



Tech Talk - Oil Production from the North Caucasus

Posted by [Heading Out](#) on January 9, 2012 - 4:32pm

Topic: [Supply/Production](#)

Tags: [baku](#), [chechnya](#), [georgia](#), [grozny](#), [north caspian](#), [north caucasus](#), [russian production](#) [[list all tags](#)]

When the topic of Peak Oil is raised, one of the first responses often heard from those trying to explain why a peak isn't going to happen, at least in the short term, is that technology will come up with new answers. These innovations will allow greater production of oil through access to previously unavailable reservoirs, and an increase in the amount of oil that can be economically recovered from them. This is an argument that has had demonstrable success in the past. [An earlier post](#) showed that innovations in technology allowed the region around Baku in Azerbaijan to remain one of the centers of oil production since the time of the [first Russian oil pipeline](#) in 1878 through today. The argument is unfortunately not universally or ultimately true, but it does provide an introduction to today's topic.

The change from cable-tool drilling to rotary drilling resurrected production in the Caucasus after the Soviet Revolution. The growth of production, including the areas of the North Caucasus, also brought other fields on line. These were initially the fields around Grozny and Maykop, and in combination they raised production to around 622 kbd at the start of the Second World War. In more recent times, it is the introduction, once again, of the latest Western technology that has helped to sustain Azeri production, and new technology is starting to improve and sustain production in the North Caucasus.



The countries, and some key locations, in the North Caucasus (after a map from the [BBC News](#))

Georgia, through the port at Batoum (now Batumi), was one of the [early exporters of oil](#) from Russia to Europe.

The production of the northern Caucasus increased from 100,000 poods in 1877 to 1,656,000 poods in 1889. In the latter year, Terek furnished 275,731 poods, Elisabetpol 3,000 poods, and Daghestan 3,955 poods, while in the Signakh field near Tiflia, 55,296 poods were obtained.

Note: poods were the early Russian measure of production and there are 8.33 poods per barrel.

In the period from 1884 to 1914, Georgia exported a total of [around 165 million barrels of oil](#). This oil increasingly came from the fields around Grozny (now in Chechnya, Russia) and later from the fields around Maykop (now in the Republic of Adygea in Russia), even though there were considerable signs of oil in Georgia (oil sands near Signakh west of Tbilisi and [gilsonite](#) in the Guria district). The Grozny fields were producing about 18% of Russian oil (with the rest coming from Baku) in 1915.

Following the collapse of oil production with the Revolution and the end of Western ownership, it was the use of rotary bits that allowed production to ramp back up, supplying a seventh of Western European imports (John Grace – Russian Oil Supply), and providing needed income to the Kremlin.

During the Second World War the region became a target for German occupation, given that oil from the region was providing a third of German imports in 1940 (Daniel Yergin – The Prize.) However, although Operation Blau reached Maykop, the smallest of the three main oil concentrations, the oil fields had been destroyed, so only around 70 barrels per day were left available. The German Army soon became bogged down in the siege of Stalingrad to the north and did not reach Baku.

The oilfields around Grozny were first developed in 1893 and grew steadily, with [386 wells by 1917](#). The Grozny field peaked at around [154 kbd in 1932](#), while the output from the entire Chechen-Ingushettia region, which fed to the three refineries at Grozny, fell to around 148 kbd by 1980 and to 106 kbd by 1985. Grozny then became more of a pipeline terminal.

The first major pipeline running from Grozny to the refinery at the port of Tuapse, had been [built in 1927](#). The pipeline was later extended to also pick up oil from the Maykop fields, and fell into disuse in 1968 when it was replaced with more modern pipelines to the rail terminals and oil terminal [at Tikhoretsk](#), and that pipeline is now [being increased in size](#) to carry 250 kbd of oil. The terminal, which takes oil from the North Caucasus and Kazakhstan and forwards it to Novorossiysk, on the Black Sea, has a maximum throughput of 640 kbd overall. Part of the pipeline carried oil initially from Grozny to Baku, but with the onset of the Azeri-Chirag-Guneshli project, flow is [now reversed](#).

Grozny has had an unfortunate history with the surface structures being largely destroyed, first in the Revolution and then by German bombers. The town and facilities were rebuilt and became the center of the local oil business. The Chechen wars of 1994-96 and 1999-2000 then largely destroyed the [center of the city](#). Similarly the oil wells in the region were impacted; in the 1994 war [only 100 wells](#), out of 1,500, were operating by the turn of the year.

The more recent finds, that are resurrecting the promise of the North Caucasus come, however, as do many recent discoveries, offshore. Lukoil carried out a series of explorations in the North Caspian between 1999 and 2005, finding six large fields off the Dagestan and Kalmykian coasts.

These were Khvalynskoye, Yuri Korchagin (50 kbd) , Rakushechnoye, Samatskoye and Filanovsky. The fields were [initially assessed](#) at around 4.7 billion barrels of oil, with the Valdimir Filanovsky being claimed as the largest new oil reserve discovered in Russia in 20 years. The initial well flowed at 6,400 bd with reserves estimated at 600 million barrels, with 34 billion cu. m. of natural gas. Overall, North Caspian production was anticipated to peak in [2013 at 170 kbd](#), but Filanovsky alone, due on line in 2014, is now anticipated to reach [210 kbd](#) with production initially coming from 11 directional wells with [horizontal completions](#). To reach these levels Lukoil will be investing [some \\$22 billion](#).



Location of the Korchagin field ([Lukoil](#))

Looking further into the future, Lukoil is expecting to be able to further develop the North Caspian to reach a production capacity of 320 kbd of oil and 13 billion cu m of natural gas per year, [by 2020](#). Lukoil expects that the increase in production will be able to offset declines that are anticipated from Western Siberia by that time.

The introduction of modern technology is thus helping to increase production from regions that were, at one time, thought to be exhausted. It should, however, be remembered that horizontal wells have now been around for [some 30 years](#). One wonders what, so far unpublished, new technologies will appear to help within the decade, since to have an impact they must be widely accepted and adopted, and I don't hear of much.

offshore platforms



Design of the Filanovsky platform ([CNGS Group](#))



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](#).