BOOM, BUST, AND CONSOLIDATION

CORPORATE RESTRUCTURING IN THE ALBERTA OIL SANDS

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CORPORATE MAPPING PROJECT

CONTENTS

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Corporate Restructuring in the Alberta Oil Sands

Ian Hussey, Eric Pineault, Emma Jackson, and Susan Cake
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About the Publishers

CORPORATE MAPPING PROJECT

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For more information, visit **www.corporatemapping.ca.**

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Executive Summary

This report analyzes the economics of the five largest bitumen-extractive corporations in Canada. The "Big Five" are Suncor Energy, Canadian Natural Resources Limited (CNRL), Cenovus Energy, Imperial Oil, and Husky Energy. We examine the key features of the five firms and analyze their accumulation dynamics in the context of the latest commodity cycle: boom (2004–2014), bust (2014–2016), and restructuring and consolidation (2015 onward).

The Big Five's Key Features and Accumulation Strategies

Key economic variables, oil and natural gas reserves, organizational characteristics, and financial metrics are provided for each of the Big Five in this section of the report.

In terms of industrial structure, all of the Big Five are vertically and/or horizontally integrated, publicly traded corporations. Three of the Big Five are vertically integrated (Suncor, Imperial, and Husky), meaning they are active from pit to pump. All five firms are horizontally integrated, meaning their activities are spread across the full spectrum of the fossil fuel sector. All five firms are multinationals, but, most importantly, all five have significant mid-stream assets in the US, including refineries and storage facilities, which enables them to attune their internal costing to mitigate exposure to currency spreads and to commodity price spreads (the so-called price discount for Canadian crude).

As of 2017, the Big Five control 79.3% of Canada's productive capacity of bitumen (2.86 million barrels per day (bb/d) out of a total of 3.6 million bb/d of bitumen production). The Big Five also collectively control 90% of existing bitumen upgrading capacity, a total of 1.2 million bb/d. The Big Five are positioned to dominate Canada's future oil sands development. In a sense they *are* the oil sands.

The Big Five directly employed 35,788 workers in 2017. Their aggregate revenue was $115.23 billion, their aggregate net income was $13.74 billion, and the assets they own and control are worth a total of $278.82 billion. For perspective, Alberta's annual gross domestic product is about $300 billion. The aggregate gross profits of the Big Five in 2017 were $46.6 billion, which was close to the government of Alberta's 2017 income of $47.3 billion.

In 2016, the average profit margin for all industries in Canada was 7.8%. Three of the Big Five—Suncor, Cenovus, and CNRL—had net profit rates above 13.5% in 2017, and Cenovus's profit margin was an impressive 19.4%. Simply put, these three firms are extraordinarily profitable compared to the vast majority of businesses in Canada. By contrast, the 2017 net profit rates for Imperial (1.7%) and Husky (4%) were well below the 2016 economy-wide profit margin average of 7.8%.

In 2017, the Big Five returned $4.16 billion to their shareholders in the form of dividends, or 30.3% of their net profits, which is considerable. The Big Five spent another $2.04 billion of their income buying back shares from the market, meaning that the total transfer of value to shareholders in 2017 was $6.2 billion. In comparison, the Big Five paid $1.6 billion in income taxes and $3.12 billion in royalties to various levels of government (chiefly Alberta), meaning the total transfer of value to various governments in 2017 was $4.72 billion. The residual once all these payments and transfers are made are retained as savings—uncommitted capital that can be eventually invested. The Big Five's 2017 residual savings were $7.3 billion.

The Big Five and the Latest Commodity Cycle

The report provides an in-depth analysis of accumulation dynamics over the last commodity cycle of boom (2004–2014), bust (2014–2016), and restructuring and consolidation (2015 onward).

Boom (2004–2014)

The aggregate productive capacity of the Big Five surged throughout the boom. In 2005, the firms' cumulative productive capacity of bitumen was 1 million bb/d, by 2009 it was about 1.5 million bb/d, and by 2015 it was up to 2.5 million bb/d. The Big Five's expansion of extractive capacity was spurred by substantial capital expenditures (CapEx). In total, the Big Five's CapEx was a whopping $196 billion over nine years (2009–2017). The aggregate CapEx of the five firms plummeted 40% in 2015 compared to 2014 because of the oil price downturn. Total CapEx decreased a further 25% in 2016 before recovering slightly in 2017, but still only representing 50.8% of the spending peak in 2014. In aggregate, the Big Five paid $31.76 billion in dividends to their shareholders over these nine years (2009–2017).

Bust (2014–2016)

The price of oil lost nearly half of its value in the second half of 2014, and 2015 was the worst year for Alberta job losses since 1982. The oil price downturn resulted in the (perhaps permanent) elimination of over 20,000 jobs across the Canadian oil and gas sector. Overall employment dropped in Alberta's mining and oil and gas extraction and support industries. Salaried employees and salaried support employees were cut dramatically in 2014 and

2015. There was a slight uptick of employees paid by the hour in these two years. Wages were reduced across the sector. Overall spending on support activities for oil and gas extraction across Canada decreased by 38.4% for 2014–2016, and the bulk of these cuts were in Alberta. By contrast, overall Canadian oil and gas extraction spending increased 7% for 2014–2016.

All of the Big Five except Suncor dramatically cut their CapEx during the bust. Each of the Big Five cut between 5% and 25% of their workforce, and each of the companies scaled back or delayed the expansion of their extractive facilities. Some of the firms sold significant assets; Imperial, for example, sold upstream and downstream assets. Suncor and CNRL both saw the downturn as an opportunity. Suncor's biggest move was becoming majority shareholder of Syncrude in 2016. Between 2014 and 2016, CNRL acquired about 12,000 natural gas wells, moving the company past Encana as Canada's largest natural gas producer.

Restructuring and Consolidation (2015 onward)

The prolonged glut in global oil markets and the resulting lower oil prices drove oil industry restructuring. Restructuring in the Alberta oil sands industry has consisted of several global oil giants selling their oil sands assets and the acquisition of much of this productive capacity by the Big Five. In 2015–2017, the Big Five were all vocal on what this phase of consolidation means for the future of the industry, with all five downplaying the possibility of large-scale expansion of productive capacity in the near-term. There will be expansion of production, but largely through increased efficiency of current facilities and because of past investments.

Conclusion

Our research shows that over the latest commodity cycle the Big Five were able to maintain their gross profits, out of which they pay for past investments, maintain overhead expenditures, and generate financial capital in the form of share buybacks and dividends. The Big Five were able to do this through direct production cost compression. With the Big Five increasing production while squeezing costs and slowing down investment, a significant chunk of Alberta's (and Canada's) carbon budget is currently reserved for a slow-growing, cost-cutting sector with weak fiscal, investment, employment, and innovation benefits.

If the Big Five are able to continue to steer provincial and federal fiscal, energy, and climate policies, Canada will not be able to live up to its Paris Agreement obligations for the year 2050. What is more, humanity likely doesn't have three decades to dramatically reduce fossil fuel use. The planet has already warmed 1C above pre-industrial levels (about 200 years ago), and in October 2018, the United Nations' Intergovernmental Panel on Climate Change (IPCC) published a summary of research on meeting the

Paris Agreement's tougher target of limiting global warming to 1.5C. The IPCC estimates that based on current trends global warming will surpass 1.5C between 2030 and 2052.

In terms of climate change effects, limiting global warming to 1.5C, as opposed to 2C, would be significantly better for humanity and the planet. But, to be clear, limiting global warming to 1.5C does not ensure that we will avoid climate change risks altogether. Albertans, for example, have experienced at least two extreme weather events in recent years—a large flood in Calgary and the surrounding region in 2013 and a gargantuan wildfire in and around Fort McMurray in 2016.

There are no easy answers for how to limit global warming to 1.5C, but the IPCC's research does clarify the options. In short, what is clear is that Canada and other countries need to implement much higher carbon taxes, and fossil-fuel-producing jurisdictions like Alberta need to develop and legislate plans for phasing out hydrocarbon production over the next number of years. In the case of the oil sands, this most certainly means phasing out production by 2050, and every year that timeline can be shortened gives humanity more of a chance to limit global warming to 1.5C.

Despite this reality, the Big Five all forecast an increase in total emissions in the future due to their plans to increase bitumen production. None of the Big Five have made science-based targets or implemented material actions that align with the amount of decarbonization required to keep the global average temperature increase below 2C, let alone 1.5C. The Big Five's hopes for future emissions decreases rely primarily on claims that new technologies will enable substantial reductions. However, technological advancements to date have not produced absolute emissions reductions, and there is no reason to believe they will. The only realistic way for the Big Five to reduce their total emissions is to reduce their oil and gas production. The Paris Agreement means that business as usual for the Big Five and other fossil fuel producers is not an option.

The ongoing energy transition in Canada and around the world is a massive economic opportunity, even for oil-dependent jurisdictions like Alberta, should they choose to embrace the energy transition and legislate accordingly. Alberta and Canada can make a just transition by developing policies that recognize and respect Indigenous rights and title, put thousands of people to work cleaning up land that has been polluted by Alberta's hydrocarbon industry and building wind and solar farms, and that minimize the impacts of such a transition on oil and gas workers by involving them in building our new economy.

1. Introduction

The Alberta oil sands evoke images of sprawling surface mines worked by larger-than-life machinery, extracting and transporting their tar-like feedstock to immense industrial refining facilities. They might evoke tailing ponds and mountains of caustic sand from which bitumen has been extracted. In a more abstract fashion, the oil sands also evoke images of pipelines and trains snaking their way south, east, and west to refining hubs or ports elsewhere on the continent, and of greenhouse gases rising into the atmosphere.

The oil sands in Canada also evoke a hegemonic economic force, mostly based in Alberta, but significantly present also in Ottawa and linked to Central Canadian elites via Toronto's Bay Street financial hub. This hegemonic complex, an articulation of public and private power, has had a significant impact on Canadian politics, economics, and society, particularly over the last two decades. It has been able to shape and mold policies as diverse as labour and employment, environmental and climate, migration, fiscal arrangements, research and science, colonial relations with Indigenous nations, waterway and ocean protection, and interprovincial trade. Spurred by a 10-year commodity boom—oil prices were high from 2004 to 2014—the oil sands as an industry grew into an increasingly dominant economic force capable of nourishing and sustaining this hegemonic power. Surprisingly, since the oil price crash of late 2014[1] the oil sands have remained a defining economic and political force; the hegemonic complex is seemingly intact in spite of this shift from boom to bust.

Our objective in this report is to study the largest bitumen extractive corporations that form the capitalist core of this hegemonic complex. Their accumulation strategies are embodied in the fixed capital mentioned above, in the vast pools of labour, energy, and materials mobilized by the "flow" of bitumen from pit to refinery through machines, processing facilities, pipelines, and trains. Accumulation has sustained the hegemonic power of the oil sands as an industry and political force, and this power has in turn been exercised to further the oil sands majors' accumulation strategies.

The accumulation dynamics we explicate in this report stem from the activities of a surprisingly small number of firms: five large extractive corporations dominate bitumen production in the Canadian oil sands.[2] The "Big Five" are Suncor Energy, Canadian Natural Resources Limited (CNRL), Cenovus Energy, Imperial Oil, and Husky Energy (see Hussey and Janzen 2018). The oligopolist bloc that structures the economic dynamics of the entire oil sands industry also includes two[3] large liquids transport corporations that dominate the pipeline industry in Canada—TransCanada Corporation and Enbridge—but we don't have space in this report to also include an in-depth analysis of their accumulation strategies.

1 The average monthly WTI price went from $103.54 USD in August 2014 to $57.24 USD in December, losing almost half its value in four months.

2 Unless otherwise cited, data on specific companies come from their annual reports and media releases.

3 Kinder Morgan sold most of its Canadian assets to the Government of Canada in 2018, including the existing Trans Mountain Pipeline (established in 1953).

Of course, the oil sands industry is populated by thousands of businesses, some small, others medium and large. At the height of oil sands boom in 2011, the entire "oil and gas" extractive sector in Canada included 7,051 firms with employees[4] (counting employee-less shell firms the number goes up to 14,415), but 93% of these firms were small businesses with 50 employees or less. Of the remaining 514 firms, 485 were medium businesses with 50 to 499 employees, and 29 were large corporations with 500 employees or more. The vast majority of small firms were in the "services to oil and gas extraction" segment, which represents 62% of all firms with employees, 25% are conventional gas and oil extractors, and 10% are oil and gas contract drillers. Less than 1% of firms with employees are counted in the group of "non-conventional oil" extractors, and yet it is the investment decisions made by this handful of corporations to explore for new oil reserves or to develop extractive capacity that drive the overall growth of the industry.

The accumulation dynamics of the Big Five must be examined in the context of the commodity cycles that mark the development of extractive capital. Capitalist development is not a linear and progressive process, accumulation is by its very nature cyclical, and commodity-producing industries are subject to some of the wildest economic gyrations. Price volatility is a hallmark of commodity-producing sectors, all the more so given the existence of deep and vast financial markets where future deliveries of all basic commodities can be bought and sold and options on these transactions traded. The price dynamics of commodity extraction and circulation drive an investment cycle that is prone to immense overshoots, which, depending on the depth of the investment process—from exploration to the construction of massive extractive facilities and the associated transport infrastructure—can have dire economic consequences as the value of fixed capital is destroyed during the inevitable downturns. The recent development of the Canadian oil sands has been driven by these cyclical dynamics, so understanding them is an important aspect of the analysis presented in this report.

Our analysis begins in Section 2 with a discussion of the Big Five's key economic variables, oil and natural gas reserves, organizational characteristics, and financial metrics. In Section 3, we scrutinize the cyclical dynamics that have delineated the development of the Big Five's accumulation strategies, focusing on the three phases of the most recent commodity cycle: boom (2004–2014), bust (2014–2016), and restructuring and consolidation (2015 onward). Section 4 contains our conclusions based on our research results.

4 Data from Statistics Canada, Table 551-0001.

2. The Big Five's Key Features and Accumulation Strategies

Table 1 summarizes some key economic variables of the Big Five.

Table 1. The Big Five's Key Economic Variables, $ CAD (2017)

Corporation	**Assets** * *Market capitalization* **	**Revenue** *** *Net Income* *	**Employees** ****	**Bitumen production capacity (bb/d)** ****
Suncor	$89,494,000,000 *$84,375,452,708* (TSX rank: 4)	$32,176,000,000 *$4,458,000,000*	12,381	1,175,372 (including Syncrude stake)
CNRL	$73,867,000,000 *$55,044,350,036* (TSX rank: 9)	$17,669,000,000 *$4,640,452,000*	9,973	655,500 (including Athabasca stake)
Imperial	$41,601,000,000 *$34,926,986,855* (TSX rank: 18)	$29,125,000,000 *$490,000,000*	5,400	501,750 (including Syncrude stake)
Husky	$32,927,000,000 *$19,615,752,388* (TSX rank: 34)	$18,946,000,000 *$786,000,000*	5,152	90,000
Cenovus	$40,933,000,000 *$16,808,580,856* (TSX rank: 40)	$17,314,000,000 *$3,366,000,000*	2,882	440,800

Data sources:
* Data from Financial Post 500 Infomart.
** Data from TSX, based on quoted market value as of May 31, 2018, ranking among the listed firms and funds on the TSX exchange.
*** Data from Morningstar.
**** Data from JWN's "Oilweek's 2017 Top 100 report."

As of 2017, the Big Five control 79.3% of the productive capacity of bitumen in Canada. This represents a potential of 2.86 million barrels per day (bb/d) out of a total potential capacity of 3.6 million bb/d [5] of bitumen production.[6] To put this number into perspective, Canada's average overall daily oil production for 2017 was 4.2 million bb/d. Since 2013, bitumen and its upgraded derivatives have counted for about two-thirds of the oil produced for market in Canada, and bitumen's share of overall Canadian oil production has grown 419% since 1999 (Hughes 2018). The Big Five form the oligopolistic core of the oil industry in Canada primarily through their strategic control of extractive capacity, but they also control a significant amount of the extractable reserves of oil in Canada (see Table 2).

5 Data from JWN's "Oilweek's 2017 Top 100 report." This includes capacity from Syncrude and Athabasca Oil Sands Project. The former is controlled 58% by Suncor and 25% by Imperial. CNRL owns 70% of the latter, as of 2017.

6 They also collectively control 90% of existing bitumen upgrading capacity: 1.2 million bb/d.

Table 2. The Big Five's Oil[7] and Natural Gas Reserves (2016)

Corporation	Total Proved (Mmboe)	Total Proved + Probable (Mmboe)
Suncor	4,875	7,856
CNRL	5,102	7,713
Cenovus	2,667	3,797
Husky	1,224	2,815
Imperial	1,382	N/A[8]

The oil sands represent 80% of Canada's extractable oil reserves (Hughes 2018). The Big Five are thus positioned to dominate the future development of Canada's oil sector. In a sense they *are* the oil sands, and Canada's "Big Oil" bloc.

The Big Five directly employed 35,788 workers in 2017. Their aggregate revenue was $115.23 billion, their aggregate net income was $13.74 billion, and the assets they own and control are worth a total of $278.82 billion. For perspective, Alberta's annual gross domestic product is about $300 billion.

As of May 31, 2018, the Big Five represented 7% of the quoted market value of the Toronto Stock Exchange (TSX). Suncor, by far the largest of the Big Five, had the fourth-largest market capitalization among listed companies. Its quoted market value was $84 billion, representing 3% of the TSX's total value. Suncor's gross profits[9] for 2017 were $21 billion. To put this number into perspective, the government of Alberta's income for 2017 was $47.3 billion. The aggregate gross profits of the Big Five in 2017 were $46.6 billion, meaning they muster collectively as much spending capacity as the province from which they derive the vast majority of their profits.

In terms of industrial structure, all of the Big Five are vertically and/or horizontally integrated, publicly traded corporations, and this forms the basis of their oligopolistic power. Table 3 summarizes some of their organizational characteristics.

7 Includes bitumen, crude oil, and natural gas liquids.

8 Imperial Oil does not publish its probable reserves. Imperial's 2016 proved reserves were two-thirds less than their 2015 reserves because of a massive de-booking of reserves by Imperial's parent company, ExxonMobil. Most of the reserves that ExxonMobil de-booked are at the Kearl Oil Sands Project. Some of the de-booked reserves may be reclassified as proved reserves again in the future if the right combination of rising oil prices and declining production costs occurs.

9 Revenue – operating expenses = gross profits; gross profits – (indirect costs (overhead) + taxes + interest + amortization + depreciation + other items) = net income.

Table 3. The Big Five's Organizational Characteristics (2017)

Corporation	Ownership *	Mid-stream operations / assets	Downstream operations / assets	Foreign operations / assets	Operations / reserves in sectors other than oil sands
Suncor	Widely held stock by North American institutional investors	Refining, upgrading	Petro-Canada	Offshore Norway; offshore UK; Libya and Syria (both suspended); refinery in Colorado (US) and connected pipeline from Wyoming	Natural gas, conventional oil, ethanol, wind farms
CNRL	Widely held stock by North American institutional investors; 9% Shell (the Netherlands)	Refining, upgrading	No	Offshore UK; offshore Côte d'Ivoire; offshore South Africa	Natural gas, conventional oil
Imperial	Subsidiary of ExxonMobil (US)	Refining, upgrading	Esso	Parent firm has foreign assets	Natural gas, conventional oil, asphalt
Husky	Foreign controlling shareholder (Hong Kong)	Refining, upgrading	Husky	Offshore China; offshore Indonesia; Toledo Refinery (50%) and Lima Refinery, both in Ohio (US)	Asphalt, natural gas, ethanol
Cenovus	Widely held stock by North American institutional investors; 25% ConocoPhillips (US)	Refining, upgrading	No	50% stake in two US refineries (Illinois and Texas)	Natural gas, conventional oil

* Data used in this column is from Hulshof et al. 2017 (TD Securities).

Three of the Big Five are vertically integrated fossil fuel producers (Suncor, Imperial, and Husky). They are active from pit to pump: extracting bitumen (upstream), upgrading and refining the bitumen, shipping various grades of petroleum products through commercial circuits across North America (mid-stream), and finally selling directly to consumers and businesses through downstream assets, such as branded gas stations (Petro-Canada, Esso, and Husky). Although Cenovus and CNRL do not have any downstream assets, they do have significant mid-stream assets.

All five firms are horizontally integrated. Their activities are spread across the full spectrum of the fossil fuel sector; the Big Five are engaged in conventional oil and gas extraction, but they're also active in the burgeoning unconventional wet gas extraction in the Montney formation (which is

located in northwestern Alberta and northeastern British Columbia). Most of the Big Five are also involved in deep-sea oil and/or gas extraction, and Suncor has owned wind farms since 2002. All five firms are multinationals with subsidiaries operating in Africa, Europe and Asia, but, most importantly, all five have significant mid-stream assets in the US, such as refineries and storage facilities.

This complex integration gives these large corporations strategic and operational flexibility: they can use their own products as inputs, they can shift activity from one component of the fossil fuel sector to another according to market conditions, and internal costing procedures can help them try to compensate losses in one of their business segments by gains in another. This was an important strategy during the 2014–2016 oil price downturn, during which losses in the upstream segment of the integrated producers have been partially offset by gains in mid-stream and downstream segments. Finally, because they are multinationals, and mostly because a significant amount of their activities span across the Canada-US border, they also attune their internal costing to mitigate exposure to currency spreads and to commodity price spreads (the so-called price discount for Canadian crude). Thus, they "optimize" their fiscal exposure. Integration is just one aspect of the economic power stemming from the organizational capacity of these large corporations. As members of an oligopolistic core they can also exercise their economic power outwards and control the myriad of small and medium service firms that depend on their activities. The Big Five actively observe each other, coordinate and cooperate in research and development, exploration, and in lobbying and engaging with various regulators and governments.

The organizational power of these corporations can be analyzed using two variables—gross profits and capital expenditure—and together these define the contours of the accumulation strategies and dynamics of the Big Five.[10] Capital expenditure involves the accumulation of organizational corporate power (see Section 3 for several examples from the latest commodity cycle), whereas gross profits measure the current exercise of economic power. The rest of this section analyzes the gross profits of the Big Five.

Gross profits represent the organizational power that can be exercised by an oligopolistic corporation above and beyond its direct production costs, which vary directly in relation to the amount of output and include labour costs and material and energy inputs. In the case of the Big Five, direct costs are what it costs to extract a barrel of bitumen and eventually the costs of refining and selling a grade of oil. As Table 4 shows, the Big Five's direct costs were 59.5% of their aggregate revenue in 2017.

10 This analytical framework is based on post-Keynesian economist Alfred Eichner's (1976) theory of the firm.

Table 4. The Big Five's Financial Metrics as a Proportion of Gross Revenue (2017)

Corporation	Gross Revenue (millions $)	Direct Costs	Gross Profits	Overhead	Depreciation & Amortization	Net Profits
Suncor	$32,176	34.56%	65.44%	31.96%	17.41%	13.86%
Imperial	$29,125	82.49%	17.51%	3.07%	7.46%	1.68%
Husky	$18,946	67.87%	32.13%	7.86%	15.21%	3.97%
Cenovus	$17,314	63.71%	36.29%	1.78%	11.72%	19.44%
CNRL	$17,669	53.94%	46.06%	2.56%	29.35%	13.57%
Total $ or Average %	$115,230	59.50%	40.50%	11.65%	15.51%	9.95%

Source: Morningstar

Aggregate gross profits for the Big Five were $46.6 billion in 2017, almost half of which were captured by Suncor. Looking at Table 4, Suncor appears as an outlier, having by far the highest gross revenue, the lowest direct costs per gross revenue, and thus the highest gross profits as a proportion of gross revenue. These gross profits sustain a very top-heavy corporate structure, significant depreciation and amortization expenses, and high net profits (half of which were transferred to shareholders in the form of dividends in 2017; see Section 3 for more detail on dividends). Imperial is the contrary case of Suncor, with very high direct costs, low gross profits compared to the other four oil sands majors, and negligible net profits as a proportion of gross revenue.

On average, gross profits represent 40.5% of the revenue collected by the Big Five, but this hides an important disparity: at the top end, Suncor's gross profits represent 65.4% of the corporation's revenue and, at the other extreme, Imperial's gross profits are 17.5% of its revenue (even at this low end, Imperial's gross profits were $5 billion in 2017).

In 2016, the average profit margin for all industries in Canada was 7.8% (Burt and Forbes 2017, 33).[11] Three of the Big Five—Suncor, Cenovus, and CNRL—had net profit rates above 13.5% in 2017, and Cenovus's profit margin was an impressive 19.4%. Simply put, these three firms are extraordinarily profitable compared to the vast majority of businesses in Canada. By contrast, the 2017 net profit rates for Imperial (1.7%) and Husky (4%) were well below the economy-wide average of 7.8%.

11 Burt and Forbes calculated this figure using data from Statistics Canada, CANSIM Table 187-0001.

It is out of gross profits that corporations cover the fixed indirect costs or overhead needed to sustain their power as oligopolistic organizations; in particular maintaining corporate bureaucracies who enact oligopolistic strategies such as information gathering, coordination, managing, marketing, lobbying, and research and development. Overhead thus covers the costs of both vertical and horizontal integration; it represents the costs associated with the control of both the internal and external environments of a corporation. In 2017, overhead expenses amounted to $13 billion or 11.65% of the Big Five's aggregate revenue. Suncor alone spent $10 billion of the total overhead costs of the Big Five because of the size and complexity of the firm. The ratio of overhead to direct costs for the Big Five as a group was 20% in 2017, which means that for each dollar spent on direct costs, 20 cents were spent on overhead. But again, this aggregate figure hides a wide disparity between Suncor, whose ratio is 92%, and Cenovus, whose ratio is 3%.

It is also out of gross profits that corporations cover their financial expenses: interest and principle on debt, which represents the acquisition of capital assets in the past, be they new (investments) or existing assets (acquisitions), tangible or intangible. Through these expenses corporations expand their organizational power and productive capacity. Gross profits also cover depreciation and amortization, the capacity to replace current productive and organizational capacity (and thus maintain the corporation among top producers), and collectively maintain the strategic role of the top producers as the oligopolistic core of the industry. A high proportion of depreciation and amortization out of gross profits usually signals an accumulation dynamic turned towards restructuring, which is the case for most of the Big Five in the current conjuncture.

A proportion of gross profits are also transformed into income streams that result in a transfer of economic power from the extractive sector to the state and to the financial sphere. Gross profits thus cover tax and royalty expenses as well as dividends and share buybacks, which in the analytical framework outlined above corresponds to a metamorphosis of the organizational power of industrial or extractive capital into financial capital, whereas taxes and royalties represent a transfer of economic power to the state.

In 2017, the Big Five returned $4.16 billion to their shareholders in the form of dividends (see Table 6 in the next section), or 30.3% of their net profits, which is considerable. The Big Five spent another $2.04 billion of their income buying back shares from the market, meaning that the total transfer of value to shareholders in 2017 was $6.2 billion. In comparison, the Big Five paid $1.6 billion in income taxes and $3.12 billion in royalties to various levels of government, meaning the total transfer of value to various governments in 2017 was $4.72 billion. [12]

12 By "various levels of government" we mean provincial and territorial governments across Canada (but chiefly Alberta), the Government of Canada, and governments elsewhere in the world where the Big Five operate.

The residual once all these payments and transfers are made are retained as savings—uncommitted capital that can be eventually invested in expanded accumulation of extractive (direct costs) and organizational capacity (overhead). For the Big Five, residual savings out of net profits amounted to $7.3 billion in 2017.

To summarize, in terms of accumulation dynamics over time, the higher the gross profits, the wider the scope of the organizational capacity of these corporations and the larger the scale of their extractive capacity (the two economic foundations of the Big Five's corporate power). The snapshot of the Big Five's accumulation strategies that we've presented above is complemented in the following section with more in-depth analysis of accumulation dynamics over the last commodity cycle of boom (2004–2014), bust (2014–2016), and restructuring and consolidation (2015 onward).

3. The Big Five and the Latest Commodity Cycle

Boom (2004–2014)

The aggregate productive capacity of the Big Five surged throughout the boom. In 2005, the firms' cumulative productive capacity of bitumen was 1 million bb/d, by 2009 it was about 1.5 million bb/d, and by 2015 it was up to 2.5 million bb/d.[13] As Table 5 shows, the Big Five's expansion of oil sands extractive capacity was spurred by substantial capital expenditures (CapEx).

Table 5. The Big Five's Capital Expenditures (2009–2017, millions $)

Corporation	2009	2010	2011	2012	2013	2014	2015	2016	2017	Company Total
Suncor	4,246	5,833	6,850	6,959	6,777	6,961	6,667	6,582	6,551	57,426
CNRL	2,985	5,335	6,201	6,104	7,067	11,398	4,468	3,797	4,698	52,053
Husky	2,762	3,852	4,800	4,701	5,028	5,023	3,005	1,705	2,220	33,096
Imperial	2,285	3,856	3,919	5,478	6,297	5,290	2,994	1,073	993	32,185
Cenovus	1,984	2,208	2,792	3,449	3,269	3,058	1,714	1,034	1,670	21,178
Total $	14,262	21,084	24,562	26,691	28,438	31,730	18,848	14,191	16,132	195,938

Source: Morningstar

Table 5 begins in 2009 because Cenovus was formed that year when EnCana split into two distinct companies, Cenovus (an oil company) and EnCana (a natural gas company). Unsurprisingly, Suncor and CNRL had the highest capital spending during these nine years. The two businesses are the largest bitumen producers of the Big Five (see Table 1) and they have the largest proved and probable reserves (see Table 2). Cenovus spent the least of the five firms by about $11 billion over nine years. In total, the Big Five's CapEx was a whopping $196 billion over nine years.

The aggregate CapEx of the five firms plummeted 40% in 2015 compared to 2014 because of the oil price downturn. The total CapEx decreased a further 25% in 2016 before recovering slightly in 2017, but still only representing 50.8% of the spending peak in 2014.

Table 6 shows the substantial dividends that the Big Five paid to their shareholders over this same nine-year period.

13 Data from JWN's "Oilweek's 2017 Top 100 report."

Table 6. The Big Five's Dividends Paid to Shareholders (2009–2017, millions $)

Corporation	2009	2010	2011	2012	2013	2014	2015	2016	2017	Company Total
Suncor	401	611	664	756	1,095	1,490	1,648	1,877	2,124	10,666
Husky	1,020	1,020	495	574	1,184	1,182	1,203	27	34	6,739
CNRL	225	302	378	444	523	955	1,251	758	1,252	6,088
Cenovus	158	601	603	665	732	805	528	166	225	4,483
Imperial	341	356	373	398	407	441	449	492	524	3,781
Total $	2,145	2,890	2,513	2,837	3,941	4,873	5,079	3,320	4,159	31,757

Source: Morningstar

In aggregate, the Big Five paid $31.76 billion in dividends to their shareholders over these nine years, with one-third of this total coming from Suncor. Suncor's annual dividend total increased every year, including large increases throughout the downturn. Suncor's 2017 dividends were more than 500% higher than its 2009 dividends, so its consistently large CapEx throughout this period is clearly paying off for shareholders.

Imperial had the smallest nine-year total, but the company's dividend payments have increased each year. For the size of the corporation, Husky paid out relatively high dividends until 2016 and 2017, when its dividend payments almost dried up completely. Still, Husky had the second highest nine-year total of the Big Five. Cenovus' annual dividend payments increased steadily over the first six years but were cut sharply in 2015 and 2016. The company's annual dividend total bounced back a bit in 2017, but it was still only 28% of the 2014 total.

Like Suncor, CNRL's substantial CapEx over the nine years has resulted in their 2017 dividends being more than 500% higher than their 2009 dividends. CNRL's dividends grew for the first seven of the nine years, and then lost about 40% of the annual value in 2016 before bouncing back in 2017 to match the 2015 total.

Now let's turn to an analysis of the bust period and some of the specific actions taken by each of the Big Five during these three years.

Bust (2014–2016)

The price of oil lost nearly half of its value in the second half of 2014, and 2015 was the worst year for Alberta job losses since 1982. The province lost 19,600 jobs in 2015. In comparison, the 2009 global financial crisis resulted in 17,000 Alberta job losses, and in the 1982 recession the province lost 45,000 jobs (Parkinson 2016).

Overall employment dropped in Alberta's mining and oil and gas extraction and support industries.[14] Salaried employees dropped 18.7%, from 85,500 in 2014 to 69,500 in 2015. Salaried support employees for mining and oil and gas extraction dropped 38.1%, from 34,275 in 2014 to 21,225 in 2015. Employees paid by the hour in mining and oil and gas extraction increased 4.7%, from 42,700 in 2014 to 44,700 in 2015. Employees paid by the hour in support activities for mining and oil and gas extraction increased 2.65%, from 33,000 in 2014 to 33,875 in 2015.

The average hourly earnings for employees paid by the hour including overtime for mining and oil and gas extraction dropped 3.55%, from $44.28 in 2014 to $42.71 in 2016.[15] For support activities, the average wage was cut 11%, from $45.44 in 2014 to $40.46 in 2016. Overall spending on support activities for mining and oil and gas extraction across Canada decreased by 38.4% for 2014–2016, and the bulk of these cuts were in Alberta. By contrast, overall Canadian oil and gas extraction spending increased 7% for 2014–2016.

As Table 5 above shows, Suncor maintained its CapEx during the bust. The company considered the downturn an opportunity, and made several significant asset purchases. Its biggest move was becoming majority shareholder of Syncrude in 2016. Suncor went from 12% owner to 54% owner by acquiring shares from Canadian Oil Sands Limited (a firm that Suncor acquired for its Syncrude shares) and from Murphy Oil. Suncor made a second substantial move by acquiring 10% more of Foot Hills oil sands mining project from France's Total, making Suncor the majority owner of Foot Hills.

In 2014, Suncor's Joslyn North mining project was scaled back with reduced spending, and in 2015 the company delayed plans to expand its MacKay River facility. The company also sold its 50% share of Pioneer Energy in 2015 as part of a larger strategy to focus on core assets. In addition, Suncor traded two of its six wind farms to TransAlta in 2015 in exchange for TransAlta's stake in the Poplar Creek Cogeneration Facility (the facility provides steam and power for oil sands production). The deal will see Suncor gain full ownership of the Poplar Creek facility in 2030.

14 Data from Statistics Canada, Table 14-10-0202-01.

15 Data from Statistics Canada, Table 14-10-0206-01.

In 2015, Suncor laid off 12% of its workforce (1,700 employees), and began using automated trucks at some of its oil sands mines, a technology that could eventually replace about 400 Suncor drivers (The Canadian Press 2018).

Unlike Suncor's decision to maintain their CapEx, CNRL cut their CapEx by 60% during the bust (see Table 5). However, like Suncor, CNRL also saw the downturn as an opportunity. In 2014, CNRL acquired liquids-rich natural gas assets from Devon Energy, and six majority-owned and operated natural gas plants and related infrastructure. Between 2014 and 2016, CNRL acquired about 12,000 natural gas wells, moving the company past Encana as Canada's largest natural gas producer.

In 2015, CNRL postponed the development of Kirby North oil sands project. It cut 5.1% of its "permanent" employees in 2015 and 2016. The company also introduced a hiring freeze, and cut senior managers' salaries by 10%. CNRL reduced other salaried employees' pay, but didn't change the rates of hourly-paid oilfield workers. In 2016, CNRL continued with the expansion of its Horizon project, with Phase 2B and 3 in construction.

Imperial Oil slashed its CapEx in 2015 by more than 40%, and the firm's 2017 CapEx is more than 80% lower than the 2014 total (see Table 5). During the bust, Imperial delayed the development of Phase 3 and 4 of Kearl Oil Sands Project. The firm also sold upstream and downstream assets. In 2014, Imperial sold several upstream assets in western Canada to Whitecap Resources for $855 million USD, and in 2016 the company sold 497 Esso-branded gas stations to five fuel distributors for $2.8 billion CAD. With continued uncertainty about the timing or future of possible new pipelines, Imperial decided to develop rail infrastructure. Its Edmonton rail terminal began operating in mid-2015 and has the capacity to ship up to 210,000 barrels per day.

Cenovus cut its CapEx by about two-thirds in 2015 and 2016 (see Table 5). During the downturn, Cenovus suspended a pilot project at its Grand Rapids project, put the Christina Lake Phase G expansion on hold, and deferred development at the Telephone Lake project. Cenovus cut 25% of its workforce in 2014 and 2015, and also cut costs with a salary freeze and reductions to discretionary spending. In January, 2016, Cenovus and Suncor announced a $100-million fund—$50 million each over 10 years—directed to Vancouver-based Evok Innovations to accelerate development of technologies that reduce oil sands production costs, tailings, and the emissions intensity of oil sands production.

Husky's reaction to the oil price decline was to cut CapEx by 40%, from $5 billion in 2014 to $3 billion in 2015 (see Table 5), and administrative expenses by 41%, from $156 million in 2014 to $92 million in 2015. During

2015 and 2016, Husky cut 10.8% of its "permanent" employees. The firm's facilities at Rush Lake, Saskatchewan, and the Sunrise Energy Project in northern Alberta began producing oil in 2015. In 2016, Husky's Edam West and Vawn facilities were under construction, and on March 1, 2016, the East Edam heavy oil plant was brought online in the Lloydminster area.

Next we analyze the third and final phase of the commodity cycle, restructuring and consolidation.

Restructuring and Consolidation (2015 onward)

The prolonged glut in global oil markets and the resulting lower-price environment drove oil industry restructuring. Restructuring in the Alberta oil sands industry has consisted of several global oil giants selling their oil sands assets and the acquisition of much of this productive capacity by the Big Five. In 2015, France's Total sold major oil sands assets, in late 2016 Norway's Statoil decided to exit the oil sands altogether, and in early 2017 the Netherland's Royal Dutch Shell sold most of its Alberta assets to CNRL (Shell became 9% owner of CNRL) and the US's ConocoPhillips sold most of its Canadian assets to Cenovus (ConocoPhillips became Cenovus' largest shareholder, with a 25% stake in the company). Perhaps surprisingly, US institutional investors increased their stake in Suncor and in CNRL during the downturn (Hulshof et al. 2017).

The exodus of global oil giants from direct involvement in the Alberta oil sands (besides owning stock in the oil sands majors) must be examined in the context of the North American investment boom in unconventional oil moving south towards shale oil basins in the US. In 2016, for example, ExxonMobil, parent company to Imperial Oil, in accounting terms wrote off 3.5 billion barrels of its oil sands reserves, but in January 2017 the firm announced $5.6 billion USD in spending to double its shale oil reserves in the Permian Basin in Texas by adding 3.3 billion barrels.

Royal Dutch Shell made two major transactions on the heels of the moves by ExxonMobil, one of its main competitors. Shell bought BG Group in mid-February 2017 for $49 billion USD in a move to strengthen its presence in Liquefied Natural Gas (LNG) production and consolidate its portfolio of offshore deepwater wells. After that purchase Shell needed to offload some of its other assets to reduce its debt, leading to the Shell/CNRL deal. Shell's global strategy bets on LNG and deepwater wells, so it was logical for the firm to divest from oil sands, an asset base that isn't a part of its new strategy. Before the Shell/CNRL transaction, oil sands represented nearly 43% of Shell's global portfolio of proven developed and non-developed oil reserves, so this represents a major change in Shell's strategy.

Back in Alberta, in the prolonged period of oil prices below $60 per barrel (much of 2015–2017), it wasn't economical to develop new extractive facilities in the oil sands, but it was economical to run existing facilities as long as firms controlled production costs. This is precisely the strategy that the Big Five oil sands majors adopted. CNRL leads the oil sands industry in cost-cutting efforts, reducing its production costs to the low-$20s per barrel. Other oil sands majors have reduced their costs to range from the mid-$20s to low-$30s per barrel; this includes Syncrude, in which Suncor now owns a majority stake thanks to recent stock purchases. The cost reductions are coming through better use of technology and by squeezing down labour costs. With rising oil prices in 2018, oil sands majors have seen their existing facilities become cash cows, generating stable and predictable returns.

In 2015–2017, the Big Five were all very vocal on what this phase of consolidation means for the future of the industry, with all five downplaying the possibility of large-scale expansion of productive capacity through investment in either new mining or in situ facilities in the near term. There will be expansion of production, but largely through increased efficiency of current facilities and because of past investments.

The switch from a booming, high-investment, high-growth, high-innovation context of intensive capital accumulation to a more normal, slowed pattern of accumulation characterized by cost-cutting has had important implications for employment and economic growth in other sectors of Alberta's and Canada's economies. In 2006, for instance, the mining and oil and gas extraction industry accounted for 6.7% of Alberta's total employment; by 2017 the industry was responsible for 6.1% of Alberta's employment. The oil price downturn that began in mid-2014 saw significant industry restructuring and the (perhaps permanent) elimination of over 20,000 jobs across the Canadian oil and gas sector (see Hussey 2017).

4. The Big Five and the Future of Extreme Oil in Alberta

The world is awash with oil (Bloomberg 2018). In his presentation at the 2017 Parkland Institute conference, Eric Pineault analyzed the current conjuncture, including the operations of the Big Five, as part of the era of extreme oil (Pineault, Hussey, and Jackson 2017). Pineault defines the era of extreme oil as having the following five characteristics:

1. The era of extreme oil is an era of societies confronted with the problem of extractible-but-unburnable oil reserves. This stems from the fact that if the Paris Agreement's 1.5C to 2C global warming target is to be met, then upwards of 60–80% of global fossil fuels reserves must remain underground (Muttitt 2016; Lee 2017; Thieroff et al. 2017; Hussey and Janzen 2018).
2. The extractible-but-unburnable oil reserves are mainly unconventional hydrocarbons, such as oil sands and shale oil, which are more emissions-intensive than the conventional hydrocarbons that energized economic growth during the twentieth century.
3. Accessing the unconventionals implies opening up new territories to oil extraction, often using very invasive forms of extraction. This implies pressure on new ecosystems and communities, and provokes new dispossessions and new environmental conflicts.
4. The existence of the vast reserves of unconventionals creates a cultural and socio-political inertia for societies with modes of production highly dependent on hydrocarbon combustion, and it dampens the socio-political will for transition away from fossil fuels.
5. The era of extreme oil is an era where climate change is not a distant possibility but a contemporary process that is creating extreme weather and climate events and potentially cataclysmic and unstoppable processes like species extinction, sea level rise, and ocean acidification.

The Alberta oil sands became one of the world's largest reserves of extreme oil as sources of hitherto unconventional hydrocarbons that were normalized during the long boom phase of the latest oil commodity cycle (2004–2014). As oil prices peaked to over $100 USD a barrel (West Texas Intermediate (WTI)) from 2008 to 2014, various authorities, from state regulators to energy sector agencies and auditors, changed the valuation of oil sands reserves from risky and marginal assets to standard exploitable assets. Crucially, as the commodity cycle changed from boom to bust and as prices dropped to under $40 USD a barrel (WTI), this process of normalization was not reversed: when prices started their recovery in 2017 bitumen had survived as an accepted form of crude oil, and the oil sands maintained their symbolic status as the third-largest reserve of oil on the planet.

During this process of normalization, an oligopolistic bloc of seven large corporations—the Big Five producers plus two pipeline corporations, Enbridge and TransCanada—gradually expanded their control over the industrial processes that transform oil sands deposits into barrels of bitumen that eventually become burnable oil. As we have seen, the capacity of the Big Five to extract bitumen has exploded in the last decade, through massive investments in fixed capital and through research that enabled the development of in situ extractive technologies. In the process of exponentially expanding their extractive capacity, the Big Five have also consolidated their control over the potential "flow" of bitumen, marginalizing smaller corporations in a typical oligopolistic fashion.

The potential output controlled by the Big Five forms the basis for their oligopolistic power over the resource and its capitalist development, and the realized "flow" of bitumen generates the income that realizes the value locked in the oil sands. We have seen that over the latest commodity cycle, as the boom turned into the bust, the Big Five were able to maintain their gross profits, out of which they pay for past investments, maintain overhead expenditures, and generate financial capital in the form of share buybacks and dividends. The Big Five were able to do this through direct production cost compression. In the case of Suncor, direct costs were on average 54% of revenue from 2008 to 2015, whereas for 2016 and 2017 its direct costs were reduced to 37% and 34.6% of revenue, respectively.

We have argued that gross profits are the key factor that determines the accumulation strategies of these oligopolistic corporations. Gross profits finance past, current, and future investments in fixed capital. They also provide the means by which these corporations can deploy and reproduce their organizational power over the market, the state, and society. The overriding accumulation strategy we have surveyed evolved in reaction to the phases of the commodity cycle. The boom period was characterized by an accelerating build-up of extractive capacity and a shift from mining to new, more technologically intensive and less-labour-intensive in situ methods of extraction. The bust and consolidation phases are characterized by the Big Five's increasing concentration of ownership and control over the resource base and over fixed extractive capital. These phases of the commodity cycle are also characterized by the conversion of un-invested industrial profits into financial income streams through the growth of share buybacks and dividend payments. Analyzed as a cyclical whole, this accumulation strategy attuned to and shaped by the phases of the commodity cycle has sustained the hegemonic power of the oil sands industry in Canadian capitalism.

In May 2015, the Alberta New Democratic Party (NDP) came to power with several objectives; among them were general commitments to improve the province's climate policies and to review royalty rates for various fossil fuels. However, the boom was already becoming a bust before the 2015 election. In this context, and because of stiffening competition from shale oil producers in the US, the NDP's royalty review actually resulted in some rates being reduced. With the NDP and its main competition, the United Conservative Party (UCP), competing throughout 2017 and 2018 to see which party can be the biggest booster of the oil sands industry, it seems the generous royalty and tax regime that has existed in Alberta since the late 1990s is unlikely to be significantly changed any time soon.

With the Big Five increasing production while squeezing costs and slowing down investment, a significant chunk of Alberta's (and Canada's) carbon budget is currently reserved for a slow-growing, cost-cutting sector with weak fiscal, investment, employment, and innovation benefits. If the oligopolistic bloc is able to continue to steer provincial and federal fiscal, energy, and climate policies, Canada will not be able to live up to its Paris Agreement obligations for the year 2050. In the next three decades, this policy trajectory would strengthen Canada's ties to oil and gas production during a period in which other countries are undergoing a deep transition away from hydrocarbons.

What is more, humanity likely doesn't have three decades to dramatically reduce our use of fossil fuels. The planet has already warmed 1C above pre-industrial levels (about 200 years ago). In October, 2018, the United Nations' Intergovernmental Panel on Climate Change (IPCC) published a summary of research on meeting the Paris Agreement's tougher target of limiting global warming to 1.5C (IPCC 2018).[16] The IPCC estimates that based on current trends global warming will surpass 1.5C between 2030 and 2052.

In terms of climate change effects, limiting global warming to 1.5C, as opposed to 2C, would be significantly better for humanity and the planet. But, to be clear, limiting global warming to 1.5C does not ensure that we will avoid climate change risks altogether. Albertans, for example, have experienced at least two extreme weather events in recent years—a large flood in Calgary and the surrounding region in 2013 and a gargantuan wildfire in and around Fort McMurray in 2016.

16 Climate Home News published a useful summary of the IPCC research summary (see Darby and Stefanini 2018).

There are no easy answers for how to limit global warming to 1.5C, but the IPCC's research does clarify the options. In short, what is clear is that Canada and other countries need to implement much higher carbon taxes, and fossil fuel producing jurisdictions like Alberta need to develop and legislate plans for phasing out hydrocarbon production over the next number of years. In the case of the oil sands, this most certainly means phasing out production by 2050, and every year that timeline can be shortened gives humanity more of a chance to limit global warming to 1.5C.

The Big Five all forecast an increase in their total emissions in the future (see Hussey and Janzen 2018), stemming from plans to increase their bitumen production. None of the Big Five have made science-based targets or implemented material actions that align with the amount of decarbonization required to keep the global average temperature increase below 2C, let alone 1.5C. The Big Five's hopes for future emissions reductions rely primarily on claims that new technologies will enable substantial reductions. However, technological advancements to date have not produced absolute emissions reductions, and there is no reason to believe they will. The only realistic way for the Big Five to reduce their total emissions is to reduce their oil and gas production. The Paris Agreement means that business as usual for the Big Five and other fossil fuel producers is not an option.

The ongoing energy transition in Canada and around the world is a massive economic opportunity, even for oil-dependent jurisdictions like Alberta, should they choose to embrace the energy transition and legislate accordingly. Alberta and Canada can make a just transition by developing policies that recognize and respect Indigenous rights and title, that put thousands of people to work cleaning up land that's been polluted by Alberta's hydrocarbon industry and building wind and solar farms, and that minimize the impacts of such a transition on oil and gas workers by involving them in building our new economy.

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