

## **OIL SHALE FROM CALDERA LAKES OF DIATREMES**

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*The chemical composition of oil shales from caldera lakes facies, as well as the carbon and oxygen isotope composition of rock-forming carbonates and sulfur isotope composition of pyrite from fine veinlets have been studied. Rocks of clayey, clayey-carbonate and carbonate composition have been differentiated. High  $P_2O_5$  and  $TiO_2$  content of shales should be emphasized. Oil shales are characterized by rather high concentrations of Ni, Co, Cr, V, Cu and Sr, and pyrites – by very high concentrations of As, Mo, Cu and Ag and a light sulfur isotope composition. Rock-forming carbonates show a heavy carbon isotope composition and rather heavy oxygen isotope composition uncommon with non-marine formations. The above geochemical peculiarities are due to the oil shales formation under special conditions of caldera lakes situated over diatremes.*