

**Kevin Timoney.** *Hidden Scourge: Exposing the Truth about Fossil Fuel Industry Spills.* Montreal: McGill-Queen's University Press, 2021. 424 pp. \$39.95, paper, ISBN 978-0-228-00894-1.

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In an increasingly digital world, it can seem like there is data to explain everything. Kevin Timoney's *Hidden Scourge: Exposing the Truth about Fossil Fuel Industry Spills* breaks that illusion. Timoney dives into the Alberta Energy Regulator's data concerning fossil fuel industry spills, revealing that there is a shockingly limited amount of data regarding spills, their ecological impacts, and their remediation status in Alberta. What data is available is largely unreliable, illogical, and misleading. What the public assumes to be a scientific process, Timoney argues, is more likely guesswork. And spotty guesswork at that.

Timoney's research is driven by his experience examining the regulatory data, as he found the data did not make sense. How could it be that thousands of oil spills had a 100 percent recovery rate, when the liquid nature of crude oil makes recovery an incredible difficult process? With a hunch that this data was too good to be true, Timoney guides the reader through the limited regulatory data, scientific literature, and interactions with those impacted by unaddressed oil and saline spills (specifically the Dene Thá First Nation) to explore how little is known about the environmental impacts of day-to-day oil operations in Alberta.

Before 1975, spill data was not well collected, so Timoney's main story takes place within the last fifty years. However, he notes that the data available is limited to "upstream" spills that occurred during production, as spills from refineries, pipelines, trucks, railcars, storage sites, and underground are absent (pp. 20-21). Timoney argues that this data is largely unreliable for multiple reasons. Many spill locations were mislabeled, as evidenced by on-the-ground investigation and satellite data. Additionally, he found the amount of substance spilled tended to be underestimated, while recovery was overestimated. Thousands of spills had a recovery efficiency of 100 percent, even though this is a highly unlikely outcome. Because the Alberta Energy Regulator does not provide independent analysis of spills, the spill data provided by industry reports was taken at face value. The consistent mistakes and misleading information in the regulatory data led Timoney to conclude that the data held by the Alberta Energy Regulator is simply not credible. Pushing further, he argues that the bewildering regulatory data is not the culmination of innocent mistakes but the result of regulatory capture.

To fill the gaps in the regulatory data and existing scientific literature, Timoney conducted his

own field work and interviewed locals, scientists, and government workers, and researched historic oil spills in the region. Information provided by members of the Dene Thá First Nation were crucial to his research, as Timoney notes, “I obtained most of the useful environmental information about the spills from the Dene Thá, not from the regulator” (p. 223). The diversity of sources and methods reflects the interdisciplinarity of the book. It addresses the crossroads of environment, policy, and science, with possible audiences spanning the sciences, social sciences, and humanities. *Hidden Scourge* offers a critical and accessible analysis of scientific data and regulatory policies of energy and environment that would benefit anyone in environmental studies.

This book is split into five parts. After a short prologue and preface, part 1 introduces some context about the Alberta fossil fuel economy, the role of fossil fuels in current environmental crises, and an overview of the characteristics and materiality of oil and saline spills. Part 2 examines the scientific literature regarding the ecological effects of spills and fossil fuel extraction, such as the disturbances caused by drilling, transportation, and construction. In this section, chapter 5 is notable as it provides an excellent primer for the various environmentally destructive practices of the oil and gas industry.

Part 3 dives into the mess that is regulatory data. This is the strongest section, where Timoney describes in great detail how the limited data he retrieved from the Alberta Energy Regulator is misleading, illogical, and sometimes simply missing. In chapter 6, Timoney introduces the “Falcon Effect,” a concept he uses to describe curves in his scatter plots showing the relationship between oil spilled and recovery efficiency. Across thousands of spills, the most common recovery percentages were 100 percent, 0 percent, and 50 percent, creating curves like a falcon’s wings. The regularity of these percentages across thousands of data points suggests that the recovery estimates are human

judgments instead of exact measurements. Similarly, in saline spills, Timoney found that the regulatory data suggests that saline spills had a 100 percent recovery rate in 15 percent of spills. However, saline water spills quickly soak into the ground and enter waterways without a visual trace, making it nearly impossible for a 100 percent spill recovery. The scientific understanding of how spills occur—chemically, physically, and ecologically—challenges the regulatory data.

Part 4, then, examines the scientific evidence of spills, covering the impacts of spills on soil, water, vegetation, and wildlife. This section details how exactly oil and saline harm the environment, as well as indicators that scientists and locals use to detect disturbances. In this section, Timoney also provides a case study of a spill (Pace-Spyglass Oil Spill) and the regulatory response to it. The final section, part 5, details Timoney’s own interactions with the regulator, noting how much of a struggle it is to obtain public information. Here, he questions what it means for Alberta’s Energy Regulator to be a captured one, and how everyday people are involved in these systemic problems.

His concluding thoughts examine the social impacts of the captured regulator. He questions the societal impacts of an untrustworthy energy regulator, and why it matters that the public is so removed from the reality of fossil fuel industry spills. In part, he argues, it is the rural nature of extraction and fossil fuel transportation that shields the fossil fuel industry and the government. Timoney ends the book by suggesting the solution is a powerful political movement that prioritizes public interests rather than industry interests.

Those with an appetite for historical detail may find themselves hungry at the end of the book. More information about the settler-colonial history of Canada (or even just Alberta) would clarify the relationship between the Dene Thá First Nation and the Albertan and Canadian governments. We learn that members of the Dene Thá

First Nation have done a bulk of the work in identifying, exposing, and attempting to remediate spills (as well as playing a key role in the creation of this book), but the historical events that led to oil extraction on their land is not clear. There are few works of historical scholarship cited, though historians will be pleased with the plethora of primary sources concerning the Alberta fossil fuel industry. The forty-seven pages of high-quality color photos plus dozens of black-and-white photos throughout the book brings the reader up close and personal (for better or worse) with the effects of oil and saline spills. Timoney also includes a handy glossary with many definitions for fossil fuel industry and scientific jargon—useful for any historian studying extraction (specifically oil), pollution, or environmental policy.

This book is a must-read for oil historians and environmental historians seeking to understand the ecological impacts of fossil fuel industry spills. But any reader will likely find themselves frustrated by just how much is unknown about the day-to-day environmental impacts of the fossil fuel industry. The product of Timoney's exhaustive research is a necessary read, as the remediation of fossil fuel landscapes will be a serious concern for the foreseeable future.

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