urasian Resources Group and BAUER Launch the World’s First Vertical Bauxite Mining Project

The project is expected to unlock about 12 million tonnes of hard-to-reach bauxite reserves over the next decade.

The Krasno-Oktyabrskoye Bauxite Mining Unit (KBRU) of Aluminium of Kazakhstan JSC, owned by Eurasian Resources Group (ERG), a leading global metals and mining company, has officially launched a project focused on the vertical extraction of bauxite using rotary drilling. Equipment has been commissioned at open pit No. 4 of the Vostochno-Ayatskoye mine. In June 2026, representatives of the German company BAUER presented miners with a symbolic key, and commercial drilling was started.

The vertical bauxite mining technique is being used for the first time not only in Kazakhstan but also worldwide.

The new technique will complement conventional open-pit mining. It will be used at previously mined areas of existing open pits where deep-seated bauxite reserves cannot be developed using conventional methods or where doing so would be uneconomical because this would require

removing a large volume of overburden.

The main item of equipment used for the project is a 133-tonne 580 hp BAUER BG 45 heavy-duty hydraulic rotary drilling rig. Fitted with a telescopic Kelly bar and a bucket auger, the machine can selectively extract bauxite vertically from depths of up to 100 metres without the use of explosives.

“The vertical mining project is an important strategic step for the Aluminium Division. The new technology helps cut costs and significantly reduces the volume of overburden removal. We can extract ore with greater precision, manage the quality of raw materials more effectively, and develop sites that used to be uneconomical. We are the first in the world to apply this technology in bauxite mining,” said Ivan Lobanov, Chief Mining Engineer at Aluminium of Kazakhstan JSC.

Key advantages of the technology:

Economic benefits

The development of hard-to-reach reserves is expected to provide an additional 12 million tonnes of bauxite over the next decade. This will help extend the life of mine and secure a steady supply of raw materials for Pavlodar Aluminium Plant.

High-quality raw materials

Selective mining reduces the amount of waste rock mixed with bauxite, resulting in higher-quality raw materials for processing.

Reduced environmental impact and improved safety

Because the technology does not require drilling and blasting, this helps avoid seismic impact and reduces dust generation. As mining operations take place within existing open pits, this reduces the area of disturbed land, while the reduced use of heavy machinery helps minimise the overall environmental footprint.

“The deposits developed by the Krasno-Oktyabrskoye Bauxite Mining Unit have a complex geological structure, which is why deep mining is becoming increasingly costly. Vertical extraction allows us to maintain the required production rate and use available resources more efficiently. This is an example of how modern technologies help improve mining efficiency and support the stable operation of the enterprise,” commented Ruslan Aslyamov, Operations Director at the Krasno-Oktyabrskoye Bauxite Mining Unit.

The project is notable because BAUER BG drilling rigs were originally designed for the construction of foundations and geotechnical work. Specialists from Aluminium of Kazakhstan JSC, in collaboration with German partners, have been the first to adapt this equipment for commercial bauxite mining.

Ore is currently being mined at the VAM-4 open pit with both methods used in parallel, and KBRU employees are receiving hands-on training from BAUER engineers in preparation for the further roll-out of the technology.