



CRM of Ukraine Database Supplements

Mineral target:	Osykivske deposit
Commodity:	Phosphate rock

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Project	101075609 — GSEU — HORIZON-CL5-2021-D3-02
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Supplement status	
Endorsed (WP leader):	Guillaume Bertrand, BRGM
Supervised	Boris Malyuk, BRGM/GIU
Approved (Metadata Coordinator):	Oleksiy Likhosherstov, GIU
Author(s):	Affiliation:
Nataliya Kovalenko	GIU
Stella Shekhunova	IGS
Vitaliy Sukach	IGMOF
Maria Kurylo	UAG

Location. Osykivske deposit located 10 km southeast of the Strobeshive village, Starobeshiv district, Donetsk region.

Research: The deposit was explored in detail in 1997-2001 by the "Donetsk Geology". The purpose of the works was to preliminarily assess the quality and calculate the reserves of phosphorites, as well as overburden and bottom sands, by categories C1+C2. Work methods - drilling and testing of wells, laboratory and technological research, well geophysics, design of geological and special maps, plans and sections of the deposit. Along the way, a glauconite product and foundry sand are obtained. Laboratory technological studies have shown the suitability of the use of enrichment products and sands used in the production of building materials, phosphorus flour is used in agriculture. The mineral reserves were assessed and accepted by the NTR of the Donetsk Geology Research and Development Group (protocol No. 60 of 09/24/2001, 12/29/1990 No. 160, 12/15/1994 No. 85).

Area: 1,096.2 thousand m².

Geological characteristics. The deposit is confined to the zone of fine folding in the Campanian sediments, lying with erosion on Cenomanian sands or Carboniferous rocks. The phosphorite series is represented by sandy marls and quartz-glauconite sandstones, which include phosphate grains, micrograins and grains. The P₂O₅ content increases from top to bottom from 2 to 13%. At the base of the series lies a granular-agglomeric or pebbly horizon up to 0.5 m thick with a P₂O₅ content of up to 10%. The productive phosphorite body has a thickness of 1-14 m, the average content of P₂O₅ -5.2%. The overlying rocks are represented by Paleogene sands with a thickness of 5 to 68 m. The Osykivski phosphorites belong to the quartz-calcite-glauconite subtype. The deposit consists of two sections: South and Northern parts. According to the geological structure, strength of the phosphorite deposit and quality, the assessed area is classified into 2 groups of complexity. Mining-geological and hydrogeological conditions are favorable for open-cast mining.

Estimation of resources/inventories. As of 01.01.2024 the State Inventory of mineral reserves of Ukraine records the reserves of granular phosphorites of the Osykivske deposit in the amount of categories B+C1, thousand tons: ore - 86,000, including P₂O₅ - 4,000; by category C2 ore - 79,100, including P₂O₅ - 3,700. In addition, reserves by category, thousand tons are recorded as a whole: C1 - ore 6,600, including P₂O₅ - 500, by category C2 ore - 52,000, including P₂O₅ - 600.