

## 2072 – Frontiers in Geoscience

Is this a dream? Yes, maybe, it is a dream. But it's a good one. Nobody will mind if I don't wake up quite yet. I'm not on watch for hours still and they'll come find me when they need me.

Can the world change radically in 50 years? Only if it has to. And it had to.

Geology and energy. We marvel at our roots. It used to be the \*best\* jobs with a geology degree were in petroleum. Or mining. But who wanted that? Well, almost everyone for a time - stable was stable and the reason to study the earth was to find where and what it contained that had that value. Or so they told us, anyway, applying that calculus so faulty they never stopped to wonder why it all looked so much like a mirror. Why it all somehow always reduced so neatly to that convenient binary: for us or for them. If we don't take it to build with, launch from, arch over, use up or destroy, then they will. Us or them. Some simple you can trust; other simple you never should, but even knowing that, it took this country a long time to wake up. But it had to. And it did.

And the petroleum and the ore? It's all still out there. Or, more precisely, still out *here* - harder, perhaps, to find than it used to be, but not gone. No. So what changed? The ability to tell ourselves the stories that justified its extraction. The calculus, if you will. What rippled the surface in 2020 with the idea of sanctifying the Atlantic seabed<sup>(1)</sup> has overflowed in that incremental-and-then-sudden way that we all recognize: drip by drip of the ice as the melting begins; grain by grain of the pile as it collapses; whether the foundation went first or the structure washed away from the top, I don't know and I'm not entirely sure I care. The need to understand that distinction might just be another one of those stories we tell ourselves. Maybe all we need to know is what we already know: give things time and erosion works.

So no. Or, maybe, yes: we're not out here to extract from the seafloor anymore. That is holy space now. That's not what we're out here to survey. We're out here to ask: what do our questions look like when they don't rise out of global conflicts and competition? what does our field look like when the tools aren't driven by the industries that have never understood that sometimes to subtract – to accommodate, to sequester, to retreat – is actually what creates our security. We all still need to breathe, after all; and to drink; and to eat; and to sleep; we all still need places to care for ourselves and our friends and our families. But what can we leave behind? Where can we subtract? How can we turn our energy toward removal and repair?

Energy and geology. What the field itself has learned how to do in the past 50 years – and in doing, has learned how to teach – is how to leave the things alone. How to make the calculus so inarguably match reality that decisions regarding the extraction and the mining and the waste have already been made and the efforts have become unjustifiable. Done been done, as they say. In that Us versus Them, they never bothered to account for the damage and we all pay for that now. As geologists – as scientists of the systems of our Earth – we have some combination of being given and taken on this accounting. This is our platform. This is where we're going.

And this platform? Right here? We're a drifter; we're a small, small part of a great big plan to slowly, slowly clean the oceans. In 2023 – the year we started – they said a cubic meter of seawater contained over a 1000 pieces of microplastic. We all know the real number is larger than that. It has to be. We all know how to see a continuum when we've been handed a step function. So we bought an oil rig and we built our platform and we started filtering. And, sure, there are a thousand other things we could – and probably should – also be doing, but isn't that impulse to not act until we can pick the best, most fanciest possibility from that list of almost infinite opportunities also a part of the problem?

<sup>(1)</sup>Turner, P.J. et al. (2020). Memorializing the Middle Passage on the Atlantic seabed in Areas Beyond National Jurisdiction. *Marine Policy*. 122:104254. [doi.org/10.1016/j.marpol.2020.104254](https://doi.org/10.1016/j.marpol.2020.104254)

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