

SUMMARY

The hydrogeochemical regionalisation of the Cretaceous aquifer system has been completed. Also, together with hydrogeochemical maps it has been possible to evaluate the regularity of distribution of ground water in the Cretaceous aquifer system, using MapInfo and Vertical Mapper software. A rhombus - Piper's diagram, of united anion - cation data was created, which allows the ground water type to be characterized, and make judgements about the formation processes of aquifer. Using the hydrochemical modelling software Phreeqc Interactive 2.8, the hydrochemical modelling of the Cretaceous aquifer system has been compiled, together with stability diagram of primary minerals: calcite, dolomite, anorthite and albite, which, in turn, allows for evaluation of the ground water balance in the system "ground water-carbonates-aluminosilicates-clay minerals.