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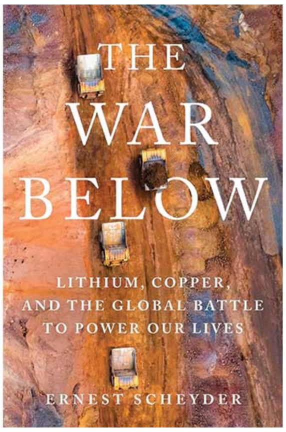
Miners, Bureaucrats Scrap Over Critical Minerals



It is fitting, after a fashion, that this account detailing the struggles of mining and the minerals needed to drive our presumed "green energy transition" gives both the first and last words to a botanist, not a miner. It personifies a complex state of affairs.

The botanist (Jerry Tiehm) and, more specifically, the little plant he found in Nevada's Rhyolite Ridge — later named Tiehm's buckwheat — became the root of a major political and economic match because the unique spot where the (later officially endangered) plant was found is in an area rich with lithium. That metal is also widely seen as key to an embryonic energy revolution.

What matters more, asks the author: the plant, or the lithium that is beneath it?

What some rational readers must also wonder: How did mankind make any progress before it had government bureaus to tell them what they should do and not do?

To be clear, the author is not confrontational with compelling personal contentions or counterarguments. He generally lets his selected facts do their job in an old-fashioned journalistic manner, which is suited to his wire-service experience, itself sadly uncommon these days.

We get to shake our heads over which bureaucracy (and/or politician) passes the buck or spends it. If, as the title suggests, the energy war is "below the ground," the decisions and red tape are on our level.

Ernest Scheyder, author of *The War Below: Lithium, Copper, and the Global Battle to Power Our Lives*, is a senior correspondent for Reuters, covering what he usually terms the "green energy transition," as well as the minerals undergirding it. He previously covered the U.S. shale-oil revolution and related issues for that wire service. On one hand, this volume does a good job illuminating the energy struggles. On the other hand, it doesn't challenge some key premises.

Dueling Agencies

The War Below accurately passes along, for example, some of the goals of the Paris climate accords of 2016. But one needs to look elsewhere for a more complete picture. Even if the Biden administration's assumptions about its regulations proved to be accurate, this would only mitigate alleged global warming by 0.023 degrees Celsius by the year 2100 — an undetectable effect. The 80 percent of our energy that we get from fossil fuels and nuclear power — and still depend upon — is not the theme of the book.

The "green" politicians and bureaucrats say the future belongs to electric vehicles (EVs), but going in that direction also requires trade-offs. Those presumptive batteries will need massive amounts of lithium, cobalt, nickel, and copper — which all need to be mined out of the Earth. The author does a masterful job in describing such challenges in *The War Below.*

Yet, even with ambitious edicts of the president of the United States and governor of California, for example, EV sales have stalled. This is taking place despite all the taxpayer dollars that tend to disguise costs. The Texas Public Policy Foundation finds that "nearly $22 billion in federal and state subsidies and regulatory credits suppressed the retail price of EVs" by an average of almost $50,000.

To be fair, that aspect of the story is not the author's beat, but including the fuller side of the story would improve the reader's understanding. Indeed, even as we were reviewing the book, reports (not the most prominent, to be sure) showed that U.S. oil and natural-gas production — largely on state and private lands — is at a record level. And as *The Wall Street Journal* put it recently, even though the White House would never admit it, "privately financed fossil-fuel production is doing far more to boost the U.S. economy than [Biden's] hundreds of billions of dollars of spending on electric vehicles and green energy."

That's not to say that the book under review is without perceptive observations. Far from it. In his exposition about the Tiehm's buckwheat flowers, some of which were killed in Nevada, he points out that the government officially ruled that rodents, not the mining company ioneer, Ltd., were the culprits. He is adept at depicting our government bureaucracy at work. While one "Biden-controlled agency" was

> debating whether to declare Tiehm's buckwheat endangered, another was considering whether to lend hundreds of millions of dollars to the company. In December 2021, ioneer said its application for a loan from a U.S. Department of Energy program that Tesla had famously used a decade prior was moving to the third of four review stages. It was a remarkable development given that another U.S. government agency was also considering a stop that could kill the entire mine. Washington's left hand, it seemed, did not know what its right hand was doing, much as in the case of Lithium Americas' Thacker Pass mine in Nevada and the Resolution copper project in Arizona.

That latter case cited involved, among others, Apache activists with religious objections. The more he reported on that particular situation, says the author, the more he became convinced the issues were "intractable." The various back-and-forth moves of various government entities, in his words, were "enough to give someone whiplash." Inconsistency, he found, "would come to define Biden's EV minerals strategy."

Global Geopolitics

As you might imagine, the book under review has a lot on electric vehicles, but leaves discussion of their practicality or lack thereof largely to others. (According to the National Center for Energy Analytics, citing a study by the U.S. Energy Department, it will cost $25 billion-$125 billion just for the infrastructure upgrades to support EVs at a level of 10 percent of all on-road cars. Currently, they amount to about two percent. Meeting the Environmental Protection Agency's goals, estimates the center, will require the spending of *more than one trillion dollars* for grid upgrades by 2035.)

That is not to say that this volume lacks numbers. Cited, for instance, is some of what is needed to make

EV batteries if the globe is to meet the goals set by the 2016 Paris accords. Between 2022 and 2030, the International Energy Agency has estimated, the world would need to "build fifty new lithium mines, sixty new nickel mines, and at least seventeen cobalt mines." (This is footnoted, as is the book throughout. Indeed, many of the footnotes are from the author's earlier writings.)

Physically, the book includes a helpful map ("The Global Battle for Green Energy Minerals"), citing sites mentioned in the book — many in this country, as well as (among others) Brazil, Bolivia, Chile, Argentina, Ghana, Democratic Republic of the Congo (DRC), China, and Australia. While the pages — with some chapters covering multiple topics/places — could have used some breakout boxes or subtitles, we will give the publisher a tip of the hat for employing simple energy-bolt graphics between discrete sections. Its coverage is wide — giving us looks at technological, environmental, and business matters, as well as politics on the national and international levels. *Fortune* named *The War Below* one of its "Best Books" of the year.


Ernest Scheyder (twitter.com/ErnestScheyder)

Accounts dig deeply in some places, including Bolivia (the "Tibet of the Americas"), where there is a tussle over extracting lithium from its salt flats (Salar de Uyuni) — the largest in the world (spotted by Neil Armstrong from the moon in 1969). The shortest chapter is one in which the author admits failure in his attempt to source the specific minerals that power his Ryobi leaf blower.

Some of the intricacies about copper and cobalt mining, in various countries, might leave your head spinning — depending on when and where you concentrate and who was in charge of mining at the time. When one private American company was running matters at a mine in the DRC, its chief executive told Scheyder, it was "great" to go into that region "and give employment, improve health, improve water for villages, build educational facilities." Then overall economics forced that company to hold a "fire sale" of its controlling stake to China Molybdenum. Safety and community relations reportedly paled. Subsequent reports about the "artisanal miners" were horrendous. Politics, internationally and nationally, got involved after Biden's Secretary of State Antony Blinken signed a memorandum of understanding with Zambia and the DRC to help them develop their mines.

Yes, more government involvement, subsidizing problems, seems not to be a panacea. Here, the author is on target, if a bit polite:

> The optics of Washington supporting mines in a region where China had already heavily invested, where an American company had to sell its prized assets, and where some children were active parts of the mining chain, grew to be too much for prominent U.S. politicians, especially those who wanted more mining in the United States. "America needs to develop our vast mineral wealth, right here, with high-wage, union-protected jobs instead of continuing to send American taxpayer dollars to countries like the Congo that use child slave labor. The only winner here is China," said Representative Pete Stauber.

The district represented by Pete Stauber (R) is in northern Minnesota, as the author explains, and it contains some of the largest "deposits of copper, cobalt, and nickel found in the country, specifically the Boundary Waters area near where Twin Metals wants to mine."

Permits for that mine project, as with many mentioned in the book, take years to get through the bureaucracy. Chapters earlier, we saw President Barack Obama's secretary of agriculture postponing the project by ordering an environmental study; Trump canceling the study; Biden, when running for president, saying nothing about it; Biden's subsequent secretary of the interior (Deb Haaland) declining to discuss the project during a congressional hearing, but then later canceling the leases (saying they were "improperly renewed" by Trump); and Stauber, mentioned above, blasting that decision as being based on politics, not science, commenting, "This Administration has decided to leave American, blue-collar workers behind and bow to pressure from radicals who prefer to rely on foreign adversarial nations for these minerals."

That's a synopsis; the author has plenty more. The writing is clear, but what it reveals can be exasperating. We are told by some progressives that it's urgent to fight climate change. To do this, say others, we need electric vehicles to power crucial technologies. Just don't take the necessary building blocks from their backyards. We have to think more before acting, say others.

Doing Business Under Washington's Eye

Such quandaries pop up repeatedly in *The War Below*. The United States, as the author acknowledges, has enough metals under its soil to build millions of its own electric vehicles (which we have been told will save us from fossil-fueled climate-change disaster). The question, he writes, "center[s] around whether the country would tap these reserves."

Often standing in the middle is the Washington silo effect — in the author's words, when "one small sliver of the federal machine" cares only about "its own small sliver, not the whole."

Geopolitically, some other nations are more focused, with Communist China being a prime example. It increasingly sees rare-earth minerals as a powerful economic weapon. *The War Below* has the ins and outs of how (for instance) Beijing has been playing the long game in this matter over a California mine called Mountain Pass, which was valuable to U.S. soldiers in the first Gulf War. But American mine operators kept running into environmental regulations. Again, this is a complicated series of events (told well by the author) over many years, including bankruptcy and buyouts. At this point, a careful reader might discover why the U.S. Bankruptcy Court in Delaware is one of the spots designated on the volume's map about the "global battle for green energy minerals."

As we read, California's Mountain Pass ("a mine that had held so much promise for America's role in the green energy transition") got a new owner — in a legal proceeding that lasted less than 40 minutes. As summarized by Scheyder:

> A consortium led by a Chicago hedge fund and a Chinese mining company now owned the only American source of metals used in nearly every single consumer electronic device — and, more important, in U.S. military weapons — by bidding a comparatively trifling $50,000 more than an American rival.

No doubt there is laughing among the comrades in Beijing, as they take our laws into their own hands.

There are both winners and losers in *The War Below*. One young firm on the rise, headed by engineers Ajay Kochhar (an Indian immigrant) and Tim Johnston, gets a bit of the spotlight. Their recycling company, called Li-Cycle, is due to go fully operational in Rochester, New York, this year; it also has facilities in Alabama, Ontario, and Arizona. When the author visited the company, he and Kochhar took note of what that meant: The biggest source of lithium on the North American continent will be not a mine, but old batteries.

At that time, the United States only produced about 5,000 tonnes a year of lithium at a small facility in Nevada. Why so little? Because, Scheyder recounts (recalling facilities previously covered), "Lithium Americas, ioneer, Piedmont and others had not been able to get their permits, much less open new lithium mines." Meanwhile, Li-Cycle is reportedly eyeing expansion into Europe and Asia.

The epilogue updates several of the episodes covered in earlier chapters. You can hear the same tune in many of them — as the U.S. Energy Department lends money to ioneer for its Nevada mine less than two weeks after the Interior Department said "no mining would be allowed on 225,504 acres in northern Minnesota for the next two decades, a region that include[s] the proposed Twin Metals copper, cobalt, and nickel project," for instance. Biden administration officials, you will not be surprised to hear, "said they did not think it incongruous that they were blocking" the latter project at the same time they were "heralding the green energy transition."

The proper word might not be "incongruous." Try "ruinous."

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