Key facts

• In autumn 2013, Russian energy giant Gazprom will be the first company ever to begin commercial drilling operations in ice infested waters above the Arctic Circle.

• Gazprom is Russia's biggest company, accounting for 10% of national GDP, and is set to play a key role in President Vladimir Putin’s aim to make the country a global energy leader.

• Opening up the offshore Arctic is central to Gazprom’s future energy strategy. The company openly admits it plans to drill in other Arctic basins and has already built another ice-class oil rig for this purpose.

• In April Gazprom announced a strategic partnership with Royal Dutch Shell to drill in the Russian Arctic. The deal exposes Shell and its shareholders to all the risks associated with Gazprom’s management and safety culture.

• Gazprom’s giant $4bn Prirazlomnaya platform could supply oil directly to the global market by early 2014, becoming the first Arctic offshore oil from ice covered waters to reach consumers.

• The Prirazlomnaya has been constructed using pieces of decommissioned North Sea rigs and has sat rusting in a Murmansk shipyard for years.

• Gazprom's platform will operate year-round in the remote Pechora Sea, where ice is present for nearly two-thirds of the year and temperatures can drop as low as -50°C.

• The Prirazlomnaya’s oil spill response plan is only publicly available as a short summary, but even this document shows that Gazprom will rely on traditional clean-up methods that simply do not work in icy conditions.

• Much of the response equipment will be housed 1000km away in Murmansk, which means the company would not be able to mount a serious accident response for days. By this time oil could have beached on nearby nature reserves, and Gazprom admit local wildlife and Indigenous Peoples could be adversely affected.
Introduction

According to the US Geological Survey, the Arctic region may contain up to 90 billion barrels of oil and a significant portion of these reserves is thought to lie in the on- and off-shore areas of Russia. As oil companies are forced to develop increasingly marginal sources of hydrocarbons, the far North is emerging as a viable new frontier for the industry: whilst a few wildcat firms like Cairn Energy have started exploratory operations in areas such as Greenland, bigger players are now gearing up for their own drilling programmes in this pristine ecosystem.

On 8 April 2013, during President Putin’s visit to the Netherlands, Gazprom signed a memorandum with Royal Dutch Shell to partner in the Russian Arctic. According to the agreement Shell may get 33.3% of Gazprom’s projects in two Arctic areas: the Chukchi and Pechora Seas. The terms of the partnership expose Shell to all the risks associated with Gazprom’s management and safety culture.

Other recent multi-billion dollar deals between western companies such as Exxon-Mobil, Statoil and Eni and domestic energy giant Rosneft is proof that the industry is serious about exploiting the Arctic’s icy waters. (See Russian Roulette: International oil company risk in the Russian Arctic.)

The Arctic is an area of huge strategic importance for Russia. The country spends significant sums on maintaining a military capability in the frozen North, including army brigades, new ice-class ships, new frontier posts along the Northern Sea Route and it sees industrial development here as inevitable. According to President Putin his “long-term goal is to secure Russia’s leadership on the global energy markets” – the country is already one of the world’s leading oil producers. Development of the country’s vast continental shelf is crucial to this and Putin recently said that in the coming years new investment in oil extraction on Russia’s continental shelf could top $500bn, even though Russian experts have said drilling in the Arctic will be more difficult than exploring outer space.

According to domestic legislation, only state-owned companies with more than five years’ experience of operating in the Russian offshore can own licenses to drill for Arctic oil. This means that there are currently only two companies that qualify: Gazprom and Rosneft. While Rosneft is developing relationships with BP, Exxon-Mobil, Statoil and Eni (see Russian Roulette), it is Gazprom that is closest to full-scale operations in the Arctic.

In 2002 Gazprom formed a subsidiary, Gazprom Neft Shelf, to develop offshore oil and gas reserves in the Arctic. While it freely admits that it is “looking forward to exploring other fields of the Arctic shelf” the company first plans to develop the Prirazlomnoye oil field in the Pechora Sea, one of the first offshore sunk well anywhere in the Russian Arctic. The field, around 60km from the coast of the Nenets Autonomous Okrug Province, lies in water 20m deep and is thought to hold over 500 million barrels of oil. Such a size makes it “of crucial significance for Gazprom Group’s oil business strategy.” It expects to extract around 126,000 barrels of oil every day from the field at peak production and total cost of development is estimated to be between $4bn and $5bn.
Gazprom

Gazprom is the biggest gas supplier in the world, accounting for 15% of global supply, and is today Russia’s largest company. Founded in 1989, the company is almost totally state-owned and provides around 10% of Russia’s entire gross domestic product. Historically, Gazprom’s focus has been on finding and developing onshore gas reserves in Russia, but it is heavily expanding its oil operations: it has nearly 6,000 production wells and plans to produce 650 million barrels of oil every year by 2020.

The Prirazlomnaya

In order to provide this level of production, Gazprom is, like many other oil companies, looking towards drilling in increasingly remote, technically challenging and sensitive environments such as the Arctic, and the Prirazlomnaya field in the Pechora Sea will be the company’s first foray into offshore oil drilling in the northern Russian continental shelf. It has adapted a giant oil platform, the Prirazlomnaya, to drill in these freezing waters and this island will be the first off-shore commercial production facility anywhere in the Arctic. The Prirazlomnaya will perform well drilling, oil production, storage and offloading and over its 25-year lifetime will drill 40 wells. Production is planned to be around 43 million barrels per year.

Originally planned to start producing oil from there in 2011, but because of the enormous technical challenges posed by drilling in the Far North the project has been delayed. The first exploratory drilling was slated to start before the end of 2011, but following a series of information leaks concerning poor safety on-board, as well as a targeted campaign by Greenpeace, Gazprom has postponed and later cancelled plans to drill that year. The current date set is the end of October 2013.

But the Prirazlomnaya platform is really only the start of Gazprom’s Arctic ambitions. The energy giant is already developing further ice-class drilling rigs to allow it to venture into more remote areas of the Russian far north. The first of these, the jack-up Arkticheskaya, is being built in Murmansk and will allow Gazprom to operate in deeper waters than the Prirazlomnaya. Yet even this vessel has been plagued by construction delays: work began on it in 1995 but financial constraints soon meant the project was mothballed for nearly a decade.

The vast Prirazlomnaya platform is a powerful symbol of the creeping industrialization of the Arctic. It is 126m2, weighs 117,000 tons (without ballast) and can provide year-round accommodation for 200 workers. The rig is fixed in place by a steel caisson containing 100,000 tons of rubble and a further 122,000 tons of concrete underneath the rig superstructure. Gazprom has a small fleet of support vessels operating alongside the Prirazlomnaya, including the ice-breakers Vladislav Strizhov and Yuri Topchev, and the tankers Mikhail Ulyanov and Kirill Lavrov and the floating storage vessel Belokamenka based in Murmansk. It will use tankers to offload crude oil from the Prirazlomnaya to the Belokamenka before trans-shipment to Rotterdam or a possible refinery it may build in Teriberka near Murmansk.
Gazprom claims the Prirazlomnaya platform can withstand harsh Polar conditions: the drill site is only ice free 110 days every year and temperatures of -50°C are not uncommon\textsuperscript{vi}. In truth, the Prirazlomnaya is about as far from the idea of an ultra-modern drilling unit as it is possible to imagine. It has been cobbled together from rusting pieces of old rigs and dragged, with construction uncompleted, into position in the Pechora Sea by tugs. This means Gazprom is using out of date equipment to drill in one of the most extreme environments anywhere on the planet.

Work on the construction project lasted for 15 years, and the unfinished Prirazlomnaya stood six of these years rusting in Severodvinsk, while construction work was paused\textsuperscript{vii}. Between 2001 and 2004, Rosneft took the lead role in preparing a drilling platform for the Prirazlomnoye field in the Barents Sea, in a 50–50 JV with Gazprom.\textsuperscript{viii} Rosneft purchased under suspicious circumstances in 2002 the retired North Sea Hutton platform\textsuperscript{ix} which was built in 1984, and combined its topsides (living quarters and machinery) with supports constructed in Russia. However, in 2003 the topsides were held up due to awaiting regulatory approval related to the presence of nuclear isotopes. In 2004 the topsides were found to be in poor condition and not compatible with local requirements.\textsuperscript{x} In late December 2004, Rosneft sold its stake in the JV to Gazprom for $1.7bn.\textsuperscript{xi}

When Gazprom finally put the platform in place for drilling in the Barents Sea in 2011, subcontractors working on its construction were quoted in the press as declaring it “94.2% ready for use”. However an anonymous source involved in the construction told Nord-News agency that in reality the platform was no more than 50% ready\textsuperscript{xii}. Gazprom had refused to send representatives to public consultations on the project in 2011, and was continuing to refuse to publish any of the platform’s safety documentation, its environmental impact assessment, or the oil spill response plan for the project.

At a press conference on 6 December 2011, Gazprom’s head of department for offshore extraction technology Vladimir Vovk admitted that project documentation was not complete at the time of the start of construction of Prirazlomnaya. He also acknowledged that the use of the retired platform Hutton was a mistake: “the attempt to speed up the construction of the platform by using old equipment had the opposite result”\textsuperscript{xiii}. As the platform was being taken out to sea in 2011, a leaked video showed the platform’s gangway falling off during a storm.\textsuperscript{xiv} An anonymous industry source explained the state of the platform to Nord News Agency:

\textit{The thing is that from 2012 the exploitation of platforms like Prirazlomnaya will be forbidden, for technical reasons: a platform which took 15 years to build may simply have become outdated. Therefore Sevmash [Construction Company] needed to put Prirazlomnaya into exploitation before the end of the year, regardless of how ready it is. And that’s what is happening: the unfinished platform is being transported to the Prirazlomnoye oil field where it will be “brought into order”.}\textsuperscript{xv}

Final work was completed at sea, but even now it is facing problems: just a few weeks after being positioned on site, the Prirazlomnaya’s rig safety ladder was torn off in a summer storm\textsuperscript{xvi} and a new video shows what appears to be a safety vessel crashing into the platform.\textsuperscript{xvii} Because of these problems, industry sources are now suggesting that the platform
may not meet Russian offshore operating standards\textsuperscript{lx}. But Gazprom is so desperate to see a return on its significant investment that it has started exploratory drilling regardless.\textsuperscript{lx}

We should not forget the Kolskaya tragedy either. In December 2011, 53 people died when the Kolskaya jack-up rig capsized during towing. Though Gazprom and its subsidiary may not have been directly responsible for the accident, their role was clear from the very start of the project, especially due to them applying regular cuts in budget and in security measurements.\textsuperscript{ki}

The economics of Prirazlomnaya are also weak, and under the current Russian tax system the development of the field is likely to be unprofitable. Gazprom had openly signalled that production at the Prirazlomnoye field would not start before tax breaks were introduced\textsuperscript{lxii}. The project received two tax reliefs, saving the company a total sum of $50 on each barrel produced, and Gazprom Neft Shelf is still lobbying for further reliefs.\textsuperscript{lxiii}

The Russian Federal government’s recent plans for tax exemptions for Arctic shelf projects after 2016\textsuperscript{lxiv} mean that the Russian state budget could stop receiving any revenue from oil and gas field development projects for 10-15 years, according to Vladimir Milov, a Director at the Institute of Energy Policy. Oil and gas companies are thus essentially placing the burden of oil price risks completely on the Russian state\textsuperscript{lxv}, and therefore the Russian people.

**Arctic Oil Spill response**

The near-impossibility of cleaning up an Arctic oil spill is well-documented. The Pew Environment Group recently examined oil spill response plans for operations in the Arctic\textsuperscript{lxvi} and warned that the oil industry is “not prepared for the Arctic, the spill plans are thoroughly inadequate”\textsuperscript{lxvii} adding that Arctic spill plans “underestimate the probability and consequence of catastrophic blowouts”\textsuperscript{lxviii}. Analysis for WWF found that industry proposals for assessing the risks of a spill in the Arctic were inaccurate, describing it as “imagineering, not engineering”\textsuperscript{lxix}.

At the same time, the US Geological Survey concluded that “there is no comprehensive method for clean-up of spilled oil in sea ice” and that recovery systems normally used to collect oil faced “severe limitations” due to extreme conditions in the Arctic\textsuperscript{lxx}. Given the dilapidated state of the Prirazlomnaya it is reasonable to question the efficacy of Gazprom’s plan to deal with an Arctic oil spill. The drill site lies in a part of the Pechora Sea notorious for its winter weather: it is covered in thick ice for almost two-thirds of the year\textsuperscript{lxxi}, and temperatures can drop as low as -50°C\textsuperscript{lxxii}. Despite this, Gazprom claims it has “estimated all foreseen hazards” and “purchased special equipment able to eliminate possible oil spills in Arctic conditions as well as to collect oil in ice conditions”\textsuperscript{lxxiii}.

Gazprom’s oil spill response plan is not available to the public. Only a summary has been published on the internet\textsuperscript{lxxiv}, whilst the full version can only be viewed in the company’s offices under very strict restrictions. However, even the summary plan makes clear that Gazprom would be completely unable to deal with an accident in the far north. The company claims it “pays great attention to preventive environmental protection measures”\textsuperscript{lxxv} but according official plans its worst-case scenario\textsuperscript{lxxvi} is only for an oil spill of around 10,000 tons.
(about 73,000 barrels). The Deepwater Horizon disaster spewed nearly 5 million barrels into the Gulf of Mexico, whilst the Prirazlomnaya itself can store up to 650,000 barrels of oil. It is unknown how they will pay the expenses in a worst-case spill scenario, and if they are going to cover the full costs.

Booms would be based “2-3 days” away in Murmansk and could only be “used in ice-free periods.” It is unsurprising that Gazprom is not able to guarantee it would be able to clean up all of a spill. The Prirazlomnaya drill site is incredibly remote and there is almost no approved infrastructure to supply the logistical support needed to undertake a major oil spill response operation. For example, the nearest federal rescue station is located in Murmansk – about 1000 km from the platform.

More generally, Russia’s track record of oil spills is appalling. It is estimated that 5 million tons of oil leak from cracked wellheads, pipes and equipment throughout Russia each year. According to official data, over 500,000 tons of leaking oil seeps into the Arctic Ocean from the polluted rivers of northern Russia. Basically, Russia spills every two month the same amount of oil that the Deepwater Horizon lost at its blow-out in the Gulf of Mexico.

Oil Spill impacts

The Prirazlomnaya oil field is surrounded by national parks and wildlife sanctuaries like Nenetsky and Vaygach that are home to protected and endangered species such as the Atlantic walrus. Gazprom’s summary oil spill response plan suggests that walrus and bird habitats would likely be impacted from leaking oil where an accident to occur on the Prirazlomnaya, whilst Indigenous Peoples who rely on the Pechora Sea for fishing and hunting would also be affected. Post-Deepwater Horizon, BP is facing a bill of nearly $42bn, which could further increase to $90bn, if the court awards the maximum penalties. Gazprom confirmed verbally at a meeting with NGOs in 2011 that it does not have enough financial resources to ensure a reasonable level of oil spill mitigation capability on the Prirazlomnaya.

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