Roșia Montană Cultural Heritage in the context of a new mining development

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ABSTRACT. The Roșia Montană Project represents a responsible mining project in progress in the Apuseni Mountains, Romania. It is the first mining project developed in Romania according to up-to-date Romanian and international (EU) standards. Besides specific geological and mining aspects, the Project comprises various other aspects concerning the culture and the community. The present paper presents the cultural heritage of Roșia Montană in the framework of the new mining development proposed by Roșia Montană Gold Corporation.

Key words: Roșia Montană, cultural heritage, responsible mining

WHAT IS RMGC?

S.C. Roșia Montană Gold Corporation S.A. (RMGC) is a mining company established and registered under Romanian laws in 1997. The shareholders of RMGC are Gabriel Resources Ltd. (Toronto, Canada) with 80% and the Romanian state with about 20%.

The Canadian mining company Gabriel Resources Ltd. is traded on the Canadian Share Market being governed by the regulations specific to public companies. In accordance with available public information, approximately 60 to 70% of the company’s shares are held by American investors, individuals or mining companies like the giant Newmont Mining Corporation (USA).

Currently, the RMGC’s management is 100% Romanian, while Gabriel Resources’ management consists of individuals with extensive modern mining experience worldwide acquired within USA based Barick Gold Corporation.

THE MINING PROJECT PROPOSED BY RMGC

The Roșia Montană new mining project proposed and currently developed by RMGC/Gabriel Resources is located within the so-called Golden Quadrilateral from the South Apuseni Mountains, Romania (Alba County, Roșia Montană Commune). Within the Roșia Montană area and other mining sites from the Golden Quadrilateral, the mining has been performed even since Roman times (Wollmann, 1976; Cauuet et al., 2003; Manske et al., 2006). Furthermore, the gold ore deposits from this area represented in fact one of the reasons behind the Roman conquest of Dacia in 106 A.D.

Long time property of the local and foreign individuals as well as small companies, altogether with the Romanian state below the level +714 m RL (Ghițulescu and Socolescu, 1941), the gold mines from Roșia Montană together with other gold mines from the Apuseni Mountains have been nationalized by the Romanian pro-Soviet Government in June 1948. Almost two decades of extensive mining in Roșia Montană were conducted by the so-called Sovrom Aur only for the benefit of the former Soviet Union.

During the 70’ies, the underground exploitation gradually ceased and large scale open pit mining started in 1973 (Sântimbreanu, 1989). The surface mining was focused on Cetate Massif with its Roman Courts (Roman open pits) with no previous archaeological/patrimonial study.

After a continuous activity of more than 30 years, and the “vanishing” of the upper 130 m of Cetate Massif, the state-owned mine E.M. Roșia Montană was closed in June 2006 because of economic reasons (annual loss of about 3 million USD since early 90’ies). The end of mining at Roșia Montană triggered dramatic changes because mining was the sole economic activity. Thus the social and economic conditions became critical in Roșia Montană.

ROȘIA MONTANĂ CURRENT STATUS

More than two millennium of mining at Roșia Montană without any environmental protection politics determined major historic and modern pollution. Only for waters in the
perimeter, the recent environmental studies have pointed out serious exceeding of the limit values for metals in the nearby rivers, as follows: 110 times for zinc, 64 times for iron, 3.4 times for arsenic, and 3.4 times for cadmium.

The open pits, the waste dumps and the underground developments have remained opened to public access, unrehabilitated and consequently they contributed extensively to the current pollution of the entire area (acid river drainage). In this context, starting with 1990, the population, mainly the young generation, start to leave the area, fleeing to other, mainly urban localities like Alba Iulia, Deva, or smaller towns like Câmpeni and Abrud, and a gradual aging of the population is now very pronounced.

WHAT DOES MODERN MINING REPRESENT?

The nature of modern mining today is that mining projects earn the social license to operate by creating benefits to the countries in which they operate, and a very important aspect is that they must improve the global social and economic life of the community around the proposed mining site (mine and processing plants as well).

The proposed Roșia Montană Project is a large mining project that will create jobs (details given below), will generate significant tax revenue and will help also to reinvigorate the mining industry in Romania. Several foreign mining companies are at present involved in exploration activities within South Apuseni Mountains (Carpathian Gold, Deva Gold etc.) and the results acquired during the last years are very encouraging, with new gold and copper ore deposits identified so far. It seems that this region (South Apuseni Mountains) with a long lasting mining tradition will be able to become once again a major metal producing region in Europe. However, like other large industrial/economic projects, the mining projects imply benefits as well as certain risks especially from antagonistic point of views (promoters and opponents).

During the development of the Roșia Montană Project, a series of false starts, missteps and several mistakes have been made. Our goal is a continuous determination to improve the project, by new amendments and a total implication to solve all the negative aspects and thus to build a model mining project. Our aim is to create around Roșia Montană mining project a vibrant region with higher income standards and better living conditions, in full respect for the environment as well as for the cultural heritage assets of that area.

RESPONSIBLE MINING – ENVIRONMENTAL PROTECTION

As stated in the Environmental Impact Assessment, a public document since 2006, RMGC’s proposed project, will use safe technologies that are operational in more than 400 mines around the world. The implementation of the project will be conducted in agreement with the commitment of the Roșia Montană Gold Corporation concerning the survey and the treatment of the historic pollution existing nowadays in Roșia Montana. In the documents submitted by the RMGC to competent Romanian authorities, it is stated that during the mining project the best techniques and technologies available around the world in the mining industry will be used.
As regarding the non-mining patrimony, it is worth to mention that several houses from mid 18th to 19th centuries have been included on the list of the historic monuments under B Category, meaning “of local value”.

The so-called Piatra Corbului and Piatra Despicate have been also included on the list of natural monuments. Among other local attraction, we can mention the wood-stamps mills, mining-related ponds, various mining equipments, as well as documentary materials (maps, paintings, photographs) concerning the mining and related activities. The media campaigns focusing against the mining project promoted by RMGC, created a number of erroneous opinions with respect to the Roșia Montană cultural heritage, e.g.:
- “the Project will destroy the cultural heritage of Roșia Montană”;
- “the entire village will be destroyed”;
- “the Roman galleries will be destroyed”;
- “the area has not been completely investigated”.

MITIGATING MEASURES

The impacted zone of the proposed mining project represents about 25% of the area of the Roșia Montană commune. The historic centre and the buildings classified as historic monuments in Roșia Montană are already protected and altogether will be continuously surveyed and maintained in good conditions. Furthermore, according to the present legislation, several “Protection Areas” have been already delineated in order to preserve in situ and to develop all relevant heritage elements that have been studied and classified by independent (Romanian and foreign) expert teams and the representatives of the competent authority, i.e. the Romanian Ministry of Culture and Religious Affairs. The six various protected areas of Păru Carpeni, Piatra Corbului, Cătălina-Monulești, Jig-Vădioaia, Tau Gauri and Historical Centre allow the in situ preservation of surface and underground vestiges with cultural heritage potential, precisely Roman circular funerary monument, Roman buildings, Roman mining workings with a water wheel drainage system, other Roman mining networks, traditional buildings, natural monuments etc. All these objectives will be restored and transformed into touristic sites.

All the above mentioned cultural heritage objectives have been obtained by the means of scientific (archaeology, ethnography, geology etc.) investigations conducted by surveying all the accessible areas and in the same time suitable for human dwelling, considering bibliographical information available and the observations made during preliminary campaigns (archaeological survey), the magnetometric analysis, the electric resistivity studies and the data secured after conducting aerial photo surveys.

A systematic research took place where the archaeological realities required it, in compliance with the general norms accepted at European Union level and Romanian standards as well, and in agreement with the code for archaeological research.

WHAT HAS BEEN DONE SO FAR?

According to the up to date legislation, RMGC has contracted several major relevant institutions belonging to the Ministry of Culture and the Romanian Academy, as well as specialized research teams from France with wide European scientific experience and recognition to conduct the study of the underground mining workings. Thus, over 80 researchers, e.g. historians, archeologists, architects, ethnographers, sociologists, and geologists from over 25 institutions contributed to the research campaigns.

The Romanian Ministry of Culture and Religious Affairs established through the Order of the Minister of Culture (No. 2504/March 2001) the National Research Program Alburnus Maior, coordinated by the National History Museum of Romania. Thus, since 2000 when the assessment study of the archaeological potential has been conducted until date, one of the most important research programs in Europe has been developed at Roșia Montana. The importance and the significant results acquired during this scientific program have been acknowledged by most of the Romanian and European experts and the National Research Program Alburnus Maior was awarded in 2001 by the Romanian Ministry of Culture and Religious Affairs with the most important award in this field – the Constantin and Hadrian Daicoviciu Award.

WHAT WAS THE ROLE OF RMGC IN THE NATIONAL RESEARCH PROGRAM ALBURNUS MAIOR?

In order to appropriately deal with such a large scale scientific program and due to the importance of the local cultural heritage, RMGC established a special department within its organizational chart to face these unusual matters for a mining project. Highly qualified scientific personnel have been selected and employed in order to manage various scientific aspects that usually occur during the development of such research as well as to prepare and provide all the logistics required for the field and post-field works. Several details are given below:

- RMGC provided logistic support for the research teams: onsite accommodation, transport, materials and tools;
- Labour force has been ensured at around 200 workers/year (2000–2007), for a period of at least 6 months/year;
- Logistic support provided for the field operations by expert teams permanently present at Roșia Montană (PCs, dedicated software, consultancy, digital imaging equipment, GIS data integration support, flights, geophysical studies);
- Financial and material support provided for the establishment of an Archaeology Storage House;
- Inventory and restoration of the mobile heritage (over 10.000 items);
- Additional financial support provided for the interdisciplinary studies;
- Establishment of a Public Information Centre;
- Archives hosting oral history (100 hours of interviews);
- Temporary exhibitions on archaeology and architecture/urbanism;

Among others, an important result of the archaeological research was the establishment of new protected areas and an appropriate in situ preservation of several archaeological
sites considered to be important by the National Archaeology Committee of the Romanian Ministry of Culture and Religious Affairs. Consequently, new cultural and patrimonial items have thus been created and they have been included on the list of historic monuments. These new patrimonial sites are presented in Fig. 1.

1. The Carpeni protected area. According to the Valletta Convention (1992) the Carpeni area was proposed and classified as archaeological reserve, being a scientific resource for future archaeological studies. The archaeological diggings performed in the frame of the National Research Program Alburnus Maior recovered buildings dating back to the Roman period. The designated protected area covering the archaeological sites covers more than 18 hectares.

2. The Tău Găuri – a Roman funerary monument. A circular funerary complex dating back also to Roman times (2nd century AD) identified during the archaeological diggings at Tău Găuri will be also preserved in situ. In fact, this outstanding archaeological/patrimonial site is already in the process of being restored and developed for touristic purposes. Moreover, this archaeological site, studied in details (by archaeologists, geologists, architects) has been already presented to the scientific community and the public as well (the volume Alburnus Maior II/2004). This new patrimonial site also benefits of a protection area that covers more than 2 hectares.

3. Natural monuments and other protected areas. Piatra Corbului represents a rocky pile with the shape of a crow’s head. Furthermore, in the same area there are visible traces of Roman mining (surface and underground). Piatra Despicată is a 6 tones andesite block, which lies on dacite substratum and represents a volcanic bomb - remnant of a volcanoclastic formation that once covered entirely or partly the Roșia Montană area. The Historical Centre or the so-called Piața (“main square”), including also upstream and downstream roads and buildings, was also delineated as a protected area.

The RMGC is currently developing a new Zonal Urbanism Plan, which already states the commitment of the RMGC for the preservation and the restoration of the buildings located in the Roșia Montană Historic Centre. Furthermore, this newly-proposed protected area covering 135 ha includes also the most important mining-related ponds going back to the Austro-Hungarian Empire period, as well as the Catalina Monulești Gallery (Coș Massif) – a Roman mining network, which is also proposed to be developed for tourism purposes. Starting with this new Zonal Urbanism Plan, the restoration and the promotion of the Roșia Montană Historical Centre will be initiated. This site includes 35 historic monument houses and 3 churches and will be developed in accordance with the sustainable development principles.

To prove the credibility of these commitments, RMGC already had started a program of restoration and maintenance of the monument houses.

The scientific results concerning the heritage of Roșia Montană with the establishment of the newly-defined protected areas, as well as the results of the public consultations and environmental assessment, altogether have been reflected in 39 changes in the Roșia Montană Mining Project. All these changes have been made in order to
increase the patrimonial, the environmental and the social responsibilities performances of the Project. Among these we would like only to remind here the changes brought to the design of the mining project as a result of archaeological research – patrimonial aspects:

- The Tâu Găuri Funerary Monument: changes of the processing plant location and of the access road;
- The Medieval mining workings area Jig-Vaidoia: decrease of the initial planned size of the Jig open pit;
- Sulei: change of the Sulei open pit site;
- Carpeni: change of the waste dump site location;
- Piatra Corbului: decrease of the initial planned size of the Cârnic open pit;
- The Roșia Montană Historical Centre: increase of the whole surface of protected areas in Roșia Montană from 53 ha to over 135 ha;
- Additional adjustments to the project due to the above mentioned changes.

A NEW MINING MUSEUM

The RMGC is currently working on the preparation of restoration documentations for 11 historic monument houses, conducting at the same time maintenance and emergency interventions on all houses located in the protected area. As concerns the buildings situated in the so-called “Piata zone”, precisely 11 houses, once restored, they will represent the establishment of Roșia Montană Mining Museum, as the RMGC publicly committed through the Environmental Impact Assessment documentation (public document since 2006).

Until now, RMGC has financially supported the publication of the scientific results of the research concerning the cultural heritage from Roșia Montană, in order to be made available to experts as well as to the interested public (Damian, 2003, 2004, 2006). Consequently, 6 books concerning the history of Roșia Montană have been already published with the entire financial support of RMGC. Furthermore, 3 new books are under publication, and other 12 are scheduled to be published, all in the Alburnus Maior and Anthros series, which was initiated by RMGC.

Altogether, the funding spent by RMGC for patrimonial research in general (field work, post-field work, publishing, other patrimonial actions, etc.) rises to over US$10 millions. The financial support offered by RMGC was in compliance with Romanian and international legal provisions.

FUTURE ACTIONS

RMGC, together with its consultants, are proposing:
- To establish the Roșia Montană Foundation for Sustainable Development, with the support of RMGC. The aim of this foundation is to implement projects on social, economical and cultural heritage development that will support the local community after the mine closure;
- To create the new Roșia Montană Mining Museum, open to the public access through the Cățâlina-Monulești mining network. The museum will display facsimiles/replicas of several types of mining works that occur in other mining fields of the site;
- The restoration of the Roșia Montană Historical Centre and the conservation of the traditional living style;
- The establishment of archaeological reserves in: a) the Carpeni Hill containing Roman dwellings and b) the Pâru Carpeni mining sector, where an underground Roman water wheel drainage system is still preserved. The underground workings will be open for public;
- To preserve in situ and to open for public, the Circular Funerary Monument from Tâu Găuri: a representative monument for the funerary practices from the Roman Dacia province;
- To continue the archaeological research on surface and underground within the Orlea Massif area;
- To continue the publishing of the scientific results in archaeological, historical, architectural and ethnographic fields;
- To train the personnel dealing with protection, conservation and restoration of the cultural heritage in the area;
- To offer alternative job opportunities for the people from Roșia Montană;
- To develop an assisted-tourist circuit connecting the above mentioned sites.

In our opinion, all these new opportunities will create major assets for the community and at the same time will certify that modern mining and cultural heritage can well co-exist. As assumed through public documents, RMGC will make available in the future another US$25 millions for the fulfilment of research projects, the promotion of the cultural heritage of the Roșia Montană area including the tourism development as an economic alternative exploiting an inexhaustible “new gold mine” – the (cultural) patrimony/heritage!

REFERENCES


