



## CRM of Ukraine Database Supplements

|                 |                              |
|-----------------|------------------------------|
| Mineral target: | Valky-Gatskivske deposit     |
| Commodity:      | Titanium, scandium, vanadium |

**Version: 17 April 2024**

|                                  |                                                                                                                                       |
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| <b>Project</b>                   | <b>101075609 — GSEU — HORIZON-CL5-2021-D3-02</b>                                                                                      |
| <b>Supplement Data</b>           |                                                                                                                                       |
| Supplement number:               | <b>MO.400041</b>                                                                                                                      |
| Dissemination level:             | <b>Public</b>                                                                                                                         |
| Supplement type:                 | <b>Description</b>                                                                                                                    |
| Work package:                    | <b>WP2: Critical Raw Materials, the International Centre of Excellence and United Nations Framework Classification (CRM-ICE-UNFC)</b> |
| Lead WP/ Supplement beneficiary: | <b>[EGS]</b>                                                                                                                          |

|                                  |                                   |
|----------------------------------|-----------------------------------|
| <b>Supplement status</b>         |                                   |
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Location. The deposit is located 11 km to the north-east of the Nova-Borova railway station in Khoroshivskiy and partly Korostenskiy district of Zhytomyr region, 15-20 km from the administrative center - the Irshansk village, 70 km north of Zhytomyr.

Research: The deposit was explored by the PDRGP "Pivnichgeologiya" in the period from 1973 to 1998, and has been exploited since 2003. The reserves are approved by the decision of the State Committee of Ukraine (protocols dated 21.06.2000 No. 556, dated 25.06.2015 No. 3384-DSK, dated 23.09.2019 No. 4916-DSK).

Geological characteristics. The deposit is located in the northwestern part of the Ukrainian Shield. The geological structure includes crystalline rocks of the lower Proterozoic (mafic and felsic in composition), weathered kaolin crust and Meso-Cenozoic sediments. The deposit belongs to ancient (overlain) Mesozoic placers and is represented by two genetic types of ores: alluvial-deluvial sandy-clay sediments and kaolin gabbro-anorthosite weathering crust. The deposit has a very complex structure and is characterized by inconsistent ore bodies in terms of thickness and length, as well as uneven distribution of ilmenite in them. The ore bodies are overlain by the barren sand-clay rocks with an average thickness of 9.3 m. The thickness of the ilmenite weathering crust varies from 1 to 25 m, the average is 5.8 m. The main ore mineral is ilmenite, leucoxenized to varying extent. Alluvial-deluvial sediments spread over the entire area of the deposit and are represented by secondary kaolin and alluvial sands. The thickness of bodies ranges from 1 to 25-27 m. Ilmenite in alluvial sands is distributed unevenly, the highest concentrations are mainly limited to the lower part of the layer, although there are increases in the concentration of ilmenite from the bottom to the top. In addition, the ores of the Valky-Gatskivske deposit contain zircon concentrations ranging from 0.1-0.3 kg/m<sup>3</sup> (weathering crust) to 0.6-0.7 g/m<sup>3</sup>. The Valky-Gatskivske deposit belongs to the deposits of a very complex geological structure (group 3). The deposit development system is hydraulic-excavator.

Information about mineral resources and reserves is confidential.