

COMPUTER CODES FOR CONTROLLING THE CAVITY LEACHING PROCESS

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A b s t r a c t

The *UBRO* computer model of leaching cavity process is designed for making predictions in the design stage of cavern leaching technology. Other codes have been developed at CHEMKOP for controlling actual cavern leaching. The kernel of their algorithm is the same as that of the *UBRO*-code.

The *KOBL*-code is designed to modify the leaching rate coefficients by comparing concentrations of produced brine and results of simulation. When good agreement is achieved then prediction of the next stage of leaching is performed.

The *KORLOG*-code is designed to adjust the differentiation of leaching coefficients used by the *UBRO* or *KOBL* codes, according to results of ultrasonic echo survey during the cavity leaching. *KORLOG* operate as follows: the actual data on the cavity shape obtained by echo surveying are adjusted to the total yield, next the cavity development between two sonic measurements is compared with the results of the *UBRO/KOBL* simulation in order to rectify the differentiation of leaching properties of rock salt and to supply the codes with these new coefficients. The final effect of a *KORLOG* run is to enable the *UBRO/KOBL* code to provide a prediction for the next stage of cavity leaching as relevant as possible to the future process.

Physical modelling on salt blocks is also performed at CHEMKOP. Special codes for computer analysis of such models have also been developed: *UBMO* which is similar in function to *UBRO*, and *KORMOD* which is similar in function to *KORLOG*.

A model with more detailed hydrodynamics is also well advanced.