tinuous and up to 150 m thick quasi-stratified and complex reservoir made by the Paleozoic WCC disintegration zone developed upon different Precambrian crystalline rocks of the paleorift faulted margin, though some pay zones occur much deeper (for example, 200 m and more below the basement top in the fractured and mylotinitized hornblendites of Yuliivka field). A sophisticated new technique developed at *DEPROIL Ltd* applying joint inversion of seismic and gravity data and adjusted by other geological and production data allows a confident delineation of prospective basement reservoirs and build a geodensity model of a WCC reservoirs. It also was found that rocks of the second zone of (hydromicaceous) and sometimes material of the third zone of WCC profile (residual kaolins and ochers) represent an impermeable formation of up to 10-30 m thick for effective sealing of commercial hydrocarbon accumulations in the weathered, fractured and altered basement reservoirs of 17-36% porosity in the Northern Flank. The reflected seismic VIIth horizon mapped by over the flanks of the Dnieper-Donets basin that mimics the true basement / sedimentary cover interface and gradually lowering basinward can be interpreted as the surface of multistage deep weathering paleofront or so-called basal platform (aquitard for paleo-groundwater flow) where precipitation of some soluble minerals of the WCC have occurred. The revised approximate age estimation for the timing of the Paleozoic weathered crust formation upon the Ukrainian Crystalline Shield and its slopes is as follows: 1) Pre-Frasnian weathered crust – 390 - 380 Ma (e.g. the Styla horst outcrop at Donbas/Azov massif margin; 2) Pre-Tournasian weathered crust – 360 Ma; 3) Pre-Visean weathered crust – 345 - 350 Ma.

Merve SASMAZ[1], Erdal Obek[2], Bunyamin Akgul[3], Ahmet SASMAZ[3]

BIOACCUMULATION OF URANIUM AND THORIUM BY USING LEMNA GIBBA AND LEMNA MINOR IN KEBAN (ELAZIĞ) PB-ZN-AG GALLERY WATER

[1]The University of Sheffield, Water Eng., Western Bank, Sheffield, S10 2TN UK
e-mail: msasmaz1@sheffield.ac.uk
[2]Fırat University, Bioengineering Department 23119 Elazig, Turkey
e-mail: eobek@firat.edu.tr
[3]Fırat University Geology Department 23119 Elazig, Turkey
e-mail: asasmaz@gmail.com

This study focused on the ability of Lemna gibba and Lemna minor to remove U and Th in the gallery water of Keban Pb-Zn-Ag mining area, Turkey. These plants were placed in gallery water and individually fed to the reactors designed for these plants. Water and plant samples were collected daily from the mining area during 8 days. The plants were ashed at 300 ^{o}C for one day and analyzed by ICP-MS for U and Th. U was accumulated as a function of time by these plants, and

performances between 110 % and 483 % for Lemna gibba, and between 218 % and 1194 % for Lemna minor, were shown. The highest Th accumulations in L. minor and Lemna gibba were observed at 300 % and 600 % performances, respectively, on the second day of the experiment. This study indicated that both Lemna gibba and Lemna minor demonstrated a high ability to remove U and Th from gallery water polluted by trace elements