

# Rio Tinto Jadar Lithium project, exploitation environment impacts

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Lithium borate reserves at the site near Loznica have been estimated roughly at 135 million tons. Vladimir Simic, a professor at the Faculty of Mining and Geology, says the underground will be exploited. "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 into lithium and boron in some 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 of jadarite discovered in 2004 near Loznica in western Serbia. Rio Tinto has invested more than \$ 130 million so far in the development of the Jadar project, and if the investment is approved, the planned construction of mines and processing plants could begin in 2021.

The jadarite ore was discovered in 2004 and recognized as a new mineral in 2007, and 15 years later we talk about the final phase of the exploration, which we heard after a meeting between Prime Minister Ana Brnabic and the Minister responsible with company representatives.

Vladimir Simic, a professor at 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 is a part of commercially available to take out, in what way, under what conditions, at what cost and finally at what profit.

"About 135 million tonnes of ore have been investigated so far, according to the available Rio Tinto materials. It is no small amount for a single bed that spans six to seven square kilometers. Of course, these are not fully defined reserves yet, we do not know if all this can be taken out commercially or not," says Simic, adding that additional studies and analyzes are needed and that this is a big deal.

He thinks that the bearing, geologically speaking, is well defined.

Otherwise, it states that the basin where the jadarite was found was drilled from tens of thousands of wells during the 1970s and 1980s, when uranium was being explored. "And I just can't believe no one has ever drilled jadarite before," says the professor. But he states that the state was working on purpose at the time - if uranium was being explored, it was done and there was no budget for other more detailed examinations of all the sediments that had been passed.

Lithium borate reserves at the site near Loznica have been estimated roughly at 135 million tons. Asked how much it can be exploited, Simic says – it depends on Rio Tinto.

Talking about the benefits to the state, he states that it is certainly something that would lead to the employment of people. He said that we have good experts.

“They will invest in it, they will pay the state a fee for the use of mineral resources that is 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 it is never clear to me out of which profit. It is not clear to me, and I have been dealing with mineral raw materials for 30 years, ”the professor said.

When asked what this will mean for the environment, the professor says that since the jadarite is located in three levels, the depth of the reduced level is from 100 to 700 and below meters, and that the best is the lowest layer, therefore at the greatest depth – it will have to be exploited 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 some technological process,” Simić added.

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

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