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**SERHII SAMILOVYCH HEMBYTSKYI IS A FOUNDER OF THE HYDROGEOLOGICAL
SECTION AT THE RESEARCH INSTITUTE OF GEOLOGY OF THE OLES HONCHAR
DNIPROPETROVSK NATIONAL UNIVERSITY**

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Short biographic data on Serhii Samiilovych Hembytskyi, who was one of the first researchers of hydrogeology and engineering geology of Dnipropetrovsk region, was presented. His role in Dnipropetrovsk scientific and educational institutions formation, particularly the Research Institute of Geology of the Oles Honchar Dnipropetrovsk National University, was noted. The main directions of further development of engineering-geological and hydrogeological studies at the Research Institute of Geology are shown.

Keywords: history of geology, engineering geology, hydrogeology

**СЕРГІЙ САМОЙЛОВИЧ ГЕМБИЦЬКИЙ – ЗАСНОВНИК ГІДРОГЕОЛОГІЧНОЇ СЕКЦІЇ
НДІ ГЕОЛОГІЇ ДНІПРОПЕТРОВСЬКОГО НАЦІОНАЛЬНОГО УНІВЕРСИТЕТУ
ІМЕНІ ОЛЕСЯ ГОНЧАРА**

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Наведено короткі біографічні відомості про Сергія Самойловича Гембицького – одного з перших дослідників гідрогеології та інженерної геології Дніпропетровщини. Відзначено його внесок у становлення наукових та учбових установ Дніпропетровська, зокрема, Науково-дослідного інституту геології Дніпропетровського національного університету імені Олеса Гончара. Показано головні напрямки подальшого розвитку інженерно-геологічних, гідрогеологічних та гідрологічних досліджень в НДІ геології.

Ключові слова: історія геології, інженерна геологія, гідрогеологія

**СЕРГЕЙ САМОЙЛОВИЧ ГЕМБИЦКИЙ – ОСНОВАТЕЛЬ ГИДРОГЕОЛОГИЧЕСКОЙ СЕКЦИИ
НИИ ГЕОЛОГИ ДНЕПРОПЕТРОВСКОГО НАЦИОНАЛЬНОГО УНИВЕРСИТЕТА
ИМЕНИ ОЛЕСЯ ГОНЧАРА**

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Приведены краткие биографические сведения о Сергее Самойловиче Гембицком – одном из первых исследователей гидрогеологии и инженерной геологии Днепропетровщины. Отмечена его роль в становлении научных и учебных заведений Днепропетровска, в частности, Научно-исследовательского института геологии Днепропетровского национального университета имени Олеса Гончара. Показаны основные направления дальнейшего развития инженерно-геологических, гидрогеологических и гидрологических исследований в НИИ геологии.

Ключевые слова: история геологии, инженерная геология, гидрогеология

Serhii Samiilovych Hembytskyi (1880-1943) is a famous scientist and educator. He has made a valuable contribution to the organization and development of hydrogeology and engineering geology in the Dnieper and Donbas areas. With his active participation the Departments of Hydrogeology at the National Mining University (NMU) and Dnipropetrovsk State University (DSU) were created, as well as the Section of Hydrogeology was founded at the Institute of Geology.

Serhii Samiilovych Hembytskyi was born in Moscow on October 30th, 1880. After graduating from the gymnasium he studied at the Faculty of Physics and Mathematics of Moscow University. In 1903 he entered the Ekaterinoslav Higher Mining School (from 1912 – the institute), finished it in 1912 and received the title of a mining engineer. After that, he stayed at the office of geology of Ekaterinoslav Mining Institute and worked here as a laboratory assistant and an



Serhii Samiilovych Hembytskyi, 1930s

assistant lecturer until he was elected as lecturer of geology and mineralogy at the Metallurgical department in 1918. S.S. Hembytskyi also taught hydrogeology to the geological prospecting speciality students and headed the laboratory of the blowpipe. In 1921, he was approved as a docent of Ekaterinoslav Mining Institute and as a professor of this one in 1925. In 1925, S.S. Hembytskyi led the Department of General Geology and Hydrogeology that was created in the Institute that year. In 1935, he became a head of the newly formed Department of Hydrogeology and Engineering Geology. From 1928 to 1929 he was a dean of the Mining Faculty of Dnipropetrovsk Mining Institute (DMI), and from 1933 to 1936 he worked as a dean of the Faculty of Geological Prospecting.

As an employee of DMI, S.S. Hembytskyi participated in the work of many educational, scientific and industrial organizations in the region. Over the years, he headed the Faculties of General Geology at DSU, Hydrogeology at DSU, Geology at Dnipropetrovsk Institute of Engineers of Railway Transport, taught at private gymnasium, Ekaterinoslav City College and other educational institutions.

The list of hydrogeological and geotechnical studies carried out by Hembytskyi for different enterprises is very extensive. Among these works there are conclusions on the hydrogeological conditions of the construction sites of Dnipropetrovsk elevator, Makiivka Plant, Sukhochivka station, Dnipropetrovsk Coke plant, a survey of Oleksandria brown coal deposit, conclusions on water supply of Olenivka station, Amur-Nyzhniodniprovskiy district of Dnipropetrovsk, Dnieper Hydroelectric Station and others.

In 1937, S.S. Hembytskyi was arrested through false accusation (rehabilitated in 1957) and sentenced

to eight years' imprisonment in a concentration camp near the city of Uhta (Komi Republic, Russian Federation), but he did not return (Past and present of the National Mining University, 2009; Макаренко, 2007). Реабілітовані історією..., 2004). While S.S. Hembytskyi was in detention, he participated in the design of heavy crude mines and other mining and geological studies in Komi Republic (<http://atlas.ukhta-lib.ru>).

S.S. Hembytskyi made a significant contribution to the development of many scientific directions in the Dnipropetrovsk region such as mine hydrogeology, hydrogeological and geotechnical study for the construction of industrial facilities and waterworks, the search for underground water for industrial enterprises (Грязнов и др., 1968, Грязнов и др., 1983, Стефанський, 2015). In 1931 he organized and headed the section of hydrogeology of Dnipropetrovsk subsidiary of the Geological Research Institute of the People's Educational Commissariat of the Ukrainian SSR. In 1933, it was reorganized into the Research Institute of Geology of DSU (Грязнов, 1968, Стефанський, 2015). He also founded the main directions of future researches of Institute in the matters of hydrogeology and engineering geology.

There are reports on the first works of the hydrogeological section of those years in the institute archive: "The hydrogeological conditions of Marievskiy site (Nikopol manganese ore basin)" (P.D. Osipov, 1934), "Hydrogeological description of the Stalin part of the western district of the Donetsk coal basin" (A.K. Matveyev, 1934). High quality and thoroughness of these investigations carried out in difficult social and economic conditions are notable. Scientific foundations and traditions laid down by S.S. Hembytskyi have been carefully preserved in the Institute of Geology of DSU.

In subsequent years, Hydrogeologic and Engineering Geologic lines of the Research Institute of Geology were led by famous scientists such as G.A. Braun, I.A. Skaballanovych, V.D. Filimonov, V.K. Rudakov. Employees of the Research Institute of Geology participated in the designing of hydraulic structures (Kakhovka, Kamianske, Kremenchuk, Kaniv and Kyiv hydroelectric power stations, and Krasnoznameniansk, North Crimea, Kamiansko-Dniprovsk, Mashevsk irrigation systems, Dnipro-Donbas canal, etc.) (Грязнов, 1968; Грязнов, 1983). Methodologies of mathematical modeling of salt transfer forecast for the technogenic contaminated territories of Western Donbas and methods of integrated environmental assessment of the impact of hydrogeochemical processes to natural and manmade waters of the Dnieper area were developed and put into operation. There were established environmental protection measures for a number of objects of Kryvyi Rih, a system of monitoring and assessment of air pollution harmful components. A local geographic information system «AquaGIS» on the basis of hydrochemical monitoring



Serhii Hembytskyi works as an engineer assistant on the train

of drinking water was developed, a method of forecasting of radioactive contamination on the basis of complex use of methods SSA-«Caterpillar» and adaptive forecasting methods and others was proposed.

The Research Institute of Geology carried out significant geotechnical studies of urban districts because of the construction and operation of buildings in the Dnieper area. In particular, the methods of evaluating of the properties and state of the rocks as a medium for building activity, methods for predicting landslides were developed as well as methods of the forecast change of the physical and mechanical properties of rocks at the Dnieper area loess formations during manmade load.

Today, the Research Institute of Geology holds scientific-pedagogical work with students of the Geology and Geography Faculty, and Professor Serhii Samiilovych Hembytskyi is a worthy example for us, an example of courage, dedication and professionalism of a scientist.

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Professor Hembytskyi in his cabinet
(photos from the archive of the People's Museum of History named after Alexander Pol of the SHEI "NMU")

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