

EXPLORING THE GREAT WHITE NORTH

The resolution of boundary disputes could open up the Arctic's vast resource potential.

ARTICLE BY
CHRISTOPHER
KULANDER and
SERGEI LOMAKO

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1616 S. Voss Rd.
Suite 1000
Houston, TX 77057
(713) 993-9320

Five countries encircle the Arctic and have both internationally recognized and unrecognized claims extending into the Arctic Ocean.

The Arctic Ocean is vast both geographically—covering more than 14 million square kilometers, an area comparable to onshore Russia—and in its hydrocarbon resource potential. In 2008, the U.S. Geological Survey's National Oil and Gas Assessment team estimated that the Arctic may contain upwards of 10% of the world's undiscovered oil and 30% of the world's undiscovered gas. Across the Pole, Russian energy giant Gazprom is counting on offshore Arctic locations to provide up to a quarter of its natural gas production by 2020. As a result, territorial disputes are under way throughout the Arctic Ocean, mostly driven by conflicts over oil and gas rights.

Exclusive economic zones

The central portions of the oceans beyond the national jurisdiction of the coastal states are considered by law to be "high seas" beyond national claims. The area extending 200 nautical miles from each nation's shoreline, known as its Exclusive Economic Zone (EEZ), was first described in the U.N.'s third Conference on the Law of the Sea (UNCLOS). Countries that are member states to UNCLOS can ask the U.N. to extend their rights under the terms of the treaty to resources beyond the country's EEZ by up to 350 nautical miles from the coast.

Such claims are primarily resolved by the U.N. Commission for the Limits of the Continental Shelf, which analyzes and interprets geologic origins, seafloor geometry and water depth. Modern drilling and logistical technology has made oil and gas production possible across most of the Arctic EEZ and shelf.

Svalbard and the Barents Sea

The EEZ extends from islands as well, greatly expanding a zone's reach. Norway—the world's third-largest oil exporter—lies at the crossroads of the Arctic, its gateway to the North Pole running through Svalbard, a group of islands halfway between Norway and the North Pole. In 1920, the major nautical powers recognized the sovereignty of Norway over Svalbard. Under the treaty, however, all signatories have equal rights to engage in commercial activities on the islands.

Norway holds that the treaty's tenets of equal economic access only apply to Svalbard and the immediate waters around the islands, and not to the wider EEZ. It also argues the continental shelf around Svalbard is part of mainland Norway's continental shelf, and should be governed by the U.N.'s 1958 Continental Shelf Convention. But Russia counters that provisions of equal economic access apply to the *entire* 200-mile EEZ circle around Svalbard.

Realizing the immense potential of its offshore gas reserves, in 2006 Norway made an official submission to the U.N. arguing that its 200-nautical-mile continental-shelf boundary should be extended into the Western Nansen Basin in the Arctic Ocean—the deepest portion of the ocean between Svalbard and the North Pole. Russia says that a portion of Norway's claim overlaps Russia's claim to the seabed.

The U.N. commission approved Norway's claim to portions of the seabed under the Norwegian Sea, Barents Sea and out into the Arctic Ocean. The U.N. recognized, however, that Russia and Norway both had legitimate claims to a portion of the Barents Sea about halfway between the Svalbard and Novaya Zemlya archipelagos, and decided it was up to the countries to develop a joint-participation protocol.

Norway is already exploiting gas reserves in the Arctic. Statoil ASA pumps natural gas from Snøhvit Field in the Barents Sea, condenses it into liquid natural gas (LNG) and exports it to Europe and the U.S. Before this project, no one



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had produced LNG from the Arctic.

East of Svalbard is another region of seafloor disputed by Norway and Russia. In 1955, the Soviet Union and Norway agreed upon a water border in the Varangerfjord, the easternmost fjord in Norway, but not farther out into the Barents Sea. Norway argues the border should follow a line equidistant from each side, but Russia would like to see a border parallel to longitude, with a diversion around the 1920 Svalbard Treaty area.

Events in this region are moving towards a climax. On April 27 of this year, Norway and Russia reached a preliminary agreement regarding the Barents Sea border. In a surprise accord, the disputed 175,000-square-kilometer area is to be divided into two roughly equal parcels, with future cooperation in governance of fisheries and petroleum development. Gazprom, which through its subsidiary, Sevmorneftegaz, owns the development rights to the enormous Shtokman gas field, has invited Statoil to help develop its Prirazlomnoye Field in the Pechora Sea, which is thought to contain 46.4 million metric tons of extractable oil.



SOURCE: KEVIN POWELL/ANCHORAGE DAILY NEWS

Alaskan-Yukon Sea border

The U.S. and Canada are in a similar dispute over ownership of a wedge-shaped slice of seafloor measuring 8,276 square miles, in the Arctic Circle between Canada's Yukon Territory and Alaska. The Americans believe the maritime boundary should extend equidistant from the coasts of the two nations, resulting in a slightly sinuous line into the Beaufort Sea. Canada argues that the maritime boundary should extend seaward without any change in direction from the land border.

The disputed area may hold significant hydrocarbon reserves. Should the U.S. ratify the UNCLOS treaty, the disagreement would likely end up before the International Tribunal for the Law of the Sea established under the UNCLOS convention, which has exclusive jurisdiction over disputes about boundaries of seafloor. In a similar clash involving the boundary between the Province of Nova Scotia and Maine, a border roughly equidistant from each country was settled upon, perhaps setting a precedent.

For its part, Canada enacted *Canada's Oceans Act*, which affirms the country's sovereign rights, jurisdiction and responsibilities in the EEZ of Canada—including the Beaufort wedge. The act leaves the door open to extend Canada's claim onto the continental shelf.

This is not the first dispute between Canada and other Arctic countries. The U.S. has long recognized the potential oil and gas reserves in the offshore Arctic region. America's largest field, Prudhoe Bay, is just off the coast of the North Slope in the Beaufort Sea, and logistical support for operations there are of singular importance. In August 2007, a U.S. Coast Guard icebreaker went to the Arctic Circle to map the sea floor off northern Alaska to determine the extent of the continental shelf.

In response, Canada has claimed that the Northwest Passage, a series of routes among the islands of the Canadian Archipelago providing access over the northern end of North America, are internal waters and beyond the scope of UNCLOS. In 1986, Canada issued its latest proclamation that the waters are domestic. And in 2006, the Canadian military even stopped referring to the straits by the traditional "Northwest Passage" moniker, instead adopting the name "Canadian Internal Waters."

The U.S. and a majority of other maritime countries believe the Northwest Passage is an international strait, thus giving foreign vessels right of passage. The U.S. has backed up its words by repeatedly sending ships—and, some claim, nuclear submarines—through the Northwest Passage without Canada's permission.

The Lomonosov Ridge

The sea ridges running across the seafloor in the Arctic are another source of claims for rights extending beyond the EEZ and continental shelf. Like other countries, Russia has made such claims on the grounds that the sea ridges emanate from the continental shelf and are a natural extension of Russia's continental boundary. An example is the Lomonosov Ridge, which extends from Russia, passing under the North Pole and connecting with the northern coast of Greenland.

In 2001, the U.N. heard Russia's argument that the ridge is an extension of its continental territory but decided that more evidence was needed before making a decision. In 2007, Russia sent two mini-submarines to map the Lomonosov Ridge and collect information to prove that the ridge under the Arctic is an extension of its continental territory. Russian scientists have been gathering evidence to document their stance because the Russian Federation must file a claim under UNCLOS demonstrating that its continental shelf extends far beyond the EEZ and encompasses most of the Arctic Circle to the North Pole.

On the other end of the ridge, Denmark and Canada counter that the Lomonosov Ridge is in fact an extension of Greenland. To promote their own presence in the area, the Danes have recently participated in a number of scientific expeditions to the Arctic, including the 2007 – 2008 International Polar Year program, which involved ships from Sweden.

Given the reserves available, the march of technology, the world's energy appetite, and the decline of fields in more temporal regions, exploration and production in the Arctic is assured. One can only hope that the differences between the Arctic countries can be resolved quickly, peacefully and with an objective eye. □

Christopher Kulander is an attorney in the Energy Section of Haynes and Boone LLP and was a geophysicist. Sergei Lomako is a partner in the Corporate Section with experience in international law and the law of the sea.

The U.S. argues for a marine border in the Beaufort Sea equidistant from the coast, while Canada believes the land border should continue straight into the sea.