TECHNOLOGY "6M-EX"

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TECHNOLOGY "6M-EX" - DESCRIPTION

A proprietary, unique worldwide technology for the concentration and extraction of metals from ore and mine tailings was developed as a result of long-term scientific research conducted by Geoexplorers International, Inc. in the USA. This multiphase technology using several novel and unconventional solutions was developed to prove the presence and the amount of precious metals, including platinum group metals (PGMs) in sediment-hosted rocks, particularly in black shales in the western USA and in deposits owned by KGHM Polska Miedź S.A.. Since the beginning of the 1990's Dr. Jan Krasoń, with the permission of the management of KGHM, in addition to ore samples, collected and brought to the USA samples of KGHM's mine tailings.

After many years of very expensive metal concentration tests conducted in own laboratories in the USA, a breakthrough technology was developed, which was used to perform several hundred analyses of concentrated metals in ore samples taken from deposits in the western states of the USA *(Project I),* and in tailings samples taken from current production and from tailings storage facilities of KGHM Polska Miedź S.A. (*Project II*). The metal content in the samples was confirmed by analyses performed by two renowned specialist laboratories: Aspex Corporation in Delmont, Pennsylvania, USA and Eltron Research & Development, Inc., in Boulder, Colorado USA.

Over the past years, we have refined and improved our "6M-EX" technology to produce larger "mini metal beads" up to several millimeters in diameter.

ANALYTICAL CHALLENGE

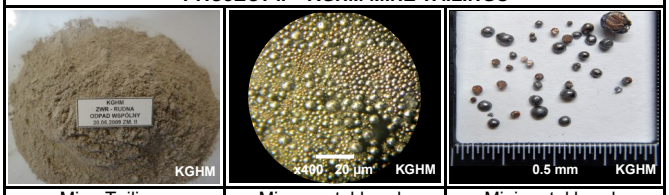
The deposits of precious metals in the western states of the USA *(Project I)* and the Polish copper-silver deposit of KGHM *(Project II)* belong to the type of stratified deposits occurring in "sediment-hosted" sedimentary rocks, where the main mineralization occurs in black copper-bearing shales and marls, containing a large amount, up to several percent, of organic matter. This makes the recovery of valuable raw materials very difficult because most precious metals, including gold and platinum group metals (PGMs), are often dispersed in organic matter in the form and size of nanoparticles. The organic material causes that standard geochemical analysis methods, such as fire assay, atomic absorption spectroscopy and others, fail and lead to wrong conclusions. The extraction of precious metals from black shales is very difficult and presents some global challenges.

REALIZED PROJECTS USING „6M-EX" TECHNOLOGY

PROJECT I – ORE DEPOSITS IN THE WESTERN USA

Black Shale USA	Micro metal beads x400	Mini metal beads mm

PROJECT II – KGHM MINE TAILINGS



Mine Tailings KGHM	Micro metal beads x400	Mini metal beads mm

"6M-EX" TECHNOLOGY - CHARACTERISTICS AND ADVANTAGES

1. **The most INNOVATIVE** technology for the concentration and extraction of metals from ore and tailings: all precious metals, including platinum group metals (PGM), rare earth metals (REE) and other non-ferrous metals, especially those occurring as nanoparticles rich in organic substances.
2. **The most ECONOMICAL** technology with an estimated total operating cost per ton of ore from deposits in the USA of approximately $120.00/t, and from KGHM's mine tailings & current production is approximately $90.00/t.
3. **The most PRO-ECOLOGICAL** technology, which is safe and harmless to the environment, using mainly secondary raw materials, whose by-product can be used in significant quantities for specific purposes, including as a filler for bituminous masses in road construction, production of building materials, mineral fertilizers for agriculture and in mining. Previously useless and harmful to human health and the environment, waste can once again become a valuable raw material, while preventing any undesirable risks and environmental penalties.
4. **The most COMPETITIVE** technology for the recovery of all precious metals and all non-ferrous metals contained in ore and mine tailings. In addition to precious metals, the technology enables the effective recovery of other valuable metals, including copper, rhenium, rare earths (REE), etc.
5. **The most EFFICIENT** technology, allowing the recovery of some precious metals up to 95% of their content.
6. **The most SCALABLE** technology, which means that it can be adapted to any sample size, from several grams to several tons of ore or mine tailings.