

POLLUTANT EFFECT OF WATER FROM BAIA SPRIE AND SUIOR MINES AND OF TECHNOLOGICAL WATER FROM ORE PREPARATION

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Baia Sprie and Suior ore deposits are situated in Gutai Mountains, which are part of Eastern Carpathians (Romania). The exploited ore from Baia Sprie is polymetallic and has a complex mineralogical composition. It contains major elements (Pb, Zn, Cu), subordinate elements (Au, Ag) and a multitude of minor elements. From Suior ore deposit is extracted gold and silver ore with polymetallic character (Pb, Zn). Due to the exploitation and preparation of the extracted ore a lot of solid, liquid and gaseous residues are affecting the environment (soil, water, air). The mine and ore preparation waters has the most pollutant effect. The water from Baia Sprie mine is treated in a neutralisation station and after that discharged in the tailing dam Tautii de Sus. The water from Suior mine is neutralised together with the sterile slime pulp from Baia Sprie flotation station and in the end it is discharged in the same tailing dam. From the tailing dam Tautii de Sus the cleared water is evacuated, through a inverse well system, in Racos brook, a tributary of Sasar river. Because of the imperfect neutralisation and treatment this water has sometimes an acid pH and a high content in metals. So, yearly there were discharged in Sasar river 1.5 mil. m³ water containing the following impurities: suspensions (74 t), filterable residues (2273 t), chlorides (41 t), sulphates (1285 t), Ca (656 t), Zn (0.4 t), Mn (2 t), Fe (4 t), Pb (0.3 t) and cyanides (0.8 t). There are necessary a series of measures to decrease the pollution degree of Sasar river.