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Bitumen Exploration and the Southern Re-Inscription of Northeastern Alberta: 1875–1967

The Alberta bitumen deposits are vast deposits of bituminous sand that sprawl across approximately fifty thousand square kilometres of northeastern Alberta. These deposits have become the home of the oil sands (or tar sands) industry, which extracts bitumen to produce synthetic crude oil, currently generating approximately two and a half million barrels per day. The oldest and most intensive extraction operations are in the Athabasca deposit in the Athabasca River Valley, north of Fort McMurray. The area is the homeland of Woodland Cree, Chipewyan Dené, and Métis Indigenous peoples. Since commercial-scale bitumen extraction began in the 1960s, the environmental impacts of the oil sands industry have damaged the landscape and watershed of the Athabasca River Valley and Peace Athabasca Delta. This has caused adverse environmental, socio-cultural, and economic change in Indigenous communities, and has sparked conflict with the Alberta government and with the industry. The impacts of the industry have become mired in politicized debates which invoke competing claims of environmental knowledge. Indigenous peoples are observing major human health and environmental impacts, which they associate with bitumen extraction, while industry and government have contested the validity of claims about the connection between environmental and health impacts and the oil sands industry. These issues can be partly attributed to hybrid geographies of Indigenous and industrial rights and land use that stem from the colonial production of geographic knowledge by early explorers and surveyors for the Dominion government.

Although the oil sands industry only began commercially producing synthetic oil from the Athabasca bitumen deposits in 1967, the impact of colonial knowledge of these bitumen deposits had re-imagined and reshaped the region long before bitumen became a profitable commodity. Examining the work of the Geological Survey and the Department of Mines between 1875 and 1945 in northeastern Alberta reveals a process of cartographic colonization that produced a resource-based geographic appraisal of the region. This emphasized the Athabasca bitumen deposits and marginalized the Indigenous landscape of the Athabasca region.[1]

1 Gavin Bridge, "Resource Triumphalism: Postindustrial Narratives of Primary Commodity Production," *Environment and Planning* 33 (2001): 2149–73.

The region's Cree and Chipewyan inhabitants have known about the Athabasca bitumen deposits since their settlement in the area. European settlers have been widely aware of the deposits since they were described in 1789 by the Scottish explorer Alexander Mackenzie who conducted an exploration mission seeking a passage across North America on behalf of the fur-trading North West Company.[2] With the Rupert's Land transfer in 1870, the Dominion of Canada purchased the Athabasca region from the Hudson's Bay Company. The Hudson's Bay Company had been given Rupert's Land, which consisted of all the land and rivers of the Hudson Bay watershed, in 1670 by King Charles II of England to create a fur trade monopoly. Following Canadian Confederation in 1867, the Canadian government initially had very little interest in the Athabasca district and repeatedly refused to acknowledge any responsibility for the well-being of Indigenous peoples in the region.

The increasing importance of petroleum and the government's growing knowledge of the Athabasca bitumen deposits fostered a desire for the region's mineral rights, which contributed to the Canadian government's motivation to sign Treaty 8 with the region's Indigenous peoples. In the early 1880s reports from the Geological and Natural History Survey of Canada, such as that of Robert Bell in 1882–83, repeatedly mentioned the abundance of hydrocarbons in the Athabasca River Valley. In historian René Fumoleau's words, the notion that the North was "floating" on oil was born.[3] In 1888 Robert McConnell verified Bell's report. He wrote, "The Devonian rocks throughout the Mackenzie Valley are everywhere more or less petroliferous and over large areas afford promising indications of the presence of oil in workable quantities."[4] The news of such reserves of oil drastically changed southern imaginings of the Northwest, and made the expense and obligation of a treaty with the region's Indigenous peoples look minimal.[5] In 1891 the Privy Council outlined the importance of securing a treaty:

2 Patricia A. McCormack, *Fort Chipewyan and the Shaping of Canadian History, 1788–1920s: "We Like to Be Free in This Country"* (Vancouver: University of British Columbia Press, 2010).

3 Robert Bell, *Report on Part of the Basin of the Athabasca River, North-West Territory*, Geological and Natural History Survey of Canada (Montreal: Dawson Brothers, 1884), cited in René Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939* (Calgary: University of Calgary Press, 2004), 24.

4 Robert G. McConnell, *Report on an Exploration in the Yukon and the Mackenzie Basins, N.W.T.*, Geological and Natural History Survey of Canada, Annual Report, 1888–89 (Montreal: William Foster Brown and Co., 1890), cited in Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939*, 25.

5 Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939*, 27.

> The discovery in the District of Athabaska and in the MacKenzie River Country, that immense quantities of petroleum exist within certain areas of those regions, as well as the belief that other minerals and substances of economic value … are to be found therein, the development of which may add materially to the public wealth, and the further consideration that several Railway projects, in connection with this portion of the Dominion, may be given effect to at no such remote date as might be supposed, appear to render it advisable that a treaty or treaties should be made with the Indians who claim those regions as their hunting grounds, with a view to the extinguishment of the Indian title in such portions of the same, as it may be considered in the interest of the public to open up for settlement.[6]

From the perspective of the federal government, by signing Treaty 8 in 1899, Indigenous signatories gave up their rights to the land in exchange for hunting rights, reserve lands, and various other benefits. Indigenous land was overlaid with a narrative and vision of industrialization, bountiful supplies of petroleum, and massive accumulations of wealth: a vision that excluded the Indigenous communities of the region.

In the early twentieth century, Canada imported over 90 percent of its petroleum. The country's dependence on imports and the increasing importance of the commodity impelled the Dominion government to seek out domestic supplies. During this time, Sidney C. Ells's work as the Athabasca representative of the federal Department of Mines reshaped and colonized the Athabasca region by producing maps, images, and descriptions of the region that defined it exclusively in relation to bitumen, a commodity that could potentially be exploited to replace imported petroleum. Between 1913 and 1945, Ells conducted exploration, surveying, prospecting, documentation, photography, and process experimentation that widely expanded Euro-Canadian knowledge of the Athabasca region, specifically in terms of bitumen and its potential extraction and value.

In 1910, while working as assistant to the director of the Mines Branch, Ells was tasked with conducting an inquiry into the Athabasca bitumen deposits. While completing the project, he became enthralled by the same 1883 reports from Robert Bell that had prompted the pursuit of Treaty 8.[7] In the spring of 1913, Ells loaded up a

6 Government of Canada, Privy Council Report, 1891, cited in Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939*.

7 Sidney C. Ells, *Recollections of the Development of the Athabasca Oil Sands* (Ottawa: Department of Mines and Technical Surveys, 1962), 2.

30-foot scow at Athabasca Landing with four men and three months of supplies, and floated downstream towards Fort McMurray, the town that would become the gateway to the Alberta oil sands region. That summer, Ells conducted reconnaissance survey missions one hundred miles north of Fort McMurray along the Athabasca River, and one hundred miles down each of the Clearwater, Firebag, and Christina Rivers, none of which had previously been surveyed. He made maps, took extensive notes, and photographed bitumen outcrops. On his return to Ontario, his report of the first trip emphasized the abundance of bitumen and advocated an extensive core drilling program, testing of the material for paving, and research into a separation process with which to produce synthetic crude oil.[8]

Between 1922 and 1923, Ells conducted extensive topographical surveying and surface profiling. The survey covered over two thousand square kilometres and focused on the general classification of bituminous sand areas, based mainly on outcrops along various streams and grouped according to possible commercial value, thickness, and character of overburden,[9] the difficulties associated with overburden removal, and the apparent quality and estimated quantity of sand available.[10] Later surveys and prospecting in the region have expanded the map of mineable bituminous sand deposits, but all of Ells's findings have held true. He specifically highlighted the importance of the Mildred-Ruth Lakes area. The Syncrude Mildred Lake project is the largest mine in the region, and one of the largest in the world. It has been active since 1987 and is expected to produce bitumen beyond 2025.

By mapping the region specifically for the location of bitumen deposits, Ells obscured the history of the region's Indigenous people. His maps make no mention of settlements, traplines, and trails relied on by Indigenous peoples for subsistence hunting, gathering, and trapping activities. In his mapping process he renamed features himself, such as naming Patterson and Forrest Lakes after two of his canoemen. Ells's reports also indicated the potential for the oil sands region to provide other economically valuable natural resources, including waterfowl and grouse, fur bearers, and big game, thereby advocating the southern exploitation of Indigenous subsistence resources.[11] Ells conducted

8 Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939*, 14.
9 Overburden is the industry term for the material (rock, soil, trees, etc.) that lies above the mineable bitumen deposits.
10 Ells, *Recollections of the Development of the Athabasca Oil Sands*, 59.
11 Fumoleau, *As Long as This Land Shall Last: A History of Treaty 8 and Treaty 11, 1870–1939*, 55.

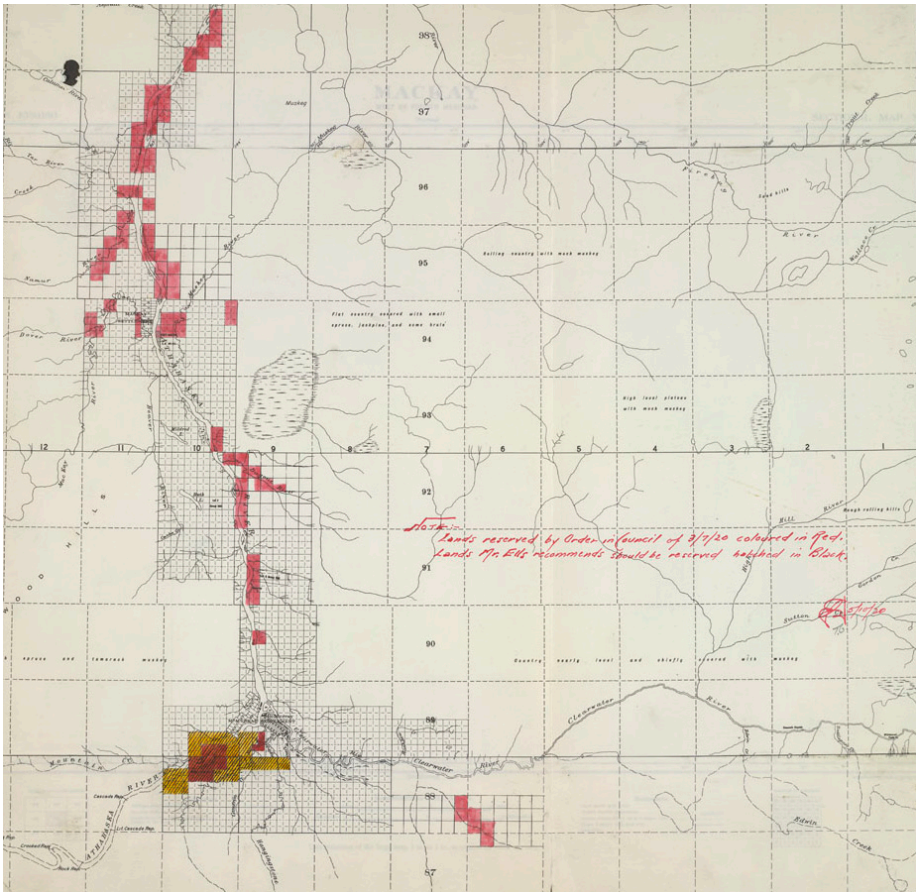

Figure 1:
Northern Affairs Program, "Lands reserved by Order in Council of 2/7/20 coloured in Red. Lands Mr. Ells recommends reserved hatched in Black." (5 October 1920), Regulation file for tar sand - Star, Spence, Cooper and Fraser - Dom. [Dominion] Land agent, Edmonton - Mines Department - McMurray tar sands - Thomas Drapeu, J. J. Rinner – General, Source: Library and Archives Canada/Department of Indian Affairs and Northern Development fonds/ e010783388

further surveying and exploration, and some limited drilling in 1931, which constituted some of the only significant geological surveying before his 1942–47 survey of 6,500 square kilometres south of Lake Athabasca.

Ells recommended to the Dominion government that some of the richest bitumen deposits in the region be set aside as bitumen leases. These deposits were reserved for resource development by order-in-council in October 1920 (figure 1). The government of Canada thus removed these lands as possible selections for Indigenous reserves that were promised under Treaty 8 and were at that time still unsettled, despite calls from Indigenous communities for the settlement of Canada's treaty obligations beginning in the mid-1920s.

Under the 1930 Natural Resources Transfer Agreement, resource ownership was transferred from the federal government to the Prairie provinces (the other Canadian provinces already owned their own resources), a change that further complicated the settlement of treaty obligations. Treaty land entitlement settlements in the Athabasca region of Treaty 8 did not begin until the 1980s, and many are still before the courts.

The efforts of Sidney Ells are far more significant for their contribution to colonizing the region by re-imagining place in the southern mind than they were for any tangible accomplishment. Many attempts to exploit bitumen resources were short-lived. The International Bitumen Company, which had produced pavement, succumbed to the Depression and closed its doors in 1930. Towards the end of the Second World War, extensive efforts to produce synthetic crude oil at the Abasand plant came to a halt when the facility burnt to the ground in 1945. After Ells retired in 1945, the discovery of billions of barrels of conventional oil at Leduc and Redwater near Edmonton in 1947 sidelined major oil sands development efforts until the late 1960s. But recalling over 30 years of work in northeastern Alberta in 1962, Ells reaffirmed his vision for the oil sands region:

> In 1913 a great and potentially valuable natural resource in the northern part of the province of Alberta lay dormant and unknown while even the surface of the country was unsurveyed. Yet as a result of investigations in the field and in the laboratory, the outcome may ultimately be reflected in important commercial development. Where now the almost unbroken wilderness holds sway, industrial plants may arise and tall stacks dominate the landscape. Few will then pause to consider what these developments represent, but success will be the reward of those who had a part in the undertaking.[12]

As the scale of the deposits was realized, the oil sands region was conceptualized in Alberta and southern Canada as an industrial heartland of oil production, wealth, and sustenance, rather than a faceless resource extraction zone. Using Treaty 8 as its legal basis, along with the knowledge gleaned from cartographic, visual, and narrative reports from people like Ells, southern Canada colonized the oil sands region, gaining political control and exploiting it for economic gain.

12 Ells, *Recollections of the Development of the Athabasca Oil Sands*, 100.

Although the work of Ells contributed to a new cognitive geography of resource extraction in the Athabasca River Valley, the process of resource colonialism has remained incomplete and Indigenous geographies have prevailed. Competing and conflicting geographies of traditional and industrial land use rights overlay and intertwine with each other, and have made the Athabasca region a contested space in which political struggles over environmental impacts have become struggles between local Indigenous knowledge of the Athabasca environment, and industry and state conceptions of the region as a resource extraction zone.

Suggested Further Reading

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