



## Nuking The Oil Slick?

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Topic: [Environment/Sustainability](#)

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A recent [interview](#) with Matthew Simmons on Bloomberg discussed the possibility of a nuclear explosion being used to seal the leaking Macondo oil well.

This idea was floated a couple of weeks back by the Russian periodical [Pravda](#), which noted the technique was used 5 times to seal leaking wells in the old Soviet Union (once unsuccessfully in attempt to stop a gas leak in the Ukraine - though the likely environmental damage might cause you to wonder what the definition of "success" is).



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The first use of this technique was in Uzbekistan in 1966, with the blast 1.5 times the strength of the Hiroshima bomb and at a depth of 1.5 kilometers.

The following [video](#) shows a report regarding how USSR plugged a gas well that was burning and leaking out of control. The current well is an oil well, a mile under water, so it is not clear that the situation is at all similar.

The [World Nuclear Association](#) has the following to say about the use of Soviet nukes for gas well fires:

In 1966, a nuclear explosive was detonated at Urtabulak gas field in Southern Uzbekistan in order to extinguish a gas well fire that had been burning for almost three years and had resisted numerous attempts at control. The gas fountain, which formed at pressures of almost 300 atmospheres, had resulted in the loss of over 12 million cubic metres of gas per day through a 200 mm casing – enough to supply a city the size of St Petersburg. Two 445 mm holes were drilled that aimed to come as close as possible to the well at a depth of about 1500 metres in the middle of a 200 metre thick clay zone. One of these came to within about 35 m of the well and was used to emplace the special 30-kiloton charge which had been developed by the Arzamas weapons laboratory. Immediately after the explosion the fire went out and the well was sealed.

This was the first of five PNEs [Peaceful Nuclear Explosions] used for this purpose, and all but one was completely successful in extinguishing the fire and sealing the well. No radioactivity above background levels was detected in subsequent surveys of any of the sites.

The Christian Science Monitor has some words of caution about making any rash decisions to detonate a bomb in the Gulf, noting the Russian experience was with onshore gas wells, not deepwater offshore oil - "[Why don't we just drop a nuclear bomb on the Gulf oil spill?](#)".

The Russians previously used nukes at least five times to seal off gas well fires. ... Komsomol'skaya Pravda suggested that the United States might as well take a chance with a nuke, based on the historical 20% failure rate. Still, the Soviet experience with nuking underground gas wells could prove easier in retrospect than trying to seal the Gulf of Mexico's oil well disaster that's taking place 5,000 feet below the surface. The Russians were using nukes to extinguish gas well fires in natural gas fields, not sealing oil wells gushing liquid, so there are big differences, and this method has never been tested in such conditions.



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