away from their household work. Academics such as environmental historian Joy Parr highlight that women were sometimes appalled by the idea that machines could do their jobs better. In addition, women who stayed home all day and whose work society did not consider "actual work" had a tough time convincing their husbands and perhaps even themselves that appliances that promised to make their lives easier were worth the expenditure. Joy Parr states, "Women whose homework was unmeasured and unpaid were not well positioned to press for purchases on the basis of labour-saving features, even if they could see ways in which the new equipment would improve their work efficiency."<sup>140</sup> Ruth Sandwell concludes in the edited volume *New Light* that, at least in the 20<sup>th</sup> century, the introduction of labour-saving machines still relied primarily on women's energy exertion, "it was women's muscle-power, skills, and knowledge that continued to be largely responsible for meeting the energy needs of the household, and therefore of society generally."<sup>141</sup> Contributor Petra Dolata's analysis of washing machines, for instance, reveals that automated household items still required a substantial amount of human energy to load, clean the machine, and pre-soak

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<sup>139</sup> Ibid.

<sup>140</sup> Joy Parr, *Sensing Change*, p.205-206.

<sup>141</sup> R.W. Sandwell, "Including Women in Energy," in eds. *New Light: Histories of Women and Energy* by Abigail Harrison Moore and R. W. Sandwell (Montreal: McGill-Queen's University Press, 2021): p.31.

clothing for instance.<sup>142</sup> These works allude to the effects of natural gas appliances on women's lives, but an in-depth analysis is, unfortunately, beyond the scope of this chapter.

Very few ads targeted single men. Those advertisements that did, promised bachelors ease and convenience through technological innovation. One ad ran,

The men who design kitchen ranges have been thinking about the poor bachelor who comes home from the office to a cold tin of baked beans. Now when he comes home, he still may be faced by the baked beans, but they will be piping hot. All he had to do was press the automatic clock control on his modern gas range and pop his dinner in the oven before leaving home.<sup>143</sup>

The advertisement emphasizes male designers and the innovative nature of this gas appliance to tie it to a certain level of masculinity. Other examples were more challenging to come by as Westcoast's natural gas marketing primarily promised to improve the ease and convenience of housewives' lives.

Westcoast did specifically target men for one natural gas appliance: the barbecue. It portrayed natural gas barbecues as masculinity enhancers. Men generally operated gas barbecues in marketing flyers or newsletter segments while women, if present, stared at them in awe (see Image 30).<sup>144</sup> The City of Vancouver Archives holds one photo of a woman roasting and seasoning a chicken on a gas-fired barbecue. However, most images of women

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<sup>142</sup> Petra Dolata, "Complex Agency in the Great Acceleration: Women and Energy in the Ruhr Area after 1945," in eds. Abigail Harrison Moore and R. W. Sandwell *New Light: Histories of Women and Energy*, (Montreal: McGill-Queen's University Press, 2021): p.163.

<sup>143</sup> "Gas Automation Brightens Meals for Single Types," *Province* (Vancouver, B.C.), Nov. 16, 1956, p.58.

<sup>144</sup> Westcoast Transmission Company Limited, "Facts You Want to Know," *The Story of Natural Gas*, 1962, p.28.; Westcoast Transmission Company, *Pacific National Exhibition: 1965 Prize Home*, Photograph, City of Vancouver Archives, 1965, Box. 210-C-07, <https://searcharchives.vancouver.ca/pacific-national-exhibition-1965-prize-home-2>.; Westcoast Transmission Company Limited, "Year-Round Patio Living With Natural Gas," *Pipeline*, p.3.

and barbecues show women smiling and posing next to a grill, and while sometimes operating it, they do so with a big smile, not focus (see Image 31).<sup>145</sup>



*Image 30: Woman watches as the man grills on the barbecue.*

Westcoast Transmission Company,  
Pacific National Exhibition: 1965 Prize  
Home, photograph, City of Vancouver  
Archives, 1965, Box. 210-C-07,  
<https://searcharchives.vancouver.ca/pacific-national-exhibition-1965-prize-home-2>.

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<sup>145</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1968, Box. F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-215>.



*Image 31: "Doris Day demonstrates real outdoor living at its best... with GAS! Doris is cooking on an infra-red barbecue, flanked by an infra-red heater with gas torch."*

Westcoast Transmission Company Limited, "Year-Round Patio Living With Natural Gas," Pipeline Vol. 3, No. 6 (June 1965): P.3, UBCSC, WEI, Box 11, File 39.

This aligns with the work of a wide array of barbecue scholars. Barbecuing is commonly portrayed as the most masculine cooking style, while cooking in the kitchen is often associated with women.<sup>146</sup> Canadian Historian Christopher Dummit reveals that this gender division has been intrinsic to the rise of barbecues in the post-war years.<sup>147</sup> Some scholars believe this results from the barbecue's disassociation from the domestic kitchen

<sup>146</sup> C. Dummit, "Finding a Place for Father," *Journal of the Canadian Historical Association*, Vol. 9, No. 1 (1998): 209-223.; C. Nyvang and J. Leer. 2019. "Kids in the Kitchen," in eds. *Food and Age in Europe, 1800-2000* by C. Nyvang et al. (London: Routledge, 2019): p.96-114.; C. Adams, *The Sexual Politics of Meat* (London/NY: Continuum, 1990).; Andrew Warnes, *Savage Barbecue: Race, Culture, and the Invention of America's First Food* (Athens, GA: University of Georgia Press, 2008).

<sup>147</sup> Christopher Dummitt, "The BBQ and Masculinity In Canada," *The Agenda TVO Today*, July 23, 2013, Recorded Live Stream, <https://www.youtube.com/watch?v=LdWoRVgIoAQ>.

symbolically tied to housewives' lives.<sup>148</sup> Other academics connect barbecues and meat, a masculine food source.<sup>149</sup> Deutsch and Elias conducted a comparative analysis of barbecuing outside of the United States but similarly found a strong association between barbecuing and masculinity.<sup>150</sup> At the Pacific National Exhibition, a Vancouver fair, Anna Barbose, manager of the Prize Home Lottery in which one could win a fully-equipped house mentioned that the home, in particular, drew women of all ages and young couples. Men, however, were, she said, drawn to the home with technological innovations and barbecues.<sup>151</sup>

#### 4.3.3. Showcasing Gas at the P.N.E.

The Pacific National Exhibition (P.N.E.) offers a concrete way of exploring how the company employed traditional gender roles to market natural gas. Founded as the Vancouver Exhibition Association in 1907, the Pacific National Exhibition aimed (and still aims) to showcase British Columbia to the rest of the world.<sup>152</sup> In the words of the group of middle-class businessmen who founded the event, the Fair aimed to “embrace Fat Stock, horses, dogs, poultry, also Horticultural, Agricultural and industrial interests [...] for the object of maintaining the City of Vancouver in that leading position she by rights should occupy.”<sup>153</sup> It has always been an extensive fair with amusement park rides, musical performances,

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<sup>148</sup> Jonatan Leer, “Gender and Barbecue: The Gendering of Tradition, Innovation and Space in the Netflix Series *Chef’s Table: BBQ* (2020).” *Anthropology of Food*, No. 16 (2022), DOI: <https://doiorg.ezproxy.library.yorku.ca/10.4000/aof.12915>.

<sup>149</sup> C. Adams, *The Sexual Politics of Meat*.

<sup>150</sup> J. Deutsch and M.J. Elias, *Barbecue: A Global History*, (Chicago, IL: University of Chicago Press, 2014): p.25–46.

<sup>151</sup> Mackenzie M. Elizabeth, “The PNE Prize Home: Tradition And Change,” Ph.D. Diss. (University of British Columbia, 2005), p. 135.

<sup>152</sup> David Breen & Kenneth Coates, *The Pacific National Exhibition an Illustrated History*, p.1.; Mackenzie M. Elizabeth, “The p.N.E. Prize Home: Tradition And Change,” Ph.D. Diss. (University of British Columbia, 2005), p.5.; “History & Legacy,” *Pacific National Exhibition*.

<sup>153</sup> Mackenzie M. Elizabeth, “The p.N.E. Prize Home,” p. 4.

agricultural shows, and educational displays.<sup>154</sup> In 1965 Westcoast called it "one of the greatest shows in Canada. It is a focal point for displaying Western Canada's business, industrial and education potentialities to North America."<sup>155</sup> At the Fair, Westcoast Transmission, as a company and member of the Gas Service League, employed traditional gender assumptions to market natural gas in the shape of fuel or appliances. The Fair primarily played into women's roles as cooks and homemakers while simultaneously objectifying their bodies to sell gas products.<sup>156</sup> Men feature less prominently in the consulted archival material on Westcoast Transmission's presence at the P.N.E.

The Exhibition showcased numerous gas-operated appliances, such as stoves, patio lights, and barbecues.<sup>157</sup> In 1967, Westcoast emphasized its presence at the P.N.E. when they

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<sup>154</sup> David Breen & Kenneth Coates, *The Pacific National Exhibition an Illustrated History*.; Joe Quan, *Chinese Theatre Performance On Stage*, photograph, City Of Vancouver Archives, 1959, Box 198-D-03 Fld. 01, <https://searcharchives.vancouver.ca/chinese-theatre-performance-on-stage>.; Joe Quan, *Audience View of Aerial Motorcycle Act*, photograph, City Of Vancouver Archive, 1959, Box 198-D-03 Fld. 01, <https://searcharchives.vancouver.ca/1959-pne-audience-view-of-aerial-motorcycle-act>.

<sup>155</sup> Westcoast Transmission Company Limited, "From the President – Prize Home Goes "All-Gas," *Pipeline* Vol. 3, No. 8 (August 1965): p.3, UBCSC, WEI, Box 11, File 39.

<sup>156</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-189>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-209>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-201>.

<sup>157</sup> Westcoast Transmission Company, *Pacific National Exhibition: Gas Service League booth*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-gas-service-league-booth-2>.; Westcoast Transmission Company, *Pacific National Exhibition: [Gas Service League Booth]*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-gas-service-league-booth>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-187>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-184>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-183>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-175>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-176>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-165>.; Westcoast Transmission Company, *Pacific*



stated, "Natural gas from our fields in the north became one of the symbols of the Pacific National Exhibition this year."<sup>158</sup> The festival restaurants grilled their hamburgers on gas, while special display booths showcased gas barbecues, stoves, heating units and other appliances. The Gas Service League booth, of which Westcoast was a member, featured a modern home for "modern lives," or so the company put it in their newsletter. Such lives included indoor gas barbecues as well as outdoor patio ones.<sup>159</sup> In 1967, the League's manager invited the Poultry Association to hold cook-offs on natural gas stoves whose winners took home grand prizes like natural gas ranges or grills.<sup>160</sup> A year prior, photos in the City of Vancouver archive reveal that women attended a similar chicken cooking competition at the Exhibition organized by the B.C. Broiler Board.<sup>161</sup> Behind the scenes, Westcoast supplied the Pacific National Exhibition with ample gas to feed visitors and heat water and buildings. In the company's words, natural gas played "a vital part."<sup>162</sup>

Women often marketed the appliances in displays and demonstrations that targeted housewives. During the 1967 edition of the P.N.E., a woman held hourly cooking demonstrations in a display kitchen with the slogan "Perfect Cooking Every Time with Gas"

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*National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-161>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-159>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-158>.

<sup>158</sup> Westcoast Transmission Company Limited, "Natural Gas At The p.N.E.," *Pipeline* Vol. 5, No. 8 (August 1967): p.3, UBCSC, WEI, Box 11, File 41.

<sup>159</sup> Ibid.

<sup>160</sup> Ibid.

<sup>161</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1966, Box: 210-C-07, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-138>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1966, Box: 210-C-07, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-139>.

<sup>162</sup> Westcoast Transmission Company Limited, "The p.N.E. Runs On Natural Gas," *Pipeline* Vol. 2, No. 6 (September 1964): p.3, UBCSC, WEI, Box 11, File 39.

in big letters behind her on the wall.<sup>163</sup> According to Westcoast, thousands attended this demonstration of the benefits of gas stoves.<sup>164</sup> At the Gas Service League booth, a woman in a classic pencil skirt demonstrated a gas barbecue. At the Tappan-Gurney (a stove and furniture company) display kitchen, a woman presented Tappan-Gurney's latest gas stove models.<sup>165</sup> Another did the same at the Enterprise display kitchen.<sup>166</sup> In 1968, Mrs. W.L. Stapleton performed a cooking demonstration on a gas stove in the "Acres of Food" exhibit in front of what appears to have been primarily women who "were intrigued with the appliances as well as the recipes," according to the company newsletter.<sup>167</sup> Within an hour, she prepared "Crepes Okanagan," "Cantonese Casserole," and "Pink Cloud" to showcase the quickness of gas cooking.<sup>168</sup> The big mirrors hung diagonally behind her, allowed the audience to follow her

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<sup>163</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-182>.; Westcoast Transmission Company Limited, "Natural Gas At The p.N.E.," *Pipeline* Vol. 5, No. 8 (August 1967): p.3, UBCSC, WEI, Box 11, File 41.

<sup>164</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-182>.; Westcoast Transmission Company Limited, "Natural Gas At The p.N.E.," *Pipeline* Vol. 5, No. 8 (August 1967): p.3, UBCSC, WEI, Box 11, File 41.

<sup>165</sup> Westcoast Transmission Company, *Pacific National Exhibition: Gas Service League booth*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-gas-service-league-booth-3>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-186>.; "From Canada Stove to Tappan-Gurney," *Saint-Laurent Montreal*, Accessed June 1, 2023, <http://www2.ville.montreal.qc.ca/arrondissements/sla/historique/en/intro/histvsl/terri/devindust/canstove/canstove.html>.

<sup>166</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-185>.

<sup>167</sup> Westcoast Transmission Company, *Pacific National Exhibition: Mrs. W.L. Stapleton*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-mrs-w-l-stapleton>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-206>.

<sup>168</sup> Westcoast Transmission Company Limited, "'Acres of Food' At 1968 p.N.E.," *Pipeline* Vol. 8, No. 9 (September 1968): p.6, UBCSC, WEI, Box 11, File 41.

every move on the stove while her assistant handed her the necessary cooking tools (see Image 32).<sup>169</sup>



*Image 32: Example of a cooking demonstration.*

Westcoast Transmission Company, *Pacific National Exhibition: Mrs. W.L. Stapleton*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-mrs-w-l-stapleton>.

Women were both the target audience for some of the natural gas marketing strategies and a critical part of that plan. Westcoast Transmission objectified and mobilized women's bodies to sell natural gas and its products. The hot water heating display at the P.N.E. reveals this most explicitly. Naked women stood behind an opaque screen while taking a steaming hot shower to sell water heating systems (see Image 33). On the shower cabin, someone had

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<sup>169</sup> Westcoast Transmission Company, *Pacific National Exhibition: Mrs. W.L. Stapleton*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-mrs-w-l-stapleton>; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-206>; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-207>; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-208>; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-205>.

printed, "Low-Cost Hot Water, always on demand with natural gas," to highlight how readily available natural gas was and the fuel's cost benefits.<sup>170</sup>



*Image 33: Woman posing at the P.N.E. behind an opaque shower screen as part of a natural gas marketing effort.*

Westcoast Transmission Company, Pacific National Exhibition, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-189>.

In general, Westcoast used its female employees to market certain products within the company. Over the years, it utilized images of its female employees in the company newsletter to sell a publication on Westcoast's new office and convince employees to wear hardhats, "it usually isn't necessary for girls to wear hard hats around the Westcoast office

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<sup>170</sup> Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, 1967, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-189>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-209>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Sept. 1968, Box: F13-C-07, Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-201>.

[...] Kathy Logan is wearing the hat to show off our smart new vinyl decals.”<sup>171</sup> The company's Vancouver office had a female stenographer pose beside safety equipment in her relatively short skirt and with a big smile to promote safe work practices (see Image 34).<sup>172</sup> The company also published a series of photos of a female employee posing next to various gas appliances at the Mechanical Display Institute in Vancouver themed "Look what G.A.S. is doing now" in its newsletter. The woman posed smiling next to a barbecue, amazed next to a countertop gas range, and in total awe under a gas heater (see Image 35).<sup>173</sup> This trend continued at the P.N.E.



*Image 34: A female employee trying to convince Westcoast employees to adhere to the company's safety measures.*

Westcoast Transmission Company Limited,  
"1967 Westcoast Round-up," *Pipeline* Vol. 8,  
No. 1 (January 1968): P.10-11, UBCSC,  
WEI, Box 11, File 41.

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<sup>171</sup> Westcoast Transmission Company Limited, "New Building Book Published," *Pipeline* Vol. 9, (December 1969): p.9, UBCSC, WEI, Box 11, File 39.; Westcoast Transmission Company Limited, "New! Westcoast Decals," *Pipeline* Vol. 2, No. 7 (October 1964): p.11, UBCSC, WEI, Box 11, File 39.

<sup>172</sup> Westcoast Transmission Company Limited, "1967 Westcoast Round-up," *Pipeline* Vol. 8, No. 1 (January 1968): p.10-11, UBCSC, WEI, Box 11, File 41.

<sup>173</sup> Westcoast Transmission Company Limited, "Look What Gas Is Doing Now!," *Pipeline*, p.3.



*Image 35: Woman demonstrating gas appliances.*

Westcoast Transmission Company Limited, "Look What Gas Is Doing Now!," Pipeline Vol. 2, No. 9 (August 1966): P.3, UBCSC, WEI, Box 11, File 39.

At the Exhibition, Westcoast used female employees to promote the P.N.E. Prize home and, especially, the gas appliances in the house. The P.N.E. Prize Home is a lottery prize that still exists today.<sup>174</sup> The house generally showcased various furniture pieces and appliances for others to buy, and one lucky person would win the entire house. The P.N.E. organizers expected the home to have some gimmicks, but the Prize Home generally reflected trends and promised neither the newest nor the highest quality.<sup>175</sup> In 1965 Westcoast Transmission, for the first time, provided all of the appliances to the Prize home; as its newsletter states, "For the First time, Westcoast Transmission – a Vancouver-based energy company -was involved in the programme supplying all major gas-fired appliances including patio heater, barbeque and outside gas light in addition to the regular household appliances."<sup>176</sup> In 1965 and 1966, Westcoast's Telex operator had an advanced showing of the

<sup>174</sup> "p.N.E. Prize Home Lottery," *Pacific National Exhibition*, Accessed September 10, 2023, <https://pneprizehome.ca>.

<sup>175</sup> Mackenzie M. Elizabeth, "The p.N.E. Prize Home: Tradition And Change," p. 139.

<sup>176</sup> Ibid. p. 54.; Westcoast Transmission Company, *p.N.E. Prize Home*, photograph, City of Vancouver Archives, Aug. 1965, Box: F13-C-07, Fld. 09, <https://searcharchives.vancouver.ca/p-n-e-prize-home-3>.; Westcoast Transmission Company, *p.N.E. Prize Home*, photograph, City of Vancouver Archives, Aug. 1965, Box: F13-C-07, Fld. 09, <https://searcharchives.vancouver.ca/p-n-e-prize-home-4>.; Westcoast Transmission Company, *p.N.E.*

Prize Home. As she poses for photos at various locations throughout the house, the company magazine used the well-documented trope of the "fickle" woman to describe their female employee, "last year she fell in love with the home and its furnishings and, fickle woman, she fell in love again this year."<sup>177</sup> In 1967, a female member of Westcoast's Accounting Department toured the "Petroleum and Natural Gas Industries' display" on the Pacific National Exhibition's grounds, posing next to oval "windows" and maps that narrated the history of natural gas and petroleum and Westcoast's place in it (see image 36).<sup>178</sup> One year, the company used a man to promote the natural gas appliances in the P.N.E. prize home. Instead of posing in awe or smiling brightly, Westcoast positioned the man as an expert or authority on the subject. He was part of the Gas Service League and, in one photo, looks intently, almost as if he was explaining how the gas barbecue worked, as a member of Domestic Heating Ltd. installed a gas barbecue (see Image 37).<sup>179</sup> In these manners, Westcoast positioned its employees in traditional gender roles to promote natural gas at the P.N.E.

The Pacific National Exhibition was hardly the only place Westcoast marketed natural gas. The company sponsored a series of gas cooking demonstrations in Vancouver to promote gas appliances and fuel. Besides building goodwill, this activity acquainted customers with

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*Prize Home*, photograph, City of Vancouver Archives, Aug. 1965, Box: F13-C-07, Fld. 09, <https://searcharchives.vancouver.ca/p-n-e-prize-home-5>.

<sup>177</sup> Westcoast Transmission Company Limited, "Sue and the Prize Home," *Pipeline* Vol. 4, No. 8 (August 1966): p.5, UBCSC, WEI, Box 11, File 40.; The stereotype "fickle woman" goes back to such texts as Virgil, *The Aeneid of Virgil* (Toronto/ New York: Bantam Books, 1981) and the idea of "Varium et mutabile, semper femina."

<sup>178</sup> Westcoast Transmission Company Limited, "Natural Gas and Petroleum on View," *Pipeline* Vol. 5, No. 3 (March 1967): p.5, UBCSC, WEI, Box 11, File 40.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Aug. 1967, Box: F13-C-07 Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-157>.; Westcoast Transmission Company, *Pacific National Exhibition*, photograph, City of Vancouver Archives, Aug. 1967, Box: F13-C-07 Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-156>.

<sup>179</sup> Westcoast Transmission Company Limited, "'All Gas' For Modern Living," *Pipeline* Vol. 3, No. 8 (August 1965): p.3, UBCSC, WEI, Box 11, File 39

the latest developments in gas equipment.<sup>180</sup> In June of 1965 and the fall, Westcoast sponsored a series of gas cooking demonstrations at the Mechanical Display Institute, where Westcoast company also exhibited gas appliances.<sup>181</sup> Mrs. Mona Brun, who also appeared in a local televised cooking show, drew substantial crowds to the Institute with her free shows.<sup>182</sup> In 1965, the Westcoast company organized a cooking demonstration with the Gas Service League. The over 1400 in attendance watched a forty-five-minute demonstration of gas broilers, rotisseries, ovens, and ranges. Following the demonstrations, the attendees watched a movie and engaged in contests; at the end, all women received a miniature orchid to take home.<sup>183</sup> In March 1966, the two partners, Westcoast and Gas Service League, organized a similar event. Over 1900 people visited the Orpheum Theatre in Vancouver for a gas cooking demonstration. Radio CKLG broadcasted the show. In an article entitled "Gas Cooking Demonstration Huge Success," Westcoast's newsletter explains that the "ladies" that attended the theatre watched a full-length movie after the cooking demonstration and received a lamb cookbook.<sup>184</sup> In these various ways, Westcoast employed traditional gender roles to market natural gas and natural gas appliances.

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<sup>180</sup> Westcoast Transmission Company Limited, "People Who Make Gas Equipment," *The Story of Natural Gas*, 1962, p.21.

<sup>181</sup> Westcoast Transmission Company Limited, "Gas Cooking Demonstrations," *Pipeline* Vol. 3, No. 10 (June 1965): p.6, UBCSC, WEI, Box 11, File 39.

<sup>182</sup> Westcoast Transmission Company Limited, "Hun Yuen Gai Ding," *Pipeline* Vol. 3, No. 6 (June 1965): p.4, UBCSC, WEI, Box 11, File 39.

<sup>183</sup> Westcoast Transmission Company Limited, "Cooking Demo. Set For Orpheum," *Pipeline* Vol. 3, No. 3 (March 1965): p.5, UBCSC, WEI, Box 11, File 39.

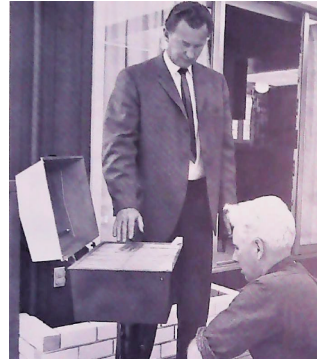
<sup>184</sup> Westcoast Transmission Company Limited, "Gas Cooking Demonstration Huge Success," *Pipeline* Vol. 4, No. 3 (March 1966): p.3, UBCSC, WEI, Box 11, File 40.





*Image 36: Woman touring the natural gas exhibit at the P.N.E., posing in front of a map.*

Westcoast Transmission Company, Pacific National Exhibition Susan Lew - petroleum and natural gas [exhibit], photograph, City of Vancouver Archives, 1967, Box: F13-C-07 Fld. 08, <https://searcharchives.vancouver.ca/pacific-national-exhibition-susan-lew-petroleum-and-natural-gas-exhibit-7>.



*Image 37: A man watches attentively as his gas barbecue is being installed as part of Westcoast's marketing efforts at the P.N.E.*

Westcoast Transmission Company Limited, ““All Gas” For Modern Living,” Pipeline Vol. 3, No. 8 (August 1965): P.3, UBCSC, WEI, Box 11, File 39.

#### 4.4. Conclusion

This chapter illustrates the role of gender narratives and identity in the energy transition that Westcoast facilitated. During construction, Westcoast operations fostered a type of frontier masculinity negotiated within a rugged, “virgin” environment. While the construction men overcame the obstacles of B.C.’s “last frontier,” the construction workers, company publications, and newspapers grew to idolize a type of pioneering man known for his strength,

courage, and perseverance. The construction crews' housing situation with the associated glorification of vice helped solidify this sense of masculinity.

Westcoast adapted this frontier masculine ideal to sell its fuel and associated products like stoves, heaters, and lights. Men transformed into knowledge-holders and were positioned as masters of the barbecue, while their wives smiled in front of stoves or stared at them in awe. Women held cooking shows targeting women, but even then, the company used the skilled, knowledgeable "male chef" stereotype to provide the credibility Westcoast believed only men could provide.

Meanwhile, women, who had been largely absent during the construction of the Westcoast system, occupied various positions in company offices and featured in marketing campaigns. The company gave women opportunities but confined their activities to specific departments and roles while attempting to influence their appearance and behaviour, partly through educational programs. The company newsletter at various times sexualized female employees to market its projects and labelled them, rather derogatorily, "girls." Westcoast, moreover, sexualized female bodies in short skirts and steamy showers to sell gas appliances and market their projects in company publications.

Westcoast Transmission's marketing department generated a cultural ideal of modern, "good living" but tied it to traditional gender norms and understandings. Linking natural gas to ease, efficiency and control, the company tried to connect all aspects of modern life to its fuel source. The car you drove, the house you lived in, and the food you cooked were all connected to "good living." While Westcoast seemingly revolutionized how much time a woman spent on household tasks, stereotypical gender identities remained crucial to marketing the "modern" fuel.

This chapter argues that the social, gendered construction of natural gas played a crucial role in the transition to large-scale natural gas usage that Westcoast initiated. While

Westcoast marketed natural gas as a modern fuel, the production of natural gas, Westcoast's day-to-day operations, and the marketing of its fuel and natural gas appliances relied on traditional gender roles. This dependence highlights the deeply entrenched connection between fossil fuel usage, energy transition, and gender identity. The next chapter analyzes what happened when Westcoast's socially constructed interpretation of natural gas as part of "modernity" and "prosperity" ran into substantial, organized environmental and Indigenous opposition.

## **Chapter 5: The 1970s Arctic Pipeline Debates: Incorporating Indigenous and Environmental Concerns**

### **5.1.Introduction**

Before the mid-1970s, as previous chapters reveal, Westcoast established and expanded its operations while intertwining itself with settler-colonial narratives that promised to “open” and “modernize” the interior and northern regions of B.C.<sup>1</sup> Large-scale organized environmental protests did not materialize, and only one episode of Indigenous resistance received newspaper coverage.<sup>2</sup> This situation changed in the mid-1970s when Westcoast Transmission tried to expand into the Canadian Arctic, and Indigenous and environmental concerns became a rising force to reckon with. This chapter analyzes the extent to which the Westcoast Transmission Company Ltd. (primarily as part of a pipeline corporation called Foothills Pipelines Ltd.) changed the ways it framed its natural gas operations in the Arctic during the 1970s while being confronted with rising environmentalist and Indigenous resistance.

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<sup>1</sup> J.G. Diefenbaker, “A New Vision,” (speech, Civic Auditorium, Winnipeg, MA, Feb. 12, 1958), <https://www.canadahistory.ca/sections/documents/leaders/Diefenbaker/The%20Northern%20Vision.html>; Tina Loo, “Disturbing the Peace: Environmental Change and the Scales of Justice on a Northern River,” *Environmental History* Vol. 12, No. 4 (2007): p.895–919.; David J. Mitchell, *W.A.C. Bennett and the Rise of British Columbia* (Vancouver: Douglas & MacIntyre, 1983).

<sup>2</sup> In 1972, the Indian Brotherhood objected to Westcoast's extension into the Yukon and Northwest Territories. During the National Energy Board (NEB) hearings, the Brotherhood argued that the NEB needed to consult them more adequately. However, Westcoast and the Board discarded the matter, labelling it “beyond its jurisdiction” and stating it could not “take a position in this disagreement which is entirely between the Indian people and the Department of Indian Affairs.” - “Pipeline Plans Okayed In B.C.,” *Province* (Vancouver, B.C.), Jan. 20, 1972, p.16.; “Pipeline Construction Program Authorized,” *Leader-Post* (Regina, Sask.), Jan. 20, 1972, p.17.; “Pipeline Okayed,” *Star-Phoenix* (Saskatoon, Sask.), Jan. 20, 1972, p.24.; “Westcoast Granted Permit For Pipeline Construction,” *Nanaimo Daily News* (Nanaimo, B.C.), Jan. 20, 1972, p.2.; “Westcoast Bid For Line Boost Okayed,” *Vancouver Sun* (Vancouver, B.C.), Jan. 21, 1972, p.19.; “West Coast Pipeline Approved,” *Ottawa Journal* (Ottawa, Ont.), Jan. 22, 1972, p.10.; Thierry Rodon, “Institutional Development and Resource Development: The Case of Canada's Indigenous Peoples,” *Revue Canadienne D'études Du Développement* Vol. 39, No. 1 (2018): p.119.

Increased exploration of the Beaufort-Mackenzie regions in the late 1960s uncovered vast onshore and offshore oil and natural gas reserves.<sup>3</sup> Connecting these northern Canadian natural gas fields and those in Alaska's Prudhoe Bay to southern markets became progressively economical and desirable as the energy crisis of the early 1970s increased prices globally and brought forth an energy shortage in the United States.<sup>4</sup> In Canada, the NEB concluded that such a pipeline would forestall an overall (domestic demand and export) natural gas deficit after 1984.<sup>5</sup> These economic desires translated into three main pipeline proposals within Canada and one in the United States. This competition forms the scope of this chapter.

In Canada, the run on Arctic gas involved two competing corporations, each advancing a plan to build a pipeline from Prudhoe Bay, Alaska, through the Mackenzie Valley in northern Canada to southern Canada and the United States.<sup>6</sup> In March 1974, Canadian Arctic Gas Pipeline Limited (CAGPL, pronounced "CAG-pull") formed a consortium of twenty-seven members (this number would change over the years) with some of the most prominent actors in the North American fossil fuel and financial industry, including Imperial Oil, TransCanada PipeLines, and Colorado Interstate Gas.<sup>7</sup> It aimed to construct a 2500-mile, 48-inch pipeline at an estimated cost of \$10 billion. Its daily

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<sup>3</sup> Alas Muzur, "Mackenzie Valley Gas Pipeline in Retrospect," *University of Calgary: The School of Public Policy Publications*, Vol. 14, No. 33 (November 2021): p.1.

<sup>4</sup> Ibid.; "The Alaska Highway Gas Pipeline: Past Environmental and Socio-economic Reviews," *Northern Pipeline Agency*, Accessed Jun. 2, 2023, [https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/enviro-socio\\_e.pdf](https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/enviro-socio_e.pdf); W.M. J. Fox, "Northern Pipelines: The Canadian Position," *Arctic* Vol. 24, No. 4 (1971), p.243.; J.C. Stabler and M.R. Olfert, "Gaslight Follies: The Political Economy of the Western Arctic," *Canadian Public Policy* Vol. 6, No. 2 (1980): p.374-375, <https://www.jstor.org/stable/3550006>; Thomas R. Berger, "Northern Pipelines: Again," *The Northern Review* No. 23 (2001): 200.; Joel J. Sokolesky, "The Canada-US. Alaska Highway Pipeline: A Study In Environmental Decision-Making," *The American review of Canadian studies* Vol. 9, No. 2 (1979): p.85.

<sup>5</sup> Joel J. Sokolesky, "The Canada-US. Alaska Highway Pipeline," p.86.

<sup>6</sup> Paul Sabin, "Voices from the Hydrocarbon Frontier: Canada's Mackenzie Valley Pipeline Inquiry (1974-1977)," *Environmental History Review*, Vol. 19, No. 1 (1995): p.19, <https://www.jstor.org/stable/3984772>.

<sup>7</sup> François Bregha, *Bob Blair's Pipeline the Business and Politics of Northern Energy Development Projects* (Toronto: James Lorimer & Company; Publishers, 1979): p.15, 37.; Anthony Sampson, *The Seven Sisters: The Great Oil Companies and the World They Shaped* (New York, NY: Bantam Books, 1984).

throughput would be 4.5 billion cubic feet, equal parts Prudhoe Bay and Mackenzie Delta gas.<sup>8</sup> One of its members, the Alberta Gas Trunk Line (AGTL), Alberta's primary natural gas transmission company headed by Bob Blair, withdrew from this conglomerate to form the Foothills Pipelines Company Limited (Foothills) with Westcoast Transmission in September 1974.<sup>9</sup> Initially, Foothills offered an exclusively Canadian pipeline known as the "Maple Leaf" line, which aligned with AGTL's president Bob Blair's nationalistic ideals. This project comprised an 817-mile, 42-inch line, with an estimated cost of \$2.5 billion. At total capacity, the line aimed to transport 2.4 billion cubic feet per day from the Mackenzie Delta to southern Canada, leveraging the established systems of both Westcoast and AGTL.<sup>10</sup> It included a connection with TransCanada Pipelines Limited, which would facilitate natural gas transportation through the Prairie Provinces into Ontario and Quebec markets.<sup>11</sup> In September 1976, Foothills introduced an alternative pipeline plan known as the Alcan-Foothills (Yukon) proposal, also called the Alaska Highway pipeline. Initially, Foothills planned the line as a 42-inch pipeline, but in February 1977, Foothills modified it to a 48-inch pipe to accommodate American preferences.<sup>12</sup> The company designed the Alaska Highway pipeline to transport gas from Prudhoe Bay, Alaska, southwards to the United States along the existing Alaska highway route through the Yukon, British Columbia, and parts of Alberta and

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<sup>8</sup> Francois Bregha, "The Mackenzie Valley Pipeline and Canadian Natural Gas Policy," *Canadian Public Policy* Vol. 3, No. 1 (1977): p.73.

<sup>9</sup> Paul Sabin, "Voices from the Hydrocarbon Frontier," p.19.; Ted Jackson, "Resisting Pipeline Imperialism: The Struggle for Self-Determination in the Canadian North," *Alternatives: Perspectives on Society, Technology and Environment*, Vol. 7 (4), 1978, p.40, <https://www.jstor.org/stable/45030219>.; "Pipeline Backers Withdraw," *Ottawa Citizen* (Ottawa, Ont.), Sep. 17, 1974, p.10.; "AGTL Quits Consortium," *Montreal Star* (Montreal, QC), Sep. 17, 1974, p.35.; "Alberta Gas Trunk Out of Mackenzie," *Times Colonist* (Victoria, B.C.), Sep. 17, 1974, p.6.; "Gas Firm Withdraws From Pipeline," *Sault Star* (Sault St. Marie, Ont.), Sep. 17, 1974, p.8.; "AGTL Leaves Pipeline Project," *Albertan* (Calgary, Alb.), Sep. 17, 1974, p.1.

<sup>10</sup> Francois Bregha, "The Mackenzie Valley Pipeline and Canadian Natural Gas Policy," p.73.; National Energy Board, *Volume IV: An Approach for the Supply and Transportation of Beaufort/ Mackenzie Basin Natural Gas to Canadian Markets*, August 1974. p.6.

<sup>11</sup> National Energy Board, *Volume IV*, p.7-8.

<sup>12</sup> Joel J. Sokolesky, "The Canada-U.S. Alaska Highway Pipeline," p.87.

Saskatchewan.<sup>13</sup> As the regulatory debates unfolded, Foothills and CAGPL emerged as each other's primary competitors within Canada.

Added to this rivalry between Foothills and CAGPL was an American proposal that attempted to render the Canadian pipeline plans obsolete. The El Paso Alaska Company applied in the United States to transport Prudhoe Bay gas through a pipeline adjacent to the Alyeska oil pipeline to the south shore of Alaska. Upon reaching the southern shore, the gas would undergo liquefaction and be transported to California by tanker ships. Subsequently, in California, the gas would be re-gasified and integrated into the existing natural gas infrastructure of the state.<sup>14</sup> While not favoured for its environmental impact, the tanker route did offer the United States greater control over its energy supply.<sup>15</sup> The El Paso project offered the U.S. Federal Power Commission (FPC) a viable alternative to CAGPL and Foothills's pipelines and intensified the competition for Arctic gas (see Figure 9 for a visual display of each pipeline route).

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<sup>13</sup> "The Alaska Highway Gas Pipeline," *Government of Canada*, Accessed Apr. 2, 2023, <https://northern-pipeline.canada.ca/5>.

<sup>14</sup> Mitchell Sharp, "The Alaska Highway Natural Gas Pipeline: A Case Study of a Joint Effort Through Two Governmental Systems," *Presidential Studies Quarterly* Vol. 11, No. 1 (1981): p.52.

<sup>15</sup> François Bregba, *Bob Blair's Pipeline*, p.72.; "Pipeline Decision Needed Soon - Imperial Executive," *Edmonton Journal* (Edmonton, Alb.), Jun. 10, 1976, p.30.; "Time Quickly Running Out For Pipeline Consortium," *Edmonton Journal* (Edmonton, Alb.), Aug. 10, 1976, p.31.; "U.S. Pressure Squeezes Pipeline Builders," *Sault Star* (Sault St. Marie, Ont.), Aug. 10, 1976, p.33.; "U.S. Go-It-Alone 'Bluff' Forcing Decision on Gas Pipeline," *Windsor Star* (Windsor, Ont.), Aug. 11, 1976, p.11.

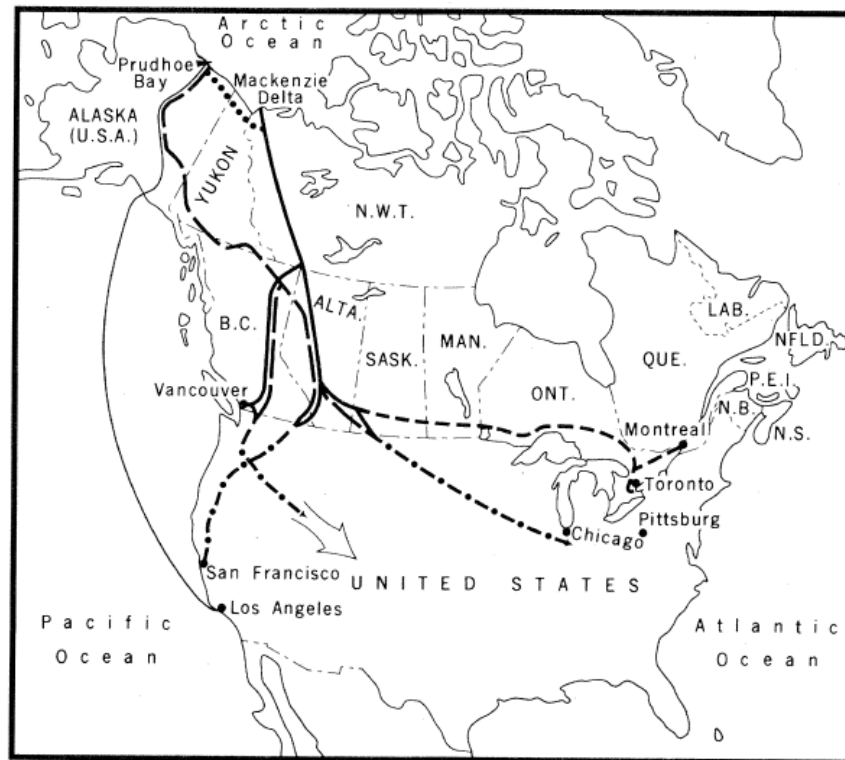


Fig. 1. Possible pipeline routes for northern gas. (—) Mackenzie Valley route (Arctic Gas or Foothills) and connections in Canada. (•••••) Prudhoe Bay to Mackenzie Delta route (Arctic Gas). (—•—) Alaska Highway route (Alcan project) and connections in Canada. (---) TransCanada pipelines, taking Mackenzie Delta gas to eastern Canada. (-•-•-) Connecting pipelines in the United States. (—•—) El Paso route (pipeline and tanker system).

Figure 9: Map of pipeline proposals participating in the Arctic gas pipeline debate.

D.J. Gamble, "The Berger Inquiry: An Impact Assessment Process," *Science* Vol. 199 (4332), 1978, P.947.

The companies filed these pipeline proposals amidst the burgeoning Indigenous rights and environmentalist movements of the 1970s, and, for the first time, the companies would have to reconcile with such concerns on a large and public scale.<sup>16</sup> In 1969, Prime Minister Trudeau and his Minister of Indian Affairs, Jean Chrétien, issued the White Paper. This policy

<sup>16</sup> Julia Christensen and Miriam Grant, "How Political Change Paved the Way for Indigenous Knowledge: The Mackenzie Valley Resource Management Act," *Arctic* Vol. 60, No. 2 (2007): p.117, <http://www.jstor.com/stable/40513127>; Chris Southcott, Frances Abele, David Natcher, and Brenda Parlee, "Beyond the Berger Inquiry," *Arctic* Vol. 71, No.4 (2018): p.394, <https://www.jstor.org/stable/10.2307/26567069>.



paper aimed to end the special status of Indigenous people and dismantle the Indian Act.<sup>17</sup>

The White Paper was met with fierce opposition as many believed it merely absolved the Canadian government from its historical obligations. For instance, the renowned Cree leader Harold Cardinal stated, "Indians understand that the path outlined by the Department of Indian Affairs through its mouthpiece, the Honourable Mr. Chrétien, leads directly to cultural genocide. We will not walk this path."<sup>18</sup> The backlash against the White Paper would persist for years.<sup>19</sup> In 1972, the Union of British Columbia Indian Chiefs presented a *Claim Based on Native Title to the Land, now Forming British Columbia*, to the federal cabinet, demanding compensation and recognition of their Aboriginal Title.<sup>20</sup> That same year, the Supreme Court of Canada presided over the landmark Nisga'a land claim issue in which it, for the first time, ruled that Aboriginal Title existed prior to colonization and outside of the colonial legislative system.<sup>21</sup> At the start of 1973, the Yukon Native Brotherhood presented their basis for land claims in "Together Today for Our Children Tomorrow" to the federal cabinet, which would start treaty negotiations in the Yukon.<sup>22</sup> During this turmoil in settler-Indigenous relations of the early 1970s, the pipeline companies presented their Arctic pipeline plans.

In this period, Canadian environmentalism also gained prominence, heightening the public's concern with fossil fuel extraction and the accompanying environmental effects. In

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<sup>17</sup> "The White Paper 1969," *Indigenous Foundations University of British Columbia*, Accessed Jun. 2, 2023, [https://indigenousfoundations.arts.ubc.ca/the\\_white\\_paper\\_1969/](https://indigenousfoundations.arts.ubc.ca/the_white_paper_1969/).

<sup>18</sup> Ibid.

<sup>19</sup> Ibid.

<sup>20</sup> "Timeline," *UBCIC*, Accessed Jun. 2, 2023, <https://www.ubcic.bc.ca/timeline/>; Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry: Proceedings, Held May 17, 1977, to July 7, 1977* (Ottawa: Dept. of Indian Affairs and Northern Development, 1977): p.109.

<sup>21</sup> K.M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*, p.109.; "Calder Case," *Indigenous Foundations UBC*, Accessed Jun. 20, 2023, [https://indigenousfoundations.arts.ubc.ca/calder\\_case/](https://indigenousfoundations.arts.ubc.ca/calder_case/); *Calder et al. v. Attorney-General of British Columbia*, 1973 SCR 313, <https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/5113/index.do>. Also, in 1972, the Cree and Inuit of northern Quebec sued the James Bay hydroelectric corporation (see Introduction)—The James Bay and Northern Quebec Agreement, Ottawa: Indian and Northern Affairs, 1976, [https://www.engov.ca/wp-content/uploads/2018/03/01-james\\_bay\\_and\\_northern\\_quebec\\_agreement\\_consolidated\\_to\\_september\\_13\\_2013\\_-1.pdf](https://www.engov.ca/wp-content/uploads/2018/03/01-james_bay_and_northern_quebec_agreement_consolidated_to_september_13_2013_-1.pdf).

<sup>22</sup> Council of Yukon First Nations, *Together Today for our Children Tomorrow*, 1973, Accessed Jun. 3, 2023, <https://cyfn.ca/agreements/together-today-for-our-children-tomorrow/>.

the 1970s, a wave of environmental consciousness engulfed North America that had started in the 1960s.<sup>23</sup> Set against the backdrop of the Cold War and 1960s youth cultures and fueled by works like Rachel Carson's *Silent Spring* (1962) and Paul Ehrlich's *The Population Bomb* (1968), the period saw the rise of large environmental initiatives and organizations.<sup>24</sup> In 1970, the first Earth Day was held. Pollution Probe, one of Canada's earliest environmental non-governmental organizations (ENGOS), the World Life Fund, and The Sierra Club were founded around this time.<sup>25</sup> In Western Canada, the Pacific Northwest became a hotbed of environmental activism, giving rise to Greenpeace and increasing vocal concerns over W.A.C. Bennett's largely unchecked industrialization and resource exploitation programs.<sup>26</sup> On a smaller scale, various groups tried to distance themselves from the consumerism and pollution of urbanizing centers in what historian Colin M. Coates identifies as a "back to the land" movement.<sup>27</sup> Environmental historians Liza Piper and historian Jonathan Clapperton have shown how local initiatives allowed marginalized communities, including those of Indigenous groups and women, to voice their concerns.<sup>28</sup> Amongst them is Save Tomorrow,

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<sup>23</sup> Ryan O'Connor, *The First Green Wave: Pollution Probe and the Origins of Environmental Activism in Ontario* (Vancouver, B.C: UBC Press, 2014): p.4.

<sup>24</sup> Jonathan Clapperton, "The Ebb and Flow of Local Environmentalist Activism: The Society for Pollution and Environmental Control (SPEC), British Columbia," in eds. p. 265.; Colin M. Coates, *Canadian Countercultures and the Environment*, edited by Colin MacMillan Coates (Calgary: University of Calgary Press, 2016): p.8.; Evans, Sterling, Zoltan Grossman, Mark Leeming, Mark McLaughlin, John Welch, Anna Willow, Frank Zelko, and Jessica DeWitt. *Environmental Activism on the Ground: Small Green and Indigenous Organizing* (Calgary: University of Calgary Press, 2019). – Rachel Carson argued that pesticides or chemical sprays entered the air and food systems in the U.S., causing harm to innocent species and human beings at a later age or after being passed on to future generations. - *Rachel Carson: She Set Out To Save A Species... U.S.* PBS, 2023.; Rachel Carson, *Silent Spring* (Boston, MA: Houghton Mifflin, 1967). – Paul Ehrlich argued that there were too many people on damaged land and "The battle to feed all of humanity is over. In the 1970s, hundreds of millions of people will starve to death [...] nothing can prevent a substantial increase in the world death rate." Charles C. Mann, "The Book That Incited a Worldwide Fear of Overpopulation," *Smithsonian Magazine*, Jan. 2018, <https://www.smithsonianmag.com/innovation/book-incited-worldwide-fear-overpopulation-180967499/>.; Paul Ehrlich, *The Population Bomb* (New York, NY: Ballantine Books, 1968): Prologue.

<sup>25</sup> Evans, Sterling, et al. *Environmental Activism on the Ground* p.3.; Ryan O'Connor, *The First Green Wave*, p.3, 7.

<sup>26</sup> Jonathan Clapperton, "The Ebb and Flow of Local Environmentalist Activism: The Society for Pollution and Environmental Control (SPEC), British Columbia," in eds. p.264-265.

<sup>27</sup> *Ibid.*, p.4.

<sup>28</sup> Evans, Sterling, et al. *Environmental Activism on the Ground*, p.3.

Oppose Pollution (STOP), an Edmonton-based organization that concerned itself with a wide range of issues from air pollution to the Mackenzie Valley pipeline discussions (a topic of this chapter).<sup>29</sup> Geographer Zoltán Grossman shows that, during the decade, Indigenous communities and their white-settler neighbours fostered small-scale alliances in opposition to a wide range of threats, including dams and mines, to their ways of life.<sup>30</sup> The public rise of Indigenous and environmental concerns formed the context for the Arctic pipeline debates of the 1970s.

The pressing demand to exploit Arctic energy resources, coupled with mounting public pressure to address Indigenous and environmental concerns, triggered several governmental proceedings to facilitate the construction of an Arctic gas pipeline. This chapter delves into some of the primary inquiries and proceedings that took place during the 1970s: the Mackenzie Valley Pipeline Inquiry (or “Berger Inquiry”), the Canadian National Energy Board hearings into all Canadian pipeline proposals, and the Lysyk Inquiry into the Alaska Highway proposal.<sup>31</sup>

Faced with the organized, political mobilization of Indigenous communities, the Canadian federal government established the Federal Environmental Assessment and Review Process to ensure projects did “the least possible damage to our natural environment.”<sup>32</sup> However, while the federal government issued guidelines for companies to assess the environmental effect of their pipelines, the review process relied on company’s self-

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<sup>29</sup> Jonathan Clapperton and Liza Piper, “In the Shadow of the Green Giants: Environmentalism and Civic Engagement,” in eds. *Environmental Activism on the Ground*, p.1.

<sup>30</sup> Zoltán Grossman, “Native/ Non-Native Alliances Challenging Fossil Fuel Industry Shipping at Pacific Northwest Ports,” in eds. *Environmental Activism on the Ground: Small Green and Indigenous Organizing* by Jonathan Clapperton and Elizabeth Piper (Calgary: University of Calgary Press, 2019): p.48.

<sup>31</sup> Government of Canada, “Description – Past Environmental and Socio-economic Reviews.”

<sup>32</sup> “Milestones in the History of Assessments,” *Government of Canada*, Accessed October 4, 2023, <https://www.canada.ca/en/impact-assessment-agency/corporate/our-impact/milestones-history-assessments.html#>.

assessment.<sup>33</sup> In addition, the Berger Inquiry was appointed by an Order-In-Council on March 21, 1974 to “inquire into and report upon the terms and conditions that should be imposed in respect of any right-of-way that might be granted across Crown Lands for the purposes of the proposed Mackenzie Valley pipeline.”<sup>34</sup> The Inquiry ran from March 21, 1974 to the end of November 1976, and the first volume of its concluding report was issued in May 1977. A synopsis of volume 2 was issued in July 1977 and volume 2 was presented in 1978.<sup>35</sup> The Berger Inquiry’s final reports advocated for a 10-year moratorium on construction in the Valley to give the local Indigenous communities the time to settle their land claims.<sup>36</sup>

Meanwhile, Arctic Gas applied to the National Energy Board in March 1974 for approval and the necessary Certificate of Public Convenience and Necessity. In the spring of 1975, Foothills did so for its all-Canadian Maple Leaf line.<sup>37</sup> The NEB hearings would last until June 1977 and thus largely coincided with the Berger Inquiry. As the NEB hearings and Berger Inquiry progressed, Foothills developed a second application, the Alaska Highway pipeline.<sup>38</sup> In July 1977, the NEB recommended the second Foothills proposal to the federal cabinet for approval, not CAGPL’s or Foothills’s Mackenzie Valley route.<sup>39</sup>

The Canadian government appointed a three-person Board of Inquiry, headed by Kenneth M. Lysyk, in April 1977 to investigate the social and economic effects of the Alaska Highway line. The Mair Inquiry was appointed in 1979 to study the pipeline’s potential socio-

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<sup>33</sup> Ibid.; Canada, Department of Indian Affairs and Northern Development, *Expanded Guidelines for Northern Pipelines*, 1972, No. 72-3, p.13.

<sup>34</sup> Thomas R. Berger, *Northern Frontier, Northern Homeland Vol. 2*, Ottawa: Mackenzie Valley Pipeline Inquiry, 1977, Appendix II.

<sup>35</sup> Government of Canada, “Description – Past Environmental and Socio-Economic Reviews.”

<sup>36</sup> “Mackenzie Valley Commissioner Brings Unique Style to Hearings,” *Albertan* (Calgary, Alb.), Dec. 6, 1974, p.24.; Thomas R. Berger, *Northern Frontier, Northern Homeland Vol. 1*, Ottawa: Mackenzie Valley Pipeline Inquiry, 1977, p.196.

<sup>37</sup> D.J. Gamble, “The Berger Inquiry: An Impact Assessment Process,” *Science* Vol. 199, No. 4332 (1978): p.947.; National Energy Board, *Reasons for Decision Northern Pipelines Vol. 1*, 1977, p. 1-6.

<sup>38</sup> Ted Jackson, “Resisting Pipeline Imperialism,” p.40-41.

<sup>39</sup> Government of Canada, "Description – Past Environmental And Socio-Economic Reviews," Accessed Jun. 1, 2023, [https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/pipeline2\\_e.pdf](https://northern-pipeline.canada.ca/sites/npa.gc.ca/files/files/pdf/pipeline2_e.pdf).

economic impacts in British Columbia. Foothills's 1976 application for a right-of-way through the southern Yukon had, in the meantime, triggered a federal Environmental Assessment and Review Panel (EARP). The panel met intermittently between 1977 and 1982 until it concluded that the Alaska Highway line could be constructed and operated in an environmentally acceptable manner.<sup>40</sup> As the EARP progressed, Foothills completed Phase 1 or the "Pre-Build" of the larger Alaska Highway plan, 200 kilometres of pipeline from Caroline, Alberta, to two points on the Canada-U.S. border. Foothills never completed Phase 2.<sup>41</sup>

Spanning roughly half a decade, Canada's Arctic gas pipeline debate offers material too expansive for a single chapter. This chapter has chosen to add to the existing academic analysis of the Arctic gas projects a study of Foothills's participation in one set of hearings (NEB) and two inquiries (Berger and Lysyk). It asks to what extent Foothills changed its understanding of the natural environment when faced with increasingly vocal and public Indigenous and environmental concerns.

It contains four arguments. First, the Alaska Highway route selection rested on the notion that the route had already been disturbed by industrial modernity. Both the ecology and the people (with emphasis on the Indigenous population) were already living in a disturbed environment from the view of Foothills and the NEB. Therefore, a pipeline could be built without significant environmental or social dislocation. Second, this frame of thinking was influenced by the Mackenzie Valley inquiry led by Justice Berger and shaped by settler understandings of "environmental impact" and Indigenous rights.

Third, while the Berger Inquiry may have compelled Foothills to consider Indigenous perspectives, it also offered a platform for Foothills to practice its narratives of Indigenous

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<sup>40</sup> "The Alaska Highway Gas Pipeline: Past Environmental and Socio-economic Reviews," *Northern Pipeline Agency*.

<sup>41</sup> "Pipeline History," *Government of Canada*, Accessed Apr. 17, <https://northern-pipeline.canada.ca/129>.

allyship. As a result, Foothills's support for Indigenous and environmental causes primarily served as a façade for Foothills's actual, eventually successful, economic intentions. It highlights one of the first large-scale examples of a major natural gas company engaging in what today is known as performative allyship and tokenism in Canada. Borrowing definitions from the social sciences, the first term refers to “easy and costless actions that often do not challenge the status quo and are motivated primarily by the desire to accrue personal benefits.”<sup>42</sup> Tokenism refers in this context to the inclusion of Indigenous communities to give the appearance of racial equality.<sup>43</sup>

Fourth, the Canadian government designed the Lysyk Inquiry to create the appearance of Indigenous consultation for an already approved pipeline rather than genuinely using the Inquiry to document the Indigenous and environmental concerns surrounding the Alaska Highway natural gas pipeline. Foothills, as a profit-oriented company, took advantage of this opportunity.

It explores these arguments by tracing Foothills's understanding of the natural environment and changes throughout the Arctic pipeline debates. Put differently, it places the Berger Inquiry into the larger context of the Arctic gas debates of the 1970s. Academics have generally favoured the Berger Inquiry over the larger Alaska pipeline debates (for a historiography of the Berger Inquiry, see Introduction).<sup>44</sup> Those books that cover the broad

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<sup>42</sup> Performative allyship is also used to describe similar behaviour in other settings, such as the LGBTQ+ community, the environmental movement, and the Black Lives Matter movement. – Maja Kutlaca and Helena R. M. Radke, “Towards an Understanding of Performative Allyship: Definition, Antecedents and Consequences,” *Social and Personality Psychology Compass* Vol. 17, No. 2 (2023): p.1.; Helena R. M Radke., Maja Kutlaca, Birte Siem, Stephen C. Wright, and Julia C. Becker, “Beyond Allyship: Motivations for Advantaged Group Members to Engage in Action for Disadvantaged Groups,” *Personality and Social Psychology Review* Vol. 24, No. 4 (2020): p.291–315.

<sup>43</sup> Canadian Center for Diversity and Inclusion, *Glossary of Terms A Reference Tool*, Jan. 2022, <https://ccdi.ca/media/3150/ccdi-glossary-of-terms-eng.pdf>.

<sup>44</sup> Stephen Goudge, “The Berger Inquiry in Retrospect: Its Legacy,” *Canadian journal of women and the law* Vol. 28, No. 2 (2016): p.399-400.; John A. Gray and Patricia J. Gray, “The Berger Report: Its Impact on Northern Pipelines and Decision Making in Northern Development,” *Canadian Public Policy* Vol. 3, No. 4 (1977): p.510, 515.; D.J. Gamble, “The Berger Inquiry: An Impact Assessment Process,” p.951, 946.; Roger Hutchinson, *Prophets, Pastors, and Public Choices: Canadian Churches and the Mackenzie Valley Pipeline*

debates were primarily written in the 1970s and value the geo-political legacy of the Arctic gas debates over their lasting influence on Indigenous communities and the environment. Ottawa's François Bregha, for instance, argues that the most detrimental outcome of the Arctic gas struggle is the increased and lasting impact of the U.S. on Canadian affairs.<sup>45</sup> Journalist Earle Gray's 1979 *Super Pipe: The Arctic Pipeline, World's Greatest Fiasco?* similarly analyzes the geo-political power struggles for Arctic gas.<sup>46</sup> Gray's involvement in the Arctic Gas Pipeline (CAGPL) project most likely influenced his perspectives.<sup>47</sup> Furthermore, one should consider Gray's work in the Cold War context in which he wrote it. The author openly favours the exploitation of Arctic gas reservoirs because otherwise, "the non-Communist world will be increasingly hostage."<sup>48</sup> Most of these broader works, thus prioritizing geo-political concerns, were written before the start of the Alaska Highway pipeline's construction in 1982 and devote comparatively little attention to the narratives employed by Foothills.<sup>49</sup> None of these studies explicitly tried to highlight Westcoast Transmission's contribution, even though Bregha argues that E.C. Phillips, President of Westcoast at the time, was "instrumental."<sup>50</sup> These two existing studies do, however, provide

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*Debate* (Waterloo: Wilfried Laurier University Press, 1992).; Ted Jackson, "Resisting Pipeline Imperialism," p.51.; Mark Nuttall, "Aboriginal Participation, Consultation, And Canada's Mackenzie Gas Project," *Energy & Environment* Vol. 19, No. 5 (September 2008): p.632.; Robert B. Gibson, "From Wreck Cove to Voisey's Bay: The Evolution of Federal Environmental Assessment in Canada," *Impact Assessment and Project Appraisal* Vol. 20, No. 3 (2002): p.154.; Noble, Bram, Kevin Hanna, and Jill Blakly. "Northern Environmental Assessment: A Gap Analysis and Research Agenda," In eds. *Resources and Sustainable Development in the Arctic* by Chris Southcott, Frances Abele, David Natcher, and Brenda Parlee (United Kingdom: Routledge, 2019): p.65-87.; Paul Sabin, "Voices from the Hydrocarbon Frontier," p.42. ; Stephen Bocking, "Thomas Berger's Unfinished Revolution," *Alternatives Journal* Vol. 33, No. 2/3 (2007): p.50-51.; for critiques of the Berger Inquiry see also Chris Southcott, Frances Abele, David Natcher and Brenda Parlee, "Beyond the Berger Inquiry," p.394.

<sup>45</sup> François Bregha, "The Mackenzie Valley Pipeline and Canadian Natural Gas Policy," *Canadian Public Policy* Vol. 3, No. 1 (1977): p.63-75.; François Bregha, *Bob Blair's Pipeline: The Business and Politics of Northern Energy Development Projects* (Toronto: James Lorimer & Company, 1979).

<sup>46</sup> Earle Gray, *Super Pipe: The Arctic Pipeline, World's Greatest Fiasco?* (Toronto: Griffin House, 1979).

<sup>47</sup> The author was the director of public affairs for the Northwest Project Study Group and the Canadian Arctic Gas Pipeline Limited for over six years. "Fonds Glen-1078 - Earle Gray Fonds," *Archives Society of Alberta*, Accessed October 1, 2023, <https://albertaonrecord.ca/earle-gray-fonds>.

<sup>48</sup> Earle Gray, *Super Pipe*, p.1-2.

<sup>49</sup> "The Alaska Highway Gas Pipeline," *Government of Canada*.

<sup>50</sup> François Bregha, *Bob Blair's Pipeline*, p. 14-15.

valuable details for those who wish to analyze the Arctic gas hearings in more detail than this chapter's scope allows for.

The chapter first analyzes Foothills's participation in the NEB hearings, second the Berger Inquiry, and third the Lysyk Inquiry. Overall, this chapter aims to provide a more nuanced understanding of the Berger Inquiry and highlight one of the first clear episodes in Canadian history when a natural gas company engaged in what nowadays is known as performative allyship.

## **5.2. The NEB: The Pipeline's Necessity**

In March 1974, the National Energy Board of Canada began preparations for public proceedings on the Mackenzie Valley pipeline projects. That month, the CAGPL filed its proposed pipeline through the Mackenzie Valley to the United States with the NEB.<sup>51</sup> The NEB would be required to review the Canadian portion of that 48-inch line. In April 1975, Foothills Pipelines Ltd., which included Westcoast Transmission, presented its all-Canadian "Maple Leaf" pipeline proposal, designed to transport gas from the Mackenzie Delta to southern Canadian markets.<sup>52</sup> In October 1975, the National Energy Board initiated public hearings to evaluate the competing Arctic gas pipeline projects.<sup>53</sup> However, concerns were raised about the integrity of the Board's chairman, Marshall Crowe, and the hearings were temporarily halted.<sup>54</sup> The hearings resumed in April 1976 with a new review panel consisting

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<sup>51</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, (Ottawa: Minister of Supply and Services, 1977): p.1-5 – 1-6.

<sup>52</sup> Westcoast Transmission Company Limited, *1975 Annual Report*, Mar. 12, 1976, p.19, UBCSC, WEI, Box 7, File 16.

<sup>53</sup> François Bregha, *Bob Blair's Pipeline*, p.65.

<sup>54</sup> Ed Phillips, *Guts and Guile: True Tales from the Backrooms of the Pipeline Industry* (Vancouver: Douglas & McIntyre, 1990): p.82.; Marshall Crowe, "Narrator's Life in the Petroleum Industry," interview by Nadine Mackenzie, *Petroleum Industry Oral History Project*, Glenbow Museum, July 1984.; "Bias Over Pipeline Denied," *Leader-Post* (Regina, Sask.), Oct. 22, 1975, p.10.; "Board Will Miss 'Anger' Of Crowe," *Calgary Herald* (Calgary, Alb.), Mar. 13, 1976, p.39.; "Chairman of Pipeline Hearing Disqualified," *Leader-Post*



(Regina, Sask.), Mar. 11, 1976, p.1.; "Chairman's Impartiality Questioned," *Edmonton Journal* (Edmonton, Alb.), Aug. 21, 1975, p.9.; "Court Bars Pipeline Hearing Head," *Gazette* (Montreal, QC), Mar. 12, 1976, p.2.; "Court Decision to Hear Crowe Arguments Postpones Energy Board Pipeline Hearing," *Vancouver Sun* (Vancouver, B.C.), Feb. 5, 1976, p.17.; "Court Rules NEB Chairman Should Be Disqualified from Pipeline Hearings," *Fort McMurray Today* (Fort McMurray, Alb.), Mar. 11, 1976, p.3.; "Court To Decide on Fate of Crowe," *Calgary Herald* (Calgary, Alb.), Nov. 4, 1975, p.40.; "Court Will Listen to Evidence Concerning Crowe on Dec. 8," *Albertan* (Calgary, Alb.), Nov. 4, 1975, p.24.; "Crowe Asks Court for Ruling on Possible Pipeline Prejudice," *Calgary Herald* (Calgary, Alb.), Oct. 30, 1975, p.34.; "Crowe Asks Court Guidance," *Albertan* (Calgary, Alb.), Oct. 30, 1975, p.5.; "Crowe Built Reputation On Firmness," *Montreal Star* (Montreal, QC), Mar. 12, 1976, p.8.; "Crowe Challenged at Pipeline Hearing," *Gazette* (Montreal, QC), Oct. 28, 1975, p.25.; "Crowe Decision Appealed," *Calgary Herald* (Calgary, Alb.), Mar. 9, 1976, p.34.; "Crowe Denies Personal Bias in Pipe Talks," *Gazette* (Montreal, QC), Oct. 21, 1975, p.15.; "Crowe Hearing Set for Dec. 8," *Edmonton Journal* (Edmonton, Alb.), Nov. 4, 1975, p.12.; "Crowe Ordered Out of Hearing," *Ottawa Citizen* (Ottawa, Ont.), Mar. 11, 1976, p.1.; "Crowe Out of Pipeline Hearing," *Ottawa Citizen* (Ottawa, Ont.), Mar. 13, 1976, p.89.; "Crowe Rejects Pipeline Bias," *Sault Star* (Sault St. Marie, Ont.), Oct. 21, 1975, p.3.; "Crowe Seeks Court Ruling on Challenge," *Star-Phoenix* (Saskatoon, Sask.), Oct. 30, 1975, p.10.; "Crowe Should Stay - Pipe Firm," *Ottawa Journal* (Ottawa, Ont.), Dec. 11, 1975, p.9.; "Crowe Shut Out of Historic Hearing... Over a Chance of Bias," *Edmonton Journal* (Edmonton, Alb.), Mar. 16, 1976, p.20.; "Crowe Victim of Gov't Conflicts of Interest," *Ottawa Journal* (Ottawa, Ont.), Mar. 12, 1976, p.17.; "Crowe," *Calgary Herald* (Calgary, Alb.), Mar. 11, 1976, p.2.; "Dispute over NEB Chairman Handed to Federal Court," *Edmonton Journal* (Edmonton, Alb.), Oct. 29, 1975, p.48.; "Energy Board Head Denies Personal Bias," *Ottawa Journal* (Ottawa, Ont.), Oct. 21, 1975, p.12.; "Energy Chairman Prompts Request to Federal Court," *Windsor Star* (Windsor, Ont.), Oct. 30, 1975, p.28.; "Energy Hearing Adjourned," *Edmonton Journal* (Edmonton, Alb.), Oct. 27, 1975, p.56.; "Evidence Favors NEB Head," *Leader-Post* (Regina, Sask.), Dec. 12, 1975, p.11.; "Federal Court Dismisses Possible Bias Allegation," *Leader-Post* (Regina, Sask.), Dec. 15, 1975, p.5.; "Federal Court to Decide Crowe Request," *Fort McMurray Today* (Fort McMurray, Alb.), Oct. 29, 1975, p.10.; "Federal Court to Hear Objections to Crowe," *Star* (Whitehorse, Ykn), Oct. 29, 1975, p.10.; "Federal Court to Rule on Crowe Accusations," *Gazette* (Montreal, QC), Oct. 30, 1975, p.41.; "Hearings Into Pipeline Bias Slated," *Leader-Post* (Regina, Sask.), Nov. 5, 1975, p.12.; "Is Pipeline Firm Favored?," *Sault Star* (Sault St. Marie, Ont.), Aug. 21, 1975, p.3.; "Lawyer Contends No Conflict of Interest," *Whig-Standard* (Kingston, Ont.), Dec. 10, 1975, p.64.; "Lawyer Raps Disqualifying of Crowe," *Sault Star* (Sault St. Marie, Ont.), Dec. 10, 1975, p.20.; "NEB Chairman Denies Any Bias," *Calgary Herald* (Calgary, Alb.), Oct. 23, 1975, p.44.; "NEB Chief Faces Bias Claims," *Red Deer Advocate* (Red Deer, Alb.), Aug. 21, 1975, p.26.; "NEB Chief Not Biased - Lawyer," *Ottawa Journal* (Ottawa, Ont.), Dec. 10, 1975, p.36.; "NEB Delays Hearing Again," *Calgary Herald* (Calgary, Alb.), Oct. 29, 1975, p.61.; "NEB Hearing Adjourns Second Day," *Fort McMurray Today* (Fort McMurray, Alb.), Oct. 28, 1975, p.8.; "NEB Question Goes to Court," *Montreal Star* (Montreal, QC), Oct. 29, 1975, p.70.; "NEB's Crowe 'Not Unbiased'," *Ottawa Citizen* (Ottawa, Ont.), Dec. 9, 1975, p.19.; "Objections Delay Pipeline Hearing," *Albertan* (Calgary, Alb.), Oct. 29, 1975, p.20.; "Oil Inquiry in Peril as Crowe Disqualified," *Vancouver Sun* (Vancouver, B.C.), Mar. 11, 1976, p.8.; "Ottawa Defends Energy Board Heard Over Bias Charge," *Vancouver Sun* (Vancouver, B.C.), Dec. 6, 1975, p.9.; "Ottawa Pipeline Hearing Falls Apart," *Vancouver Sun* (Vancouver, B.C.), Oct. 27, 1975, p.8.; "Parties Object to Crowe's Part," *Sault Star* (Sault St. Marie, Ont.), Oct. 28, 1975, p.7.; "Personal Bias Suggestions Face Energy Board Head," *Leader-Post* (Regina, Sask.), Aug. 22, 1975, p.26.; "Pipeline Board Studies Challenge to Chairman," *The Times* (Nanaimo, B.C.), Oct. 28, 1975, p.5.; "Pipeline Firm Defends Crowe," *Gazette* (Montreal, QC), Dec. 11, 1975, p.22.; "Pipeline Hearing Delayed Again," *Edmonton Journal* (Edmonton, Alb.), Oct. 28, 1975, p.21.; "Pipeline Hearing Delayed," *Calgary Herald* (Calgary, Alb.), Oct. 27, 1975, p.3.; "Polar Gas Plan Requires Exports," *Calgary Herald* (Calgary, Alb.), Dec. 11, 1975, p.27.; "Pressure Groups Force Hearing Delay," *Fort McMurray Today* (Fort McMurray, Alb.), Oct. 27, 1975, p.8.; "Supreme Court Reserves Decision on Crowe Case," *Albertan* (Calgary, Alb.), Mar. 11, 1976, p.20.; "Supreme Court Rules Crowe Ineligible," *Sault Star* (Sault St. Marie, Ont.), Mar. 11, 1976, p.23.; "Three Public Interest Groups Seek to Disqualify Crowe," *Gazette* (Montreal, QC), Mar. 9, 1976, p.33.

of J.G. Stabback, C.G. Edge, and R.F. Brooks.<sup>55</sup> The three-man panel held hearings in Ottawa and various cities in the Northwest Territories and Yukon.<sup>56</sup> As their work progressed, in September 1976, Foothills (Yukon) added the Alcan or Alaska Highway pipeline proposal to its applications.<sup>57</sup> In May 1977, the NEB concluded its hearings and it issued its decision in July of that year.<sup>58</sup> While instrumental, the NEB's decision was advisory, and it would be up to the Trudeau government to give Canada's final approval for a pipeline.<sup>59</sup>

During its hearings, the NEB adopted a comparative approach and Foothills designed the Alaska Highway proposal to adapt to this NEB's stance. After establishing the economic necessity of a pipeline in an initial set of hearings, the Board, partly inspired by its American counterpart the Federal Power Commission (FPC), moved to contrast the effects of the various proposals in subsequent hearings. It defined what it considered "acceptable" social and environmental effects through such a comparative approach, choosing the one it considered "best" instead of considering the effects of each pipeline individually.

The NEB initially sought to establish the economic necessity of a pipeline. They focused on the scope of Canada's natural gas supply and markets. Concurrent with the NEB

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<sup>55</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. xi.; "Board Resumes Pipeline Hearing," *Vancouver Sun* (Vancouver, B.C.), Apr. 12, 1976, p.8.; "NEB Starts Pipe Probe Again Today," *Gazette* (Montreal, QC), Apr. 12, 1976, p.41.; "NEB Begins Pipeline Hearings Once Again," *Albertan* (Calgary, Alb.), Apr. 12, 1976, p.6.; "NEB Hearings Start Over," *Edmonton Journal* (Edmonton, Alb.), Apr. 12, 1976, p.70.; "Northern Pipeline Hearings Resume Today," *North Bay Nugget* (North Bay, Ont.), Apr. 12, 1976, p.3.; "Arctic Pipe Hearing Re-Open," *Ottawa Journal* (Ottawa, Ont.), Apr. 12, 1976, p.10.; "NEB Hearings Into Northern Pipeline Resume," *Ottawa Citizen* (Ottawa, Ont.), Apr. 12, 1976, p.10.

<sup>56</sup> Westcoast Transmission Company Limited, *1974 Annual Report*, Mar. 7, 1975, p.3-4. UBCSC, WEI, Box 7, File 15.; National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. xi.

<sup>57</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1-6.

<sup>58</sup> Joel J. Sokolsky, "The Canada-U.S. Alaska Highway Pipeline," p.88.; National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. xi.; The public hearings spanned 214 days and included 1,200 exhibits and roughly 900 public documents. Hearing transcripts would amount to a colossal 37,000 pages. National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1-13. More than 80 parties were granted intervenor status, from industry giants to Indigenous organizations. Gas Hearings Set Energy Future," *Ottawa Citizen* (Ottawa, Ont.), Oct. 25, 1975, p.5.; "Mackenzie Pipeline Plans Come Before Board Monday," *Whig-Standard* (Kingston, Ont.), Oct. 25, 1975, p.14.; "Pipeline Battle to Begin Monday," *Windsor Star* (Windsor, Ont.), Oct. 25, 1975, p.29.; "Round Two in Pipeline Battle Starts," *Leader-Post* (Regina, Sask.), Oct. 27, 1975, p.5.

<sup>59</sup> "NEB Winds Up Hearings On Northern Pipeline," *Calgary Herald* (Calgary, Alb.), May 13, 1977, p.3.

inquiry into the Arctic pipeline proposals, the National Energy Board initiated a set of hearings to establish whether it was in Canada's interest to build a pipeline to the Canadian Arctic. Entitled "Supply and Deliverability of Canadian Natural Gas in Relation to Reasonably Foreseeable Requirements for Use in Canada and Potential for Export," these NEB hearings began on Nov. 12, 1974, in Calgary and finished on Mar. 5, 1975, in Ottawa.<sup>60</sup> The hearings and associated studies would ultimately conclude that the demand for Canadian natural gas and the existing export commitments to the U.S. would surpass the available supply. This situation would persist until natural gas from additional reserves could be connected.<sup>61</sup> These conclusions marked a reversal of the position previously held by the NEB and the Canadian gas industry. Over the prior decades, both consistently argued that Canada possessed abundant gas supplies (see Chapter 1).<sup>62</sup> Now, faced with the energy crisis of the 1970s, Western industrialized countries feared persistent energy shortages, economic disarray, and inflation. They therefore shifted their perception of fossil fuels from abundance to scarcity.<sup>63</sup> This shift pushed the NEB to accept on economic and geo-political grounds that Canada needed a pipeline originating in its northern regions.

The subsequent NEB hearings on the Arctic pipelines further cemented this conclusion. Westcoast submitted details to the NEB, reiterating its supply shortages and outlining an imperative need to tap the Mackenzie Delta and Beaufort Sea reserves. As the

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<sup>60</sup> National Energy Board, *Canadian Natural Gas Supply & Requirements* (Ottawa, April 1975), p.I.; Joel J. Sokolsky, "The Canada-US. Alaska Highway Pipeline," p.88.; John Helliwell, "The National Energy Board's 1974-1975 Natural Gas Supply Hearings," *Canadian public policy* Vol. 1, No. 3 (1975): p.415.

<sup>61</sup> National Energy Board, *Canadian Natural Gas Supply & Requirements*, p.I.

<sup>62</sup> Canada, *House of Commons Debate*, 30th Parliament 1st Session, Vol. 7, Jul. 16, 1975, [https://parl.canadiana.ca/view/oop.debates\\_HOC3001\\_07/1085](https://parl.canadiana.ca/view/oop.debates_HOC3001_07/1085), p. 7629.

<sup>63</sup> In 1973 the Organization of the Petroleum Exporting Countries (OPEC) halted the export of crude oil to the U.S., which had chosen to support Israel during the Yom Kippur War. The stop resulted in fuel shortages and caused energy prices to go up, with widespread global economic and political consequences. Confronted with their reliance on oil from the Middle East, North America moved to find alternatives. "The Energy Crises: 1973 and 1978-79," *Government of Alberta*, Accessed October 2, 2023, <http://www.history.alberta.ca/energyheritage/oil/energy-crises-political-debates-and-environmental-concerns-1970s-1980s/the-energy-crises-1973-and-1978-79.aspx#page-1>.; Timothy Mitchell, "The Resources Of Economics: Making the 1973 Oil Crisis," *Journal of Cultural Economy* Vol. 3, No. 2 (2010): p.190.

company's 1974 annual report explains, Westcoast's submission emphasized the "urgent need for access to the Beaufort Mackenzie gas reserves if Canada is to ensure that the nation's long-term requirements are met and that existing export contracts are honoured for their full-term."<sup>64</sup> In its final report, the NEB concluded that the United States suffered from a natural gas shortage that only a connection to its Prudhoe Bay reserves could resolve. By the time such ties were established, Canada would likely be experiencing a natural gas deficiency.<sup>65</sup> The Board, therefore, concluded, "The question of whether or when a pipeline is needed is answered, in the Board's view, by its finding that additional gas is needed for Canadian markets during the first half of the 1980s."<sup>66</sup> These talks shifted the attention away from *whether* a pipeline was needed to *which* pipeline should be approved, making it complicated for the NEB to decide against a pipeline.

Especially at the start of the NEB hearings, Foothills accommodated the dominant national economic interpretations of northern resources in its pipeline proposal. Alleging that its proposal was "the only choice for Canada," Foothills emphasized the nationalistic nature of its Maple Leaf proposal and its benefits for Canada.<sup>67</sup> Westcoast Transmission argued that Canadians would own the Maple Leaf pipeline, which cost \$3 billion less and had a higher proportion of Canadian involvement than CAGPL's plan.<sup>68</sup> E.C. Phillips, Westcoast president,

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<sup>64</sup> *Westcoast Transmission 1974 Annual Report*, Vancouver, B.C.: Westcoast Transmission Company Limited, Mar. 7, 1975, p.4.; Westcoast Transmission Company Limited, *1975 Annual Report*, p.19.

<sup>65</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1–162.

<sup>66</sup> *Ibid.* p.1–88.

<sup>67</sup> "'The Only Chance For Canada,'" *Province* (Vancouver, B.C.), Nov. 6, 1975, p.24.; "Foothills Pipelines Proposal Called Canada's Only Choice," *Albertan* (Calgary, Alb.), Nov. 6, 1975, p.2.; "Business," *Province*, p.1.; "Pipeline Said Canada's 'Only Choice,'" *Times* (Nanaimo, B.C.), Nov. 6, 1975, p.2.; "Reserve Estimates Debated at Hearing," *Gazette* (Montreal, QC), Nov. 6, 1975, p.19.; "Foothills The 'Only Choice,'" *Edmonton Journal* (Edmonton, Alb.), Nov. 6, 1975, p.13.

<sup>68</sup> Westcoast Transmission Company Limited, "Westcoast's Fortunate Geography," *Solutions to an Energy Shortfall*, March 1977, p.5, Library and Archives Canada, OCLC 15820852.; "'The Only Chance For Canada,'" *Province*, p.24.; "Foothills Pipelines Proposal Called Canada's Only Choice," *Albertan*, p.2.; "Business," *Province*, p.1.; "Pipeline Said Canada's 'Only Choice,'" *Times*, p.2.; "Reserve Estimates Debated at Hearing," *Gazette*, p.19.; "Foothills The 'Only Choice,'" *Edmonton Journal*, p.13.; Westcoast Transmission Company Limited, *1975 Annual Report*, p.20.; Westcoast Transmission Company Limited, "Application Filed For Maple

explains in his memoir that Foothills's greatest strength was its reliance on the existing systems of both Westcoast and AGTL. Without those, a line would have to duplicate over 1200 miles of big-inch line.<sup>69</sup> The Westcoast company elaborated in a 1977 publication, "The social and economic benefits of Westcoast's philosophy are obvious when compared to the enormous cost of wastefully duplicating existing pipelines and facilities and hiring and training additional personnel."<sup>70</sup> Foothills lawyer R.J. Gibbs contended that CAGPL designed its pipeline as a high-pressure delivery system for American consumers.<sup>71</sup> The NEB reached a similar conclusion in its final report, stating that CAGPL "primarily would provide a land bridge for the transportation of United States gas through Canada."<sup>72</sup> Especially at the start of the NEB hearings, political economic interpretations of northern gas resources thus dominated Foothills's narratives.

Economic concerns would also push Foothills to explore an alternative to its Maple Leaf line. In 1976, CAGPL argued that the Mackenzie Delta did not possess enough reserves to justify such an approach and a lengthy and expensive pipeline project like Foothills's Maple Leaf line.<sup>73</sup> Jack Armstrong, Imperial Oil Ltd. President, similarly remarked, "Foothills is a non-starter right now [...] There are not enough reserves to build it."<sup>74</sup> The companies emphasized a fact that had become increasingly evident to Foothills as well.<sup>75</sup> Over the years,

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Leaf," *Pipeline News* Vol. 5, No. 3 (March 1975), p.1., UBCSC, WEI, Box 6, File 44.; *Westcoast Transmission 1975 Annual Report*, Vancouver, B.C.: Westcoast Transmission Company Limited, Mar. 12, 1976, p.20.

<sup>69</sup> Ed Phillips, *Guts and Guile*, p.98.

<sup>70</sup> Westcoast Transmission Company Limited, "Westcoast's Fortunate Geography," *Solutions to an Energy Shortfall*, March 1977, p.2.

<sup>71</sup> "Canada 'Would Pay Tab' For Piping Alaska Gas," *Montreal Star* (Montreal, QC), Apr. 15, 1976, p.32.; "Canadians To Pay for Gas to U.S., Pipe Firm Warns," *Ottawa Journal* (Ottawa, Ont.), Apr. 15, 1976, p.8.; "Arctic Gas Proposal Attacked," *Albertan* (Calgary, Alb.), Apr. 19, 1976, p.15.

<sup>72</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1–105.

<sup>73</sup> "Pipeline Will Dwarf Railway," *Brantford Expositor* (Brantford, Ont.), Apr. 9, 1976, p.34.; "Estimates Differ on Oil Reserves," *Brantford Expositor* (Brantford, Ont.), Nov. 16, 1975, p.5.; "Foothills Pipeline Consultant Defends his Reserve Estimates," *Leader-Post* (Regina, Sask.), Nov. 27, 1975, p.35.

<sup>74</sup> "Man Who Came to Dinner Clue to Future Pipeline?" *Ottawa Journal* (Ottawa, Ont.), Feb. 22, 1977, p.10.; "Arctic Gas Proposal Urged," *Fort McMurray Today* (Fort McMurray, Alb.), Feb. 16, 1977, p.2.

<sup>75</sup> François Bregha, Bob Blair's Pipeline the Business and Politics of Northern Energy Development Projects, p.71.

the pipeline companies and their associates subjected the Board and the public to widely diverging and ever-changing estimates.<sup>76</sup> This left the *Calgary Herald* and *Edmonton Journal*

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<sup>76</sup> "The Only Chance For Canada'," *Province* (Vancouver, B.C.), Nov. 6, 1975, p.24.; "Foothills Pipeline Officials Present Different Opinions," *Leader-Post* (Regina, Sask.), Nov. 22, 1974, p.16.; "Gulf Gas Field May Have Double," *Star* (Whitehorse, Ykn.), Nov. 3, 1975, p.13.; "Another Oil Firm Cuts Estimates," *Whig-Standard* (Kingston, Ont.), Dec. 4, 1975, p.32.; "Arctic Gas Estimate Hiked," *Province* (Vancouver, B.C.), Oct. 31, 1975, p.18.; "Arctic Gas Estimates Confusing," *Calgary Herald* (Calgary, Alb.), Dec. 5, 1975, p.29.; "Arctic Gas Field Estimate Doubled," *Ottawa Journal* (Ottawa, Ont.), Oct. 31, 1975, p.29.  
 "Board Links Canadian Needs, Mackenzie Pipeline Projects," *Edmonton Journal* (Edmonton, Alb.), Nov. 15, 1974, p.87.; "Business," *Province* (Vancouver, B.C.), Nov. 6, 1975, p.1.; "Capacity of Delta Gas Field May Double Estimate," *Montreal Star* (Montreal, QC), Oct. 31, 1975, p.26.; "Delta Gas Reserves Set at 7.3 Trln.," *Gazette* (Montreal, QC), Nov. 5, 1975, p.21.; "Differences Shown In Gas Estimates," *Albertan* (Calgary, Alb.), Nov. 5, 1975, p.2.; "Estimates Differ On Gas Reserves," *Brantford Expositor*, p.5.; "Foothills Group Asks for Confidential Data," *Albertan* (Calgary, Alberta), Nov. 1, 1975, p.23.; "Foothills Pipeline Consultant Defends his Reserve Estimates," *Leader-Post*, p.35.; "Foothills Pipelines Proposal Called Canada's Only Choice," *Albertan*, p.2.; "Foothills The 'Only Choice'," *Edmonton Journal* (Edmonton, Alb.), Nov. 6, 1975, p.13.; "Gas Estimates Jump In Mackenzie," *Albertan* (Calgary, Alb.), Oct. 31, 1975, p.1.; "Gas Estimates Vary," *Owen Sound Sun-Times* (Owen Sound, Ont.), Nov. 6, 1975, p.6.; "Gas Reserve Estimate in North Cut 25 Per Cent," *Edmonton Journal* (Edmonton, Alb.), Dec. 3, 1975, p.14.; "Gas Reserve Estimates Differ," *Edmonton Journal* (Edmonton, Alb.), Nov. 5, 1975, p.17.; "Gas Reserve Potential in Mackenzie Delta Cult," *Sault Star* (Sault St. Marie, Ont.), Dec. 4, 1975, p.40.; "Gas Reserves 7.3 Trillion Cubic Feet," *North Bay Nugget* (North Bay, Ont.), Nov. 5, 1975, p.6.; "Gas Reserves Estimate Double Original Amount," *Leader-Post* (Regina, Sask.), Nov. 1, 1975, p.24.; "Gas Supply Views Vary," *Province* (Vancouver, B.C.), Nov. 5, 1975, p.19.; "Gas Totals Disputed," *Montreal Star* (Montreal, QC), Nov. 5, 1975, p.52.; "Greater Gas Output Possible, Probe Told," *Edmonton Journal* (Edmonton, Alb.), Nov. 19, 1974, p.37.; "Gulf Experts Doubles Mackenzie Estimate," *Calgary Herald* (Calgary, Alb.), Oct. 31, 1975, p.24.; "Gulf Oil Reduces Estimate of Northern Gas Reserves," *Red Deer Advocate* (Red Deer, Alb.), Dec. 3, 1975, p.28.; "Gulf Oil Reduces Estimated Delta Gas Reserves by 25%," *Gazette* (Montreal, QC), Dec. 3, 1975, p.15.; "Gulf Reduces Estimate Of Mackenzie Natural Gas," *Vancouver Sun* (Vancouver, B.C.), Dec. 3, 1975, p.47.; "Gulf Reduces Natural Gas Estimates," *Albertan* (Calgary, Alb.), Dec. 3, 1975, p.24.; "Gulf Says Reserves Lower Than Thought," *Whig-Standard* (Kingston, Ont.), Dec. 3, 1975, p.22.; "Imperial Optimistic About Beaufort Sea," *Albertan* (Calgary, Alb.), Dec. 8, 1975, p.12.; "Imperial Puts Reserves at 66 Trillion Cubic Feet," *Leader-Post* (Regina, Sask.), Dec. 8, 1975, p.35.; "Maple Leaf Costs Rise," *Montreal Star* (Montreal, QC), Feb. 5, 1976, p.54.; "Much Less Gas," *Ottawa Citizen* (Ottawa, Ont.), Dec. 4, 1975, p.70.; "Natural Gas Reserve Estimates Differ," *Windsor Star* (Windsor, Ont.), Nov. 5, 1975, p.21.; "Natural Gas Shortages Expected by 1980s Brief," *Ottawa Citizen* (Ottawa, Ont.), Sep. 18, 1974, p.10.; "NEB Doubts Delta Gas Figure," *Calgary Herald* (Calgary, Alb.), Nov. 26, 1975, p.38.; "NEB Takes 'General' Pipe View," *Province* (Vancouver, B.C.), Nov. 15, 1974, p.27.; "NEB to Consider Northern Pipelines' In General Way'," *Fort McMurray Today* (Fort McMurray, Alb.), Nov. 15, 1974, p.3.; "NEB Told Increased Gas Production is Possible In Alberta," *Fort McMurray Today* (Fort McMurray, Alb.), Nov. 20, 1974, p.10.; "North Gas Field Could Yield Twice Estimates," *Edmonton Journal* (Edmonton, Alb.), Oct. 31, 1975, p.6.; "Oil Firms Raise Gas Field Estimates," *Vancouver Sun* (Vancouver, B.C.), Nov. 5, 1975, p.80.; "Pipeline Said Canada's 'Only Choice'," *Times* (Nanaimo, B.C.), Nov. 6, 1975, p.2.; "Pipeline Troubles Increase," *Leader-Post* (Regina, Sask.), Jan. 24, 1975, p.29.; "Reserve Estimate Lowered," *Leader-Post* (Regina, Sask.), Dec. 4, 1975, p.40.; "Reserve Estimates Debated at Hearing," *Gazette*, p.19.; "Shell Cuts Gas Estimate," *Edmonton Journal* (Edmonton, Alb.), Dec. 4, 1975, p.12.; "Shell Slashes Delta Estimate," *Calgary Herald* (Calgary, Alb.), Dec. 4, 1975, p.37.; "Size of Reserves Important Factor," *Star* (Whitehorse, Ykn.), Nov. 5, 1975, p.5.; "The Confusing World of Arctic Gas Estimates," *Edmonton Journal* (Edmonton, Alb.), Dec. 8, 1975, p.51.

confused, "Who is right? No one really knows."<sup>77</sup> However, continued drilling in the Mackenzie Delta resulted in few significant gas discoveries by 1975.<sup>78</sup> From an economic standpoint, it therefore no longer made sense for Foothills to push for its all-Canadian, Maple Leaf line through the Mackenzie Valley.

Westcoast Transmission, however, had been devising an alternative proposal since the late 1960s. In his memoir, E.C. Phillips recounts that Westcoast engaged in discussions regarding the feasibility of a pipeline along the Alaska Highway as early as 1969.<sup>79</sup> Late in 1969, Westcoast formed Mountain Pacific Pipeline Ltd, which proposed to pipe gas south from Alaska through the southern Yukon, British Columbia, and onward to the U.S. Westcoast did little with the company because of a lack of funds, and Westcoast instead partnered with AGTL to propose the Maple-Leaf line.<sup>80</sup> However, with insufficient gas discoveries in the Mackenzie Valley, some senior Foothills officials became increasingly convinced in the mid-1970s that they had to reach the American market to make an Arctic pipeline project viable. Growing increasingly disenchanted with the Maple-Leaf proposal, Foothills in late 1975 revived and modified the Mountain Pacific plan to form the Alaska-Highway pipeline project.<sup>81</sup> The scholar François Bregha uncovered that in early 1976, Foothills also feared that the FPC, which was progressing much faster than the NEB, would approve CAGPL's Mackenzie Valley pipeline, a project Foothills thought Canada would unlikely refuse once the FPC approved it. In the words of AGTL executive vice-president Robert Pierce, Canada "would have a hard time withstanding that pressure."<sup>82</sup> The Alaska Highway route, which, unlike the Maple Leaf line, did connect to the U.S., would form a

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<sup>77</sup> "Arctic Gas Estimates Confusing," *Calgary Herald*, p.29.; "The Confusing World of Arctic Gas Estimates," *Edmonton Journal*, p.51.

<sup>78</sup> François Bregha, *Bob Blair's Pipeline*, p.70.

<sup>79</sup> Ed Phillips, p.61.

<sup>80</sup> *Ibid.*, p.59, 61.

<sup>81</sup> François Bregha, *Bob Blair's Pipeline the Business and Politics of Northern Energy Development Projects*, p.71.

<sup>82</sup> *Ibid.*, p.69, 71.

more formidable opponent to CAGPL's line. They found their American export partner in John McMillan from Texas and his Northwest Pipeline Company of Utah.<sup>83</sup> Primarily economic concerns thus pushed Foothills to adopt a second pipeline proposal.

Environmental factors played a minimal role in the design of the Alaska Highway proposal. Bregha reveals that Foothills, being smaller in size than CAGPL and therefore more flexible in its operations, could more efficiently respond to the proceedings and conclusions of the Federal Power Commission.<sup>84</sup> In particular, Foothills adjusted its novel Alaska Highway pipeline proposal to accommodate the FPC's definition of a pipeline's acceptable environmental impact. The FPC had started its hearings headed by Judge Nahum Litt in April 1975.<sup>85</sup> Under the U.S. National Environmental Protection Act (NEPA) provisions, the Commission had to study all possible alternatives before concluding. These alternatives included a route CAGPL had considered but rejected as uneconomical, a pipeline along the Alaska Highway. When the FPC released its draft environmental impact statement on November 21, 1975, it concluded that the Alaska Highway route was environmentally preferable to both CAGPL and the El Paso tanker routes.<sup>86</sup> In April of 1976, the FPC made its Final Statement. They preferred CAGPL's Mackenzie Valley route over El Paso's tanker project but concluded that CAGPL's plan insufficiently accounted for its environmental impact. As a result, the FPC approved neither plan. The Commission, instead, favoured the Alaska-Highway route because it ran alongside an existing highway and could connect with the Mackenzie Delta through a lateral line that could similarly lay adjacent to a major road, the Yukon's Dempster Highway.<sup>87</sup> The FPC appeared to suggest that once an area had been

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<sup>83</sup> Ed Phillips, *Guts and Guile*, p.69.

<sup>84</sup> François Bregha, *Bob Blair's Pipeline*, p.37-38.

<sup>85</sup> Joel J. Sokolsky, "The Canada-U.S. Alaska Highway Pipeline," 90.; François Bregha, *Bob Blair's Pipeline*, p.70.

<sup>86</sup> François Bregha, *Bob Blair's Pipeline*, p.72.

<sup>87</sup> Joel J. Sokolsky, "The Canada-U.S. Alaska Highway Pipeline," p.90.



environmentally "damaged," any subsequent harm would be inherently less severe than if companies were to build in a "novel" and seemingly "untouched" environment. Foothills incorporated these understandings in its Alaska Highway proposal. In July 1976, Foothills filed its application with the American FPC and submitted its Alaska Highway proposal to the NEB soon after.<sup>88</sup>

### **5.2.1. The NEB: Environmental Concerns**

The introduction of the Alaska Highway proposal allowed the NEB to adopt a broader comparative approach. Instead of debating two pipelines through the Mackenzie Valley, the NEB could now compare the impact of pipelines in two different geographical locations, the Northwest Territories and Yukon. During the continuing NEB hearings, Foothills adapted its political-economic interpretation of northern resources to accommodate the FPC and NEB understanding of the environmental impact. However, it only marginally outlined how the Alaska Highway would manifest its position as environmentally preferable.

Like the FPC, the NEB considered the Alaska Highway route less destructive than the Mackenzie Valley routes. Since pipeline construction would occur in areas already accustomed to human activity, disruptions and environmental consequences were expected to be significantly reduced. Foothills's experts upheld this belief and claimed that its route would indeed keep negative impacts to a minimum because it ran through an existing transportation corridor. The *Edmonton Journal* ran an article that stated, "Foothills environmental and socio-economic experts claim negative impacts will be kept to a minimum, urging that a natural corridor for a pipeline already exists along their designated route."<sup>89</sup> The

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<sup>88</sup> Joel J. Sokolsky, "The Canada-US. Alaska Highway Pipeline," p.91; Ed Phillips, *Guts and Guile*, p.71.; François Bregha, *Bob Blair's*, p.79-82.

<sup>89</sup> "Pipeline Concerns Voiced at Hearings," *Edmonton Journal* (Edmonton, Alb.), Mar. 3, 1977, p.32.

NEB's final report in 1977 would deem the Alaska Highway route environmentally acceptable primarily because of this aspect. In their words, "The most prominent feature of the Foothills (Yukon) proposed Alaska Highway route is its alignment generally along the existing highway transportation corridor."<sup>90</sup> In addition, they remarked, "From an environmental viewpoint, it is undesirable to develop a new pipeline corridor."<sup>91</sup> Foothills was thus in search of an alternative, more viable proposal that skillfully aligned with established understandings of "acceptable" environmental impacts.

The NEB focused on regional environmental impacts, like ungulates and soil stability, as opposed to the global concerns like CO<sub>2</sub> emission one must consider today. The Board believed Foothills could mitigate the environmental impact of the Alaska Highway route, by implementing avoidance and mitigation measures. The NEB had reservations about CAGPL's ability to ensure the protection of the Porcupine caribou herd in the Yukon coastal area, as well as the Beluga whales, snow geese, and swans in Shallow Bay, the primary environmental concerns in the Mackenzie Delta region.<sup>92</sup> In contrast, the Board was satisfied with Foothills's plans for the wildlife habitats of the Alaska Highway project.<sup>93</sup> Species of critical economic and aesthetic importance were mountain sheep, including Thinhorn Mountain Sheep and Dall's sheep, woodland caribou, moose, grizzly bears, and aquatic furbearers like beavers.<sup>94</sup> Foothills asserted that it would construct the Alaska line when "movements of Dall's sheep were less likely to occur."<sup>95</sup> Moose, Foothills argued, were relatively insensitive to

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<sup>90</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1–153.

<sup>91</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, (Ottawa: Minister of Supply and Services, 1977): p. 6–60.

<sup>92</sup> The NEB outlined the main environmental concerns for these reasons in the following manner, "The main concerns underlying the environmental unacceptability of the northern section of the Prime Route are centered around the Porcupine caribou herd in the Yukon coastal area and the Beluga whales, snow geese and swans in Shallow Bay." National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1–152.

<sup>93</sup> Foothills identified four critical wildlife habitats; "muskeg and wetlands, riparian communities, upland forest and subalpine forest." National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 6-141

<sup>94</sup> Ibid.

<sup>95</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 6-141.

environmental disturbances. They were solitary ungulates with no traditional group calving lands or migration patterns, and their habitat requirements and behaviour were flexible. Foothills argued that moose would, therefore, adjust with relative ease to the construction of a pipeline.<sup>96</sup> Foothills's environmental impact strategy for its Alaska Highway route thus centred to a significant extent on avoidance and mitigation efforts.

The NEB adopted a similar approach regarding the Foothills Alaska Highway route's impact on the terrain, acknowledging that its impact on the Yukon would be pervasive because of "the present development and the overall sensitivity of the physical environment in the project area."<sup>97</sup> Foothills identified volatile slopes and concerns about possible fault movements that would trigger landslides in its existing design. However, the company assured the NEB that it would avoid these in its final design, arguing "consideration would be given to avoiding slopes that could be unstable during seismic activity and areas of recognized instability."<sup>98</sup> If the company could not avoid specific slopes, it promised to enhance their stability before proceeding.<sup>99</sup> They, however, acknowledge that "further work [...] would have to be done" on their potential seismic effect.<sup>100</sup> The flooding of the rivers they planned to cross would be counteracted by rip-rapping the river embankments and (re-)scheduling construction activities to avoid high water periods.<sup>101</sup> However, detailed mapping of river behaviours would only occur during a later "design phase."<sup>102</sup> Foothills adopted a similar approach for other environmental factors, like natural drainage patterns, water quality, and the pipeline's impact on ecologically significant areas such as Kluane National Park, the Kluane Game Sanctuary, and the proposed International Biological Program sites adjacent to

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<sup>96</sup> Ibid., p. 6–142.

<sup>97</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 6–132.

<sup>98</sup> Ibid., p. 6–134.

<sup>99</sup> Ibid., p. 6-134-135.

<sup>100</sup> Ibid., p. 6–135.

<sup>101</sup> Ibid.

<sup>102</sup> Ibid.

the Alaska Highway.<sup>103</sup> The environmental impact, the company and Board argued, of the Alaska Highway route, could be counteracted.

The NEB and Foothills did acknowledge that the company had based its plans on "initial conclusions" and emphasized the need for "further work" to assess and address its project's environmental implications fully.<sup>104</sup> The NEB therefore required Foothills to submit a more complete and final environmental assessment if and after it approved the company's Certificate of Public Convenience and Necessity. The Board concluded it would, "include as a condition of any certificate a requirement that Westcoast implement the recommendations that would be contained in any final environmental impact assessment report prepared by its consultant."<sup>105</sup> Following such NEB's conclusions, Gary Letcher, counsel for the Yukon Conservation Society, raised concerns about the usefulness of any environmental assessments completed after the Board approved Foothills's Certificate, but he received a limited response.<sup>106</sup>

It is noteworthy that an environmental consultant, hired by Foothills and its individual members, completed most of the environmental impact assessments.<sup>107</sup> Since the early 1970s, the federal government obliged large-scale natural resource projects to engage in a Federal Environmental Assessment and Review Process.<sup>108</sup> However, while guidelines existed, the process depended largely on self-assessments and, in this case, environmental consultants hired by Foothills.<sup>109</sup> An Environmental Assessment and Review Panel under the Federal Environmental Assessment and Review Office was not mandated to study the Alaska

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<sup>103</sup> Ibid., p. 6-136, 6-138, 6-139, 6-141,

<sup>104</sup> Ibid., p. 6-131.

<sup>105</sup> Ibid. p.6-207 – 6-208.

<sup>106</sup> Ibid.

<sup>107</sup> Ibid. p. 6-208, 6-110.

<sup>108</sup> "Milestones in the History of Assessments," *Government of Canada*.; Canada, Department of Indian Affairs and Northern Development, *Expanded Guidelines for Northern Pipelines*, 1972.

<sup>109</sup> Ibid.

Highway route until August 1976, when the company applied for a right of way in the Yukon.<sup>110</sup>

Stakeholders and the press expressed concern over the relative ease with which NEB accepted Foothills's environmental studies for its Alaska Highway route and the limited quantity of studies Foothills presented. During questioning, Bill Klassen, spokesman for the Yukon Conservation Society, expressed concern over the state of Foothill's environment review. They uncovered various mistakes, including an assessment of the pipeline's impact on the willow fly-catcher, a bird that did not occur in the region.<sup>111</sup> The Conservation Society recommended that Foothills undertake another study, preferably with local supervision.<sup>112</sup> The Council for Yukon Indians informed the NEB that Foothills had conducted analyses of salmon runs in specific streams after the salmon run was over.<sup>113</sup> CAGPL argued that the absence of crucial baseline data in Foothills's environmental reviews made it difficult to draw reliable conclusions. However, they admitted that Foothills could likely complete some necessary vegetation studies within two years through intensive work and sufficient funds.<sup>114</sup> The Toronto-based Energy Probe and the Working Group on Canadian Energy Policy argued that Foothills's Alaska-Highway proposal "can hardly be said to have received the same degree of scrutiny as the others" but deemed it worthy of further studies.<sup>115</sup> The Yukon Conservation Society (YCS) contended that Foothill's environmental statement did not contain adequate information to make "a sound judgment on the environmental impact of the

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<sup>110</sup> "Pipeline History," *Government of Canada*.

<sup>111</sup> "It's A Ghost Town," *Albertan* (Calgary, Alb.), Mar. 4, 1977, p.56.; "Environmental Statement Full of Careless Mistakes," *Leader-Post* (Regina, Sask.), Mar. 4, 1977, p.35.; The willow-fly-catcher does look similar to the Alder Flycatcher, which does live in the Yukon. "Willow Flycatcher (*Empidonax Traillii*)," *Government of Canada*, Accessed October 4, 2023, <https://wildlife-species.canada.ca/bird-status/oiseau-bird-eng.aspx?sY=2019&sL=e&sB=WIFL&sM=p1>.

<sup>112</sup> *Ibid.*

<sup>113</sup> "Pipeline Hearing Delay Sought," *Edmonton Journal* (Edmonton, Alb.), Mar. 4, 1977, p.56.

<sup>114</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p.6–151.

<sup>115</sup> "Southern Groups Say Pipelines Don't Pass," *Star* (Whitehorse, Ykn.), Jun. 24, 1977, p.10.

proposed project."<sup>116</sup> *Edmonton Journal* explains that the company "did not bother to argue when points were brought up showing inaccuracies, inconsistencies and allegedly misleading information in the company socio-economic and environmental reports accompanying their application."<sup>117</sup> The content of Foothills's Alaska-Highway environmental reviews held minimal significance in the decision-making process.

Instead, the NEB adopted a comparative stance, in which it bid one pipeline proposal against the other instead and defining its own interpretation of "environmentally acceptable" in the process. In sum, the Board upheld the belief that constructing a pipeline in an existing transportation corridor would ultimately have less of a negative impact on the environment. Lastly, the NEB felt that Foothills could mitigate any impact, stating in its report that "Foothills for its project would be environmentally acceptable for a pipeline" because it could "ameliorate by avoidance or mitigative measures."<sup>118</sup> The NEB adopted a similar comparative approach to the impact of the various pipelines on Indigenous communities.

### **5.2.2. The NEB: Indigenous Concerns**

At first glance, the National Energy Board and Foothills acknowledged and recognized the importance of incorporating Indigenous concerns. The Board's final report discusses the importance and "magnitude of the potential socio-economic impact on the peoples of the north."<sup>119</sup> To engage with Indigenous communities, the NEB relocated its hearings to Inuvik and Yellowknife for three weeks in 1976 to conduct consultations. During these hearings, six groups, including the Committee for Original Peoples Entitlement, Inuit Tapirisat of Canada,

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<sup>116</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 6-234.

<sup>117</sup> "Energy Hearings Conclude," *Edmonton Journal* (Edmonton, Alb.), Mar. 7, 1977, p.45.

<sup>118</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1-153.

<sup>119</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1-57.

Council of Yukon Indians, Indian Brotherhood of the Northwest Territories, Northwest Territories Chamber of Commerce, and Robert Sharp of Old Crow, had the opportunity to present their perspectives.<sup>120</sup> It is worth noting that the Council for Yukon Indians faced financial constraints and did not file as an official intervener until April 1976. Unlike the Berger Inquiry, the NEB did not fund public interest groups.<sup>121</sup> Nevertheless, the NEB aimed to create some space for Indigenous concerns within its process.

Around the mid-1970s, Foothills started supporting the Indigenous land claim as part of its Maple Leaf pipeline plan, likely because the Berger Inquiry made a Mackenzie route increasingly contentious (see ensuing section).<sup>122</sup> In January 1976, the company emphasized that it was willing to postpone the construction of its Maple Leaf line to accommodate the land claim negotiations of Indigenous communities.<sup>123</sup> This announcement came before the official filing of the Alaska Highway proposal with the NEB while the company was working on its proposal.<sup>124</sup> One of the chairmen of Foothills Pipeline Ltd., Westcoast's Kelly Gibson, informed the NEB in January of 1976 that the company would be willing to extend the construction start date from 1979 to 1981.<sup>125</sup> Foothills anticipated that Indigenous communities in the northern regions would require additional time to reach settlements on land claims. In various newspapers, Mr. Gibson emphasized Foothills's desire for "a proper, not just legal arrangement" with Indigenous communities. In a subsequent interview, he

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<sup>120</sup> "NEB Hearings Move Into North," *Daily Herald-Tribune* (Grande Prairie, Alb.), May 7, 1976, p.6.

<sup>121</sup> "CYI Intervenes In Pipeline Hearings," *Star* (Whitehorse, Ykn.), Apr. 30, 1976, p.2.

<sup>122</sup> François Bregha, *Bob Blair's Pipeline* p.72.

<sup>123</sup> "Foothills May Delay Pipeline Until 1981," *Calgary Herald* (Calgary, Alb.), Jan. 13, 1976, p.20.

<sup>124</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p.1-6.; Joel J. Sokolesky, "The Canada-US. Alaska Highway Pipeline," p.87.

<sup>125</sup> "Foothills May Delay Pipeline Until 1981," *Calgary Herald*, p.20.; "Delays Predicted on Foothills Pipe," *Province* (Vancouver, B.C.), Jan. 13, 1976, p.13.; "Northern Pipeline Delayed Until 1981," *Montreal Star* (Montreal, QC), Jan. 13, 1976, p.14.; "Foothills May Finish Pipeline By 1981, Gibson Tells Hearings," *Fort McMurray Today* (Fort McMurray, Alb.), Jan. 13, 1976, p.3.; "Foothills Completion Date on Northern Pipeline 1981," *Red Deer Advocate* (Red Deer, Alb.), Jan. 13, 1976, p.17.; "Pipeline Job Delayed Again?," *Edmonton Journal* (Edmonton, Alb.), Jan. 13, 1976, p.54; "Land Claims May Delay Foothills Pipeline," *Leader-Post* (Regina, Sask.), Jan. 14, 1976, p.42.; "Completion Date Put Off Until 1981," *Whig-Standard* (Kingston, Ont.), Jan. 13, 1976, p.5.

added, "You can get a strictly legal settlement, but it doesn't mean the people would want you there" and "We want to be welcomed. Otherwise, I can envision people lying down in front of bulldozers."<sup>126</sup> Thus, Foothills appeared willing to accommodate Indigenous concerns in its Maple Leaf plan and to have undertaken a significant shift in its engagement with Indigenous communities. Twenty years prior, the company ignored or relied on governmental authorities to mediate its relationship with Indigenous peoples (see Chapter 2).

However, Foothills' suggested delay did not pertain to its Alaska Highway plan, to which the Indigenous communities in the Yukon were also largely opposed. During the hearings, Indigenous representatives in the Yukon, such as the Council for Yukon Indians, primarily opposed the construction of a natural gas line like the Alaska Highway project before the settlement of Indigenous land claims.<sup>127</sup> The Council desired the authority and clarity of a land claim before it felt it could make an informed decision on a pipeline through its territory.<sup>128</sup> The Council did assert that a pipeline should never go through the Old Crow and North Slope areas. They took no active stance on a Dempster connection to the Mackenzie Delta along the Dempster highway but noted their opposition to the Dempster highway in 1977.<sup>129</sup> Daniel Johnson, the chairman of the Council for Yukon Indians, recalled how the construction of the Alaska Highway itself in the 1940s had disrupted Indigenous communities' traditional ways of life, affecting hunting and trapping. The Association of Yukon Municipalities echoed similar sentiments emphasizing the need to agree on Indigenous land claims before approving the Alaska Highway pipeline. In the media, Ione Christanson, the mayor of Whitehorse, reiterated the importance of a land claim settlement and the belief that land claim negotiations could be completed at a favourable time in Yukon.<sup>130</sup> However,

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<sup>126</sup> Ibid.

<sup>127</sup> "CYI Intervenes In Pipeline Hearings," *Star*, p.2.

<sup>128</sup> "Native Land Pact 'Maybe This Year'," *Red Deer Advocate* (Red Deer, Alb.), Mar. 5, 1977, p.15.

<sup>129</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 5–145.

<sup>130</sup> "Native Land Pact 'Maybe This Year'," *Red Deer Advocate*, p.15.



in the NEB's final report, the general stance of the Government of the Yukon Territory was outlined as "not prepared to suggest that it should be a condition precedent to the issuing of a certificate that the Yukon Indian land claims be settled and implemented."<sup>131</sup> A handful of interveners, including the staff members of Project North, a number of Canadian churches, and the charitable organization OXFAM Canada, stood in solidarity with the Indigenous communities.<sup>132</sup> However, primarily Indigenous communities of the Yukon themselves claimed that land claims should precede the approval of any pipeline project.<sup>133</sup>

The NEB, bound by the fact that Canada required a pipeline, adopted an approach to the pipelines' societal impacts that closely resembles its attitude towards their environmental effects. The Board compared the Yukon to the Northwest Territories, instead of analyzing them individually, and adopted a settler-colonial, hierarchical interpretation of culture to validate its conclusions. They favoured a pipeline through the Yukon instead of the Northwest Territories because the number of affected residents would be fewer, and Indigenous land claims had progressed further in the region. According to the NEB's assessment, "the Indian communities along the Alaska Highway would be adversely affected. However, they are fewer in number - about 3,000 inhabitants versus approximately 13,000 in the Mackenzie Valley corridor."<sup>134</sup> The Board also described Indigenous Yukon communities as having had more prolonged exposure to "modern" society. It stated they were not undergoing a "major restructuring of their society, as the Dene appear to be."<sup>135</sup> Since Indigenous people in the Yukon territory were already exposed to "modernity," a pipeline would harm them less than the Dene communities in the Northwest Territories which had experienced relatively little exposure to "modernity." The NEB concluded that "the socio-economic impact on the

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<sup>131</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 5-146.

<sup>132</sup> Ibid., p. 5-175- 5-178.

<sup>133</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1-159.

<sup>134</sup> Ibid., p. 1-144.

<sup>135</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1-145.

pipeline corridors would, on balance, be more favourable along the Alaska Highway than in the Mackenzie Valley."<sup>136</sup> As the NEB had already decided to approve a pipeline project, the Foothills Alaska Highway project came out as favourable. The Board clearly valued settler-cultural practices over Indigenous ones, calling the first "modern" and thus indirectly those of Indigenous communities less advanced.

Foothills presented evidence to reinforce this belief. The company argued that the socio-economic impact of its Alaska Highway route would be substantially less because its pipeline ran along the Alaska Highway. The route would affect approximately 50 registered trapping areas and the trapping lines and wildlife within them. The NEB's final report concluded, "The Applicant felt that the fact that the pipeline route paralleled the Alaska Highway would help to keep the disruptions to a minimum."<sup>137</sup> Moreover, Foothills argued that the existence of the highway meant that the Alaska Highway pipeline would not significantly affect most big game hunting and associated guided undertakings because they took place away from their pipeline route.<sup>138</sup> Once more, the existence of a transportation corridor and the idea that this area had already been accustomed to human activity played a fundamental role.

The NEB argued that Foothills could mitigate negative socio-economic impacts through appropriate planning and controls. This conclusion was consistent with its stance on environmental matters. The NEB mentioned Foothills's willingness to implement specific programs "to translate socio-economic principles enunciated in the hearing into specific programs by the time of final design."<sup>139</sup> However, the details of such programs were absent from the Board's final report. Foothills assured that all workers would be accommodated in

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<sup>136</sup> Ibid.

<sup>137</sup> Ibid., p. 5–129.

<sup>138</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 5–129 – 5–130.

<sup>139</sup> Ibid., 5–134.

self-contained camps located away from existing communities, believing that the high quality of these camps would encourage workers to stay there.<sup>140</sup> Foothills maintained that its pipeline project would not impose an undue burden on the existing community and continuously emphasized the job opportunities it would provide to residents as well as the local procurements of goods and services that would take place.<sup>141</sup> The company acknowledged that the Yukon's economy could be susceptible to inflation if demand significantly increased, but they believed that Yukoners themselves could effectively manage this situation. The NEB reported that Foothills expressed confidence that "the impact of inflation would be controlled to a great degree by Yukoners themselves in that they would have to decide on the extent of their participation in the project."<sup>142</sup> Foothills, moreover, encouraged local businesses to focus on what they called "stable and durable business opportunities" associated with the pipeline's operations phase.<sup>143</sup> Foothills pledged to give preference to local workers and allow Indigenous communities to engage in traditional activities like hunting and trapping if desired. However, they emphasized that this would likely only be feasible in non-supervisory positions.<sup>144</sup> The general lack of detailed information led scholars J. C. Stabler and M. R. Olfert to remark in their 1980 article, "The facts hardly justify the choice of the Alcan-Foothills route over the Mackenzie Valley route."<sup>145</sup> Although Foothills made pledges to mitigate potential adverse outcomes of its pipeline project, the specific details of these plans, like its environmental plans, remained absent.

When studied independently, the NEB did not believe the Alaska Highway project

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<sup>140</sup> Ibid., p. 5–134.

<sup>141</sup> Ibid., p. 5–136.

<sup>142</sup> Ibid., p. 5–125.

<sup>143</sup> Ibid., p. 5–124.

<sup>144</sup> Ibid., p. 5–122.

<sup>145</sup> Alcan-Foothills" was an alternative name used for the Alaska Highway pipeline.- J. C. Stabler and M. R. Olfert, "Gaslight Follies: The Political Economy of the Western Arctic," p. 386.

would benefit the Yukon Indigenous communities. However, the NEB favoured the Alaska Highway route when adopting its comparative approach to Arctic pipeline development. The Board stated, for instance, that "the native people and the traditional sector would gain little, if anything, from the project." Instead, the communities would likely suffer social disruption, and the pipeline would "permanently damage their culture and way of life."<sup>146</sup> Criminal activity, family breakdowns, and substance abuse would likely offset any benefits from short-term employment during the construction of the Alaska Highway line.<sup>147</sup> However, the NEB argued that the Yukon was "well along the road to becoming an industrialized economy, similar in many ways to a southern economy," and any effects on the economic practices of Indigenous communities would therefore be less.<sup>148</sup> While acknowledging the damaging effects a pipeline would have on the Indigenous communities, the NEB believed the effect in the Yukon to be less detrimental than the Mackenzie line in the Northwest Territories.

The NEB acknowledged the socio-economic and environmental concerns of local Indigenous people, but ultimately dismissed those concerns as a negotiation tactic. This is evident in the following conclusion,

it appears that the pipeline issue is being used as a pawn in the land claims negotiations. As a consequence, some of the current public statements by native groups on pipeline issues may turn out to be different from the positions such groups may wish to adopt at a later time when the climate in respect of land claims may have changed.<sup>149</sup>

The NEB argued that Indigenous communities used the pipeline debates to advocate for broader land claims negotiations, deeming their stance in the debates partly unreliable.

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<sup>146</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 3*, p. 5–216 – 5–217.

<sup>147</sup> Ibid., p. 5–217.

<sup>148</sup> Ibid., p. 5–217.; National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1–145.

<sup>149</sup> National Energy Board. *Reasons for Decision, Northern Pipelines Volume 1*, p. 1–59.

Foothills used the NEB's comparative approach and white settler understanding of pipeline impact to its advantage, arguing that its Alaska Highway route was preferable because it ran through an existing transportation corridor. Foothills simultaneously promised to delay its inviable Maple Leaf pipeline proposal to accommodate Indigenous concerns, portraying itself as supportive of Indigenous rights. The NEB recommended that the Canadian government approve the Alaska Highway project in 1977.<sup>150</sup>

### **5.3. The Berger Inquiry: A Socio-Ecological Understanding**

In the summer of 1975, the National Energy Board endorsed a pipeline from the Canadian Arctic when it ascertained the existence of a natural gas shortage that only "frontier" gas could resolve. Seemingly anticipating such a conclusion, the Canadian government had preemptively appointed Thomas Berger in March 1974 to head an inquiry on the potential impact of a pipeline from the Canadian gas reserves in the Mackenzie Delta (see Image 38). Specifically, the Trudeau government appointed Justice Berger to uncover the "social, environmental and economic impact" of a Mackenzie Valley pipeline and produce an advisory report that determined the desirability and feasibility of such a line.<sup>151</sup> The federal government, moreover, requested that Berger analyze a pipeline as part of a future energy corridor in the Mackenzie Valley.<sup>152</sup> Justice Berger did not possess the authority to decide on the pipeline's construction or determine its executor; that decision rested with the Canadian government in Ottawa.<sup>153</sup> Little did Prime Minister Trudeau know that this Mackenzie Valley

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<sup>150</sup> Government of Canada, "Description – Past Environmental and Socio-Economic Reviews."

<sup>151</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort Simpson, N.W.T.*, Vol. 25, Sept. 8, 1975, p.2469.; "If Your Nation Becomes So Violent That it Would Tear Up Our Land..." *The Province* (Vancouver, B.C.), Dec. 20, 1975, p.70.; "If Your Nation Becomes So Violent That it Would Tear Up Our Land..." *Gazette* (Montreal, QC), Dec. 20, 1975, p.54.

<sup>152</sup> Thomas R. Berger *Northern Frontier, Northern Homeland Vol. 1*, p.1.

<sup>153</sup> *Ibid.*; Canada. Mackenzie Valley Pipeline Inquiry Vol. 25, p.2470.

Pipeline Inquiry or “Berger Inquiry” would become known for its ground-breaking nature and championing of Indigenous and environmental concerns.<sup>154</sup> This section asks to what extent the Berger Inquiry pushed the transmission companies to alter their prevailing understanding of the natural environment as an economic resource. It argues that the Berger Inquiry offered Foothills a platform to establish a façade of support for Indigenous and environmental causes for the company’s actual, eventually successful, economic intentions.

This section advances three points to support this claim. First, the design of the Berger Inquiry facilitated the emergence of an alternative conceptualization of nature. Berger challenged the prevailing perception of the North as a mere repository of natural resources, as Indigenous communities advocated for their deep personal connection to the landscape. Second, in contrast to the Canadian Arctic Gas Pipeline Ltd., Foothills increasingly positioned itself as a proponent of Indigenous rights. Consequently, the Berger Inquiry succeeded in reshaping, to some degree, the attitudes of transmission companies during the Mackenzie Valley pipeline debates. Third, when considering the Berger Inquiry within the broader political-economic context of Arctic gas exploitation, it can be argued that the limited reserves in the Mackenzie Delta influenced Foothills's support. Given this circumstance, supporting the Indigenous demand for a moratorium on pipeline construction in the Mackenzie Valley could be seen as a strategic decision, but not one that Foothills would feel the need to act upon.

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<sup>154</sup> Chris Southcott et al., “Beyond the Berger Inquiry,” p.396.; Stephen Bocking, “Thomas Berger’s Unfinished Revolution,” p.50; John A. Gray and Patricia J. Gray, “The Berger Report,” p. 510.



*Image 38: Justice Thomas Berger during the Mackenzie Valley Pipeline Inquiry.*

"[Thomas Berger]," Photograph, November 15-19, 1976, Northwest Territories Archive N-2018-010: 03874.

### **5.3.1. Design of the Inquiry**

Justice Berger adopted a comprehensive interpretation of the government's guidelines for his task, significantly transforming the prevailing understanding of the concept of "Inquiry." In Canada, white, southern men with limited lived experience north of the 60<sup>th</sup> parallel had historically decided much of the fate of the northern regions. As explained in a newspaper article at the time, "Many people, especially a kind of southerner [...] view the North as a place to come, make some quick money, then get back to "civilization."<sup>155</sup> Justice Berger, however, designed the Mackenzie Valley Inquiry in a manner that catered to the specific needs of the local populations.

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<sup>155</sup> "If Your Nation Becomes So Violent That it Would Tear Up Our Land...", *The Province*, p.70.; "If Your Nation Becomes So Violent That it Would Tear Up Our Land...", *Gazette*, p.54.

Instead of a formal proceeding which heard experts from distant regions, the Mackenzie Valley Inquiry evolved into a platform that amplified local knowledge, environmental concerns, and Indigenous perspectives. The hearings had all the usual bearings of formal inquiry hearings, countless lawyers and experts, professional cross-examinations, and an ever-increasing volume of evidence.<sup>156</sup> However, unconventional and informal community hearings complemented these formal aspects. To facilitate this inclusive process, Justice Berger took two key steps. First, he arranged financial support for Indigenous organizations and public interest groups to prepare and present their cases. Indigenous groups received \$400,000, environmental groups received \$200,000, and several towns in the Northwest Territories shared a budget of \$80,000. An additional \$25,000 was allocated to the Northwest Territories Chamber of Commerce to assess the pipeline's impact on local businesses.<sup>157</sup> Second, Justice Berger decided to bring the hearings to the communities rather than expecting the communities to travel to a central location. The hearing schedule was adapted to align with the availability and preferences of the communities.<sup>158</sup> At the start of Berger's first hearing at Moose Kerr School in Aklavik on April 2, 1975, the Justice articulated his understanding of his mandate. He stated,

I am here so that you can tell me what you think and so that you can say what you want to say. I want you, the people who live here, who make the north your home; I

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<sup>156</sup> "Mackenzie Valley Commissioner Brings Unique Style to Hearings," *Albertan*, p.24.; Pamela Stern, "Hunting for Hydrocarbons: Representations of Indigeneity in Reporting on the New Mackenzie Valley Gas Pipeline," *The American Review of Canadian Studies* Vol. 37, No. 4 (2007): p.421.; "Interior Route May Add \$500 Million to Bill," *Calgary Herald* (Calgary, Alb.), Mar. 12, 1975, p.46.; "Final Talks On Pipeline In the North," *Ottawa Citizen* (Ottawa, Ont.), Apr. 13, 1976, p.37.

<sup>157</sup> Ibid.

<sup>158</sup> Allegedly, Justice Berger even utilized a man's home as a hearing venue when the individual's health prevented him from attending the hearing at the school gymnasium - Shirley Roburn, "Power From the North: The Energized Trajectory of Indigenous Sovereignty Movements," *Canadian Journal of Communication* Vol. 43, No. 1 (2018): p.170.



want you to tell me what you would say to the Government of Canada if you could tell them what was in your minds.<sup>159</sup>

This inquiry design facilitated the unparalleled participation of northern communities in a pipeline inquiry.

Justice Berger took significant steps to ensure that the hearings and the perspectives of northern Indigenous communities reached households across the country, breaking away from the traditionally secluded nature of public inquiries.<sup>160</sup> Justice Berger arranged for the Canadian Broadcasting Corporation (C.B.C.) to broadcast summaries of the hearings in four Indigenous languages to facilitate widespread access and understanding.<sup>161</sup> This initiative enabled northern Indigenous communities to follow the proceedings and prepare for subsequent hearings. Furthermore, transcripts of the hearings were distributed to the communities, ensuring that the information reached those directly impacted. Justice Berger emphasized the importance of these measures in a statement to the C.B.C., “It is a public inquiry. It is not a private kind of session for lawyers and judges and experts.”<sup>162</sup> In these manners, the voices of northern Indigenous communities also found their way into the living rooms of white, southern households. For the first time, these broadcasts confronted such households directly with the consequences of their gas consumption and the challenges Northern Indigenous communities faced.<sup>163</sup> What academics have labelled the “ground-breaking” nature of the Berger Inquiry is thus not unfounded.<sup>164</sup>

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<sup>159</sup> Berger Qt. In Shirley Roburn, “Power From the North,” p.2471.

<sup>160</sup> Berger qt. In Pamela Stern, “Hunting for Hydrocarbons,” p.423.

<sup>161</sup> “Mackenzie Valley Commissioner Brings Unique Style to Hearings,” *Albertan*, p.24.; Canada. Mackenzie Valley Pipeline Inquiry, Vol. 25, p.2471.

<sup>162</sup> Thomas Berger, *Justice Berger Prepares for his Inquiry*, Interview by C.B.C. Dec. 5, 1974, Accessed Mar. 6, 2023, <https://www.cbc.ca/player/play/1724541382>.

<sup>163</sup> Berger qt. In Pamela Stern, “Hunting for Hydrocarbons,” p.423.

<sup>164</sup> Roger Hutchinson, *Prophets, Pastors, and Public Choices*.; Ted Jackson, “Resisting Pipeline Imperialism,” p.51.

The testimonies provided by Indigenous communities introduced a socio-ecological perspective of the natural environment, which contrasted with the companies' focus on the economic utilization of the land. Indigenous community members expressed deep concerns about potentially losing their cultural and ecological heritage. They explained to various newspapers, "There are so many ways, you know, to kill a culture, and I'm pretty sure that the government has used them all."<sup>165</sup> Martha John Charlie, part of the Loucheaux from Old Crow, spoke about the disruption a pipeline would likely cause to future generations' way of life,

God made this land, Mr. Berger [...], and now we who are old don't understand what white men are doing to it and who all the strangers are. We used to know all about the animals, the caribou, and the muskrats, and now the animals act funny. Different, I think. This is why I'm against the pipeline. I'm thinking of our grandchildren. I want to know if the caribou will ever cross the pipeline or if they'll go away and never come back. I want caribou for my grandchildren and great-grandchildren.<sup>166</sup>

The Indian Brotherhood of the Northwest Territories, similarly, iterated that they feared the pipeline would mean a "cultural genocide" for the Indigenous communities.<sup>167</sup> Many Indigenous testimonies refused to adopt a colonial interpretation of progress during the Berger hearings.<sup>168</sup> Asserting that, as Chief John Snow explains, white, southern people's "technology, greed and his self-interest rape of the natural resources which is destroying our

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<sup>165</sup> "Challenge Issued for Northern Lifestyle," *Daily Herald-Tribune* (Grande Prairie, Alb.), Aug. 23, 1976, p.2.; "Pipeline Threat Seen to Trappers' Way of Life," *Vancouver Sun* (Vancouver, B.C.), Aug. 23, 1976, p.5.; "Pipeline Threatens Hamlet Way of Life," *Star-Phoenix* (Saskatoon, Sask.), Aug. 23, 1976, p.2.

<sup>166</sup> "If Your Nation Becomes So Violent That it Would Tear Up Our Land...," *The Province* (Vancouver, B.C.), Dec. 20, 1975, p.70.; "If Your Nation Becomes So Violent That it Would Tear Up Our Land...," *Gazette* (Montreal, QC), Dec. 20, 1975, p.54.

<sup>167</sup> "Southern Rule 'Cultural Genocide'," *Montreal Star*, p.29.; "Cultural Genocide Feared," *Province* (Vancouver, B.C.), Nov. 19, 1976, p.9.

<sup>168</sup> "Pipeline Inquiry Starts Heated Debate," *Windsor Star* (Windsor, Ont.) Mar. 4, 1975, p.17.; Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort Good Hope, N.W.T.* Vol. 19, Aug. 6, 1975, p.1841.; Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort McPherson, N.W.T.* Vol. 13, Jul. 10, 1975, p.1179, 1183–1184.

land."<sup>169</sup> They expressed their understanding of “progress,” rooted in their culture, land, and people and received support from various Indigenous communities across Canada, including the Inuit communities in Holman and Sachs Harbor (Image 39).<sup>170</sup>



*Image 39: [Unidentified community members at Mackenzie Valley Pipeline Inquiry community hearing in Holman (Ulukhaktok)].*

“[Berger Inquiry],” Photograph, March 2-3, 1976, Northwest Territories Archive N-2018-

Various Indigenous groups acknowledged the potential benefits of exploiting northern resources but wanted to ensure direct benefits in return. They believed that if a pipeline project was to proceed, Indigenous communities should receive tangible benefits, such as

<sup>169</sup> Canada. Mackenzie Valley Pipeline Inquiry, Vol. 52, p.5273.

<sup>170</sup> Holman and Sachs Harbor communities expressed their worries about the pipeline's threats to their independent subsistence practices, particularly hunting seals and white foxes. The Prince Edward Island Association of Metis and Non-Status Indians related to the struggles faced by Indigenous communities in the North as they feared the northern peoples would end up in a situation similar to theirs. - “Berger Flies to Icy Wastes,” *Vancouver Sun* (Vancouver, B.C.), Mar. 2, 1976, p.11.; “Southern Rule ‘Cultural Genocide’,” *Montreal Star* (Montreal, QC), Nov. 19, 1976, p.29.; “Cultural Genocide Feared,” *Province*, p.9.; “Scientist Warns Against Hasty Beaufort Sea Drilling,” *Edmonton Journal* (Edmonton, Alb.), Jan. 29, 1976, p.48.; “Ecological Risks Involved Make Project a Mistake,” *Leader-Post* (Regina, Sask.), Jan. 30, 1976, p.17.; “p.E.I. Urges Moratorium On Pipeline,” *Calgary Herald* (Calgary, Alb.), Jun. 8, 1976, p.8.; “Berger Inquiry Listens to p.E.I. Development Briefs,” *Albertan* (Calgary, Alb.), Jun. 9, 1976, p.16.; “p.E.I. United On Mackenzie Pipe,” *Daily Herald-Tribune* (Grande Prairie, Alb.), Jun. 9, 1976, p.26.

Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Latham Island, N.W.T.* Vol. 34, Oct 22, 1975, p. 3402, 3434.; Canada. Mackenzie Valley Pipeline Inquiry, Vol. 12, p.1135.; Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Trout Lake, N.W.T. and Nahanni Butte, N.W.T.* Vol. 24, Aug. 24, 1975, p.2420.

employment opportunities.<sup>171</sup> Larry McConnell, representing the Fort Resolution Settlement Council, explained that non-local, or "imported people," typically filled many jobs in the region, but they wanted employment prospects for local populations.<sup>172</sup> Adolf Deusterhus testifying in Yellowknife, similarly stated that "the construction of a pipeline would bring much-needed employment opportunities in the north."<sup>173</sup> During the hearings, Mr. Hushion and Mr. Ellwood from Foothills responded by underscoring their pipeline's numerous job opportunities, emphasizing that Foothills would preferentially hire northern residents.<sup>174</sup> Following the completion of the project, Mr. Ellwood spoke of 250 permanent operating jobs in the Northwest Territories. He asserted that the company reserved a significant portion of these jobs for northern residents.<sup>175</sup> CAGPL echoed these sentiments.<sup>176</sup> The companies did acknowledge that certain roles during the operational phase would require northerners to have specialized skills and qualifications.<sup>177</sup> These Indigenous perspectives aimed to ensure that the economic benefits generated by resource extraction projects would stay within the region and contribute to the sustainable development of northern communities.

The design of the Berger Inquiry, therefore, for the first time, gave Indigenous communities a platform to voice their concerns over a potential natural gas pipeline through their territories. Indigenous representatives took this opportunity to present an alternative

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<sup>171</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Latham Island, N.W.T.* Vol. 34, Oct 22, 1975, p. 3402, 3434.; Canada. Mackenzie Valley Pipeline Inquiry, Vol. 12, p.1135.; Canada. Mackenzie Valley Pipeline Inquiry, Vol. 24, p.2420.

<sup>172</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort Resolution, N.W.T.* Vol. 32, Oct. 8, 1975, p.3065

<sup>173</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Yellowknife, N.W.T.* Vol. 34, Oct. 15, 1975, p.3270

<sup>174</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort Simpson, N.W.T.* Vol. 27, Sept. 10, 1975, p. p.2725.

<sup>175</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Pine Point, N.W.T.* Vol. 30, Oct. 6, 1975, p.2917.

<sup>176</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Yellowknife, N.W.T.* Vol. 34, Oct. 15, 1975, p. 3250.

<sup>177</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Aklavik, N.W.T.*, Vol. 40, Feb. 23, 1976, p.3848.

understanding of the natural environment. Instead of being a mere economic resource, they viewed the natural environment as a source of cultural significance, a homeland, and their own interpretation of “progress.”

### 5.3.2. Company Views

The inclusion of Indigenous voices in these hearings forced the two pipeline proponents, CAGPL and Foothills, to at least consider Indigenous concerns in their pipeline proposals. CAGPL struggled to move away from its inherently economic approach to pipeline construction. However, Foothills learned to adjust its narratives without necessarily sacrificing any potential economic gains.

CAGPL adopted a dual stance. They would support settling Indigenous land claims but not at the expense of their natural gas pipeline.<sup>178</sup> William Wilder, the company's chairman, most clearly elucidated this attitude. He publicly urged the government to expedite the settlement process and also emphasized the nation's need for gas and the undesirability of any pipeline construction delays.<sup>179</sup> Echoing this sentiment, Mr. Horte stated, "We believe that construction of the pipeline could proceed without prejudice to a settlement of these claims or to the interests of native people."<sup>180</sup> Pierre Genest, a lawyer for CAGPL, stated, "In short, what we believe this project offers to Canada is the most economically feasible contribution to Canada's defence against the world energy crisis."<sup>181</sup> He further asserted that

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<sup>178</sup> "Hot Land-Claims Issue in Berger's Lap," *Province* (Vancouver, B.C.), Mar. 3, 1975, p.5.

<sup>179</sup> "Pipeline Delay Defended And Attacked," *Whig-Standard* (Kingston, Ont.), Jun. 4, 1976, p.3.; "Witnesses Call for Land Claim Settlements," *Sault Star* (Sault St. Marie, Ont.), Jun. 4, 1976, p.21.; "Settle Claims Before Building Pipeline, Berger Inquiry Told," *North Bay Nugget* (North Bay, Ont.), Jun. 4, 1976, p.2.; "Renewed Pleas For Pipeline Delay Heard By Berger," *Calgary Herald* (Calgary, Alb.), Jun. 4, 1976, p.11.

<sup>180</sup> "Mackenzie Line Need Right Now," *Edmonton Journal* (Edmonton, Alb.), Aug. 12, 1975, p.81. In subsequent hearings, CAGPL representative Mr. Rowe commented, "The position of Arctic Gas is that the building of a pipeline would not influence the settlement of the land claims." Vol. 24 Trout Lake, N.W.T. Aug. 23, 1975, and Nahanni Butte, N.W.T. Aug. 24, 1975, p.2430-2431.

<sup>181</sup> "Silence Conspiracy' Charged," *Vancouver Sun* (Vancouver, B.C.), Mar. 3, 1975, p.13.

Berger's disapproval of a pipeline would negatively affect the well-being of every Canadian citizen. In his words, it was "bound to seriously affect the well-being of every Canadian man, woman and child."<sup>182</sup> CAGPL thus only marginally chose to include the arisen socio-ecological understanding of Arctic resources in its public narratives.

CAGPL, especially in its narratives, generally prioritized the pipeline's route and cost over environmental concerns. The conglomerate did fund the independent Environment Protection Board, a group of scientists that completed an independent examination of CAGPL's plan. Its lengthy report was of "real assistance," to the Berger Inquiry, as Berger himself would state.<sup>183</sup> The report was critical of CAGPL's plans and newspapers reported that the conglomerate had primarily based its route selection on cost-effectiveness and only minimally considered the environment.<sup>184</sup> However, the company believed that technological prowess and engineering solutions could overcome environmental challenges.<sup>185</sup> The 1975 Department of Environmental Affairs report on the environmental impact of Arctic Gas echoes this attitude. The report states, "The applicant selected the pipeline route [...] to minimize construction cost and has chosen to apply engineering solutions to environmental problems encountered, rather than avoid the problems by re-routing the line."<sup>186</sup> During the Berger hearings, Arctic Gas grew increasingly frustrated with the criticisms of its route selection. It challenged others to propose alternative suggestions, asserting, "Tell us where to

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<sup>182</sup> Ibid.; "Hot Land-Claims Issue in Berger's Lap," *Province*, p.5.; "Ottawa Pulling Rug Out From Under Berger?," *Alberni Valley Times* (Alberni, B.C.), Mar. 4, 1975, p.1.; "Pipeline Decision in Ottawa May Negate Berger Inquiry," *Montreal Star* (Montreal, QC), Mar. 4, 1975, p.35.; "Ottawa May Decide Mackenzie Pipeline Issue," *Star-Phoenix* (Saskatoon, Sask.), Mar. 4, 1975, p.1.; "Sharp Ruffles Berger Probe," *Red Deer Advocate* (Red Deer, Alb.), Mar. 4, 1975, p.1.; "New Pipeline Debate Erupts in Commons," *Sault Daily Star* (Sault Ste. Marie, Ont.), Mar. 4, 1975, p.1.

<sup>183</sup> Thomas R. Berger, "The Mackenzie Valley Pipeline Inquiry," *Queen's Quarterly* Vol. 83, No. 1 (1976): p.4.

<sup>184</sup> Ibid.; "Ecological Impact of Delta Pipeline Probed," *Montreal Star* (Montreal, QC), Jan. 21, 1976, p.40.; "Pipeline Ecology Questions 'Unanswered'," *Calgary Herald* (Calgary, Alb.), Jan. 21, 1976, p.11.; "Little Data Available on Pipeline Impact Bliss," *Fort McMurray Today* (Fort McMurray, Alb.), Jan. 21, 1976, p.2.; "Effects of Pipeline Said Not All Known," *Leader-Post* (Regina, Sask.), Jan. 22, 1976, p.40.; "Many Questions On Pipeline Remain," *Daily Herald-Tribune* (Grande Prairie, Alb.), Jan. 23, 1976, p.23.

<sup>185</sup> "Interior Route May Add \$500 Million to Bill," *Calgary Herald*, p.46.

<sup>186</sup> "Costs Decided Route, Report Says," *Edmonton Journal* (Edmonton, Alb.), Mar. 13, 1975, p.12.

put it," as President Van Horte pleaded, "and we'll see what we can do."<sup>187</sup> CAGPL unequivocally embraced an economics-first approach to their natural gas pipeline and considered the environment primarily an obstacle it needed to overcome, not unlike earlier engineering attitudes toward pipeline construction.

It was not until July 1975 that Northern Affairs Minister Judd Buchanan requested Justice Berger to include the Foothills pipeline in the inquiry.<sup>188</sup> Foothills initially faced strong criticism during the hearings for its primarily economic perspective on the natural environment. However, the company quickly recognized the need to adjust its economic narratives to align with the concerns of the northern region. In a school gymnasium in Hareskin, a community of approximately 500 Indigenous residents, Chief T'selei explained to Foothills president Robert Blair how southern companies had fundamentally misunderstood the Indigenous peoples' deep-rooted connection to the land,

I cannot understand how a man can live for wealth and power, knowing that his ambition and greed is destroying so much around him [...] Somehow, in your carpeted bedroom, in your panelled office, you are plotting to take away from me the very centre of my existence. You are stealing my soul.<sup>189</sup>

With Mr. Blair seated just a few feet away, the Chief marked Bob Blair as a direct threat to the Indigenous way of life. Using an analogy, Chief T'selei declared, "Don't tell me you are not responsible [...] You are the 20th Century General Custer; you have come to destroy the Dene nation."<sup>190</sup>

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<sup>187</sup> "Optimism For Pipeline Inquiry," *Owen Sound Sun-Times* (Owen Sound, Ont.), Jun. 9, 1975, p.4.

<sup>188</sup> "Observer of Berger Inquiry Says Canadian Pipeline Chances Good," *Fort McMurray Today* (Fort McMurray, Alb.), Jul. 11, 1975, p.2.; "All-Canadian Pipeline Plan Gaining Ground," *Windsor Star* (Windsor, Ont.), Jul. 11, 1975, p.45.

"Odds on Canadian Pipeline Improved," *Sault Daily Star* (Sault St. Marie, Ont.), Jul. 11, 1975, p.5.; "Rival Route Gets Push," *Montreal Star* (Montreal, QC), Jul. 11, 1975, p.29.; "All-Canadian Pipeline Hopes Rise at Inquiry," *Gazette* (Montreal, QC), Jul. 11, 1975, p.20.; "Foothills Pipeline Given New Hope," *Calgary Herald* (Calgary, Alb.), Jul. 14, 1975, p.16.

<sup>189</sup> Ibid.

<sup>190</sup> Ibid.

In a subsequent interview, Bob Blair expressed sympathy towards the Chief's sentiments. He rationalized Chief T'selei's behaviour by acknowledging the radicalism known to exist in Fort Good Hope. Blair did not take the Chief's remarks personally, stating, "I don't think he was speaking specifically of our company destroying anything."<sup>191</sup>

In contrast to CAGPL, Foothills positioned itself as a supporter of Indigenous communities during the Berger Inquiry. Upon his return to Calgary following, what he called his "shock treatment," Blair decided that Foothills would renounce the "General Custer" image.<sup>192</sup> Blair proclaimed that a senior representative with the authority to change Foothills's operations would attend every hearing, "He will sit in the front row where the people can see him and watch his reactions."<sup>193</sup> During the hearings, residents had expressed concern over the influx of workers, the accompanying strain on northern services, including the already overburdened healthcare system, and the possible increase of substance abuse and related disturbances.<sup>194</sup> Foothills pledged to review the location of its construction camps and relocate them if necessary to minimize contact with Indigenous communities.<sup>195</sup> However, it remained unclear whether this would be sufficient. Furthermore, Blair openly conversed with Indigenous communities on the radio. In an almost hour-and-a-half-long program entitled "Our Native Land," he debated the natural gas line with Harold Cardinal, the president of the Indian Association of Alberta.<sup>196</sup> He also outlined in an interview that Foothills would consider selling controlling interest in the company to Indigenous communities and explained

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<sup>191</sup> Ibid.; Canada. Mackenzie Valley Pipeline Inquiry, Vol. 19, p.1852.

<sup>192</sup> "Pipeline Backdown," *Albertan* (Calgary, Alb.), Aug. 13, 1975, p.1. "Blair Got Shock Treatment," *Red Deer Advocate* (Red Deer, Alb.), Aug. 15, 1975, p.20.

<sup>193</sup> Ibid.

<sup>194</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Latham Island, N.W.T.* Vol. 34, Oct. 22, 1975, p.3400.; Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings Fort Simpson, N.W.T.* Vol. 25, Sept. 8, 1975, p.2519.

<sup>195</sup> "Pipeline Backdown," *Albertan*, p.1.; "Blair Got Shock Treatment," *Red Deer Advocate*, p.20.

<sup>196</sup> "Radio," *Leader-Post* (Regina, Sask.), Apr. 8, 1976, p.32.; "CFOS Highlights," *Owen Sound Sun-Times* (Owen Sound, Ont.), Apr. 9, 1976, p.19.; "On The Airwaves This Weekend," *Gazette* (Montreal, QC), Apr. 10, 1976, p.20.



that he had discussed this matter with Indigenous leaders.<sup>197</sup> Foothills therefore demonstrated a more flexible stance towards Indigenous concerns. Smaller in scale than CAGPL, it was better able to facilitate the inclusion of Indigenous concerns and alternative perspectives on the natural environment.

Foothills was willing to partly renounce its economic understanding of northern resources and prioritize Indigenous concerns for its Maple Leaf route. Blair emphasized the significance of local support for Foothills during a hearing session with about 125 people in a school gymnasium, stating, "Foothills does not choose to install a pipeline through any location if the land owners are strongly opposed or arguing their claims."<sup>198</sup> Later he told reporters: "We don't put on bullet-proof vests and run over them, and we don't call for the Mounties," to highlight the company's commitment to seemingly peaceful and respectful engagement.<sup>199</sup> In an interview following a Berger hearing, Blair remarked that Foothills could wait ten years if necessary.<sup>200</sup> Blair's promise was considered a "big breakthrough" by Indigenous organizations.<sup>201</sup> Unless there was a "substantial improvement in the attitude of

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<sup>197</sup> "Would Sell Control to Natives," *Star* (Whitehorse, Ykn.), Aug. 13, 1975, p.10.

<sup>198</sup> "Pipeline Executive Willing to Delay Mackenzie Line," *Star-Phoenix* (Saskatoon, Sask.), Aug. 7, 1975, p.24.; "Company Would Delay Pipeline 10 Years to Resolve Native Problem," *Edmonton Journal* (Edmonton, Alb.), Aug. 7, 1975, p.1.; "Pipeline Firm Willing to Delay Construction," *Times* (Nanaimo, B.C.), Aug. 7, 1975, p.12.; "Pipeline Delay Eyed," *Vancouver Sun* (Vancouver, B.C.), Aug. 7, 1975, p.20.; "Pipeline Company Willing to Wait," *Alberni Valley Times* (Alberni, B.C.), Aug. 7, 1975, p.11.

<sup>199</sup> *Ibid.*

<sup>200</sup> *Ibid.*; "Foothills Ready to Delay Construction 10 Years if Need Be," *Fort McMurray Today* (Fort McMurray, Alb.), Aug. 7, 1975, p.3.; "Pipe Men Willing To Wait 10 Years," *Times Colonist* (Victoria, B.C.), Aug. 7, 1975, p.18.; "Pipeline Builder Could Ask Delay In Construction," *Windsor Star* (Windsor, Ont.), Aug. 7, 1975, p.5.; "Pipeline Delay Offered," *Ottawa Citizen* (Ottawa, Ont.), Aug. 7, 1975, p.1.; "Pipeline Executive Willing to Delay Mackenzie Line," *Star-Phoenix*, p.24.; "Ill Lay Down My Life, Says Anti-Pipeline Chief," *Ottawa Journal* (Ottawa, Ont.), Aug. 7, 1975, p.1.; "Pipeline Delay Possible to Settle Native Claims," *Brantford Expositor* (Brantford, Ont.), Aug. 7, 1975, p.2.

<sup>201</sup> "Breakthrough' Scored in Mackenzie Land Claim," *Red Deer Advocate* (Red Deer, Alb.), Aug. 8, 1975, p.12.; "Land Claim Supported," *Daily Herald-Tribune* (Grande Prairie, Alb.), Aug. 8, 1975, p.2.; "Pipeline Firm Head Hints Delay," *Province* (Vancouver, B.C.), Aug. 8, 1975, p.5.; "Natives Score Breakthrough in Land Claim Struggle, Lawyer tells Berger," *Fort McMurray Today* (Fort McMurray, Alb.), Aug. 8, 1975, p.10.; "Foothills Will Bow to Native Demands," *Edmonton Journal* (Edmonton, Alb.), Aug. 8, 1975, p.10.; "Pipeline Firm President Aids Indians' Land Claim," *Calgary Herald* (Calgary, Alb.), Aug. 8, 1975, p.2.

the residents," Blair would recommend postponing the project.<sup>202</sup>

While seemingly highly supportive of Indigenous land claims, academic François Bregha, who actively studied Bob Blair's involvement in the Arctic pipeline debate, remarked that the Berger hearings had "sensitized him to the deep opposition" but that Blair was "above all a pragmatist."<sup>203</sup> CAGPL's Van Horte most likely accurately declared Foothills's motives, as reported in *Edmonton Journal*, "that Mr. Blair's suggestion of deferring construction is self-seeking since the construction of the proposed Foothills pipeline [...] could not proceed for several years in any event, until more natural gas reserves have been established in the Mackenzie Delta region."<sup>204</sup> Foothills was thus largely accommodating Indigenous concerns during the Berger Inquiry to establish an image of support, but the company's Mackenzie Valley project was not even feasible yet.

Foothills neglected to include Indigenous understandings of a pipeline's environmental impact in its assessments. Instead, it adhered to the dominant, white settler understanding of environmental impact mitigation, where mitigation measures can protect the environment if properly designed and implemented. During the hearings, Foothills's witnesses informed Mr. Berger that information on the route conditions remained scarce for certain branch sections. Concerning the mainline, Environmental supervisor Leo Bouckhout testified that they could rely on the substantial amount of data available because Alberta Gas Trunk took some of the studies it had completed as part of the Arctic Gas consortium. However, Foothills had already made revisions in response to environmental concerns and expected further modifications. Consequently, in late August of 1975, Commission Counsel Ian Scott concluded that

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<sup>202</sup> "Foothills Ready to Delay Construction 10 Years if Need Be," *Fort McMurray Today*, p.3.; "Pipe Men Willing To Wait 10 Years," *Times Colonist*, p.18.; "Pipeline Builder Could Ask Delay In Construction," *Windsor Star*, p.5.; "Pipeline Delay Offered," *Ottawa Citizen*, p.1.; "Pipeline Executive Willing to Delay Mackenzie Line," *Star-Phoenix*, p.24.; "Ill Lay Down My Life, Says Anti-Pipeline Chief," *Ottawa Journal*, p.1.; "Pipeline Delay Possible to Settle Native Claims," *Brantford Expositor*, p.2.; "Pipeline Delay Eyed," *Vancouver Sun*, p.20.; "Pipeline Company Willing to Wait," *Alberni Valley Times*, p.11.

<sup>203</sup> François Bregha, "The Mackenzie Valley Pipeline and Canadian Natural Gas Policy," p.80.

<sup>204</sup> "Mackenzie Line Need Right Now," *Edmonton Journal*, p.81.

Foothills still had to complete most environmental assessment work.<sup>205</sup> The company did promise that, during construction, it would maintain a "well-qualified environmental inspection team" but omitted details on the structure and operation of such a team.<sup>206</sup> Foothills thus did not actively try to include any alternative Indigenous understanding of the natural environment in its environmental assessment reports.

In his final report, Berger acknowledged an alternative, Indigenous understanding of natural resources and resource management. He broke apart the prevailing white settler understanding that plans could almost always contain adverse environmental effects with the correct mitigation efforts,

There is a myth that terms and conditions that will protect the environment can be imposed, no matter how large a project is proposed. [...] It is an assumption that does not hold in the North.<sup>207</sup>

Berger openly opposed the idea that southern, white settler cultural understandings were superior to Indigenous ones, "So the future of the North ought not to be determined only by our own southern ideas of frontier development. It should also reflect the ideas of the people who call it their homeland."<sup>208</sup> He criticized the Canadian nation for disregarding and disrespecting Indigenous viewpoints, "Euro-Canadian society has refused to take native culture seriously. European institutions, values and use of land were seen as the basis of culture."<sup>209</sup> Moreover, he disagreed with the pipeline companies that they would provide valuable economic opportunities for the Indigenous residents, stating, "There is abundant

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<sup>205</sup> "Official Admits Lack of Detail," *Star-Phoenix* (Saskatoon, Sask.), Aug. 23, 1975, p.4.; "National," *Edmonton Journal* (Edmonton, Alb.), Aug. 23, 1975, p.2.; "Environmental Information Still Scanty on Pipeline Route," *Albertan* (Calgary, Alb.), Aug. 23, 1975, p.3.; "Little Environmental Work on One-Third of Pipeline," *Red Deer Advocate* (Red Deer, Alb.), Aug. 23, 1975, p.16.

<sup>206</sup> Canada. Mackenzie Valley Pipeline Inquiry, *Minutes of Proceedings* Inuvik, N.W.T. Vol. 36, Jan. 28, 1976, p.3506–3507.

<sup>207</sup> *Ibid.*, p. XI.

<sup>208</sup> *Ibid.*, p. XIX.

<sup>209</sup> *Ibid.*, p. XVIII.

reason to doubt that a pipeline would provide meaningful and ongoing employment to many native people”<sup>210</sup> Lastly, he repeated Indigenous voices and their concerns for their ways of life, identity, increased alcoholism, crime rates, and violence that a pipeline would bring to their communities.<sup>211</sup> Berger emphasized that any attempt to build a pipeline through the Mackenzie Valley without first settling Indigenous land claims would be devastating, as he writes, “The social costs of building a pipeline now will be enormous, and nonremedial programs are likely to ameliorate them.”<sup>212</sup> The Berger report, therefore, advocated for a 10-year moratorium on any development in the Mackenzie Valley.<sup>213</sup> As other academics' work concluded, the Berger report itself was rather ground-breaking. For the first time, an inquiry acknowledged alternative, Indigenous viewpoints and criticized the established practices of the Canadian government and fossil fuel industry.

Instead of adopting Berger’s understanding of natural resource management, the Canadian government chose to adhere to established ways and support a pipeline project that bypassed the Mackenzie Valley. On May 11, two days after Berger's appearance in front of the Canadian federal government, *Ottawa Journal* reported that "A Dempster Highway connection between the proposed AlCan Highway pipeline and the Mackenzie Delta has been regarded in government circles as providing a way for Canada to tap Mackenzie Delta gas

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<sup>210</sup> Ibid., p. XIX., XXI.

<sup>211</sup> Ibid., p. XXI-XXII.

<sup>212</sup> Ibid., p. XXII.

<sup>213</sup> “Berger to Give Ottawa Pipeline Information,” *Nanaimo Daily News* (Nanaimo, B.C.), May 9, 1977, p.8.; “Berger Study Hits Beaufort Activity,” *Montreal Star* (Montreal, QC), May 10, 1977, p.13.; “The Berger Report - A Cry Right From the Heart,” *Province* (Vancouver, B.C.), May 10, 1977, p.1.; “Billion Dollar Uncertainties,” *Province* (Vancouver, B.C.), May 10, 1977, p.4.; “B.C. Reserving Official Comment,” *Times Colonist* (Victoria, B.C.), May 10, 1977, p.3.; “Pipeline President Disagrees With Report,” *Edmonton Journal* (Edmonton, Alb.), May 10, 1977, p.33.; “Report Reactions,” *Windsor Star* (Windsor, Ont.), May 10, 1977, p.33.; “Dempster Spur Could Move Delta Gas,” *Ottawa Journal* (Ottawa, Ont.), May 11, 1977, p.9.; “Report Angers Caroline Mayor,” *Red Deer Advocate* (Red Deer, Alb.), May 12, 1977, p.2.; “NEB Hearings Wrap Up,” *Red Deer Advocate* (Red Deer, Alb.), May 13, 1977, p.5.; “NEB Winds Up Hearings On Northern Pipeline,” *Calgary Herald*, p.3.; “U.S. Wants Early Start To Pipeline Talks,” *Ottawa Journal* (Ottawa, Ont.), May 13, 1977, p.4.; “AGTL Made Huge Outlay of Capital,” *Calgary Herald* (Calgary, Alb.), May 14, 1977, p.12.; “Pipelines and Surprises,” *Province* (Vancouver, B.C.), May 14, 1977, p.4.

reserves should a Canada-US Mackenzie Valley pipeline proposed by Canadian Arctic Gas Pipeline Ltd. of Toronto fail to receive Canadian approval.”<sup>214</sup> Despite its ground-breaking nature, Berger's understanding of the natural environment did not fully translate into the decisions of the Canadian government.

Foothills, which had positioned itself as a supporter of Indigenous land claims during the Berger hearings, moved to accommodate such interests. Bob Blair reported that they would include Dempster later in their proposal. *Ottawa Journal* stated, “The AlCan Highway gas pipeline consortium would be willing to construct another connection into the Mackenzie Delta, using the Dempster Highway, if the federal government accepts the 10-year moratorium proposed by the Berger Inquiry.”<sup>215</sup> Bob Blair would highlight Foothills’s political and economic advantages to the Canadian press and portray Indigenous land claims as an obstacle that Foothills could overcome or outwait. *Ottawa Journal* reported on Bob Blair’s statement,

The Canadian portion would be Canadian-owned as well as operated, and that providing much-needed gas to the U.S. quickly would maintain important friendly relations [...] because land claim negotiations are further along and seem less complicated in the southern Yukon, the land claims issue "appears manageable" and should be completed by 1977, with another year and a half for implementation.<sup>216</sup>

Statements like these further the idea that Foothills used its Mackenzie Valley route, which was not yet feasible then, to boost its corporate image without impeding its chances to access Arctic gas through its alternative Alaska Highway route. The Lysyk Inquiry into the Alaska Highway pipeline further cements this argumentation.

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<sup>214</sup> “Dempster Spur Could Move Delta Gas,” *Ottawa Journal*, p.9.

<sup>215</sup> Ibid.

<sup>216</sup> Ibid.

#### 5.4. The Lysyk Inquiry; a “mini-Berger”?

In April 1977, the Canadian federal government commissioned a three-person inquiry to analyze the socio-economic impacts of the Alaska-Highway pipeline route, or as they put it, to identify "the principal social and economic implications of the proposal and the attitudes of people in the Yukon to it."<sup>217</sup> The Inquiry was named after its chairman, Kenneth Lysyk, Dean of Law at the University of British Columbia. The Inquiry's two other members were Willard Phelps, appointed by the Yukon government, and Edith Bohmer, Executive Director of the Yukon Association of Non-Status Indians, nominated by the Council of Yukon Indians.<sup>218</sup> The Lysyk commission was scheduled to last three months, from May 1 to August 1.<sup>219</sup> They held 22 days of formal hearings in Whitehorse and 27 days of informal hearings, following which the Inquiry travelled to 16 other Yukon communities. They would hear 502 testimonies.<sup>220</sup> In comparison, Justice Berger took over three years to arrive at his conclusions, consulted 35 communities, and heard over a thousand witnesses.<sup>221</sup> *Montreal Gazette*, therefore, called it "the hastily appointed commission of inquiry."<sup>222</sup>

The ensuing sections argue that the federal government designed the Lysyk Inquiry to secure an illusion of consultation for an already approved pipeline, as opposed to being a genuine attempt to document the concerns of the soon-to-be-affected region.

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<sup>217</sup> Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*. p. 3.; François Bregha, *Bob Blair's Pipeline*, p.110.

<sup>218</sup> Ms. Bohmer would later seek employment with Foothills Pipe Lines Ltd. François Bregha, *Bob Blair's Pipeline*, p.110. ; "Foothills Backs Pipeline Probe," *Red Deer Advocate* (Red Deer, Alb.), Apr. 20, 1977, p.16.; "Phelps Approved As YTG Rep," *Star* (Whitehorse, Ykn.), Apr. 29, 1977, p.6.; "Two to Pipeline Group," *Windsor Star* (Windsor, Ont.), May 2, 1977, p.10.; "Pipeline Probe Members Named," *Leader-Post* (Regina, Sask.), May 2, 1977, p.11.

<sup>219</sup> "Foothills Backs Pipeline Probe," *Red Deer Advocate*, p.16.; Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*, p.3.

<sup>220</sup> Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*, p.3.

<sup>221</sup> François Bregha, *Bob Blair's Pipeline*, p.VII, 110.

<sup>222</sup> "A Ring of Inevitability," *Gazette* (Montreal, QC), Jul. 6, 1977, p.6.

The Lysyk Inquiry was tailored to an American decision-making model and did not facilitate the inclusion of Indigenous and environmental concerns. The Canadian government set an "August 1" deadline to accommodate American interests. In October 1976, the U.S. Congress passed the "Alaska Natural Gas Transportation Act" (ANGTA). ANGTA introduced new administrative and judicial processes to expedite a decision on a natural gas transportation system for Alaskan resources.<sup>223</sup> It established a four-stage process for the approval of transportation proposals. The FPC would first review an Alaska gas transportation project, with recommendations sent to the U.S. President before May 1, 1977. Second, federal agencies, state governors and "interested persons," such as the pipeline companies themselves, would critique and study the FPC's recommendations. The President required these by July 1, 1977. In the third stage, the President would review both supplied works and present his decision to Congress, which would have to accept it by September 1, 1977, or no later than sixty days after that. The fourth and final stage was a Congressional review of the President's decision. If approved, the necessary legislation had to be granted immediately so construction plans could start.<sup>224</sup> As Lysyk explains,

The timetable of the Government of Canada determined the deadline. The government proposes to decide in August 1977 which, if any, of the proposed pipeline routes through Canada it would be prepared to approve in principle. The government would then be in a position to inform the President of the United States of Canada's decision before September 1, 1977, having regard to the fact that the President is required by

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<sup>223</sup> U.S. Congress, House, Alaska Natural Gas Transportation Act, H.R.15304, 94<sup>th</sup> Congress, Introduced on September 26, 1976.; United States Senate Committee On Energy And Natural Resources, *Alaska Natural Gas Transportation Act: Staff Report of the Federal Energy Regulatory Commission* (January 18, 2001): p.3, [https://www.arlis.org/docs/vol1/AlaskaGas/Report/Report\\_FERC\\_2001\\_ANGTA\\_StaffReport.pdf](https://www.arlis.org/docs/vol1/AlaskaGas/Report/Report_FERC_2001_ANGTA_StaffReport.pdf).

<sup>224</sup> Joel J. Sokolsky, "The Canada-U.S. Alaska Highway Pipeline," p.91-92.

law to provide Congress with his recommendations on the pipeline question by that date.<sup>225</sup>

For the U.S. president to meet this deadline, the Canadian government needed Lysyk's report on August 1<sup>st</sup>. In contrast to Berger, Indigenous communities thus did not determine the pace and nature of the Lysyk inquiries.

This is evident in the prominence of Indigenous people's concerns about the Inquiry's proceedings. They complained that they had insufficient time to prepare for the Inquiry.<sup>226</sup> In addition, some residents failed to comprehend the purpose of the Lysyk inquiry. The Berger hearings had preoccupied themselves with the Mackenzie Valley route. However, briefly, they heard from Yukon communities such as Whitehorse and Old Crow as soon as Foothills proposed its Alaska Route. Berger, however, felt ill-equipped to judge such a route, "I am in no position to endorse such a route: an assessment of social and economic impact must still be made, and native claims have not been settled."<sup>227</sup> However, the Berger Inquiry left communities confused as to why they had to re-state their opposition to a pipeline. *Edmonton Journal* reported that residents in Old Crow "couldn't understand why the government was asking them again if they wanted the pipeline after they had already said no to Berger."<sup>228</sup> In addition, the Canadian government designed the Lysyk inquiry to be the first of two inquiries partly because of its confined schedule. Lysyk would give preliminary recommendations. If the government approved the Alaska Highway proposal in principle, they would establish a second inquiry to produce a final statement on the pipeline's socioeconomic effect. It would be that second proposal that would stipulate conditions for a pipeline after the line was approved.<sup>229</sup> The design of the Lysyk Inquiry thus largely adhered to the government's desires

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<sup>225</sup> Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*, p.3.

<sup>226</sup> Ibid.

<sup>227</sup> Thomas R. Berger *Northern Frontier, Northern Homeland Vol. 1*, p.XIV.

<sup>228</sup> "Lysyk Board Must Now Prepare Report," *Edmonton Journal* (Edmonton, Alb.), Jul. 16, 1977, p.20.

<sup>229</sup> Kenneth M. Lysyk, E.E. Bohmer, and W.L. Phelps, *Alaska Highway Pipeline Inquiry*, p.3.



and an American timetable.

At the Lysyk Inquiry, Indigenous communities repeated a socio-ecological understanding of the natural environment comparable to the one expressed during the Berger Inquiry. The Indigenous communities held a deep socio-ecological understanding of their ties to the land, especially at Old Crow, where archeological evidence tracing its roots back approximately 30,000 years, making it “one of the most ancient sites of human habitation known in North America.”<sup>230</sup> Ms. Linda Netro of Old Crow declared that when “the pipeline comes through, there will be more people settled here, and [they] will not have respect for the land. They will pollute the land and the water.”<sup>231</sup> Members of other Indigenous communities shared these concerns.<sup>232</sup> Mrs. Mary Easterson, a member of the Kluane Band, for instance, expressed a similar sentiment, “The Indian people, after the construction of the pipeline, will be the ones left to piece their culture together.”<sup>233</sup> Repeatedly, Indigenous witnesses emphasized that land claims were their primary means to regain control over their lives and strengthen their economy and culture, as well as their communal pride and individual self-confidence. Indigenous communities perceived the Alaska Highway projects as threatening their land claim settlement. The Lysyk inquiry agreed with their standpoint: “It is only if land claims are given priority over other land use and development projects that there will be sufficient political pressure to ensure a just settlement.”<sup>234</sup> The Indigenous communities presented a socio-ecological understanding of natural resource management that strongly opposed the Alaska Highway plan.

Indigenous communities emphasized the importance of the porcupine caribou herd for their subsistence practices. Consequently, the environmental sections of the Lysyk report

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<sup>230</sup> Ibid., p.126.

<sup>231</sup> Ibid., p.127.

<sup>232</sup> Ibid., p.117.

<sup>233</sup> Ibid.

<sup>234</sup> Ibid., p.118.

allocated significant time to what the committee called "one of the last great herds of caribou."<sup>235</sup> Various Indigenous communities rely on the herd for their protein intake, amongst them Old Crow in the Yukon and Indigenous groups in Alaska and the Northwest Territories.<sup>236</sup> The report summarized the situation as follows,

The herd is not only a biologically important element of the northern Yukon wilderness and internationally crucial because of its migration patterns, but it is also important because the people who live within its range have strong cultural and economic associations with this herd.<sup>237</sup>

If the Caribou altered their route to avoid the pipeline, this would significantly affect Indigenous communities. Traditionally, the herd crosses the Alaska Highway during migration, moving south in the winter and returning north in the spring to reach its calving ground. The construction of a pipeline and the accompanying increase in traffic on the highway could make the herd deviate from its established pattern, potentially reducing the herd to what Lysyk called "a remnant."<sup>238</sup>

During the Inquiry, Foothills resorted to economic interpretations of natural resource management. Grafton Njootli, a band councillor for Old Crow, asked if Foothills would support a 10-year moratorium on pipeline construction as it had done during the Berger hearings. Foothills's vice-president replied that ten years was too long and that he "hoped Indian land claims could be settled much sooner than that."<sup>239</sup> Like the NEB hearings and Berger Inquiry, Foothills expressed that many negative influences, like those associated with the in-migration of workers, could be mitigated through containment measures.<sup>240</sup> Lysyk,

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<sup>235</sup> Ibid., p.128.

<sup>236</sup> Ibid.

<sup>237</sup> Ibid.

<sup>238</sup> Ibid., p.126–127.

<sup>239</sup> "Pipeline Impact Played Down," *Vancouver Sun* (Vancouver, B.C.), Jul. 6, 1977, p.18.

<sup>240</sup> Ibid., p.92–93.

however, concluded that the company did not “adequately address” its impact on, for instance, essential services.<sup>241</sup> Westcoast's then chairman E.C. Phillips would, in a 1979 interview with BC TV, reflect on the Indigenous objections and assert that they were using the pipeline to get land claim settlements but that they did not object to the line, “they have environmental concerns but in relative terms to put it into proper perspective what they really are attempting to do is get the federal government to come to the table and negotiate their land claims.”<sup>242</sup> Foothills only proved willing to support an Indigenous land claim settlement if they did not impede their project.

The Lysyk report reflected the socio-ecological concerns of Indigenous communities but also the desires of the Canadian government. The report stated, “The testimony of Indian witnesses was almost overwhelmingly apprehensive about the pipeline proposal. A few persons supported the project, anticipating greater job opportunities, but most were negative towards it for a number of reasons.”<sup>243</sup> However, the report also tried to quantify their socio-ecological understanding and believed that Foothills could mitigate adverse effects. The Lysyk report asserted that regulatory measures could keep a pipeline's impact within “acceptable limits,” but this alone would insufficiently account for the pipeline's adverse effects. Therefore, the Lysyk Inquiry recommended a Yukon Heritage Fund to compensate the Yukoners for “unquantifiable - but very real - detrimental effects.”<sup>244</sup> Lysyk argued that Foothills would have to make an initial capital investment of \$200 million to this fund.<sup>245</sup> It would take time to establish such a fund, and Lysyk suggested the Canadian government postpone construction until 1981 to accommodate Indigenous concerns.<sup>246</sup>

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<sup>241</sup> Ibid., p.95.

<sup>242</sup> E.C. Phillips Interview with Jack Webster, *BCTV* (October 10, 1979).

<sup>243</sup> Ibid., p.117.

<sup>244</sup> Ibid., p.149.

<sup>245</sup> Ibid., p.152.

<sup>246</sup> “Lysyk Urges Pipeline Delay,” *Star-Phoenix* (Saskatoon, Sask.), Aug. 2, 1977, p.1.; “Lysyk Wants Pipeline Moratorium,” *Sun Times* (Owen Sound, Ont.), Aug. 2, 1977, p.8.; “Delay Recommended in Northern Pipeline,” *Leader-Post* (Regina, Sask.), Aug. 2, 1977, p.2.

In the meantime, the Canadian government had initiated an environmental assessment of the Alaska Highway pipeline to accompany the Lysyk Inquiry's focus on the socioeconomic impact of the line.<sup>247</sup> Most of the Yukon portion of Foothills pipeline would traverse territorial lands, which, as part of the Territorial Land Act, were under the jurisdiction of the Minister of Indian and Northern Affairs. As the route could potentially significantly impact the environment in the federally administered land, the Minister of Indian and Northern Affairs started an environmental impact assessment on March 21, 1977. Under the federal Environmental Assessment and Review Process, such an assessment would establish formal guidelines for Foothills impact assessments and a panel, which would initiate a technical review of the concluding reports.<sup>248</sup>

However, this time, like the Lysyk Inquiry, the environmental assessment came with a strict deadline. The Canadian government requested the Environmental Assessment Panel's interim report by August 1, 1977, to facilitate an expedited conclusion on the Arctic pipeline question or, as the Panel put it, the federal government was "facing major decisions on competing pipeline proposals in the fall of this year."<sup>249</sup> To accommodate this request, the Panel reviewed existing data and, if the Alaska Highway proposal were approved, would initiate the formal assessment and review procedure.<sup>250</sup> It concluded in August 1977 that Foothills had limited knowledge of the permafrost along its suggested route, needed more information on water crossings, could not yet carry out the adequate stabilization of slopes in ice-rich permafrost and sandy soils, but believed Foothills could develop the necessary mitigation measures.<sup>251</sup> It also supported the general conclusion that the Alaska Highway

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<sup>247</sup> Alaska Highway Pipeline, Interim Report of The Environmental Assessment Panel (Ottawa, Ont.: Minister of Supply and Services Canada, 1977): p.3.; "Environmental Hearings On Pipeline," *Star* (Whitehorse, Ykn.), May 6, 1977, p.40.

<sup>248</sup> Alaska Highway Pipeline, Interim Report of The Environmental Assessment Panel, p.2-3.

<sup>249</sup> Ibid., p.2-4.; "Notice of Public Hearings Alaska Highway Pipeline Proposal," *Times Colonist* (Victoria, B.C.), Jun. 8, 1977, p.55.

<sup>250</sup> Alaska Highway Pipeline, Interim Report of The Environmental Assessment Panel, p.3.

<sup>251</sup> Ibid., p.13-14, 17, 19,

route was preferable to the Mackenzie Valley route.<sup>252</sup> The report added that a Dempster Highway extension “would likely have irreversible detrimental effects on the Porcupine caribou herd.”<sup>253</sup> Yet, confined by the August 1 deadline, the Environmental Assessment Panel concluded On July 27, 1977, that the Alaska Highway proposal lacked significant information, but Foothills could likely complete the line with mitigation efforts. The Lysyk Inquiry and the Environmental Assessment report allowed the presentation of Indigenous socio-ecological understandings of the natural environment. However, their design and conclusions adopted a political-economic interpretation of natural resource management.

The Environmental Assessment report would arrive a few days before the Lysyk Inquiry’s.<sup>254</sup> On August 2, 1977, the Lysyk Inquiry presented its final report to the Canadian government. After six years of studies and Inquiries, the Canadian government had to conclude the Canadian portion of the Arctic pipeline debate.<sup>255</sup> On August 8, 1977, the Canadian government gave conditional approval to the Alaska Highway project.<sup>256</sup> The United States and Canada would eventually solidify their attitudes on the Alaska Highway pipeline project in an international agreement: the 1977 *Canada-U.S Agreement on Principles Applicable to a Northern Natural Gas Pipeline*. In 1978 the Canadian Northern Pipeline Act established the Northern Pipeline Agency to oversee the Agreement’s enactment in Canada.<sup>257</sup>

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<sup>252</sup> Ibid., p.50.

<sup>253</sup> Ibid., p.45.

<sup>254</sup> Alaska Highway Pipeline, Interim Report of The Environmental Assessment Panel.; “Notice of Public Hearings Alaska Highway Pipeline Proposal,” *Times Colonist*, p.55.

<sup>255</sup> “Pipeline Decision in Government’s Lap,” *North Bay Nugget* (North Bay, Ont.), Aug. 2, 1977, p.11.; “Lysyk Inquiry to Report Today,” *Star-Phoenix* (Saskatoon, Sask.), Aug. 2, 1977, p.1.; “Final Yukon Pipeline Report To Be Tabled Today,” *Sault Star* (Sault St. Marie, Ont.), Aug. 2, 1977, p.1.; “Pipeline Debate Heads Into Home Stretch,” *Province* (Vancouver, B.C.), Aug. 2, 1977, p.3.; “Arctic Gas Winds Up Operations,” *Calgary Herald* (Calgary, Alb.), Aug. 2, 1977, p.43.; “Gas Report Here Today,” *Alberni Valley Times* (Alberni, B.C.), Aug. 2, 1977, p.1.; “M.p.s To Debate Pipeline Report,” *Ottawa Citizen* (Ottawa, Ont.), Aug. 2, 1977, p.61.

<sup>256</sup> “Highway Pipeline Route Backed,” *Montreal Star* (Montreal, QC), Aug. 8, 1977, p.1.; “TCP Joins Foothills,” *Montreal Star* (Montreal, QC), Aug. 8, 1977, p.19.; “Ottawa Backs Foothills In Talks With U.S.,” *Gazette* (Montreal, QC), Aug. 9, 1977, p.9.; “TransCanada Joins Foothills Project,” *Gazette* (Montreal, QC), Aug. 9, 1977, p.9.; “Decision Supports Foothills,” *Red Deer Advocate* (Red Deer, Alb.), Aug. 9, 1977, p.12.

<sup>257</sup> “Pipeline History,” *Government of Canada*.

Although not part of the Agreement, Foothills would pay the Yukon \$200 million in taxes for any socioeconomic costs associated with its pipeline. Under the Property Tax, the Yukon government would collect, according to the Canadian government, "more than \$1 billion over the twenty-five-year economic life of the system if annual inflation averaged at 5%." However, Bregha has labelled this figure "highly misleading."<sup>258</sup> It remains unclear if such a figure would have been enough to compensate the Yukon population for the Alaska Highway pipeline, as Foothills only partially constructed the pipeline.

While social and cultural concerns had played a prominent role during the hearings, the company would eventually cancel part of the line for economic reasons. Foothills had designed a two-staged pipeline construction plan. Phase 1, or the "pre-build," would consist of two parts, each connecting Caroline, Alberta to a point on the Canadian-U.S. border. The western leg would go to Kingsgate, B.C. and the eastern to Monchy, Saskatchewan.<sup>259</sup> Canada would use this southern section of the pipeline to transport an excess of two trillion cubic feet of natural gas from Alberta to the U.S., the profits of which Foothills would use to finance the remainder of the pipeline.<sup>260</sup> The company completed phase 1 of the project in late 1982.<sup>261</sup> Meanwhile, environmental assessments continued for the remainder of the pipeline plan. The panel met between 1979 and 1982, issued four reports, and approved the pipeline in 1982.<sup>262</sup>

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<sup>258</sup> François Bregha, *Bob Blair's Pipeline*, p.159.

<sup>259</sup> "Saskatchewan Part of Line Okayed," *Leader-Post* (Regina, Sask.), Sep. 5, 1980, p.41.; "Pipeline Section Approved," *Star-Phoenix* (Saskatoon, Sask.), Sep. 6, 1980, p.28.; John Anderson, President Westcoast Transmission Company Limited, "N.A.," Address to the Western Investment Seminar, Richmond, B.C., June 17, 1981, p.6, UBCSC, WEI Box. 12, File 17.; "After Years of Effort, the Pre-build Is On Its Way," *Calgary Herald* (Calgary, Alb.), Sep. 13, 1980, p.13.

<sup>260</sup> John Anderson Executive Vice President and Chief Operating Officer Westcoast Transmission Company Limited, "The Alaska Highway Gas Pipeline Project," Address to International Pipe Line Contractors Association Monaco, September 25-29, 1979, p.13-14, UBCSC, WEI Box. 12, File 16.; "Final Hurdles Being Cleared on Pipeline," *Edmonton Journal* (Edmonton, Alb.), Apr. 18, 1980, p.99.

<sup>261</sup> E.C. Phillips Interview with Jack Webster, *BCTV* (December 12, 1978).

Raymond Bellour, "Alternation, Segmentation, Hypnosis: Interview with Raymond Bellour," by Janet Bergstrom, *Camera Obscura*, 3-4 (Summer 1979): p.90.

<sup>262</sup> Federal Environmental Assessment Review Office, "Alaska Highway Gas Pipeline Routing Alternatives Whitehorse/ Ibex Region," *Report of the Environmental Assessment Panel* (Ottawa, Ont.: Minister of Supply and Services, 1981).; Federal Environmental Assessment Review Office, "Alaska Highway Gas Pipeline: Yukon

In addition, the Northern Pipeline Agency charged W.W. Winston Mair with conducting hearings in the parts of British Columbia that Foothills's Alaska pipeline would traverse. Mair primarily analyzed mitigation efforts as evident in his Inquiry's goal, to establish terms and conditions, or as Regina's *Leader-Post* wrote, "the minimization of adverse social or environmental impact."<sup>263</sup> In 1982, however, Foothills ran into financial trouble and deferred Phase 2 of the project.<sup>264</sup> The Berger Inquiry and rising public environmental and Indigenous opposition to the Arctic gas pipeline proposals had pressured Foothills to adjust its narratives. However, their statements only marginally translated into actions and the final segments of the pipeline remain unbuilt for economic, not societal or cultural, concerns.

## 5.5. Conclusion

This chapter unpacks Foothills's participation in the Alaska gas pipeline debates of the 1970s. It shows that Foothills altered and adapted its narrative understanding of the natural environment and its pipeline's social effects to accommodate the Canadian National Energy Board and U.S. Federal Power Commission's shared, white-settler interpretation of acceptable environmental impact. However, this chapter argued that Foothills only presented

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Hearings (March-April 1979)," Report of the Environmental Assessment Panel (Ottawa, Ont.: Minister of Supply and Services, 1979).; "Alaska Highway Gas Pipeline Environmental Assessment Panel Preliminary Information on Public Review," *Star* (Whitehorse, Ykn.), Dec. 11, 1978, p.18.; "New Questions For Foothills," *Star* (Whitehorse, Ykn.), May 17, 1979, p.26.; "Permafrost Problems Chill Foothills' Pipeline Plans," *Edmonton Journal* (Edmonton, Alb.), Sep. 21, 1979, p.1.; "More Studies Ordered On Impact of Alcan Line," *Vancouver Sun* (Vancouver, B.C.), Sep. 21, 1979, p.7.; "Foothills Ordered To Beef Up Environment Argument," *Province* (Vancouver, B.C.), Sep. 21, 1979, p.1.; "Arctic Line Should Proceed," *Calgary Herald* (Calgary, Alb.), Sep. 24, 1979, p.6.

<sup>263</sup> "Tight Rein Kept On Pipeline's Social Impact," *Leader-Post* (Regina, Sask.), Aug. 1, 1980, p.45.; W. Winston Mair, *Forgotten Land, Forgotten People: Report on the Alaska Highway Gas Pipeline Hearings Respecting Terms and Conditions for Northeast and Southeast British Columbia* (Ottawa, Ont.: Northern Pipeline Agency, 1980), p.8-9.

<sup>264</sup> Ed Phillips, Guts and Guile, p.131-136.; Bill White, "1971-1982: Alaska Gas Pipeline Wars," Office of the Federal Coordinator, Accessed June 2, [https://www.arlis.org/docs/vol1/AlaskaGas/Paper/Paper\\_OFC\\_2012\\_1971to1982PipelineWars.pdf](https://www.arlis.org/docs/vol1/AlaskaGas/Paper/Paper_OFC_2012_1971to1982PipelineWars.pdf).

a narrative façade of Indigenous and environmental inclusivity. The company did not act per this image if it impeded its potential access to Arctic gas and the associated profits.

During the NEB hearings, Foothills initially continued the political and economic interpretation of natural resource management it had developed in the 1950s (see Chapters 1 and 2), emphasizing the national advantages of its Maple Leaf line, an all-Canadian pipeline through the Mackenzie Valley. It would also primarily develop the Alaska Highway proposal to accommodate its own economic interests, not in response to any environmental or Indigenous concerns. In this way, it played into to the NEB's comparative approach to Arctic gas pipeline development.

The NEB could not refuse a pipeline because it had determined in earlier hearings that a natural gas shortage was imminent. After establishing the economic necessity of a pipeline, the NEB moved to contrast the effects of the pipelines, choosing the one it considered "best" instead of considering the pipelines' impact individually. It partially based this approach on the U.S. FPC's conclusions. The FPC stipulated that any pipeline through an established transportation corridor would have less detrimental effects than one that required creating a new one, such as in the Mackenzie Valley. Foothills skillfully played into NEB's comparative approach and adjusted the design of its second pipeline, the Alaska Highway route, to unfolding FPC and NEB conclusions. That route offered a welcome alternative to the Mackenzie Valley, which grew increasingly contentious as the 1970s progressed, mainly because of the Berger Inquiry.

Foothills used the Berger Inquiry to explore how it could manifest a supportive corporate image without risking access to the Arctic gas reserves. The Berger Inquiry's design allowed people, especially Indigenous communities, to present an alternative interpretation of natural resource management. They added a social and cultural interpretation of natural gas to the established political and economic one. For the first time, Indigenous communities could



present their understandings on such a large scale. Berger's design and public nature forced Foothills to take a standpoint on Indigenous land claims. Leading figures in the company promised the Indigenous communities that they would delay a pipeline to facilitate the Indigenous land claim process. However, Foothills faced little risk during the Inquiry, given that it had insufficient reserves to support the Maple Leaf line through the Mackenzie Valley and had developed a route that bypassed the Valley, the Alaska Highway pipeline. Nowadays, its standpoints could, therefore, be considered examples of performative allyship.

During the Lysyk Inquiry into that alternative route, Foothills shed its image as a supporter of Indigenous rights. When Indigenous communities asked if Foothills would postpone construction until land claims were settled, company officials refused. The Canadian government, afraid to miss out on Arctic gas, had designed the Lysyk Inquiry to facilitate an expedited pipeline approval with a strict deadline and limited resources. As a result, Foothills no longer felt the need to uphold its image or actively incorporate Indigenous and environmental concerns.

The Alaska Highway proposal received approval from all required Canadian and U.S. regulatory authorities in the late 1970s. Foothills would ultimately not complete the contentious sections through the Yukon and B.C. However, Foothills did not pause these developments in the early 1980s out of concern for the pipeline's social or cultural effect. Instead, it did so for economic reasons due to a lack of financial capital.

Scholars have heralded the Berger Inquiry as a "ground-breaking" endeavour, and in many ways, the Inquiry's design and conclusions were. However, this chapter shows that such statements require nuance. Justice Berger and the Inquiry's nature and settler understandings of "environmental impact" and Indigenous rights shaped the frame of thinking that eventually disapproved of a Mackenzie Valley route. However, the Inquiry also offered Foothills a platform to present itself as an advocate of Indigenous and environmental concerns.

Eventually, regulatory authorities primarily approved the Alaska Highway route on the notion that modernity had already disturbed the Yukon's natural environment and local population (emphasizing Indigenous communities). Therefore, the construction of a pipeline would not cause significant environmental or social dislocation.

Berger concluded that the pipeline question would “tell us something about what kind of country Canada is, what kind of people we are.”<sup>265</sup> Such an understanding, especially considering the pressing and increasing environmental and climate change concerns, has arguably remained the backdrop against which Canada can understand and analyze any current and future large-scale energy projects.

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<sup>265</sup> “Some Pipeline Construction Next Year,” *Star* (Whitehorse, Ykn.), May 18, 1978, p.9.

## **Conclusion**

This dissertation examines the extent to which Westcoast Transmission Company Limited's introduction and continuing expansion of natural gas facilities in Western Canada manifested and adapted socio-ecological relations in the area. It traces these relations from the initial development of the pipeline system until the first significant public organized environmentalist and Indigenous opposition to the fuel and its infrastructure.

At the start of this period, Frank McMahon and Westcoast Transmission inaugurated large-scale natural gas consumption in B.C. while capturing high modernist ideals that equated natural resource extraction, northern development, and high energy consumption with modernity. In Alberta, Westcoast Transmission was among the first to export natural gas from the province, playing a crucial part in the creation of provincial regulations for such actions. In the 1970s, the Canadian government considered Westcoast, then part of Foothills PipeLines Ltd., a prominent contender for the transportation of Arctic gas resources to southern markets. It participated in notable inquiries and hearings like the Mackenzie Valley Pipeline (Berger) Inquiry. Scholars often herald that inquiry as a defining moment in Canadian energy history, arguing that it introduced Indigenous and environmental activists as notable stakeholders in fossil fuel expansion activities. The study analyzes how Westcoast shaped and adapted socio-ecological relations between these formative periods in Canadian energy history, engaging with each in the process. It shows how the energy transition that this pipeline system facilitated occurred within and was influenced by the physical environment, the power structures of settler colonialism, prevailing settler gender norms, and economic nationalism.

This dissertation expands the idea that Canada's mid-20<sup>th</sup> century energy transition was partly, but not simply, a function of technological innovation and economic

interpretations of the gaseous fuel. As the introduction and Chapter 1 reveal, it was not until the Leduc discoveries of 1947 that critical innovations such as a leak-resistant pipeline joints and economical quantities of natural gas were developed to warrant the costly and legally complex construction of a long-distance natural gas pipeline.<sup>1</sup> A volatile fuel that companies could not transport in barrels, natural gas relied on such discoveries for its mass exploitation.

Economic interpretations of natural gas as a fuel that could meet a supply and demand concern also aided the large-scale introduction of natural gas. The energy shortages in the U.S. and Canada in the late 1940s and early 1950s boosted Westcoast's plans for a pipeline from the Peace River region in the Northeast of B.C. and Northwest of Alberta south to markets in the Pacific Northwest. British Columbia, moreover, observing the wealth its neighbouring province was accruing from the Leduc discoveries, opened its territory for mineral exploration around this time, a right it had previously reserved for a public campaign.<sup>2</sup> On the demand side, none of the communities in the Greater Vancouver and Victoria areas, Fraser Valley, Cariboo district and Okanagan Valley, had utility natural gas service in the 1950s.<sup>3</sup> Westcoast understood that natural gas, a reliable and comparatively clean fuel with high heating power, could be an economically competitive alternative to the "dirty" coal and diminishing supplies of good-quality fuel wood in these regions.<sup>4</sup> Natural gas was posited to answer this economic question of supply and demand.

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<sup>1</sup> Colin A.M. Duncan and R.W. Sandwell, "Manufactured and Natural Gas," in eds. *Powering up Canada: The History of Power, Fuel, and Energy From 1600* by R.W. Sandwell (Montreal: McGill-Queen's University Press, 2016): p.313–314.

<sup>2</sup> McKenzie Porter, "Frank McMahon's Five Lucky Lives," *Maclean's* (Jan. 5, 1957): p.40.; George L. McMahon, "Oil and Gas Development in British Columbia," (Speech, Annual Meeting B.C. Section Canadian Institute of Mining and Metallurgy Hotel Vancouver, Vancouver B.C., October 22, 1952), p.6. UBCSC, WEI, Box. 7, File 6.; Ed Janicki, "Petroleum Exploration History of Northeastern British Columbia," *Ministry of Energy, Mines and Petroleum Resources*, 2008, p.43.; Earle Gray, *Wildcatters: The Story of Pacific Petroleum and Westcoast Transmission* (Toronto: McClelland and Stewart, 1982): p.39.; McKenzie Porter, "Frank McMahon's five lucky lives," p.40.

<sup>3</sup> *Westcoast Transmission Company Limited Review and Study of Economic Feasibility of Proposed Natural Gas Pipeline Project in Canada*, Commonwealth Services Inc. (New York, February 1956): p.44, 67.

<sup>4</sup> *Ibid.* 49-53.

This dissertation argues that the energy transition in Western Canada was more than just an economic question or a matter of overcoming technological challenges. It was as much, if not more, about altering people's socio-ecological relationship to this energy source. Chapter 1 on Westcoast's regulatory proceedings highlights the intricate interplay of these various factors. It borrows the term "legibility" from James C. Scott to show that companies, engineers, geologists, and regulatory authorities produced standardized understandings (maps, diagrams, and figures) of natural gas on which to base their decisions. By focusing on the nature of natural gas, the chapter adds to Scott's assertion that legibility is a primary driver of big industrial projects. Natural gas is nearly impossible to quantify, especially considering the costs of producing accurate estimates. The fuel is generally found in permeable and porous rock beds or oil reservoirs. It expands and contracts depending on conditions and location and, as a result, cannot be as easily mapped out as oil. Without a guaranteed market to justify exploitation costs, producing a legible understanding of the fuel became nearly impossible. The resulting uncertainty surrounding natural gas estimates left ample room for interpretation, and participants in the regulatory hearings crafted narratives to imbue socio-ecological meaning into the limited available information. Natural gas transformed from a mere fuel into a partial guarantor of modernity, energy security, and progress. The chapter concludes that the primary drivers of Westcoast's success were the company's ability to navigate the uncertainties inherent in western Canada's natural gas picture. The mid-20<sup>th</sup> century energy transition challenge was more than just supply (finding enough fuel to meet demand). Narrative arguments and the social construction of the energy resource were crucial to facilitating the adoption of this new fossil fuel.

Chapter 2 reveals the limitations of the socio-ecological understandings produced in regulatory processes. It covers the construction, expansion, and maintenance of Westcoast's system. The chapter situates itself within the existing literature on local knowledge and

questions the relatively static nature of the boundaries between established and local practices and the, at times, uncritical celebration of local knowledge. Like environmental historians Tina Loo, Meg Stanley, and Liza Piper, it concludes that industrialization firmly embedded itself in the local.<sup>5</sup> It offers a private-sector case study, where other scholars have mainly analyzed state-sponsored projects. The chapter advocates for a more nuanced understanding of pipeline construction, arguing that Westcoast completed the line because crews successfully engaged in a feedback loop with their natural environments. They acted, nature reacted, and the crews responded, blurring the boundaries between local and established knowledge. In the process, they adopted a rather ad-hoc, trial-and-error or improvisational approach to pipeline construction. Challenging circumstances, such as muskeg and limited resources, partly pushed crews to accept such hazards. However, they also acted per a desire to "overcome" nature and a certain level of pride associated with risk-taking. Academics generally posit local knowledge as a positive and desirable building block for infrastructure development, but this chapter offers more subtlety to this understanding. The analysis emphasizes that Westcoast only considered white-settler understandings of local environments, while Indigenous communities were overlooked or merely consulted through third-party agents, like state officials. The chapter moves away from political economic analysis and shows the importance of construction crews' dynamic socio-ecological relations for this part of Western Canada's energy transition to natural gas.

Chapter 3 argues that High Modernist megaprojects were not solely the domain of state actors but also accomplished by private corporations with shared ideals. It focuses on a natural gas pipeline, whereas the existing literature on High Modernism in Canada favours

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<sup>5</sup> Elizabeth Piper, *Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2010): p.3.; Tina Loo and Meg Stanley. "An Environmental History of Progress: Damming the Peace and Columbia Rivers," *The Canadian Historical Review* Vol. 92, No. 3 (2011): p.399, 407

hydroelectric project analyses.<sup>6</sup> The chapter stipulates that by overcoming the physical space between B.C.'s natural gas fields and southern markets with its pipeline system, Westcoast also bridged a cultural divide between the interior and northern regions of B.C. and the metropolitan south. The company located a permanent staff in towns along its line to keep scrubbing plants, compressors, and meter stations operational. These West Coast families tried to establish a sense of home and belonging in an unfamiliar natural environment. To attain this goal, they, aided by their employer, tried to impose a southern, white-settler lifestyle on their surroundings, complete with subdivisions and golf courses. However, nature itself compelled Westcoast families to negotiate their identities. The company framed this process as "modernization," furthering the creation and growth of white-settler culture in the interior and north of B.C. This chapter therefore further explores the dynamics of social inequalities and colonialism that influenced the development of the Westcoast project.

Narrative arguments and the social construction of the energy resource facilitated the adoption of this new fossil fuel for Canadians, furthering the argument that the transition to large-scale natural gas was not merely a question of supply. Chapter 4 shows how settler gender norms were integral to the energy transition that Westcoast facilitated. During construction, men negotiated a masculine ideal within their natural surroundings. Honed by arbitrary living conditions and strenuous, often remote, environments, the crews and company grew to normalize, even idolize, a rough, rugged man with a disposition to overcome the challenges of the land. Labour histories, particularly of bush camps, have long established that resource camps primarily consisted of men engaging in homosocial relations, drinking, and

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<sup>6</sup> Tina Loo and Meg Stanley, "An Environmental History of Progress," p.399–427.; Tina Loo, "Disturbing the Peace: Environmental Change and the Scales of Justice on a Northern River," *Environmental History* Vol.12, No. 4 (2007): p.895-919.; Ken Coates, "The Power to Transform: The Kemano Power Project and the Debate about the Future of Northern British Columbia," *Journal of Northern Studies* Vol. 1, No. 2 (2007): p.31-50. Meg Stanley, *Voices from Two Rivers: Harnessing the Power of the Peace and Columbia* (Vancouver/ Toronto: Douglas & McIntyre, 2010).

card game activities.<sup>7</sup> This chapter traces how Westcoast adapted these masculine ideals at the crux of construction to domestic environments as part of its marketing efforts. Men became knowledge-holders of, mainly outdoor, gas appliances. This is in contrast to women whose bodies were sexualized and domesticated for Westcoast's marketing campaigns. Westcoast did provide opportunities for women in its main offices, but traditional gender expectations controlled the appearance, roles, and behaviour of these women. In Westcoast's marketing campaigns, natural gas, posited as "modern" and a provider of "good living," relied on traditional, settler gender norms for its extraction, transportation, and marketing.

The final chapter on the Arctic gas pipeline debates of the 1970s once more emphasizes the importance of narratives for energy transitions. Concerns such as economic nationalism, energy security, and colonial ambitions of industrialization and modernization expressed in the 1950s continued to play a role. However, faced with a rise in environmental and Indigenous concerns, Westcoast had at least to consider those issues as part of its expansion plans. Existing scholarship on Arctic gas developments in the 1970s primarily focuses on the Berger Inquiry, where Indigenous and environmentalist voices, for the first time, publicly partook in a pipeline inquiry. This chapter places the Berger Inquiry into the broader context of the Arctic gas pipeline debates. It does not dispute the revolutionary nature of that Inquiry. However, it shows that it offered Westcoast, as part of Foothills PipeLines Ltd., a platform to practice its Indigenous and environmental allyship narratives. Westcoast primarily used such narratives as a façade for its prevailing political and economic attitudes as it moved to gather approval for its Alaska Highway route, which circumvented the region

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<sup>7</sup> Ian Walter Radforth, *Bushworkers and Bosses: Logging in Northern Ontario, 1900-1980* (Toronto, Ont: University of Toronto Press, 1987).; Richard Mackie, *Mountain Timber: the Comox Logging Company in the Vancouver Island Mountains* (Winlaw, B.C: Sono Nis Press, 2009).; Gordon H. Hak, *Capital and Labour in the British Columbia Forest Industry*, (Vancouver: UBC Press, 2007).; Adele Perry, *On the Edge of Empire: Gender, Race, and the Making of British Columbia, 1849-1871* (Toronto: University of Toronto Press, 2001).



covered by the Mackenzie Valley Inquiry. The selection of the Alaska Highway pipeline rested on the notion that industrial modernity had already disturbed the route. Both the ecology and the people, focusing on local Indigenous communities, were already residing in a disturbed environment from the point of view of Foothills. Therefore, the regulatory authorities in Canada and the U.S. believed a pipeline could be constructed without significant environmental or social dislocation. The Berger Inquiry influenced this stance, as did settler understandings of "environmental impact" and Indigenous rights.

This dissertation on the Westcoast Transmission system shows that energy transitions are not just about technological advancements or an economic question of supply. Regulatory authorities, consumers, environmental activists, and Indigenous communities had to be persuaded to adopt this pipeline system and natural gas. As a result, fuel usage became increasingly intertwined with questions of gender identity, community building, geopolitics, and what a "modern" society entails. This dissertation explains how Westcoast developed, operated, maintained, and expanded its complex energy system and sheds light on the persistent nature of Canada's fossil fuel energy consumption.

The situation for Indigenous communities in Canada has changed since the 1970s, but tension remains between the economic development of natural resources, continued colonialism, and Indigenous and environmental concerns and rights. The scope of this study concludes before the ground-breaking Nisga'a Treaty of 1998. This first modern-day treaty established the authority of the Nisga'a Government and assured the community's access to their land.<sup>8</sup> Unlike historic treaties, the Nisga'a Treaty is an extensive, complex document that includes land and resource management references.<sup>9</sup> In general, Treaty rights and Indigenous

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<sup>8</sup> Chris Wood, "Nisga'a Land Treaty," *The Canadian Encyclopedia/ Maclean's*, Accessed June 29, 2023, <https://www.thecanadianencyclopedia.ca/en/article/nisgaa-land-treaty>; "Understanding the Treaty," *Nisga'a Lisims Government*, Accessed June 28, 2023, <https://www.nisgaanation.ca/understanding-treaty>.

<sup>9</sup> Kent McNeill, "Aboriginal Rights in Canada: The Historical and Constitutional Context," *International Journal of Legal Information* Vol. 41, No. 1 (2013): p.26, 28.

land rights have received broader constitutional protection and political and societal attention.<sup>10</sup> However, the Coastal GasLink project reveals that much contention remains over who has the authority to develop and execute a natural gas line. The Coastal GasLink is designed to transport natural gas across northern B.C., from Dawson Creek to Kitimat, where LNG Canada will export the gas in a liquefied state.<sup>11</sup> The line crosses Wet'suwet'en territory, a community whose hereditary chiefs oppose the project. Coastal GasLink has pushed its plan forward despite this resistance, leading to widespread opposition across Canada in the form of infrastructure blockades and protests in 2020. The Wet'suwet'en resistance continues today and points to the persistence of the tension between colonialism, natural resource exploitation, and economic interest at the heart of Canadian resource development.<sup>12</sup>

Building on the foundations established in the 1970s, environmentalism continues to play a prominent role in Canadian energy projects but on a more global scale. Whereas from the late 1940s to the 1970s, environmental concerns were more localized, focusing on local wildlife populations such as the caribou herds and a pipeline's effect on permafrost soil conditions, nowadays, the global effects of fossil fuel developments have become clearly apparent. An international movement to keep oil and gas in the ground is gaining prominence, drawing climate activists worldwide to Canada's fossil fuel fields.<sup>13</sup> To avert the worst effects of climate change, the Canadian government has promised the country will reach net zero emissions by 2050. However, the country remains, for now, one of the largest producers and

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<sup>10</sup> Ibid., p.16-38.

<sup>11</sup> "Coastal Gas Link," *TC Energy*, Accessed September 3, 2023, <https://www.tcenergy.com/operations/natural-gas/coastal-gaslink/>. "Coastal GasLink," *Government of British Columbia*, Accessed September 2, 2023, <https://www2.gov.bc.ca/gov/content/industry/natural-gas-oil/lng/connecting-natural-gas-pipelines/coastal-gaslink/>; "Coastal GasLink," *BC Energy Regulator*, September 11, 2019, <https://www.bc-er.ca/what-we-regulate/major-projects/coastal-gaslink/>.

<sup>12</sup> Avigail Eisenberg, "Decolonizing Authority: The Conflict on Wet'suwet'en Territory," *Canadian Journal of Political Science* Vol. 55, No. 1 (2022): 40–58.

<sup>13</sup> Inayat Singh and Alice Hopton, "Movement To Keep Fossil Fuels In The Ground Gaining Momentum In Canada And Abroad," *CBC News*, Nov. 6, 2021, <https://www.cbc.ca/news/science/fossil-fuels-cop26-extraction-1.6238403>.

exporters of fossil fuels, pushing the United Nations (UN) at the 2023 climate summit to criticize the Trudeau government for its continuing inaction.<sup>14</sup> This difference in context has transformed the stakes associated with, and narratives used to discuss, natural gas consumption, exploitation, and infrastructure development.

In Canada, natural gas production and consumption have steadily expanded since the first large-scale natural gas networks of the 1950s. In 2020, Canada produced, on average, 15.5 billion cubic feet of natural gas daily (Bcf/d). Alberta and B.C. produced 98 percent of that total. The energy exploitation made the country the world's sixth-largest natural gas producer. Almost all this gas is transported through pipelines, including the Westcoast pipeline, now known as BC Pipeline.<sup>15</sup> In 2020, Canadians consumed, on average, 11.4 Bcf/d of natural gas. Most consumers reside in Alberta (6.4 Bcf/d), Ontario (2.7 Bcf/d) and B.C. (0.8 Bcf/d). The largest consumers are industrial (8.0 Bcf/d), and the residential and commercial sectors consume 1.7 Bcf/d. In 2019 (2020 numbers are not yet available), natural gas accounted for 36 percent of Canada's fuel needs (see Figure 10).<sup>16</sup>

The fuel plays a critical role in the nation's food system; it powers greenhouses, helps manufacture fertilizer, and fires up barbecues and kitchen stoves. Additionally, certain petrochemicals derived from natural gas, like butane and propane, contribute to the production of everyday items like clothing, hospital equipment, and recreational gear such as kayaks and hiking boots used to explore the country's renowned natural landscapes.<sup>17</sup>

Canadians have become so deeply entangled with the gaseous substance that it is tough to

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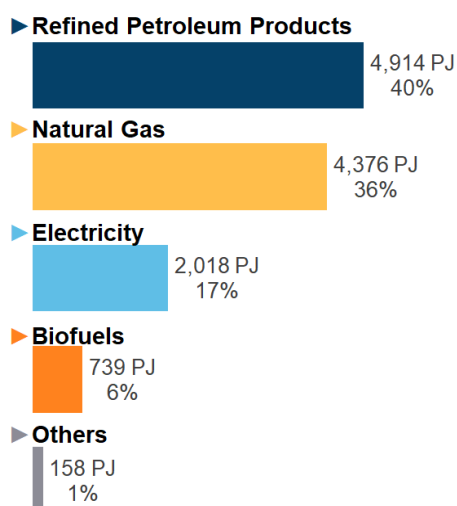
<sup>14</sup> Benjamin Shingler, "Canada's Climate Commitments Called Into Question On World Stage," *CBC News*, Sept. 22, 2023, <https://www.cbc.ca/news/climate/canada-climate-united-nations-cap-1.6974069>.

<sup>15</sup> A small portion is transported as Liquefied Natural Gas on ships or in trains. In 2020, 6.8 Bcf/d was exported to the U.S., while Canada imported 2.2 Bcf/d. – "Provincial and Territorial Energy Profiles – Canada," *Canada Energy Regulator*, Accessed October 10, 2023, <https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-canada.html>.

<sup>16</sup> For comparison, Canada had a total end-use demand of 12,305 petajoules (PJ) in 2019. 2020 figures are not yet available. Ibid.

<sup>17</sup> "Uses of Natural Gas," *CAPP*, Accessed Jun. 1, 2023, <https://www.capp.ca/natural-gas/uses-for-gas/>.

envision their lives without it, while the advent of its mass consumption as a fuel source in Canada is less than seventy years old. This entanglement is particularly precarious given the climate crisis and the continuing tension between natural gas developments, questions of identity, and Indigenous communities.



*Figure 10: Provincial and territorial energy profiles of Canada in 2020.*

“Provincial and Territorial Energy Profiles – Canada,” Canada Energy Regulator, Accessed October 10, 2023, <https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-canada.html>.

This dissertation shows that technological innovations and economic interpretations of natural gas played a fundamental role in the energy transition of the mid-20th century. However, adapting people’s socio-ecological relationships to the new fuel primarily facilitated the introduction of Westcoast transmission’s natural gas. This dissertation, therefore, at its core, highlights the complexity of energy transition. Energy usage, transitions, societal norms, racial practices, and gender and communal identities are intrinsically

intertwined. Put differently; this research reveals some of the opportunities for equality that come with energy transitions, as such energy shifts must attune to the geopolitical and social movements that advocate for a more inclusive and equitable society. Whatever the next energy transition entails, it cannot just be an economic and technological matter. However, Canada's fossil fuel dependency has only grown over the years while tensions persist between Indigenous communities, environmental concerns, and the energy industry. The question remains whether these tensions can be reconciled.

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