

CRM of Ukraine Database Supplements

Mineral target:	Zavallivske deposit
Commodity:	Graphite

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Project	101075609 — GSEU — HORIZON-CL5-2021-D3-02
Supplement Data	
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Lead WP/ Supplement beneficiary:	[EGS]

Supplement status	
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Location: located in the Golovaniv district of the Kirovograd region (the main part of the deposit is in the Zavallya village) and in the Podil district of the Odesa region. The plant is located at a distance from the district centers of the Gayvoron town and the Savran village of 22 km and 12 km, respectively.

Exploration: commenced in 1921, geological exploration work was carried out repeatedly, starting from 1928. Development of the deposit was started in 1930 by open-cast and underground methods, and since 1962 only by open-cast method in the South-Eastern section. Reserves of graphite ores and related minerals have been approved by the GKZ of the USSR (protocols dated 3.11.1982 No. 9110, dated 10.04.1991 No. 11046) and the DKZ of Ukraine (protocols dated 19.04.2018 No. 4355; dated 28.12.2021 No. 5437).

Deposit area : 44 km².

Geological characteristics: The deposit consists of six areas: South-Eastern, Promizhna, Khutir Andriivka, Pivdenna Smuga, Pravoberezhna (Kirovograd Region) and Zarichna (Odesa Region).

The ore zone has been studied to a depth of 480 m and consists of 38 layer-like ore bodies of complex morphology with a thickness of 3.5 to 80 m. The productive sequence is composed of metamorphic graphite-bearing rocks of the gneiss complex. The ore bodies have a thickness of 3 to 60 m, and the thickness of the barren rocks separating the ore bodies is from 3 to 100 m. The graphite content within the selected ore bodies is from 2 to 18%, with an average for the deposit of 6.86%. Ores are divided into brittle, semi-brittle and dense.

The graphite obtained at the Zavallivskiy plant meets the requirements of State standards.

Crystalline overburden rocks (calciphyres and charnockites) are suitable for the production of aggregate and crushed stone, and garnet-biotite gneisses are used as raw materials for obtaining garnet concentrate.

The hydrogeological and engineering-geological conditions for the development of the deposit are very complex. They are due to the location of the deposit within the boundaries of the South Boug River and three interconnected water-bearing horizons.

Reserves of graphite ores and related minerals as of 01.01.2023 are:

- graphite ores / graphite, thousand tons: B+C – 80,143.0/5,035.5; C2 – 14,613.0 / 744.2; off-balance – 16,388.0 / 1,093.3;
- garnet ores / garnet (abrasive raw material), thousand tons: C1 – 18,682.3 / 3,163.0;
- building stone, thousand m³ : B+C1 – 5,623.0.

Degree of development:

are being developed:

- the South-Eastern section (PJSC "Zavallivskiy Graphite Plant");
- Zarichna site (Ukrainian Supply Group LLC)
- not being developed - Promizhna, Pivdenna Smuga, Pravoberezhna, Khutir Andriivka.