

## Further new activities at uranium deposit Rozna

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Mining of uranium ore has been running at Rozna deposit for 56 years, since 1957.

Extraction of uranium ore is currently performed in the mining field of blind shaft R7S. Top slicing and caving under the artificial roof method is used for the extraction.

Uranium ore mined in the Rozna deposit is treated at a chemical treatment plant (a mill) situated in the close vicinity of the Rozna mine. In the mill, uranium is extracted from the crushed and ground ore by alkaline leaching. The uranium is then removed from the solution by sorption on resin; the next steps are precipitation and drying. Alkaline leaching is applied at the atmospheric pressure and the temperature of 80 °C. The final product of the milling is ammonium diuranate  $(\text{NH}_4)_2\text{U}_2\text{O}_7$ , which is further treated into a fuel for nuclear power plants in conversion facilities abroad.

The milling is carried on under the condition of the closed cycle of technology water. Due to the positive annual precipitation balance, the over balance of technology water in tailings pond has to be purified before discharging into a river. Evaporation and membrane processes (electrodialysis and reverse osmosis) are used to purify the water.

New activities are searched and carried out with consequence of gradual decreasing of the uranium production. The main target and also benefit of this is the using of skilled human resources in the mine Rozna I and entry able underground spaces.

Geological exploration works for a construction of the underground gas storage were started on 21st level of shaft R7S three years ago. New horizontal galleries with profile 9 m<sup>2</sup> were driven during geological exploration works. Exploratory holes with length 100m were drilled. Sampling of rocks for geochemical, geomechanical and petrographic tests were carried out. So far 1264,9 m exploration galleries and 1130 m exploration drilled holes was made.

Geological exploration works for construction of underground research workplace on 12th level started in 2013 near the shaft Bukov1. 140m of horizontal exploration galleries with profile of 9 m<sup>2</sup> have been driven so far.

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