

## Environmental aspects of technological schemes improvement for overburden development with intra- quarry dumping in conditions of watered placer deposits.

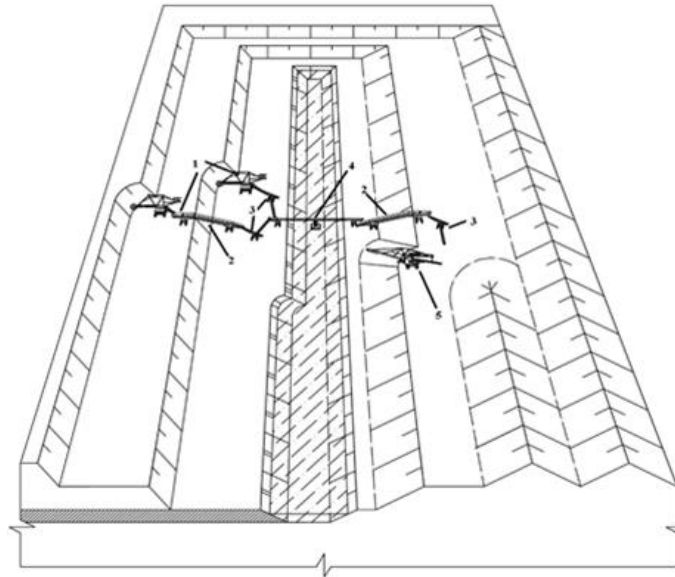
Vladyslav Kardash (PhD Student NTU DP, Department of surface mining)

**Relevance:** Due to the gradual depletion of titanium placer reserves with a simpler geological structure, it becomes necessary to improve technological schemes for use in conditions of placer deposits with high water influx.

**Purpose:** Assessment of the impact of the investigated technological scheme on the environment by analyzing the technology and looking for possible improvements.

**Methodology:** Currently a three-dimensional mining and geological model of the deposit is being developed.

**Results:** Various technological schemes of overburden mining with intra-pit dumping will be modeled. Such modeling will make it possible to assess the possibility of using technological schemes on the specific field example, indicating the mineral content characteristics and the exact volumes of rocks.



The improved technological scheme of  
overburden development

**Conclusions:** For the developed technological scheme, the parameters of dust emission and a economical feasibility were calculated. The use of such a scheme will significantly reduce dust emission when transporting overburden to a dump. However, a more detailed study of the indicators of the volumes of the areas occupied by the dumps is required. As well as the parameters of internal dumps and methods of their formation in the conditions of watered deposits.