

## GEOSTRATEGIC RESOURCES – NON-FERROUS METALS – REQUIRE AN APPROPRIATE MANAGEMENT

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### Abstract:

*Natural resources, in general, hold a geostrategic connotation due to their importance. The geostrategic interest mainly targets oil, natural gases and non-ferrous ore deposits. These resources can be found in Romania's subsoil in various quantities, and their exploitation and processing started early on. Non-ferrous deposits stand out as a particular case, which also explains the start of this industry in Romania simultaneously with those around the world.*

**Key words:** strategic resources; geopolitical; non-ferrous metals; resource management

The management of geostrategic resources includes radioactive ores, especially uranium, the importance of which does not mainly reside in its use as fuel for nuclear power plants, but in its use in the production of nuclear bombs. Given this military priority, detailed information regarding the geographical distribution, nature and size of the deposits falls under the law of national safety.

Radioactive deposits are not an exception to the rule of subsoil resources in Romania, in the sense that they are not very large and their distribution is spread across the Carpathian regions: Bihor, Almaj, Bistritei, Giurgeu and others. With the exception of some deposits in the Banat and Apuseni Mountains, known since before the Second World War and mercilessly exploited until 1955 ("to be processed by the ex-USSR"), all the others began to be exploited only after 1965.

The geopolitical context after 1990, with the fall of the Iron Curtain, reconfigured both the strategic role and the management of non-ferrous resources in the Eastern European space [1].

Romania's intentions to produce electricity through nuclear technology materialized when the nuclear power plant at Cernavodă started to be put to use in 1996.

After 1990, there were no foreign companies in Romania that wanted to exploit radioactive deposits. The interest that foreign investors and companies have for oil is not equaled by radioactive, gold or silver ores [3].

Gold has been and tends to remain one of the attractive resources in these parts. The Greek historian Herodotus mentioned the gold in the Apuseni Mountains for the first time when he refers to the war between the Persians led by King Darius and the Scythians in 513 B.C., in the region of the Maris (Mures) river. Presumably, Darius was drawn by the gold riches of the Scythian Agatârş tribe.

Some historians claim that the gold of the Dacians (estimated at over 150 000 kg) was one of the main reasons of the Roman invasion of Dacia. After 106 B.C., gold exploitation intensifies, the Romans bring specialized miners, especially from Dalmatia. Among the more important mining centers, all of them found in the Apuseni Mountains, are: Roșia Montana, Bucium – Alburnus Major and Zlatna – Ampelum [8]. Given the importance of the deposits, exploitation was initially managed by the officers of the 13<sup>th</sup> Gemina Legion, and then by a “procurator aurarium”, mining specialist, who resided in Zlatna (Ampelum) and by the general procurator of the province, who resided at Alba Iulia (Apulum).

The Roman retreat and the invasions of the migratory peoples slowed the systematical exploitation down for a time, without stopping it permanently. It was continued on a reduced scale by the locals.

Over the centuries, the Hungarian Arpadian kings brought Saxon colonists specialized in mining into the region. It is worth pointing out that, through the strengthening of the Catholic Church, most of the mines in the Apuseni Mountains became the property of the roman-catholic bishop at Alba Iulia [4].

With the end of the First World War, the Romanian administration regains its rights. As such, in 1929 the “Mica” Company builds the first gold flotation plant at Brad, followed by the one in Dealul Crucii. The direct involvement of the state and the financial policy of the National Bank encouraged the modernization of exploitations and an increase in production: 730 kg of fine gold in 1919, 1000 kg in 1921, 1300 in 1925 and in 1937 – 5355 kg, a number representing the maximum quantity extracted before the Second World War.

The main gold producers before the War were: the “Mica” Society, producing 55% of the Romanian gold at an exploitation complex in the Apuseni Mountains (the Musariu, Bradisor, Valea-Morii mines and the processing plant at Gura Barza) and owning a total surface of 5375 acres; the “RIMMA” society – “Autonomous Administration of Mining and Metallurgical Enterprises in Ardeal”, managing the state mines, the second most important gold producer (21.9%) and owning several areas: Valea Roșie (2557.7 acres) in the Baia Mare region, Dealul Crucii (2500 acres) in the same region, Baia Sprie (387.5 acres), Baiut-Văratec (662.5 acres) and Rsoia Montana in the Apuseni Mountains (1115 acres), Sacaramb (6632.5 acres) and Valea lui Stan (1500 acres), to which we should add the processing plants at Firiza and Zlatna. The “Aurum” company, the third gold producer with a production of 6.5%, had 180 acres leased in the Baia Mare region. Among these big producers were societies like “Petrosani”, “Industria aurului”, “Toplita-Magura-Concordia”, “Albini” and small producers, usually forming an association, who were mostly working in the Apuseni Mountains and very few in the Baia Mare region. The only company with foreign capital was “The French Gold Mining Society in Transilvania”, that came into being after 1930, owning 1982.5 acres in lease in Baița and Nistru (Baia Mare) and producing 166 kg of gold and 483 kg of silver during 1937.

The silver producers were the same as the gold producers, with an exception: the “Phonix” company, processing the argentiferous lead at Herja. Until 1933, obtained silver was left at the producers’ disposition. After this date, it was bought by the National Bank. In the case of silver, taking 1937 again as a reference point, total production had reached 25,645 kg, of which “Phonix” had produced 9184 kg and “RIMMA” 7430 kg.

The year 1940 temporary brings a Hungarian management of the gold mines, which will operate during the beginning of the Second World War. Data regarding the occupation period is confusing and difficult to confirm: the end of the war and the

nationalization in 1948 change the property of the mines, seeing them pass in the Romanian state's possession [5].

The management of the gold and silver deposits was done until 1990 without showing great leaps in production or the discovery of new resources.

The interest for Romanian gold was felt after 1995, when the Deva Autonomous Administration of Copper and the Canadian company "Gabriel Resources Ltd." started negotiations regarding the discovery, exploitation, extraction and processing of gold and silver deposits at Roșia Montană and the Bucium Complex in the Apuseni Mountains. In 1997, the "Euro Gold Resources", a Romanian-Canadian company, was founded. The feasibility study showed that Roșia Montană had the largest gold deposit in Europe – 8 million ounces of gold (approximately 300 tons of gold and 1600 tons of silver at a present value of over \$3 billion, the exploitation taking place over a period of 11 years). Afterwards, the company changed its name to the "Roșia Montană Gold Corporation", with the following stockholders: "Gabriel Resources Ltd." (holding 80%), "Mininvest Deva" (18.5%), Cartel Bau SA Cluj (0.5%), Commat SA Trading Bistrița (0.5%) and Foricon SA Deva (0.5%).

In order to capitalize on the deposit, management aims to uncover large areas and move the Roșia Montană village (population of 4125) altogether, along with the two churches built in the 16<sup>th</sup> century and declared architectural monuments. The excavation of the over 200,000 tons of ore (with a content of 1.9 grams of gold / ton) would upset the balance of the ecosystem (even though the company commits itself to rebuilding the landscape), which is the reason why at the present time the project is still full of controversy in the eyes of various environmental NGOs, including Greenpeace.

On the same note, other companies are interested in the extraction of gold and silver from the sterile dumps.

The Romanian state funds gold exploitation with approximately 35 million RON yearly, exploitation which at the current moment is the exclusive work of the state company "Mininvest Deva"; the Romanian-Canadian "Roșia Montană Gold Corporation" is only prospecting and exploring.

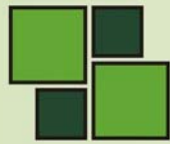
The Romanian state spends \$32,000 for the production of one kilogram of gold (including subventions); the stock market values gold at \$12,500, so the losses are very big.

On a worldwide scale, countries in South America are important gold producers along with China, Australia, South Africa, USA and Russia. India, Japan, Turkey are great gold consumers.

Romania's membership in NATO and the EU has caused radical changes in the field of the country's geostrategic resources. The reasons are most importantly linked to reserves, which are usually small and any other future discoveries cannot be spectacular. Romania enters the aforementioned organizations as a growing consumer and importer, not by any means as a supplier of geostrategic resources.

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