

# DECISION HORIZONS:

## Decommissioning and the Reproduction of Capitalism in the North Sea Oil and Gas Industry

*Masters Dissertation Submitted for the MSc Sustainability, Energy, and  
Development Programme*

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Adapted from Böttner *et al.*'s (2020) map of the North Sea, each dot represents one offshore oil and gas structure. This pseudo-inkblot acts as a visual reminder from which to conceptualize the scale at which decommissioning will occur within the North Sea, and the long term impacts resulting from our decision horizons.

After debunking the Intergovernmental Panel on Climate Change's report in one slide and a handful of almost flippantly casual minutes, the delegate from Rystad closed their presentation with these words, two hands on the podium, and an almost disarming smile; "how things change, or not at all". Despite the natural air of the speaker, the end of the presentation titled "Global Activity Levels" aligned perfectly with the limit afforded by the program and gracious moderators turned time-lackeys, exposing the practiced form beneath the casual facade. The assertion that production levels had nowhere to go but up did not appear to shock those facing the stage. The stage was set, both literally and figuratively, to ensure that there was no doubt in the audience's mind that decommissioning "in the net zero era" would not deter the rise in global production, or that it ought to.

This speaker belonged to the opening panel of the Society for Petroleum Engineers' conference titled "Well Decommissioning & Late Well Life in the Net Zero Era", which served as a microcosm within my dissertation from which to understand how decommissioning is conceptualized by offshore oil and gas operators within the UK. This in turn contributed to the wider aim of exploring how such conceptualizations work to both make, and reproduce, capitalism within our lives.

There are over 2,000 offshore oil and gas wells predicted to be decommissioned by the end of the decade in the North Sea. Offshore oil and gas operators are legally required to decommission installations at the end of their lives. International legal precedent mandating decommissioning first began with the United Nations' OSPAR 1998 Decision 98/3 prohibiting "the dumping, and the leaving wholly or partly in place, of disused offshore installations within the maritime area". As it stands, the OSPAR decision only applies to infrastructure residing

above the seafloor. Within this framework, all subsurface structures are permitted to remain in-situ.

There is an obvious disjuncture between the claims made by operators and politicians that decommissioning is not only imminent, but is an opportunity for a new energy era, and the continued emphasis on prolonging offshore oil and gas extraction. Despite promises of the energy transition literally rising from the ruins of our carbon modernity, decommissioning itself does not guarantee the manifestation of a decarbonized future. My dissertation explored what future industry stakeholders are attempting to produce through the conceptual framing of the decommissioning of offshore oil and gas platforms in the North Sea. Rather than assume capitalism is the context underlying such futures, an excavation into decommissioning displays the work necessary in the social production of the qualities assumed intrinsic to capitalism. Specifically, capitalism's assumed boundless drive to expand, the primacy of profit, and the prevalence of the hypermobile corporate form. Through an exploration of the social labor inherent in the production of the future by oil and gas stakeholders through decommissioning, the coherency of capitalism as a project is made visible.

Where is Capitalism "Visible"?

Within liability structuring, fiscal and legal structures alienate circulating operators from the rigs they (more often than not temporarily) own. This not only disentangles polluters/operators from the environmental ramifications of offshore disasters, but alienates them from the high cost of decommissioning "unproductive" rigs. Secondly, modeling, and the visualization of data, can become tools from which to create the future for oil and gas stakeholders. The performance of modeling as a technology of the imagination confines future

ethical orientations and values from the present. What models are attempting to guarantee is safety over time, along with the assurance that no additional expenditures will be necessary for operators within the time scale depicted. Operators are liable in perpetuity, yet this eternity is calculatively condensed within models to an unregulated standard of 3,000 years, placing the predicted deep time disasters outside of the confines of operators' modelable timescales. Such leaks are naturalized through industry narratives, described as predicted "flows".

### The Value:

This dissertation foundationally highlights the mechanisms which render capitalism real through decommissioning, and how they in turn, are evident within major oil and gas operators contributions to the energy transition. The framing of capitalism within this dissertation has broader implications to a discussion on the contemporary action—and inaction—taken to combat the climate crisis, by providing the conceptual space for intervention and a hopeful potential for rupture within this setting. I will not recommend what I believe ought to be done with the North Sea's redundant offshore oil and gas installations. Instead, this dissertation provides an opportunity to reflect on the social conventions, ethical frameworks, and moral justifications nestled within the contractual and technical processes of decommissioning which contribute to capitalism's durability. It is an opportunity to reflect further on whether or not they are worth bringing into a future unbridled from a dependence on fossil fuels.

A Selection of Photographs and Figures:

(Most just add a bit of context but might not make sense with the narrative for them to be included)



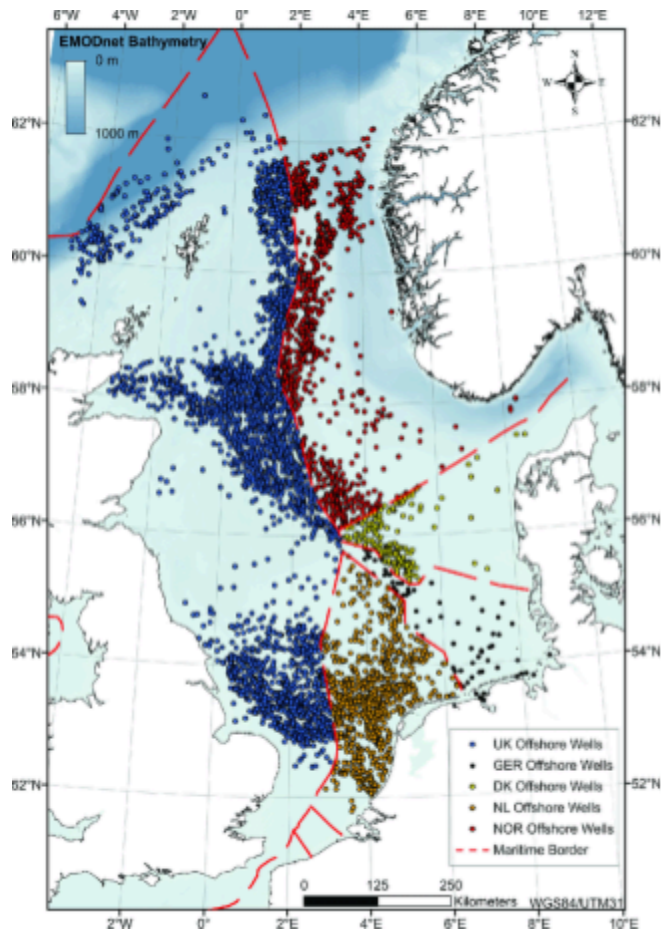
**Figure 1** A photograph taken by the author during one of the presentation sessions in the afternoon of the first day of the SPE Aberdeen Section's Decommissioning Conference. Despite sitting firmly within the back half of the audience, there is not a single woman in the frame. The vast majority of attendees and presenters were men, while conference organizing staff and hospitality were disproportionately women. As the slides from this presentation were not made public by the author(s), the information displayed there has likewise been redacted here.



## Accurate and Reliable Management of Legacy Wells using Numerical, Risk-based Models – a case study

Dr Morteza Sefat – Associate Professor, Heriot Watt University  
Stephen Patterson – Lead P&A Engineer, TotalEnergies

**Figure 2** Depicts the opening slide of a presentation delivered at the SPE's Decommissioning Conference. The uses of the terms "accurate" and "reliable" convey a security and legitimacy to the methodology outlined within their presentation. The "management of legacy wells" is also a phrase used to describe decommissioning management. Other speakers at the conference also foregrounded the identification of offshore installations as a semi-productive or unproductive but still active "legacy well", rather than claim that they are a well in need of decommissioning. The presentation is publicly available on the event's website, with a selection of the slides redacted.



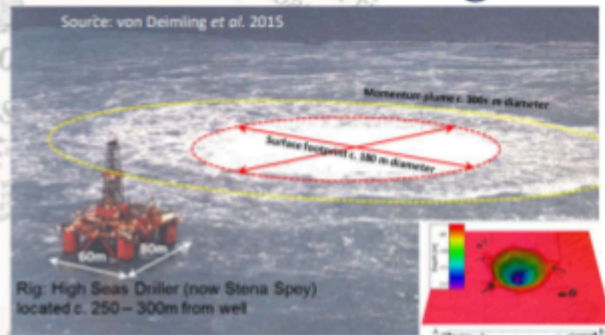
**Figure 4**

There are 20,507 documented offshore oil and gas wells and related infrastructure within the North Sea. Within the context of this analysis, this map displays the potential for over 20,000 possible locations for oil and gas leakages. Map authors cite that "the available information with respect to these offshore wells is highly variable, however, for all of them at least geographic information, well intent, drilling date and drilling depth exist." (Böttner *et al.*, 2020:3). This further obscures a holistic understanding of the scope of future disasters, as knowledge sharing and the public availability of data for these sites of extraction is minimal.

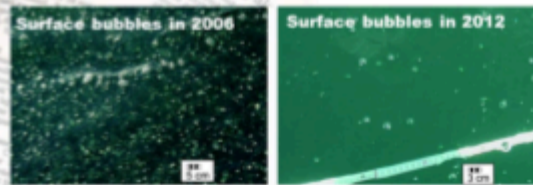
# “Confirmation Bias”

## Major Event Influences All Subsequent Drilling

- 22/4b-4 blowout in November 1990
- Gas bubbles observed on surface (bit at 360 m, driller POOH, swabbing gas into the well (H<sub>2</sub>S and methane))
- The well had encountered a 31 - 46m thick, 67 psia over-pressured gas column, with max. pressure of c. 9.5ppg EMW
- This blow out event directly influenced all subsequent drilling procedures in the area:
  1. Surface casing should be set prior to penetrating this sandstone at c. 500 m
  2. A weighted mud system must be used for well control (>9.5 ppg mud)



Leaving a 20 m x 70 m crater



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**Figure 5** This slide, taken from a presentation given at the SPE's Decommissioning Conference, displays a case study of a gas leak which has lasted over 30 years. The case study was included to highlight how improper decommissioning associated disasters—or the apolitical “major events” as they titled it—such as this gas leak, predisposes operators to over-cautious assumptions regarding P&A procedures. It is also dually important as it places an emphasis not on the ecological harm incurred as a result of the disaster, but how it “directly influenced all subsequent drilling in the area” (Thomas, 2024). The presentation is publicly available on the SPE's website.