

Environment impact of Lithium exploration in Serbia

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Lithium borate reserves at the site near Loznica have been estimated roughly at 135 million tons. Vladimir Simić, a professor of the Faculty of Mining and Geology, says that underground mining operations will be conducted to mine out these reserves." There should be no problematic effects, because I suppose as with most borates and similar minerals – these are easily soluble minerals that will be converted to lithium and boron in a technological process," he added.

The Jadar project, developed by one of the leading mining companies Rio Tinto in Serbia, includes one of the world's largest lithium borate deposits. Jadar is a unique deposit of a new lithium sodium borosilicate mineral – jadarite discovered in 2004 near Loznica in western Serbia. Rio Tinto has invested more than USD 130 million so far in the development of the Jadar project, and if the investment is approved, the planned development of mines and processing plants could begin in 2021.

Jadarite ore was discovered in 2004 and recognized as a new mineral in 2007, while 15 years later we are talking about the final phase of the exploration, which was reported after a meeting between the Prime Minister Ana Brnabic and the minister in charge of mining with company representatives.

Vladimir Simić, a professor of the Faculty of Mining and Geology at the Department of Economic Geology, explains that the final phase of the exploration means, according to our laws, that a resource and reserves study will be finalized to determine exactly how much ore is available, which part of it is commercially available for mining, in what way, under what conditions, at what cost and ultimately at what profit.

"According to the available Rio Tinto materials, some 135 million tonnes of ore has been explored so far. This is not a small amount for a single deposit spanning six to seven square kilometres. Of course, these are not fully defined reserves, we don't know if it can all be mined out commercially or not," Simić says, adding that additional studies and analyses are needed and that this is one big job.

He thinks that the actual deposit, geologically speaking, is well defined.

He also adds that inside the basin where jadarite was found, tens of thousands of wells were drilled during the 1970s and 1980s, when uranium was being explored. "And I just can't believe no one has ever found jadarite," professor says. Nevertheless, he states that the state was concentrating on a single ore at the time – if uranium was being investigated, it was done and there was no budget for other more detailed explorations of all the sediments that had been passed.

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tons. When asked what quantities can possibly be mined out, Simić says – it depends on Rio Tinto.

Talking about the benefits for the state, he notes that it is certainly something that would boost employment levels. He also said that we have good experts in this field.

They will invest into this project, they will pay the state a fee for the use of mineral resources required by law ... I do not know about lithium, because it does not appear in existing laws, it will probably be something similar to other non-metallic mineral raw materials, maybe up to five percent of profits – though I'm not quite sure of what profits. This is not even clear to me, and I have been dealing with minerals for 30-odd years," professor said.

When asked about the environmental impacts, the professor says that since jadarite is located in three levels, the depth of the ore level ranges from 100 to 700 meters and even lower than that, while the best layer is the lowest one, therefore at the greatest depth – this layer would have to be mined out underground." There should be no problematic effects, because I suppose, as with most borates and similar minerals, they are easily soluble minerals that will be converted to lithium and boron in a technological process," Simić added.

Lithium is used in the manufacture of batteries powering vehicles, computers, mobile phones and industrial systems, as well as alloys for the aviation industry.

Source: rs.n1info.com