

In Greenland, global warming fuels dreams of uncovering untapped riches as ice retreats

Karl Ritter, Associated Press, 11-27-09

TASIILAQ, GREENLAND — Gert Ignatiussen returns to this fjord-front Inuit town with the spoils of his hunting trip. Six seals, all killed with a single shot to the head.

With nimble handwork, his wife Bartholine cuts them up on the porch of their wood-frame home, saving the best meat for dinner. Ignatiussen throws leftover chunks of flesh and intestines to the yelping sled dogs fettered on a dusty slope below the house.

The blood-drenched scene offers a glimpse into Greenland's past — a time not long ago when seal hunting meant survival to nomadic Inuit tribes in one of the most hostile climates on Earth.

Inside, Ignatiussen, 54, shows what he believes is Greenland's future: A collection of mineral-rich rocks that he has stashed away in a drawer if he ever needs money.

Global warming is melting the fringes of the frozen world where Greenland's Inuits have hunted seal, whale and polar bear for generations. It's thawing the permafrost on which their homes are built. It's disrupting Arctic wildlife and fish stocks, and making hunting trips more dangerous by thinning the ice that supports their dog sleds.

But all is not doom and gloom. The retreating ice could uncover potential oil and mineral resources which, if successfully tapped, could dramatically change the fortunes of this semiautonomous Danish territory of 57,000 people.

The U.S. Geological Survey estimates there are more than 18 billion barrels of oil and gas beneath the Arctic waters between Greenland and Canada, and 31 billion barrels off Greenland's east coast.

North Sea resources of the same magnitude have made Norway one of Europe's richest countries.

Even if only a small part becomes recoverable as the Arctic sea ice retreats, it would be enough for a major boost in living standards for Greenland's tiny population.

"If we find those kind of quantities of oil and gas and the prices remain at current levels, then Greenland would be a very wealthy country, no doubt," said Joern Skov Nielsen, the director of Greenland's Bureau of Minerals and Petroleum.

Finding hydrocarbons would be crucial to help Greenlanders realize their long-held dream of cutting the annual 3.4 billion kroner (\$680 million) lifeline from former colonial power Denmark that currently rules out full independence.

It's still a big "if."

To date no oil has been found in Greenlandic waters. Even if discoveries are made in new areas under exploration, the most optimistic estimates say commercial production is at least 10-15 years away because of the long time-scale involved when developing offshore oil and gas fields.

Even so, local decision-makers are getting prepared. Last year the Greenland parliament approved the creation of a sovereign wealth fund similar to that which Norway uses for its surplus oil income.

Any payoff from minerals would be smaller, but more immediate. The giant island is believed to be rich in base metals such as zinc, and iron; precious stones like diamonds and rubies; and precious metals like gold and platinum. It's also a potential hotspot for rare earth minerals used in electronic gadgets including mobile phones and flat-screen TVs.

The problem is 80 percent of the island is covered by an ice sheet that is up to 2 miles (3 kilometers) thick, which means exploration is only possible in coastal regions. Even there conditions are far from ideal due to the long winter with frozen ports, 24-hour darkness and temperatures regularly dropping below -20 F (-30 C) in the northern parts.

However, as the climate slowly warms, more of Greenland is opening up for exploration.

Nielsen said the retreat of Greenland's massive inland ice sheet has uncovered new deposits of iron on the west coast near the capital, Nuuk.

In northern Greenland, Britain's Angel Mining PLC said a new deposit of zinc has been laid bare by a retreating glacier. The company plans to reopen an abandoned zinc mine in the area, and eventually link it to the new deposit, chief executive Nick Hall said.

Climate change has been "helpful rather than unhelpful" to miners in Greenland, he said, but added that the main stimulus for the mining activity "is that the world is hungry for resources."

Angel Mining already operates a gold mine in the south. An olivine mine just north of Nuuk also has started production.

Many more are expected soon. The number of mineral exploration licenses issued by Greenland's local government surged from 17 in 2002 to 72 this year.

In Tasiilaq, a cluster of brightly colored homes on Greenland's southeast coast, residents believe more in minerals than oil. They don't know what's hidden under the ocean, but they can sense during the summer months that there are glistening riches embedded in the barren mountains.

Hunters from the area are frequent winners of Greenland's annual amateur mineral hunt, a popular competition designed to encourage Greenlanders to learn more about geology and mining.

Ignatiussen won the inaugural competition in 1989 when he found a rock with traces of gold.

"It had many colors. I could feel there were minerals inside," he explained to visitors invited to his home in August for a home-cooked seal stew.

About 1,000 fist-sized rocks are sent in every year to the Bureau of Minerals and Petroleum, which gives out 120,000 kroner (\$24,000) in tax-free prize money, including 55,000 kroner (\$11,000) for the top entry. Postage-free packaging is available at every post office on the island.

Officials also offers basic courses in geology to amateur mineral hunters, and started a more advanced mining education in Sisimiut in western Greenland last year. The goal is to prepare Greenland's labor force for jobs in the mining industry.

Skeptics question whether Greenland is ready for a transformation into an industrial society. The only large-scale industry on the island is fishing, which accounts for about 90 percent of exports.

"Greenlanders are hunters and fishermen," said Finn Lynge, a retired Greenlandic diplomat who lives in Narsaq, on the southern tip. He said the mining and oil industries require job skills "for which Greenlanders are not apt at all."

He noted plans by Alcoa to build an aluminum smelter and two hydroelectric plants to power it in Maniitsoq, southwestern Greenland. Project leaders say the 600 workers needed for the construction phase would have to be recruited from Europe or China because Greenland doesn't have that kind of labor.

Even when the plant is up and running, the engineers would likely have to come from outside.

"What we can put on the table is menial labor," Lynge said.

Under a self-rule agreement that took effect last year, Greenland will use any revenue from oil and minerals to slash its annual grant from Denmark, which currently accounts for one-third of its economy.

If the windfall were to exceed the grant, new negotiations would take place, which many hope would result in Greenland becoming a sovereign nation modeled after the welfare states of Scandinavia.

Skeptics say Greenland's population is too small to govern a territory that is three times the size of Texas — even if it discovers untapped wealth. Also, the population is plagued by social problems including alcoholism, domestic violence, sexual abuse and suicides.

Local authorities say the suicide rate corresponds to about 100 per 100,000 residents. That's higher than any country in the World Health Organization's suicide statistics. Greenland is not part of those numbers because it's not an independent country.

Greenlanders older than 15 drink an average of about 12 quarts (12 liters) of pure alcohol per year, according to official health statistics.

The social ills are evident on the sparsely populated east coast, where the change from a hunting lifestyle to a modern society happened in a matter of decades in the last century.

The town bar in Tasiilaq, a smoke-filled gallery of drunk faces and glazed eyes, only sells beer. Police say there's been less trouble since hard liquor was banned last year.

"People who were used to living from fishing and hunting ... there's nothing for them to do. They have no education," said Taatsi Fleischer, a 30-year-old policeman from Nuuk who has been stationed in Tasiilaq for a year. "People get welfare benefits. They buy food, but the rest is for drinks."

Despite the promise of wealth and independence, many Greenlanders regard the hypothetical treasure trove buried beneath their feet with ambivalence. Lynge worried about what kind of Greenland it would produce — a once-pristine landscape flecked with oil derricks and hulking smelting facilities?

"Out of my window I see fjords and mountains and icebergs," he said. "Caribou, musk ox and an occasional polar bear. Wonderful country. Then a generation from now, two generations from now, what will meet the eye?"