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Adventures in Pore Space: Shared Reservoirs in New Energy

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Uncertainty, conflicts, and liability: navigating the competitive landscape for deep pore space resources with the emergence of new subsurface industries in Alberta

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Abstract

Existing regulatory frameworks are seldom responsive to the unique issues arising from the emergence of new industries and technology. Bespoke legislative enactments and amendments are often required, and the application of those laws to new industries or technologies can remain uncertain until precedents are established by regulators and the courts. For example, existing and new regulatory frameworks for subsurface resources will be tested by the proliferation of carbon capture and storage (“CCS”) projects and the emergence of new subsurface industries like the extraction of lithium from saline aquifers, helium production, natural gas and hydrogen storage, and geothermal energy.

The growing pains accompanying the emergence of these industries will be exacerbated by the fact that existing and new subsurface operators are competing for pore space resources in the same reservoirs, which may be subject to both Crown and freehold title. The potential for conflicts of subsurface rights arising from competing pore space uses is particularly acute in the Devonian Carbonate System, which broadly includes the carbonates, shales, and evaporites from the Wabamun to the Elk Point Group. For example, of the 24 CCS evaluation permits issued by Alberta Energy since 2022, approximately half target carbonate reservoirs in the Devonian Carbonate System. Many of the same reservoirs are extensively permitted for brine-hosted minerals, and many are also subject to petroleum and natural gas rights. Further, there is an increasing need for similar reservoirs for water and acid gas disposal. And there is the potential future need for natural gas and hydrogen storage in salts interspersed between Devonian carbonates and shales in east-central Alberta, which may interfere with planned CCS operations.

With the rapid disposition of pore space rights for CCS over the past couple of years and the emergence of new subsurface industries, significant uncertainty remains as to how operators in existing and emerging industries will interact within the patchwork of existing and new regulatory frameworks governing deep pore space resources.

This talk will focus on the potential stress points that may lead to conflicts of subsurface rights, and the regulatory recourse and commercial arrangements that may be necessary to address those conflicts. For example, we will examine the potential utility and frailties of a “pore space unitization agreement”, an example of which the Government of Alberta released in connection with the adoption of the Small-Scale and Remote Carbon Sequestration Tenure announced in September 2023.

Stakeholders in the negotiation of unitization agreements or other agreements for the shared use of common pore space will likely be tested by the inherent complexity of such commercial arrangements, which may necessitate further legislative amendments and the expropriation of one or more stakeholders’ interests as one resource or pore space use is prioritized.



This talk will thus be of interest to stakeholders in the traditional and emerging industries identified above whose projects are likely to intersect the subsurface rights of others, the viability of which may depend on their ability to navigate potential conflicts arising from competing deep pore space operations.

Biography



Nick Ettinger is a lawyer at Torys LLP. His practice encompasses a broad range of corporate and administrative law matters, with an emphasis on regulatory and environmental frameworks in Canada's electricity and natural resource sectors. Before joining Torys in 2023, Nick clerked at the Court of King's Bench of Alberta where he assisted judges in the adjudication of complex energy disputes.

Prior to law, Nick obtained his bachelor's and master's degrees in geological sciences at Queen's University and the University of Texas at Austin, respectively, with a focus on carbonate sedimentology and geochemistry. Thereafter, he worked in exploration for Statoil/Equinor on an array of onshore and offshore assets in North America, Turkey, and North Africa.

Nick has published on topics ranging from the characterization of conventional carbonate reservoirs to international climate law and the Canadian regulatory frameworks for carbon capture and storage and critical minerals.

With his subsurface and legal backgrounds, Nick provides uniquely specialized advice to investors, project developers, and operators in conventional and emerging subsurface industries.

