4.9 Cultural and Ethnical Conditions,
Cultural Heritage
Table of contents

1 Introduction .................................................................................................................9
2 Baseline Conditions ..................................................................................................14
  2.1 Cultural Landscape ............................................................................................14
    2.1.1 Settlement Patterns in Roşia Montană ...........................................................14
  2.2 Architecture and Urban Setting of Roşia Montană ............................................15
    2.2.1 Roşia Montană Urban Setting .......................................................................16
    2.2.2 Corna Urban Setting .....................................................................................16
    2.2.3 Dwellings ........................................................................................................17
    2.2.4 Historical Monuments .....................................................................................17
    2.2.5 Protected Zone ...............................................................................................18
  2.3 Churches and Cemeteries .................................................................................18
  2.4 Archaeological Heritage .....................................................................................20
    2.4.1 Roman Artefacts .............................................................................................20
    2.4.2 Medieval Age and Modern Artefacts ..............................................................22
    2.4.3 Archaeological sites identified at Roşia Montană and the most representativeinvestigated structures ..................................................................................................22
    2.4.4 Underground Mining Works ............................................................................23
    2.4.5 Cătălina Monuleşti and Păru Carpeni .........................................................26
    2.4.6 The Archaeological National and International Context .................................28
      2.4.6.1 National Context ......................................................................................28
      2.4.6.2 International Context ..............................................................................29
  2.5. Industrial Mining Heritage ..................................................................................29
3 Assessment of Impact ...............................................................................................30
  3.1 Cultural Landscape .............................................................................................30
  3.2. Architecture and Urban Setting of Roşia Montană ............................................30
  3.3. Churches and Cemeteries .................................................................................30
  3.4. Archaeological Heritage .....................................................................................31
    3.1.1 Surface Archaeology and Underground Archaeology ....................................31
    3.1.2 Underground Mining Works ............................................................................31
  3.5. Industrial Mining Heritage ..................................................................................31
4 Mitigative Measures ..................................................................................................32
  4.1 Cultural Landscape .............................................................................................32
  4.2 Architecture and Urban Characteristic of Roşia Montană ....................................32
  4.3 Churches and Cemeteries .................................................................................33
    4.3.1 Churches ........................................................................................................33
    4.3.2 Cemeteries .....................................................................................................44
  4.4 Archaeological Heritage .....................................................................................44
Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

4.4.1 Baseline Data Collection ................................................................. 44
4.4.2 Managing the Archaeological Database .......................................... 45
4.4.3 Storage spaces .................................................................................. 45
4.4.4 In-Situ Preservation and Restoration .................................................. 45
4.4.5 Cătălina Monulești and Păru Carpeni .............................................. 46
4.4.6 Roman Funerary Monument –Tâu Găuri ........................................... 47
4.4.7 Roman Constructions on Carpeni Hill .............................................. 47
4.4.8 Preservation in situ of Roman and Medieval Underground Mining Works in Piatra Corbului ................................................................. 47
4.4.9 Movable Artefacts ............................................................................ 48
4.4.10 Chance-Finds Protocol ................................................................. 48
4.4.11 Dissemination of Information .......................................................... 50
4.5 Industrial Mining Heritage ................................................................. 52

5 Legislative Framework and Internationally Accepted Guidelines .......... 54
5.1 Romanian Legislation for the Preservation of Cultural Heritage .... 54
5.2 International Standards ....................................................................... 55
5.2.1 European Union Guidelines .......................................................... 55
5.2.2 World Bank Legislation ................................................................. 56
5.2.3 ICOMOS Charter for the Protection and Management of the Archaeological Heritage (1990) ................................................................. 56
5.3 Cultural Patrimony in Roșia Montană ................................................ 57

6 References ............................................................................................ 60
7 Photographs (Exhibit 4.9.1) .................................................................. 62

List of tables

Table 4.9-1. Summary of Cultural Heritage-Related Impacts ..................... 10
Table 4.9-2. Condition of Religious Buildings in Roșia Montană and Corna .... 20
Table 4.9-3. Church Considerations and Impact Mitigation/Management Options ...... Error! Bookmark not defined.
Table 4.9-4. Schedule of publications of the Alburnus Maior series ............. 50
Table 4.9-5. Designations for Cultural Patrimony in Roșia Montană ............... 57

List of exhibits

Exhibit 4.9.1. Photographs
Exhibit 4.9.2. Land Use
Exhibit 4.9.3 Location of Historic Monuments
Exhibit 4.9.4 Locations of Churches and Cemeteries
Exhibit 4.9.5 a-f Location of Significant Archaeological Features
<table>
<thead>
<tr>
<th>Exhibit 4.9.6a-b</th>
<th>Areas Subject to Investigation of Underground Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit 4.9.7</td>
<td>Locations of Churches and Cemeteries and Project Features</td>
</tr>
<tr>
<td>Exhibit 4.9.8</td>
<td>Cultural Heritage Features Slated for Preservation</td>
</tr>
<tr>
<td>No.</td>
<td>General Commitments Noted in this Chapter or Section</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Ensure that development does not damage or disturb sites, items or places of significant cultural heritage value prior to preliminary investigation in order to avoid any irreversible loss.</td>
</tr>
<tr>
<td>2</td>
<td>In accordance with archaeological release certifications, RMGC will strive to minimise impacts caused during the construction and operational phases of development.</td>
</tr>
<tr>
<td>3</td>
<td>Ensure the independent management of cultural heritage assets in a way that involves residents in their local heritage and ensures that potential tourism-generated revenue remains in the community.</td>
</tr>
<tr>
<td>4</td>
<td>Access to the Protected Zone will be maintained throughout the life of the proposed project.</td>
</tr>
<tr>
<td>5</td>
<td>RMGC proposes to facilitate the creation of the Foundation through the contribution of an endowment and by appointing an executive director.</td>
</tr>
<tr>
<td>6</td>
<td>RMGC will either compensate for churches and other church property or reconstruct them in Piatra Albă depending on the results of consultation with the church authorities and congregations and on the numbers of congregants being resettled in Piatra Albă.</td>
</tr>
<tr>
<td>7</td>
<td>Graves will be relocated according to the relevant Romanian legislation (Order 35/1982 and Order 235/2002).</td>
</tr>
<tr>
<td>8</td>
<td>If desired by the family, a service conducted by a priest will be conducted both for the re-opening of the grave and the subsequent burial. All fees relating to the relocation of graves and associated ceremonies will be funded by RMGC.</td>
</tr>
<tr>
<td>9</td>
<td>RMGC will encourage the assets of the RosiaMin museum be endowed to the proposed Foundation, and will undertake careful dismantling and storage of such items, prior to decisions on an appropriate site for reconstruction and preservation.</td>
</tr>
<tr>
<td>10</td>
<td>To the extent that health and safety requirements allow further exploration and re-opening works and eventual public access, work will continue on the Catălăina gallery.</td>
</tr>
<tr>
<td>11</td>
<td>RMGC is also committed to the preservation of one of the more significant areas of Roman works for future research, which is located beneath Piatra Corbului.</td>
</tr>
<tr>
<td>12</td>
<td>RMGC will commit to maintaining the historical monuments in their present condition during the transitional period leading up to transferral of ownership to the Foundation.</td>
</tr>
<tr>
<td>13</td>
<td>Prior to the transfer of ownership of buildings in the Protected Zone from RMGC to the Foundation, RMGC will fund the renovation of all the Historical Monuments and houses that it owns in the Protected Zone that are in relatively good structural condition.</td>
</tr>
<tr>
<td>14</td>
<td>All movable archaeological assets (artefacts) uncovered will be moved to the storage facility, to be funded by RMGC.</td>
</tr>
<tr>
<td>15</td>
<td>In the event that no Cultural Heritage Centre/Museum is opened, MNIR in collaboration with RMGC will enter into discussion with the Ministry of Cults and Culture to determine the best location and custody for the artefacts.</td>
</tr>
<tr>
<td>16</td>
<td>RMGC will categorize surface areas for patrimonial and cultural vigilance during the project life cycle. Increased vigilance primarily during the initial development phase will allow for rapid intervention by RMGC staff to properly record chance finds.</td>
</tr>
<tr>
<td>17</td>
<td>A special protocol will be implemented that requires the supervision of all soil stripping and mining archaeological monitoring while opening the pits by independent teams providing their special services via contracts with RMGC.</td>
</tr>
<tr>
<td>18</td>
<td>Cultural and patrimonial advocates working with RMGC management have the authority to restrict surface areas pending prior field review during the development and construction phase of the project.</td>
</tr>
<tr>
<td>19</td>
<td>RMGC has preserved the funerary monument from Tâul Găuri, is committed to the in-situ reconstruction of the monument.</td>
</tr>
<tr>
<td>20</td>
<td>Carpeni hill archaeological reserve will be zoned as a protected area and has been identified as a national monument.</td>
</tr>
<tr>
<td>21</td>
<td>The grave of the local hero Simeon Balint will not be directly impacted by the Project. Access will be maintained to this grave throughout the Project, although access may have to be restricted at times for safety reasons.</td>
</tr>
<tr>
<td>22</td>
<td>Record-keeping practices for the implementation of the chance finds protocol will abide by the requirements of standard operating procedure to be developed for the management of environmental and social management system records.</td>
</tr>
<tr>
<td>23</td>
<td>RMGC proposes to undertake a variety of initiatives to promote the economic viability of the protected zone, both during the life of the mine, and after.</td>
</tr>
<tr>
<td>24</td>
<td>RMGC will review proposals for funding on a case-by-case basis and will facilitate enterprises in a number of ways including but not limited to direct funding, loans, and donations of property or historic buildings.</td>
</tr>
<tr>
<td>25</td>
<td>RMGC will document then determine when vibration induced damage requires mitigation funding to historic monuments during the project life cycle.</td>
</tr>
<tr>
<td>26</td>
<td>An initial list of critical structures will be generated, with cross-references to their general location and applicable survey sketches and photographs.</td>
</tr>
<tr>
<td>27</td>
<td>RMGC will fund the construction of a facsimile of Roman mining works in Roşia Montană that will allow viewing of interesting Roman mining techniques.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>28</td>
<td>RMGC to restore and make provision for public access to either the Cătălina Monulești or Pâru Carpeni Roman galleries.</td>
</tr>
<tr>
<td>29</td>
<td>RMGC will construct churches of various denominations in the resettlement area, as appropriate to meet the worshiping needs of residents. New churches constructed in the resettlement area will, to the extent possible, reflect the architectural layout of the churches.</td>
</tr>
<tr>
<td>30</td>
<td>The Greek Orthodox church and Romanian Orthodox church in Roșia Montană, and the churches located in the historic centre (Unitarian church, Roman-Catholic Church and Reformed Church) will be maintained by RMGC in their present or better condition for the life of the project. RMGC will also assist in maintaining these churches post-closure through initiatives proposed by the Foundation.</td>
</tr>
<tr>
<td>31</td>
<td>RMGC will continue to regularly update their website with new information regarding the ongoing cultural heritage investigation of Roșia Montană. Furthermore, RMGC will participate in a mining archaeology website which has been develop to present information about mining projects in Europe. RMGC will facilitate the setup of a weblog that will present spotlights on various members of the cultural heritage team and their views regarding the project.</td>
</tr>
</tbody>
</table>
1 Introduction

This section describes the potential cultural heritage-related impacts associated with all phases of the Roșia Montană Project, in accordance with Section 4.8 of Ministerial Order (M.O.) 863 dated 26.09.2002 on Approval of the methodological guidelines applicable to the stages of the environmental assessment procedure.

The significance of aspects of cultural heritage identified in this section has been evaluated through expert opinion in various fields including archaeology, anthropology, Romanian history, and architecture. Impacts were evaluated based on the inventory and significance of cultural property and intangible cultural heritage as summarised in this section and presented in detail in the Roșia Montană Project Baseline Reports (Baseline Report 8).

Although local legislation may vary from country to country, cultural property may be a place, region, physical structure or remains to which community members ascribe significance. The World Bank defines cultural property as including:

“Sites having archaeological (prehistoric), paleontological, historical, religious, and unique natural values. Cultural property, therefore, encompasses both remains left by previous human inhabitants (for example, middens, shrines, and battlegrounds) and unique natural environmental features such as canyons and waterfalls.” (World Bank O.P. 11.03).

In addition to providing an inventory of cultural property, this section also includes elements of “intangible cultural heritage.” The United Nations Educational, Scientific and Cultural Organisation (UNESCO) defines intangible cultural heritage as follows:

“Embracing all forms of traditional and popular or folk culture, i.e. collective works originating in a given community and based on tradition. These creations are transmitted orally or by gesture, and are modified over a period of time through a process of collective recreation. They include oral traditions, customs, languages, music, dance, rituals, festivities, traditional medicine and pharmacopoeia, the culinary arts and all kinds of special skills connected with the material aspects of culture, such as tools and the habitat” (UNESCO, 2003).

The management of both cultural property and intangible cultural heritage will be done according to all relevant legislation and guidelines as outlined in Section 5.
Table 4.9-1. Summary of Cultural Heritage-Related Impacts

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Mitigation Measures</th>
<th>Applicable Management Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSTRUCTION</strong></td>
<td>Extensive baseline study conducted by an international team of archaeologists resulted in the research and mapping of a series of galleries from Roman, medieval and modern period; The rescue archaeological programme and the discharge procedures were performed according to Romanian legislation; A 3-D simulation was created that illustrates features of Roman mining works. The simulation will be made available on several websites and represents a valuable learning tool; RMGC will fund the construction of a series of facsimiles in Roşia Montană that will allow viewing of interesting Roman mining techniques; Soil stripping operations (considering also opening of the pits) will be supervised by qualified archaeologist and construction activities will be conducted in accordance with a “chance finds protocol”; RMGC to restore and making provision for public access to either the Cătălina Monuleşti or Pârul Carpeni Roman galleries; and, Conservation of Piatra Corbului area for future archaeological research, as well as protected area.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Loss of past underground mine working areas:</td>
<td>Residents in the areas adjacent to these churches will be resettled or relocated. The three churches in the historic centre will not be directly affected by the Project. RMGC will construct new churches of various denominations in the resettlement area, as appropriate, to meet the worshipping needs of its residents. The new churches will to the extent possible reflect the architectural design of the original church. Consultation with churches will also ensure that important church artefacts are relocated from the old church to the new church and that where paintings cannot be moved, existing paintings will be recorded and similar paintings are commissioned.</td>
<td>ESMS Plans, Plan G, Resettlement and Relocation Action Plan ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Loss of place of worship: The removal of the two prayer houses and two churches (located in Corna) and the loss of access to two churches (in Roşia Montană) throughout the mine life time will result in a loss of place of worship.</td>
<td>New churches constructed in the resettlement area will to the extent possible, reflect the architectural layout of the churches from Roşia Montană. The Greek Catholic church and Romanian Orthodox church in Roşia Montană, and the churches located in the historic centre (Unitarian church, Roman-Catholic Church and Reformed Church) will be maintained by RMGC in their present or better condition for the life of the project. RMGC will also assist in maintaining these churches post-closure through initiatives proposed by the Foundation. Churches to be relocated will be investigated by an independent archaeological team.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Loss of historic, architectural, and potential archaeological value of churches: The planned relocation of a Pentecostal Prayer house, a Romanian Orthodox Church, a Greek Catholic Church and two Baptist Prayer Houses in Corna will impact the historical and architectural identity of those facilities.</td>
<td>Graves will be relocated to a location specified</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Loss of cemeteries:</td>
<td></td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Potential Impact</td>
<td>Mitigation Measures</td>
<td>Applicable Management Plan</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------</td>
</tr>
<tr>
<td>410 individual graves will be relocated as a result of the Project. This may conflict with spiritual beliefs of relatives of the deceased.</td>
<td>by the family of the deceased; If desired by the family, a service conducted by a priest will be conducted both for the re-opening of the grave and the subsequent burial; and, Unknown graves will be relocated to new cemeteries in the resettlement areas.</td>
<td>Heritage Management Plan ESMS Plans, Plan L, Resettlement and Relocation Action Plan</td>
</tr>
<tr>
<td>Loss of intangible heritage: The relocation of a part of the Roșia Montană locality will result in a possible loss of the cultural heritage of a village that has evolved from an extensive mining history.</td>
<td>The collection of information for the cultural heritage baseline included producing an extensive photographic and audio interview archive of long-time residents of Roșia Montană. The decision on the best way to display the archives will be made by a Foundation, whose establishment will be facilitated by RMGC; The most significant portion of Roșia Montană from a cultural heritage point of view will be preserved through the establishment and management of a series of Protected Zones, respectively: The Protected Zone Roșia Montană Historic Centre which includes 35 of the 41 historical monuments (buildings) in Roșia Montană, as well as the Cățălina-Monulești gallery and vestiges of industrial heritage – the manmade lakes (“tăuri”) and elements of cultural landscape The Carpeni hill area and the Pâru Carpeni mining sector where are located representative building of Roman era and underground vestiges of ancient mining exploitations, including a Roman hydraulic system The funerary monument from Tâu Găuri The Piatra Corbului Protected zone. The Alburnus Maior National Research Programme has significantly improved the understanding and documented the existing and historic cultural heritage of Roșia Montană. Extensive dissemination of this information has already occurred and will continue to occur as documented in this plan. The sustainability of Roșia Montană will be enhanced by jobs created by the operation of the mine, indirect spin-off jobs, and through economic enhancement initiatives detailed in the ESMS Plans Plan L, Community Sustainable Development Plan.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan ESMS Plans Plan L, Community Sustainable Development Plan.</td>
</tr>
<tr>
<td>Inadvertent destruction of artefacts: Irreversible loss of cultural heritage resulting from the destruction of archaeological artefacts of cultural significance during soil stripping and excavation activities.</td>
<td>Extensive baseline study conducted by an international team of archaeologists allowing identification and research of areas with archaeological potential; Implementation of a “late chance finds protocol” to identify, document and preserve artefacts and structures unearthed during construction and excavation activities.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Vibration-induced damage to cultural property: Heavy vehicle operation and blasting in open pits may result in vibration-induced damage to historic buildings located in the Protected Zone or archaeological structures that will be preserved in situ.</td>
<td>Based on the lists of historically or culturally significant structures identified in the Cultural Heritage Management Plan, RMGC Environmental Management staff along with independent contractors have conducted photographic/physical mapping surveys of each identified structure; An independent study – recently performed – outlined the current status of preservation of the</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan ESMS Plans, Plan E, Noise and Vibration Management Plan ESMS Plans, Plan, Roșia Montană Project Environmental and Social Management Plan</td>
</tr>
</tbody>
</table>
### Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

#### Section 1: Introduction

<table>
<thead>
<tr>
<th>Potential Impact</th>
<th>Mitigation Measures</th>
<th>Applicable Management Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical monuments</td>
<td>RMGC will commit to funding the repair of any vibration-induced damage to any historic monuments for the life of the mine. Damage to culturally important structures will trigger a standard operating procedure for “Corrective and Preventive Action for Environmental and Social Management System Non-conformances”.</td>
<td></td>
</tr>
<tr>
<td>Inadvertent destruction of artefacts: Irreversible loss of cultural heritage through the accidental potential destruction of archaeological artefacts of cultural significance.</td>
<td>Extensive baseline study conducted by an international team of archaeologists allowing identification of areas where there is a higher probability of a chance find; Archaeologist supervision of topsoil stripping. RMGC will facilitate a foundation and through the Foundation’s funding of cultural tourism initiatives, more Romanian’s and international tourists will be able to experience the cultural value of the artefacts uncovered by the RMGC-funded archaeological programme; Implementation of a “chance finds protocol” to identify and preserve artefacts unearthed during excavation activities. The Alburnus Maior National Research Programme has significantly improved the understanding and documented the existing and historic cultural heritage of Roșia Montană. Extensive dissemination of this information has already occurred and will continue to occur as documented in this plan through a programme of analysis and publication.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Vibration-induced damage to cultural property: Construction of infrastructure and blasting in open pits may result in vibration that damages historic monuments preserved by the creation of</td>
<td>Based on the lists of historically or culturally significant structures identified in the Cultural Heritage Management Plan, RMGC Environmental Management staff along with independent contractors have conducted photographic/physical mapping surveys of each identified structure;</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>Loss of past underground mine working areas: Loss of past underground mining galleries dating back to the ancient, medieval and modern period is expected during open pit mining operations.</td>
<td>Extensive baseline study conducted by an international team of archaeologists resulted in the research and mapping of a series of Roman-era galleries; The archaeological discharge certification programme was conducted according to Romanian legislation; A 3-D simulation was created that illustrates features of Roman mining works. The simulation will be made available on several websites and represents a valuable learning tool; RMGC will fund the construction of a series of facsimiles in Roșia Montană that will allow viewing of interesting Roman mining techniques; Soil stripping operations to will be supervised by a qualified archaeologist and construction activities to be conducted in accordance with a “chance finds protocol”; RMGC to restore and make provision for public access to either the Călălina Monulești or Păru Carpeni Roman galleries; and, Protection of area under Piatra Corbului for future archaeological research.</td>
<td>ESMS Plans, Plan M, Cultural Heritage Management Plan</td>
</tr>
<tr>
<td>OPERATIONS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

### Potential Impact

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Mitigation Measures</th>
<th>Applicable Management Plan</th>
</tr>
</thead>
</table>
| the protected zone. | Constant monitoring of the preservation status of the historical monuments  
RMGC will commit to funding the repair of any vibration-induced damage to any historic monuments for the life of the mine; and,  
Damage to culturally important structures will trigger a standard operating procedure for “Corrective and Preventive Action for Environmental and Social Management System Non-conformances”. | ESMS Plans, Plan M, Cultural Heritage Management Plan            |
| Loss of Access:  
During this phase, permanent public access will not be possible to the Greek Catholic and the Romanian Orthodox churches in Roșia Montană. | RMGC to construct churches in the relocation community to meet the needs of Greek Catholic and Romanian Orthodox parishioners.  
RMGC to undertook required measures for temporary public access. | ESMS Plans, Plan M, Cultural Heritage Management Plan            |
| CLOSURE  
Loss of congregants:  
Churches not impacted directly by the proposed project footprint may be impacted indirectly due to remaining behind inside the protected zone.  
Deterioration of Churches:  
Churches indirectly affected by the Project may not have sufficient congregations to support activities in the community due to the changes in local demographics from initial resettlement and eventual mine closure. | RMGC to assist in maintaining the churches located in the Protected Zone, as well as the Romanian Orthodox Church and the Greek Catholic church in Roșia Montană (historic monument) post-closure through the establishment of a Foundation whose activities are intended to continue far beyond the life of the mine.  
Access will be provided as needed for congregants to maintain contact with the facilities that do not relocate to the new settlement.  
RMGC to establish a Foundation to implement a variety of sustainable development initiatives geared towards ensuring a viable community beyond the life of the mine. | ESMS Plans, Plan M, Cultural Heritage Management Plan  
ESMS Plans, Plan L, Community Sustainable Development Programme |
2 Baseline Conditions

2.1 Cultural Landscape

Cultural landscape is a broad term that encompasses the natural environment of a region and its interaction with socio-economic factors. In other words, cultural landscape is a reflection of how a community interacts with its environment. Cultural landscapes often reflect specific techniques for the utilization of natural resources, taking into account the features and limitations of the environment (WHO, 1996).

Due to the broad nature of this term, impacts relating to several contributing elements of Roşia Montană’s elements to cultural landscape are dealt with in their respective sections of the EIA, including: afforested zones (Section 4.6, Biodiversity) physical landscape, mining, agriculture, forestry, land use and landscape monuments (Section 4.7, Landscape), (Section 4.8, Socio and Economic Environment). Furthermore, the contribution of churches, historic monuments, and architecture to the cultural landscape are discussed separately in this section.

The remaining contribution to the cultural landscape of Roşia Montană is the settlement pattern and village architecture. The settlements of Roşia Montană and Corna have had a significant influence the visual aesthetics in both valleys. The largest factors in the development of these localities have been the physical landscape and the historic influence of mining, particularly in Roşia Montană Village (Exhibit 4.9.1, Photograph 1).

2.1.1 Settlement Patterns in Roşia Montană

Population density in the area is on average higher than in other regions in the Apuseni Mountains area as a result of employment offered by the mining industry. The National Institute for Statistics provided the following data for 1992:

- Roşia Montană village - 1,556 inhabitants; and,
- Corna - 358 inhabitants.

At present, ribbon development along the narrow valley floors is comprised of domestic dwelling and farm buildings. The main centres of population are in the Roşia valley, with a smaller settlement at the head of the Corna Valley. Settlement patterns are clearly visible as “built areas” as shown on the land use map (Exhibit 4.9.2, Land Use). Roşia Montană itself is a larger settlement with shops, houses and associated facilities.

The relief in the Project area and its vicinity is organised around the main south - north valley of the Abrud River, which drains three valleys of right-bank tributaries flowing from the east:

- Roşia Valley;
- Sălişte Valley; and,
- Corna Valley

River valleys have traditionally been used as corridors for communication and transportation. Homes and towns were built along these transportation routes, with the confluents becoming important crossroads and the sites of many towns in the area. Because the river valleys are narrow, towns have developed in linear patterns. On the valley floor, where land is relatively level, the building pattern is quite dense. On the steep hillsides, fewer homes are built and the pattern of occupation is scattered. The land on the hillsides has traditionally been used more for growing hay on the lower hillsides and summer pasture on the upper hillsides. Within the settlements and on prominent knolls within the valleys, churches, some of considerable age, have been constructed. Again, the architecture of these structures is
characteristic of the area and forms a visual focus in various sections of the valleys further enhancing the overall landscape setting.

In addition to the influence of topography, the organization of human settlements in the Project area also results from a combination of agro-climatic and industrial factors:

- Most homesteads are located in the lower part of the valleys, for obvious climatic reasons but also because stream water was required in large quantities for gold washing; and,
- Those households that are (or were) less mining-oriented and more agriculture-oriented tended to settle in higher areas, like in Țarina or Săliște with preferred exposures to the south or to the west.

Roșia Montană locality is a longitudinal settlement with two centres: Roșia Piată (The Historic Centre) in the east (the main town square), and Roșia Centru in the west (where the administrative centre is located including the town hall and the headquarters of RoșiaMin).

The three hamlets of Corna - Tâul Cornei, Corna Sat, Corna Vale - are situated along the Corna Stream, in a natural amphitheatre with a difference in elevation of 500 m from the head to the base of the valley. One hundred and twenty-two permanent and seasonal households are scattered on the hills between Cârnic and Cetate peaks, and towards the village of Bucium Poieni. Households are concentrated in the Corna Sat area, where there are the two churches and cemeteries, a school, a club, an old tavern, and a store. The settlement pattern in Corna is typical for Apuseni Mountain rural settlements with the household and outbuildings situated in the middle or as extensions of the property, perpendicular to the road and dependent on the relief. There is no regular street network and small streets wind through properties following the uneven sinuous relief.

The principal road network in the vicinity of the mine is the National Road 74A, which travels from Alba Iulia to Câmpeni through Abrud. The National Road runs north/south along the Abrud Valley and forms part of the national transportation corridor through the mountains. All existing access to the mine area is via minor roads leading off this principal route

In addition to this primary road system, there is an extensive network of tracks generally passable only by all-terrain vehicles, horse-drawn cart or on foot. These tracks lead to isolated dwellings, farm buildings or to woodlands and pastures on the valley sides and ridges. Access to the wider countryside is unrestricted with paths through woods and pastures. The forest is used as a source of wood for fuel and construction, food (e.g. mushrooms) and for hunting.

Due to the geography of the area, the relief establishes the limits of settlement development. With no possibility of extension, the living perimeter has been the same for 200 years. Increase in population made the development of the village possible by property division and reduction of individual plot size.

2.2 Architecture and Urban Setting of Roșia Montană

This section summarises the architecture and urban characteristic of Roșia Montană based on investigations undertaken by CPPCN and S.C. OPUS - Atelier de Arhitectură S.R.L., Bucharest (OPUS). Following the work undertaken by CPPCN in 2000, in 2001 OPUS undertook a detailed cataloguing of the buildings in Roșia Montană to better characterise the significance of its architecture and settlement pattern.

The investigation of historical monuments listed under Romanian Legislation was also further examined by OPUS. The investigation began with the consultation of the CPPCN inventory, followed by the incorporation of information from the preliminary ethnological study and sketches of the buildings provided by the Strâjan Designing Office from Alba Iulia.
The sketches depicted the building layout/architectural configuration, building techniques and general observations made by the OPUS team of specialists. This work allowed for a more detailed understanding of the historical monuments located in Roşia Montană than was available from the existing record cards.

The evaluation of significance of buildings was determined in accordance with the List of Historical Monuments (issued by the Ministry of Culture and Cults in 2004), which included categories of significant buildings as monuments of architectural or ambient value.

### 2.2.1 Roşia Montană Urban Setting

Urban development in Roşia Montană has largely occurred in relation to economic development, physical landscape, and historical conditions. Due to its settlement pattern and building architecture, Roşia Montană looks like a market town rather than a village, which separates it from similar sized villages in Transylvania that are more reliant on agriculture.

The village consists of two separate zones that are easily distinguishable by differences in street networks and the associated urban structure. The first zone stretches from the western boundary of the village and extends to the public square/market place. This zone is organised in a linear fashion along the axis created by the Roşia stream and the road that connects the village to the town of Abrud and Câmpeni via Gura Roşiei (Exhibit 4.9.2, Land Use).

This zone is predominantly characterised by a single row of houses that face the main road. This zone also includes a Greek Catholic and an Orthodox church. All the households have small subsistence vegetable gardens and a few fruit trees. Also present in this zone, are four communist-era apartment buildings that housed mining workers and the RoşiaMin mining museum and headquarters.

The second zone extends eastward from the first zone and stretches towards the northern, southern, and eastern limits of the village. The second zone is centred on the town square but also possesses a number of “secondary poles” which result in a “pretzel shape” rather than the linear configuration of the first zone. This configuration is largely a result of conditions imposed by the landscape of the Jig and Cârnic Mountains. The centre of this zone is a polygonal-shaped town square around which there are stone and brick urban style buildings (Exhibit 4.9.1, Photograph 3). Although many buildings have been demolished (some of which have been replaced with newer ones), the square still preserves the main features of the old settlement.

The public square/market place (Exhibit 4.9.1, Photograph 2) forms the main nucleus of the village and is the convergence point for a number of narrow roads that connect Roşia Montană with the higher areas of the village, including the Brazi and Berg districts, where the professional elite resided. The Piaţa of Roşia Montană still possesses a number of stone tables where vendors display their wares.

### 2.2.2 Corna Urban Setting

The type of rural households found in the village of Corna, which is part of the Roşia Montană comuna, is more characteristic of typical villages found in the Apuseni Mountains area. The village of Corna lies along the Corna Valley, bordered to the south by the town of Abrud, to the northwest by the village of Roşia Montană, and to the northeast by the village of Bucium Poieni.

The upper part of the settlement, the actual Corna locality, looks like a “scattered” settlement (a pattern common for the area of Apuseni Mountain). The constructions are located within plots of different size and shape with the only the only quasi cohesion-point the Orthodox church area, around which the public edifices of the settlement are located (the school, the orthodox parish house, the shop, the cultural centre and the local pub).
This is a settlement of predominantly Romanian ethnology and differs in this regard from Roșia Montană, which is an ethnic and religious melting pot. Additionally, unlike Roșia Montană, Corna is not divided into ethnic and/or religious neighbourhoods.

The general character of the settlement is that of a rural mountain community, with households and domestic areas located on various plots of land, alternating with between wide-open spaces, orchards, yards, and pastures.

### 2.2.3 Dwellings

Houses in and adjacent to the market square (Roșia Piață, Berg, and Roșia Centru) tend to be larger than in other neighbourhoods and typically have the side or back side of the house facing the road rather than the front. These dwellings are also enclosed with high stone or plastered brick walls resembling a small fortress. Stucco rural baroque decorations are found on frames of main gates and house walls and include vegetal and geometrical motif, iron-wrought trellises in some windows and Austro-Hungarian influenced occupational marks of mining (two crossed hammers) are placed within a cartouche on the front of the houses (Exhibit 4.9.1, Photograph 3). Other buildings have incorporated Roman-era funeral stelae into their construction, which is evidence that stones used in Roman construction were reused by subsequent generations, and that this part of the archaeological record has been lost as a result.

On account of the rapid deterioration of the economic situation in Roșia Montană, especially since 1989, many households are in a state of deterioration ranging from minor cracking and fractured facades, to completely uninhabitable buildings with severe cave-ins.

Dwellings constructed in the last 10-15 years, represent another group of buildings, some of them possessing impressive dimensions (ground floor and 1-2 levels) that reflect the owners’ prosperity derived from revenues generated from mining under communism. These buildings although reflecting relative wealth in the village, are not of significant architectural or cultural significance. The blocks of flats built during the communist regime in Roșia Montană Centru (Roșia Montană Centre) and Roșia Montană Piață (Roșia Montană Market) are also not considered to be of significant architectural or cultural significance.

Dwellings in Roșia Montană have been bought and sold at a rate not characteristic of other villages in the Apuseni Mountains area. This occurrence has resulted in successive modifications being made to the function of buildings, such as from residential dwelling to commercial usage. This has led to changes in building elevation and to the architectural appearance of the front facade.

Other buildings may be seen in lăturenii (roughly translated as side-settlers) neighbourhoods, including Țarina, Sosași, and Gura Minei. These areas possess a way of life that resembles a more traditional lifestyle, with occupations more characteristic of the Apuseni Mountains such as cattle raising and farming. The slow rate of development in this region has left many dwellings unpopulated or merely used for fieldwork.

The layouts of houses in the area are predominantly very similar in layout and design to the rest of the village.

### 2.2.4 Historical Monuments

The rules that govern the protection of historical monuments (historical buildings) are outlined in Law 422/2001 on the Protection of Historical Monuments”. Under this law, historical monuments are defined as:
“Immovable assets, constructions and lands located on the territory of Romania or outside its borders, Romanian state property, that are important to national and world history, culture and civilization.”

Roșia Montană possesses 41 historical monuments that have been identified by Romanian Legislation\(^1\) as being of architectural significance, 35 of which are located in the Protected Zone (Exhibit 4.9.3, Location of Historic Monuments). An additional the remaining six are lying in the industrial area. Nonetheless, project development has been designed so that none of these Historical Monuments are directly affected by the project. There are no buildings in Roșia Montană that have been classified under Law 422/2001 as being of national or international significance. No buildings in Corna have been categorised as historic monuments.

The majority of buildings of local historical interest are located in the historic centre of Roșia Montană and date back to the 19\(^{th}\) century, representing various periods or influences of Austro-Hungarian architecture. These buildings have been inventoried and described in detail by specialists as part of the cultural preservation effort (Baseline Report 8, Cultural Heritage Baseline Report). This assessment was based on direct on-site observation and monographic investigation that helps to identify characteristics of the social groups (ethnic, denominational, occupational) who lived there, such as income level, social rank, religious denomination etc.

It is important to note that a process of acculturation took place in Roșia Montană between the 18\(^{th}\)-20\(^{th}\) centuries, a feature that is illustrated through the mixture of architectural styles and historical influences on certain historical buildings.

\subsection{Protected Zone}

In 2002, RMGC applied for a General Urban Plan (PUG), which constitutes the technical and legal basis for any modifications to the area. One of the conditions of the approval of the PUG imposed by the Ministry of Cults and Culture was that a Protected Zone be established that includes the main town square and a concentration of buildings declared as having architectural value in addition to churches and access to ancient and more recent mine workings. The National Commission of Historic Monuments, through its authorisations No. 61 of February 2002 and No. 178 of June 2002, has approved the establishment of this Protected Zone. A separate application for a PUZ for the Protected Zone, which will further clarify permitted activities within this zone, will be submitted to Alba County Council during this year.

\subsection{Churches and Cemeteries}

This section presents an inventory of churches and cemeteries in Roșia Montană. Churches are key elements of cultural heritage and are significant features of communities in terms of their religious significance. Churches, in particular, have a visual contribution to the cultural landscape as well as representing an integral part of the sociological fabric of a village by acting as a meeting place.

There are seven main religious denominations in the Roșia Montană and Corna including:

- The Romanian Orthodox Church has the largest congregation, with (370 families) and a Church Council of 15 members; the Priest lives in the locality (Roșia Montană - 587 registered parishioners and Corna - 196 registered parishioners)

\footnote{The List of Historical Buildings issued in 1992, revised in 1998, 2000 and 2004, contains 42 lists comprising the historical monuments in Romania (structured by county, town/commune, village). It should be noted that a revised list was issued in July 2004 that categorises historical monuments as being of either local or national significance.}
The second largest congregation is the Greek Catholic Church with 90 registered parishioners (70 in Roșia Montană, 20 in Corna), and a Church Council of 8; the Roșia Montană priest lives in Cluj & the priest from Corna lives in Câmpeni.

The Roman Catholic Church has 45 registered parishioners, and a Church Council of 4. The priest lives in Alba Iulia;

The Reformed Church with 1 congregant;

The Unitarian Church with 21 members;

The Baptist Church with 35 members;

The Pentecostal Church 82 members.

The ethnic diversity that has shaped present day Roșia Montană is further demonstrated by its total of 10 churches and 12 cemeteries (not including private cemeteries on private property). However, with the current predominance of the Romanian Orthodox Church in the region and Romania at large, some of these churches are now deserted or in need of restoration works.

There are a total of six churches located in Roșia Montană village (Exhibit 4.9.4, Location of Churches and Cemeteries). Three of these churches are located outside of the legislated protected zone and include:

- The Greek Catholic Church (1741);
- The Romanian Orthodox Church (1781); and,
- The Pentecostal Prayer House.

Churches located within the protected zone include:

- The Romano Catholic Church (1866);
- The Unitarian Church (1796) (abandoned); and,
- The Reformat Church (early 19th century)

In addition to the churches in Roșia Montană there are also two churches and two prayer houses located in Corna including:

- The Romanian Orthodox Church (1719);
- The Greek Catholic Church (1841); and,
- Two prayer houses belonging to the Baptist Church.

The orthodox churches present in Roșia Montană and Corna have an architectural style consistent with churches in the Apuseni Mountain. An exception is the Greek Catholic Church in Roșia Montană, which was constructed in Roșia Montană in 1781 but was later converted to Greek Catholicism. In 1948 the Romanian Orthodox church resumed ownership of the church; however, the Church returned to Greek Catholic ownership in 2004.

The Church’s history is related to the Greek Catholic archpriest Simeon Balint and Avram’s Iancu’s prefect from the Revolution of 1848 is buried there. This church also has as parish fair the day of the “Assumption of the Virgin” held on September 8. The Greek Catholic Church is also included in the List of Historic Buildings (AB-II-m-B-00269)2.

The churches in Roșia Montană and Corna vary considerably not only in the sizes of their congregations, but also in the structural condition of the building. The following table summarises the condition of the churches and prayer houses.

---

2 List of Historical Buildings published by the Ministry of Culture and Cults in Ministerial Order 646 bis, July 16 2004.
### Table 4.9-2. Condition of Religious Buildings in Roşia Montană and Corna

<table>
<thead>
<tr>
<th>Name of Religious Building</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roşia Montană</td>
<td></td>
</tr>
<tr>
<td>Greek Catholic Church</td>
<td>Good condition.</td>
</tr>
<tr>
<td>Romanian Orthodox Church</td>
<td>Externally appears sound. Internally there are many cracks, some of which are quite substantial in the structural walls. There is also a little paint degradation due to water infiltration.</td>
</tr>
<tr>
<td>Roman Catholic Church</td>
<td>Good condition.</td>
</tr>
<tr>
<td>Unitarian Church</td>
<td>Structurally sound. However, there is superficial damage both externally and internally, primarily due to water infiltration. There is minor damage to the external render and heavy staining of paintwork over the side entrance roof.</td>
</tr>
<tr>
<td>Reformed Church</td>
<td>Very poor state of repair, with extensive damage to the external render, structural damage to the entrance stairway and floors, and water or mould degradation internally surrounding the mounted pulpit. Other damage includes broken louvers in the bell tower, broken or missing windows, and lifting roof sheeting.</td>
</tr>
<tr>
<td>Pentecostal Prayer House</td>
<td>Good condition.</td>
</tr>
</tbody>
</table>

| Corna                     | Good condition with only minor render damage externally. The render is broken in various places at ground level but does not detract significantly from the church’s appearance. |
| Romanian Orthodox Church  | Very poor condition with severe interior and exterior degradation. The external render has been broken away in large areas, exposing the walls to the direct weather conditions. This has resulted in moisture contamination throughout the interior of the church. |
| Greek Catholic Church     | Good condition. |
| Baptist Prayer House #1   | Good condition. |
| Baptist Prayer House #2   | Well maintained, no obvious external defects. |

### 2.4 Archaeological Heritage

This section presents a summary of the artefacts found during the surface and underground portions of the archaeological programme, as well as a list of the archaeological sites identified at Roşia Montană and the most representative investigated structures. A complete inventory of the artefacts uncovered during the 2000-2001 campaigns of the programme is presented in *Alburnus Maior Volume I* (P. Damian, 2003) and detailed description of the uncovering of the circular funeral monument in *Alburnus Maior II* (M. Simion et al., 2004).

The following sections present a summary of what was uncovered and learnt as a result of the archaeological component of the *Alburnus Maior* National Research Programme. This was a very comprehensive programme undertaken over 6 years to date, and details regarding the methodology undertaken and a more detailed presentation of its findings can be found in the (Baseline Report 8, Cultural Heritage Baseline Report).

#### 2.4.1 Roman Artefacts

Although no archaeological excavation had been performed in Roşia Montană prior to the Project, in 1981 a mining museum was created near the entrance of a former Roman gallery under the Orlea Massif. The museum was created with the help of local enthusiasts and a team from the Alba Iulia museum, in order to preserve and exhibit some of the chance finds from the Roşia Montană area. This open-air museum stores over 50 Roman period stone monuments including votive altars, funerary *stelae, aedicule* and sarcophagus lids from the Roman period, in addition to mining tools made of stone and wood, and other mining related
items. Most of these chance find artefacts were uncovered from the 18th-20th century during agricultural work.

It is important to note that the chance finds found prior to the RMGC funded archaeological programme were moved before examination could be undertaken in situ. This resulted in a significant loss of information that could otherwise have been acquired from these artefacts.

Additionally, many stones that carried inscriptions were subsequently used as construction material and can be seen in existing buildings, a further indication of disruption of artefactual evidence.

During the archaeological campaigns undertaken during 2000-2005, over 7,000 artefacts were found, including:

- Pottery (Exhibit 4.9.1, Photograph 6);
- Bronze and Silver Coins;
- A variety of Bronze objects (buckles, belt ornaments, mirrors etc.);
- Glass objects;
- Funerary stela and votive altars;
- Funerary lions; and
- Wood mining equipment.

All these items have been gathered, restored, preserved and recorded in a general inventory database, according to the provisions of Law 182/2001. All these processes were funded by RMGC according to the regulations of Law 378/2001, completed by Law 462/2003. The artefacts are preserved in the warehouse of the archaeological office in Roșia Montană under the custodianship of the National Museum of History in Bucharest. The restoration process of the artefacts is ongoing for the artefacts found during the 2003-2005 campaigns. The specialised departments of the National History Museum of Romania in Bucharest, as well as of MNIT, MNUAI and MCDR, make the restoration.

The most significant artefacts uncovered during the investigation of the underground mining workings were the wooden fragments of Roman-era water wheels found in Pâru Carpeni mining sector (Exhibit 4.9.1, Photograph 14). This is a major discovery concerning drainage in Roman mines using machinery that hasn’t been discovered in Europe since the 1930’s and the chance discovery in the mines in the southern part of the Iberian Peninsula.

Bibliographical research revealed that parts of a drainage wheel had been found at Roșia Montană in the 19th century, but without a very exact location being specified, yet most probably coming from the Cătălina Monulești gallery. In addition, there were two blades and the axle of the wheel, which were almost complete and were on display at the archaeological department of the Union Museum in Alba Iulia.

Other than the fragments of water wheels, the archaeological artefacts discoveries made during the underground archaeological investigation of old mining works were infrequent and consisted of a few abandoned pieces of wood (sticks, boards etc.), preserved in the humid environment of the mine, wood charcoals, and fragments of Roman lamps.

Carbon 14 dating conducted on various wood or charcoal samples point to possible activities during pre-roman period (a hypothesis based only on the analysis of a single sample, thus it has to be further confirmed by other samples and analysis in the future) and on significant exploitations during the 2nd and 3rd centuries AD. Pottery or other relevant items have so far been absent, failing to confirm this important dating information. If information uncovered to date consisted only of the pottery discovered to date (lamp fragments of the 2nd century AD), this would represent a very narrow and unreliable chronological overview on the activity in this massif.
2.4.2 *Medieval Age and Modern Artefacts*

Very few artefacts were uncovered from these periods and were limited to Late Medieval and Modern Pottery. Artefacts from these eras were recorded and stored in the same fashion as Roman-era artefacts, as described in the preceding section.

2.4.3 *Archaeological sites identified at Roşia Montană and the most representative investigated structures*

Below is presented the list of the archaeological sites identified at Roşia Montană as a result of the rescue archaeological program undertaken here since 2000 up to now. Further details upon the subject can be found in the *Baseline Report 8, Cultural Heritage Baseline Report*, also including standard record cards for these sites.

- Găuri - Hop - Hăbad - Tăul Țapului
- Valea Nanului (Nanului Valley)
- Carpeni
- Cârnic massif
- Cetate massif
- Zona Istorică Roşia Montană (Historic Zone Roşia Montană)
- Jig – Văidoaia massif
- Țărina
- Orlea massif
- Pârâul Porcului - Tăul Secuilor
- Valea Cornei (Corna Valley)
- Tăul Cornei - Corna Sat
- Balmoșești

The most significant results (representative archaeological structures identified and investigated) up to now are:

- Identification and research of Roman habitation areas with edifices on the Carpeni Hill
- Discovery of a Roman vestiges of habitation in the Găuri-Hop - Hăbad - Tăul Țapului area
- Identification and research of sacred areas, where 40 votive altars were found located on Hăbad plateau and Nanului Valley
- Excavation of seven cremation necropolises and funerary areas situated in the Hop-Găuri, Valea Nanului, Carpeni, Tăul Cornei, Țarina, Jig-Piciorag and Părâul Porcului-Tăul Secuilor areas, being investigated more than 1,200 Roman cremation graves
- Discovery in the Tău Găuri area of a Roman funerary precinct dating in the 2nd – 3rd c. AD., holding two cremation graves. This monument is currently under in situ preservation process and opening for public access (all the costs for protection, design and construction being provided by RMGC).
- Investigation of areas for primary processing of the auriferous ore (Jig-Piciorag, Hăbad)
- The roman mining underground exploitations from Cățălina Monulești gallery, Păru Carpeni mining sector, Cârnic massif – Piatra Corbului and Great Network areas.
One of the most representative results of the archaeological programme resulted in two Roman-era structures being located at Tâul Gâuri and on Carpeni Hill (Exhibit 4.9.5, Location of Significant Archaeological Features). The first structure, located at Tâul Gâuri and discovered in 2001, was a 2nd-3rd century funerary monument. Initially, the Romans depended on cremation as the dominant method for disposing of the dead. The ashes of the deceased were placed in a glass or pottery urn prior to burial. Roman cremations entailed a variety of different objects being placed with the burnt bones including coins, a lamp, or small pots.

The funerary monument is a double circular stone structure that would have had built upon it an earth barrow (tumulus) (Exhibit 4.9.1, Photograph 4).

The majority of the Roman-era necropolises uncovered at Roșia Montană are considered relatively common and all were researched and any related artefacts conserved and placed in the temporary custody of MNIR.

During archaeological investigations in an area of Carpeni Hill called Bisericuța, the archaeological investigation also uncovered evidence of a stone wall in 2001, which was a vestige of a Roman-era building with 3 separate stages of development constructed on the same foundation (Exhibit 4.9.5, Location of Significant Archaeological Features). This field research was expanded in 2002 and 2003 in order to reveal the extent of the building. It remains unclear what the function of this building was. Each of the subsequent 2 stages was constructed on top of the remnants of the previous stage.

The building contained remnants of a hypocaust, which is an ancient Roman central heating system with underground furnace and tile flues to distribute the heat. This excavation also uncovered a brick with the stamp of the Roman Legion XIII Gemina, which was stationed in Apulum (Alba Iulia) during this period.

Remains of a medieval fortress (also possible to date back to Roman period) were uncovered on Balmoșești; however, as this area will not be impacted by the Project, research priority was given to other areas.

### 2.4.4 Underground Mining Works

Roșia Montană possesses a vast network of past underground mining works ranging from modern works to as far back as the Roman Age (106 – 265 A.D.). This section presents the results of Alburnus Maior National Programme investigation of old mining works in Roșia Montană. The investigations summarised to date are from 1999-2006, although excavations will continue as required. The areas investigated during this period are shown in Exhibit 4.9.6, Areas Subject to Investigation of Underground Works.

Carbon-dates indicate that mining activities have been undertaken on site in Roșia Montană prior to the Roman conquest; however, to date there is no other archaeological evidence to support this theory. It is also probable that mining began at the surface, where high-grade veins were exposed, with underground mining occurring only at a later stage.

After eight years of mining archaeological research in Roșia Montană site, a first evaluation about the nature, the importance and the preservation of the mining vestiges from this site was carried out. If a synthetic image of Cârnic massif, Jig massif and what is left of Cetate massif was possible to be realized, on the other hand, the vision is still incomplete as regards Coș, Carpeni, Orlea and Țărăna massifs, areas where the field study is at the beginning.

Despite this incomplete vision, one can notice from the very beginning that for all ancient mining workings there is a systematic repetition of the shape and distribution of the investigated workings from the whole underground mining park. At the same time, there are also certain types of mining working sites typical for a sector or for a certain massif, depending on the shape and the mineralized structures’ dip (veins, breccia, stockworks, and
impregnations), on the host rock, respectively their more or less intense hardness (more or
less intensely silicified dacite, volcano-sedimentary soft rocks), or the topographic position of
the workings as against the ground-water layer. For these reasons we are going to present
the major types of mining workings present in all mining sectors, and those typical for one or
other massif, as well.

Starting from 1999, the team from Toulouse, specialized in mining archeology and
coordinated by Béatrice Cauuet, PhD (CNRS researcher, UTAH Laboratory, Toulouse II Le
Mirail University), ensures the scientific study of mining vestiges within the site. Within eight
years of research at Roşia Montană (annual missions of 2 to 4 months from 1999 to 2006),
over 70 km of all ages underground mining workings have been covered. A considerable
part of these workings have been partly topographically surveyed, two thirds being localized
within Cârnic and Cetate massifs. Crossing recent galleries executed during 20th century, the
French team that included Romanian archeologists and geologists from Deva, Cluj and
Bucharest now being trained in mining archaeology, an unknown specialization in Romania
(practical training school having this specialization on the field, situated at Roşia Montană),
was able to distinguish from the 70 km of underground mining workings about 53 km of
recent mining workings (19th-20th centuries), 10 km of modern workings, dug with explosive
(17th-18th centuries) and almost 7 km of ancient mining workings dug with iron tools (chisel
and sledge hammer) or by fire setting. Modern and recent mining workings that can be
identified by studying their walls (traces of drill holes, the general shape of workings,
comparison to archive plans etc.) are with no other details dated back 17th and the beginning
of 20th centuries, by the radioactive analyses of charcoal or preserved wood. We have to
mention that several so-called “modern” galleries are equipped with more or less preserved
wooden rails and switches, which would worth being retrieved and preserved taking into
account the rarity of such equipments.

From all ancient mining workings studied by now summing up a total length of 7km, 95% are
dug with iron tools (chisel and sledge hammer or pick), technique attested by the tool traces
from the walls and their regular shape, having plane roof and floor, or having steps or tiers
on the floor. Concerning the very hard rocks (silicified dacite), hand tools digging was
replaced by fire setting, but the latter is not more than 5% of the entire mining workings. Two
sectors with ancient fire setting mining workings, respectively Gâuri sector from south-west
of Cetate massif and Piatra Corbului sector situated east of Cârnic massif were identified.
Fire setting mining workings from Cârnic were dated back Roman times due to charcoal, fire
blasting remains. Moreover, a half tools-blasted, half fire-blasted gallery, depending on the
nature of the blasted rock was discovered in the eastern side of Cârnic. This situation
confirms that both mining techniques were simultaneously used in the same epoch,
depending on the hardness of the rock. Fire setting generated major ventilation problems for
those working sites situated far from the surface and moreover, they consumed a lot of
wood.

For classification purposes, mining works discussed have been broken down into five time
periods:

- Ancient works: before 300 A.D., including Roman vestiges, and possible indications
  of Dacian, and any Bronze Age exploitations.
- Age of Migration/Early Medieval Ages: 300-1100 A.D.
- Medieval: 1100-1500 A.D.
- Late Medieval/Modern: 1500-1900 A.D.
- Modern/Contemporary: 1900 A.D. to present.

Mining archaeological investigations were made in the Cetate, Cârnic, Cârnicel, Jig-
Vădoi, Coş, Orlea-ţarina, Carpeni-Pâuru Carpeni and Hâbad sectors, where large
underground mapping works were undertaken. Access to ancient works was made possible
via modern/contemporary works that intersected with the surface (Exhibit 4.9.1, Photograph

Section 2: Baseline Conditions
5). Details of the investigation of each of these sectors is provided in the Baseline Report 8, Cultural Heritage Baseline Report.

Eight years of field research focussing on the ancient mining remains of Roşia Montană has revealed a great deal of information regarding their distribution, extent, and the techniques used to construct them. Generally, the ancient works researched in Roşia Montană were characterised by small dimensions, always evenly calibrated and often opened by sharp tools (wedge). Traces of picks have also been noted on some walls. A few hard rock areas close to the surface and intended for aerating showed indications of being opened by fire setting, in particular in the southeast part of the slope south of Cârnic. Radiocarbon dating has also verified that these are in fact Roman works. This also suggests that the Roman mining in this area was quite sophisticated.

The results of the Alburnus Maior National Research Programme included a sequence of 22 radiocarbon dates from ancient timbers preserved in waterlogged conditions in the mines, and from charcoal from fire setting. The application of such an extensive scientific dating programme is unparalleled in Romania and allows a considerable improvement in understanding the chronological development of mining techniques in the area.

Modern mining has fragmented most of the old works, destroying almost entirely any traces of it in Cetate massif, while in the Cârnic massif and Orlea-Ţarina area a significant part begun reexploited and reshaped. This fragmentation is highly variable depending on the region and whether the modern works overlapped or merely intersected the ancient works. They are also often clogged with sediments accumulated from the leaking of fines from more recent mining works on the surface or at shallow depths. In other cases, once the ore was extracted, they were used to store mining excavation material from newer excavations.

The ancient workings investigated included galleries, sloping galleries, narrow stopes, chambers on pillars and shafts, which displayed a wide variety of architecture depending on the metallogeny of the area in which they were located. In areas with vertically oriented ore veins, the work sites are apparently made up of galleries put one on top of the other. Right communication shaft between levels are short and rare. A single example has been recorded and is located in Cârnic. It allows connection of the upper and lower level. Inclined plane passages, with or without steps, and long or short descents were preferred.

These workings had rock faces with well-preserved traces of tools with breaks (benches, or recesses), which indicated the limits of the shafts. In the work sites, these traces of tools allow us to understand the exploitation dynamics, meaning the direction of the excavation, how they followed the ore bodies, and the strategic choices made by the miners as the work progressed. Certain characteristic forms found in trapezoidal sections of some exploratory galleries were not characteristic of Roman mining. These traditions may have been of local and of Dacian origin or have come with miners brought in from Dalmatia and Illyria.

Most of the ancient workings in the Cârnic massif were subjected to major modern reworking, which has altered, fragmented or completely destroyed them. A spatial analysis by precise surveys has enabled the visual mapping of how this original layout would have appeared. The ancient workings frequently completely filled by fine sediments that leached from inaccessible surface works, or were partially filled by ancient backfill that was left underground by the ancient miners. Apparently underwater or filled for several centuries, these works preserved a small number of wooden artefacts (supports, abandoned equipment, various pieces of equipment etc.) that has permitted dating to 1st century BC, and some that were even older. However, in the absence of discoveries of material from the Dacian period, no defendable conclusions in this regard can be made. In fact, the ceramic pieces found so far were mainly from Roman lamps typical of the 2nd century AD (Firmalampen) as well as some rare fragments of wide-mouthed pots that are quite common and attributable to the Roman era.

This rational organisation of the mining system is similar to the mining concessioning of the Roman polymetallic mine (copper, iron, gold and silver) of Vipasca (Aljustrel, south of
Two bronze tablets, quoting the Roman mining code of this 2nd century AD Roman town, in force under Hadrian, were discovered in small hills and in a mineshaft. Among other provisions, these law tablets speak of a delineation of mining concessions, leased from twin shafts and opened from the surface.

2.4.5 Cățălina Monulești and Pâru Carpeni

Two of the more significant sectors of mining works investigated as part of the Albuminus Maior National Programme were the Cățălina Monulești, located in the Lety-Coș Massif, and the mining sector of Pâru Carpeni. Both of these areas were very good examples of Roman-era underground mining methodology and were unique in that due to their location at relatively low elevations in the Rosia Valley, quite sophisticated technology was required to allow mining in these sectors.

The famous network of Cățălina Monulești is especially known as a result of the discovery of a set of wooden waxed tablets that was discovered by chance there in 1855. Very deep in the massif, at over 100 m below the surface, the network had become inaccessible since the start of the 20th century as a result of the sliding down of the modern wood-supported gallery, which had initially revealed the network and is at present, very unstable and flooded.

The French archaeological team, with the support of a team of fifteen miners performed research work from 2002 to 2004 by clearing 390 metres of modern galleries and rebuilding its wooden propping over more than 100 m before reaching Roman-era works.

The survey drafted in 2003 was compared to the 19th century archive of Poșepny, revealing that network access was only possible through its northern half. The southern area crosscutting, perhaps the modern Verkes gallery is inaccessible due to a massive backfilling or ground sliding. Exploring the network’s northern part revealed remarkable ancient workings that demonstrate the similar Roman-era mining practices that were revealed in the Cârnic massif.

These specific features are:

- Trapezoid galleries (Exhibit 4.9.1, Photograph 7);
- Working faces, successive and overlapping (Exhibit 4.9.1, Photograph 8);
- High and narrow stripped areas (Exhibit 4.9.1, Photograph 9);
- Lighting devices with lamp niches (Exhibit 4.9.1, Photograph 10);
- Water drainage systems with wood canals and elevating wheel (ancient wood fragments of wheel were discovered in this area)(Exhibit 4.9.1, Photograph 11); and,
- Wooden tools such as the wooden ladder preserved in situ (Exhibit 4.9.1, Photograph 12).

In spite of all these difficulties, the Cățălina Monulești site represents a remarkable ancient network that represents a good prospect for continued research and new findings. With regards to the southern part, in particular the portion that remains sealed and the lower level flooded, significant potential exists for this area to have exceptional drainage systems such as an elevating wheel (several such examples are known and preserved to this day in the Roman world).

It is also important to note that both modern and recent (17th-19th centuries) workings in this area still possess wooden rails used during recent mining works (Photograph 13). The preservation of these wooden rails was possible in spite of the difficulties inherent in the clearing of the Roman era works.

In 2004, further to the north of Roșia valley, topographical surveys were initiated in the Carpeni area, a very significant sector, particularly due to the wooden equipment which was very well preserved in the very humid environment resulting from these galleries being lower.
in elevation than those in Cetate and Călnic. Investigations of this sector lead to the discovery of several areas with ancient workings, including two drainage wheel rooms. The work of exploration and topography was done starting from modern workings connected to the Sf. Cruci drift (level + 714 m), which intersected with a large number of ancient workings. There is still a lot of exploration to be carried out in this sector, particularly behind the concrete walls covering various sectors of ancient works.

A very significant discovery was made in 2005 while the exploration team was on an underground reconnaissance expedition in the Pâru-Carpeni Sector and discovered the emplacements of at least two hydraulic wheels that were used to remove water and allow mining in otherwise flooded areas (Exhibit 4.9.1, Photograph 14). They were located about 25 m from each other and date from the Roman era (C14 dating performed on a piece of wood). Large rectangular shaped rooms were found that were connected to a lower gallery (which is where the water came from) and an upper gallery (towards which the water had risen). In these rooms wooden wheels with wooden buckets were found and would have been used to take the water from the bottom of the room to a higher gallery, and along a wooden channel to another water wheel. The two rooms discovered in 2004 were filled with an accumulation of preserved wooden fragments of the water wheel system.

In 2005, the drainage room located more to the southeast, was in a better state of preservation than the previously investigated one, and was completely excavated. From this initial room excavations identified two other draining rooms connected directly by galleries to the first room; one was lower and the other one was just above it. This group of three draining rooms connected diagonally and dug out one on top of the other, starting at a depth of 30 m are in the southeastern part of Paru-Carpeni. The central room revealed all the pieces of wood that had lined the roof as well as the broken parts of an elevator wheel with buckets, dated by C14 dating to the 2nd century AD. This is a major discovery concerning drainage in Roman mines using machinery that hasn’t been discovered in Europe since the 1930’s and the chance discovery in the mines in the southern part of the Iberian Peninsula.

Bibliographical research revealed that parts of a drainage wheel had been found at Roşia Montană in the 19th century, indicating the find location in the Călătina Monulești gallery, without additional details. In addition, there were two blades and the axle of the wheel, which were almost complete and were on display at the Union Museum in Alba Iulia, most probably parts of the water wheel found in Pâru Carpeni in 2005. The room studied was pierced by a modern gallery going up to the level of the water collector basin. It therefore appears very probable that it was during this chance discovery that the modern miners removed the two blades and axle of the wheel, which are now in the museum at Alba Iulia. Thanks to all this items, it was possible to carry out a preliminary reconstruction of the timbering of the roof of the room and the suspension equipment and wheel structure. Also, the system for raising water in the mine, using a succession of three rooms with elevating wheels connected to different drainage galleries, was studied and mapped. It seems evident that other draining rooms must exist, in which further research would make confirmation of this system possible.

During the 2005 campaign, a dendrochronologist, Christian Orcel from the Archéolabs laboratory came especially from France to take some in situ wood core samples for analysis. His work studying the growth rings of trees preserved in the draining room will allow the creation of a dendrochronological timeline for pinewood in Northeastern Romania when at this time this type of timeline with dating references. No more precise dates than those obtained from radiocarbon (Carbon 14), exist. The study is in progress, but has already revealed that that most of the wood species are pine for timbering and beech for the parts of the wheel. The upper and lower timbering of the room match exactly and go back to the middle of the 2nd century A.D., about 155 AD. On the other hand the pieces of supports found in the lower gallery are probably older by about 50 years, most likely dating from the early years of the 3rd century AD. The study has to be completed for more information to be revealed on this matter.
2.4.6 The Archaeological National and International Context

This section provides an explanation of the national and international context of the archaeological heritage of Roșia Montană. This explains how the archaeological finds of Roșia Montană compare to other Roman mining operations (if they have been documented) both nationally and internationally. This is an essential step in evaluating the significance of the archaeological heritage of Roșia Montană.

2.4.6.1 National Context

Extensive archaeological and epigraphic evidence, much of it resulting from support of RMGC since 2000, demonstrates that Roșia Montană, both its mines and setting, was a Roman mining complex of great importance in Antiquity. It is nonetheless essential that this significance be considered in its wider context. Inevitably, such a consideration is based on the current state of archaeological evidence and understanding but, incomplete as these are, the evidence for widespread Roman gold-mining operations in Romania is already extensive and certainly sufficient to make some general assumptions possible. Romania has long been known for its rich gold deposits, and international scholarship has been drawing conclusions regarding the extent of Roman gold-mining operations in Romania for many years. These conclusions, albeit some of them tentative, are summarised in ‘Tabula Imperii Romani’ and have been revised and updated together with extensive bibliographies in the ‘Barrington Atlas of the Roman World’ (R. Talbert. 2000). To these have been added the ‘Historic Study’ by Dr. Lucia Marinescu (2002), and Mihaela Simion’s check-list of the current state of archaeological research for gold-mining in Romania (Baseline Report 8, Cultural Heritage Baseline Report).

Ancient sources refer to the enormous quantity of gold brought out of Dacia by the Emperor Traian, on the final defeat of Decebalus in 106 A.D. and evidence for Roman gold mining in Transylvania and the Banat is well known. There are five great regions; four in the famed ‘Golden Quadrilateral’, to the north and west of Alba Iulia, and one in the Banat Mountains, to the south of Oțelu Roșu. In addition to the report undertaken by Mihaela Simon, Roman period mining operations are listed in the Barrington Atlas thus:

- In the mountains and river valleys to the west of Turda (Potaissa);
  - In a vast area of mountains and valleys stretching northwest from Bucium to Scărișoara;
  - In a region to the west of Zlatna (Ampelum);
  - In a region centred on Brad; and,
  - In the Banat mountains to the south of Oțelu Roșu.

The specific references to Roman sites within these regions and the literary reference from which they were taken is provided in Appendix D of the Baseline Report 8, Cultural Heritage Baseline Report. Although the details pertaining to these sites are scarce, they nonetheless demonstrate that Roșia Montană is not unique in terms of its Roman mining history. Furthermore, the evidence to date hints strongly at the presence of at least 47 Roman gold-mining centres and related developments in Transylvania and Banat, of which at least 14 have already produced evidence of major Roman gold-mining operations with associated settlements and related infrastructure (as Bucium, Brad, Almașu Mare etc.).

While some historical mining works have disappeared under more recent developments over the last 200 years, others still exist and encourage future archaeological activity and research. The importance of Roșia Montană is thus a reflection of what is known, rather than of what could one day be known elsewhere in Romania. The evidence suggests that future archaeological research elsewhere in Romania will change current impressions of the significance of Roșia Montană. Although considered of unparalleled importance today, it is unlikely that this will always be the case.
2.4.6.2 International Context

The objectives of this section are twofold: first, to complement the national (i.e. Romanian) context section, and second, to address the Roman imperial (i.e. international) context of Roşia Montană. Given the large area covered and the vast growing body of data available, this exercise has had to be carried out in a very general/summary form. Nonetheless, some invaluable and up-to-date sources have been consulted: among them the ‘Historical Study’ by Lucia Marinescu (2002) and the Barrington Atlas with its invaluable database (2000). Nonetheless, limited as this survey has been, the data reviewed is sufficient to confirm that as with the national assessment, there are many mining sites elsewhere in the Roman Empire, and the picture presented here is based only on the sum of current knowledge. More significant evidence and research is being added to the ‘tally’ every year.

A brief survey of the evidence from the Roman Empire as a whole demonstrates widespread gold-mining activity. Roman gold-mines are known to have been located in the following provinces: western Britannia (S. Wales), Aquitania (W. France), Tarraconensis/Lusitania/Baetica (NW Spain, SW Spain and Portugal), Noricum, Pannonia, Dalmatia/Moesia Superior (Austria, Slovenia, Bosnia, Herzegovina, Albania, Kosovo, Bulgaria), Aegyptus (SE Egypt) and, of course, Dacia (Romania) (R. Talbert, 2000).

These operations are listed in the Barrington Atlas thus:

- Britannia (S. Wales);
- Aquitania (W. France);
- Tarraconensis/Lusitania/Baetica (Spain & Portugal);
- Noricum/Pannonia/Dalmatia/Moesia Superior (Austria, Slovenia, Bosnia, Herzegovina, Albania, Kosovo, Bulgaria); and,
- Aegyptus (SE Egypt).

2.5. Industrial Mining Heritage

Roşia Montană has a documented history of mining of almost 1900 years dating back at least to the Roman Age. The progression of mining technology from that age to the present represents a valuable chronology of industrial mining heritage, in particular the role that it has played in the formation of Roşia Montană’s cultural heritage.

In an attempt to preserve modern day mining heritage, the state owned mine, in cooperation with local residents of Roşia Montană, established a mining museum in the 1980’s. The museum possesses several full-scale California stamp mills, a stamper’s cabin, a number of Roman votive altars, and a publicly accessible Roman gallery.

The museum was established to attract local and foreign tourists, interested in learning how gold was extracted in the past in Roşia Montană.

The past underground mining works present in Roşia Montană are an integral part of this industrial mining heritage and are discussed in Section 2.4. The architecture of Roşia Montană also reflects to some degree the industrial mining heritage of Roşia Montană and is summarised in Section 2.2.

For detailed information on the industrial mining heritage see please Roşia Montană Project Baseline Reports (Baseline Report 8).
3 Assessment of Impact

3.1 Cultural Landscape

The construction of the mine will require the relocation of a part of Roșia Montană village and all of Corna. This will have impacts on several components of cultural landscape including: afforested zones (Section 4.6), physical landscape and landscape monuments (Section 4.7), tourism and employment (Section 4.8), and settlement patterns.

In summary, the project will result in changes in the physical landscape, the socio-economic environment, and settlement patterns in Roșia Montană as it exists today. As such, the alteration of the cultural landscape of Roșia and Corna valleys will be significant.

3.2 Architecture and Urban Setting of Roșia Montană

The resettlement and/or relocation of parts of the village of Roșia Montană and the entire village of Corna will result in a loss of buildings while also altering the urban setting both villages. The implementation of the Project will require the removal of approximately 970 residential properties.

Although the loss of residential buildings from Roșia Montană and Corna will have a direct impact on their urban setting, the architecture of these buildings is common throughout the Apuseni Mountain region. The portion of Roșia Montană that has been confirmed to be of cultural significance, according to the provisions of Law 422/2001, the List of Historical Buildings and the Law 5/2000 will be preserved through the establishment of the Protected Zone. In fact, the economic activity generated by the Project and through the implementation of the Community Sustainable Development Programme (ESMS Plan L) will dramatically improve the community’s ability to provide much needed maintenance and care for the historical structures located within and outside the Protected Zone. Several of these structures have deteriorated and are considered unsafe by modern standards of human habitation.

3.3 Churches and Cemeteries

Churches and prayer houses located in the Corna Valley will be impacted by the development of the tailings management facility (TMF). The Pentecostal Prayer House within Roșia Valley will not be affected directly by the Project and will not require removal, but it will be inadequate for holding religious services. The removal of religious facilities and infrastructure has the potential to create a loss of a sense of history within the community in addition to its use as a place of worship and for communal gatherings. The organizations around the churches are generally involved in activities associated with religious life, specific projects related to the church (like repainting the building etc), and sometimes charity work, under direct supervision of the priests.

The Greek Catholic church and Romanian Orthodox churches in Roșia Montană are located outside of the Protected Zone but will not be directly affected by the Project. However, although some congregants will chose to resettle in Piatra Albă and therefore remain relatively close to their Church, these churches will be inaccessible for regular religious services during the life of the Project.

Churches located within the Protected Zone will not be directly impacted by the Project and access will be maintained throughout the life of the Project. However, the relocation/resettlement of a portion of their congregations will impact church operations and
outreach programs as attendance may decline inside the protected zone due to the changing demographics the project resettlement plan presents.

The Project will relocate 410 graves from seven of the twelve cemeteries and including single gravestones located in households land within the resettlement plan footprint. The relocation of graves could cause stress to family members and could clash with religious beliefs.

3.4. Archaeological Heritage

3.1.1 Surface Archaeology and Underground Archaeology

Archaeological rescue excavation has been performed in all surface areas within the designated project footprint (see Baseline Report 8). Government approved via MCC archaeological discharges have been granted for the majority of the project area. The discharge certificate has been suspended by the court and is subject of an annulment claim. A final judgment as regards the discharge certificate is expected to be granted in the period to come, as the litigation is currently in its final stage. The Orlea area the archaeological researches are scheduled to be undertaken between 2007 to 2012.

Excavation activities during construction and the deposition of waste rock will not therefore have the potential to destroy or bury archaeological vestiges. Destruction of artefacts would limit the ability to better understand the history of Roşia Montană and its mining heritage beyond what has been known from the Alburnus Maior National Research Programme.

3.1.2 Underground Mining Works

The construction of the proposed open pits will result in destruction of some old mining works, some of which date back to the Roman Age and medieval/modern period. Additionally, the backfilling of the open pits with waste rock may prevent future archaeological exploration in deeper areas.

The Roman gallery that is presently part of the RosiaMin museum and is accessible to the public forms part of the proposed project mine plan and will be lost.

It should also be noted that the investigation of underground works is itself a destructive science and that following scientific examination, the galleries are no longer considered pristine. The underground works in Roşia Montană are often collapsed and flooded with water and material must be moved and supports constructed to ensure their safe investigation.

3.5. Industrial Mining Heritage

The implementation of the Project will modify the historical mining heritage of Roşia Montană. The Project will result in the loss of the existing mining museum and will have an impact on the underground mining workings located in the Cârnic Massif and Orlea Massif. Additionally, the resettlement and relocation of residents will result in a loss of inhabitants who currently reflect the culture and daily life of a past mining community. The resettlement and relocation of residents away from the site of their family’s history and heritage has the potential to disrupt the oral history passed from generation to generation of the Rosia Montana mining district.
4 Mitigative Measures

4.1 Cultural Landscape

In February 2002, the Ministry of Culture and Religious Affairs, based on documentation submitted by Project Alba and OPUS (RMGC’s contractors), declared the formal boundaries for a Protected Zone in the historic centre of the locality. This area will preserve 35 historical monuments (houses) constructed in the second half of the 19th (according to the MCC-DMIM license no. 178/2002). The Protected Zone will also preserve three churches and the market square all of which contribute significantly to the cultural landscape of Roşia Valley, as well as Tâul Mare, Tâul Brazi, Tâul Anghel, and Văidoaia area.

Additional protected areas including Carpeni Hill and Pâru Carpeni mining sector, the funerary monument from Tâu Găuri and Piatra Corbului area will also help to conserve important features of the Roşia Montană cultural landscape.

Rehabilitation in accordance with the ESMS Plans, Plan J, Mine Reclamation and Closure Plan will rehabilitate a number of the features of the mine including, waste rock stockpiles, the processing plant, ore and topsoil stockpiles, the tailings management facility and the Cetate Waste and Mine Drainage Pond Dam so that they blend naturally with the surrounding environment.

Additionally, biodiversity enhancement programmes detailed in the ESMS Plans, Plan H, Biodiversity Management Plan, will positively affect the cultural landscape.

4.2 Architecture and Urban Characteristic of Roşia Montană

The Protected Zone include 35 of the 41 Historical Monuments present in Roşia Montană. An additional the remaining six are lying in the industrial area. Nonetheless, project development has been designed so that none of these Historical Monuments are directly affected by the project. Furthermore, RMGC will commit to maintaining the historical monuments in their present condition and improving their current status during the transitional period leading up to transferral of ownership to the Foundation. These transfers of ownership to the Foundation will not only provide a source of income for the Foundation (rental to mine workers for accommodation and RMGC offices, as well developing tourist pensions), but will also ensure that the Historical Monuments are preserved beyond the life of the Project. Prior to the transfer of ownership of buildings in the Protected Zone from RMGC to the Foundation, RMGC will fund the renovation of all the Historical Monuments and houses that it owns in the Protected Zone that are in a relatively good structural condition. As a number of the Historical Monuments are in an increasing state of disrepair, this will be one of the positive benefits of the Project.

A concept identified in the Law 422/2001 on the Protection of Historical Monuments, which is particularly relevant to the situation in Roşia Montană is reffering to stimulating measures regarding the economic sector or any other sector shall be set up under the law in order to protect historical monuments.

In Roşia Montană, as stated in the Resettlement and Relocation Action Plan the existing Rosiamin mine is subsidized by the central government. The progressive closure of this operation has already resulted in the loss of more than 800 jobs; the additional loss of 500 more jobs will have a significant social, environmental and economic impact on Roşia Montană and Abrud. Additionally, a local copper mining operation, "Cuprumin", located in a nearby valley, is also reported as being slated for closure in the near future. The closure of the two mines will have a serious negative impact on the economic vitality of the entire region.
The economic downturn in the region has already begun to have a detrimental impact on the historical monuments located in Roșia Montană, which vary in states of dilapidation from minor structural damage to extensive collapsed portions of the buildings. Under Law 422/2001, responsibility for surveillance, maintenance, consolidation, restoration, and capitalisation through adequate means, is the owner’s responsibility. In many cases in Roșia Montană, the owner no longer lives in the village. Furthermore, in a number of cases the owner does not have the financial means to restore or repair damage to historical monuments. If this trend continues, a number of historical monuments would be permanently lost.

RMGC has already purchased 14 historical monuments, located within the established protected zone. Additionally, RMGC has committed to establishing a Foundation to promote the sustainable development of the region and of which cultural heritage will play an important part (ESMS Plans, Plan L, Community Sustainable Development Programme). Upon successful formation of the Foundation, RMGC will donate the houses it has purchased in the Protected Zone to the Foundation. The Foundation will then be able to rent these houses to construction and operation workers in order to generate income to be used in a variety of Foundation initiatives.

This initiative will work in concert with other initiatives proposed in the Socio-economic Development Action Plan to create a sustainable economy in the Protected Zone during the Project and following mine closure.

The Foundation will operate independently of RMGC and will dictate its own mandate and priorities.

RMGC will commit to repairing documented vibration-induced damage to any historical monuments impacted in this context during the project life cycle. Following mine closure, the foundation will be entirely responsible for the maintenance of these historical buildings.

### 4.3 Churches and Cemeteries

#### 4.3.1 Churches

Consultation with representatives of each congregation having property in the Project-Affected Area began in 2002 and is on-going. The relocation of churches requires signed agreements from the vice-bishop, priest, parish council, and bishop. Exhibit 4.6.4, Locations of Churches and Cemeteries illustrates the locations of the churches and cemeteries in addition to the proposed Project.

An evaluation of the various considerations and potential options for each of the churches and prayer houses in Roșia Montană and Corna is presented in Table 4.9-3.

The Romanian Orthodox Church and the Greek Catholic Church, as well as the Pentecostal Prayer House, although located outside the protected zone, will not be directly impacted by the Project. However, although some congregants may have chosen to resettle in Piatra Albă, and therefore remain relatively close to their Church, these churches will have restricted access during the life of the Project.
As a result, consultation on the moving/closure/relocation with representatives of each of the
aforementioned congregations was initiated in 2002 and is ongoing.

For the churches that will be displaced as a result of the Project, replacement churches will
be constructed in the new resettlement community of Piatra Albă in order to accommodate
those congregations affected by the project. In cases where a religious entity or facility
cannot be sustained or lacks momentum to proceed through the resettlement processor may
be unwilling to support a congregation in Piatra Albă, settlement proceedings to determine
the value of the church will be negotiated.

In 2003, RMGC contracted two companies to prepare an inventory of the churches and to
prepare estimated relocation costs of movable items to within 10% of the actual cost of
relocation for each of the churches. These were provided with copies of the foundation plan
and elevations for all buildings along with current photographs. Also sought the expertise of
an expert, who represents the Commission for Painting of New Orthodox churches, and for
restoration of historic paintings. Based on the expert evaluation it was provided the
Commission’s suggested price for these works in Roşia Montană.

In Abrud and Alba Iulia, it appears at this stage that there are adequate existing church
facilities and cemeteries. Prominent sites totalling an area of 800 m² have been planned in
Piatra Albă for the construction of new churches.

### 4.3.2 Cemeteries

Romanian legislation does not have specific cultural heritage considerations regarding the
relocation of graves, addressing mainly health and safety issues. However from a cultural
heritage perspective, cemeteries contribute visually to the cultural landscape of Roşia
Montană and local residents religious beliefs and traditions regarding burial are essential
when considering the relocation of graves / cemeteries.

Thirteen (13) hectares have been allocated at the Piatra Albă site for cemeteries. This is an
adequate area both to replace cemeteries in Roşia Montană impacted by the new mine and
to fulfil the future requirements of cemeteries for a community the size of Roşia Montană.
Cemeteries in the Corna Valley/ Gura Cornii area that will be impacted by the new Mine will
also be relocated.

Graves will be relocated according to the relevant Romanian legislation (Order 35/1982 and
Order 235/2002). Removal and re-internment of graves handled with dignity and religious
convention should alleviate most of the emotional and religious concerns involved in
relocating graves and their remains. If desired by the family, a service conducted by a priest
will be conducted both for the re-opening of the grave and the subsequent burial. All fees
relating to the relocation of graves and associated ceremonies will be provided by RMGC.
The grave of the local hero Simeon Balint will not be directly impacted by the Project.
Restricted access will be maintained to this grave throughout the Project.

### 4.4 Archaeological Heritage

Archaeological sites are considered to be an important and irreplaceable aspect of any
country’s cultural patrimony and management measures have been put in place both to
mitigate potential impacts to Roşia Montană’s archaeological heritage in addition to
encouraging it’s role in fostering a sustainable community beyond the life of the Project.

#### 4.4.1 Baseline Data Collection

In recognition of the potential importance of the archaeological heritage of Roşia Montană, a
village with at least 1900 years of known mining history, RMGC financed – accordind to its
legal duties - a multidisciplinary programme called the *Alburnus Maior* National Research
Programme, which was undertaken to survey, identify, research, catalogue, and preserve the archaeological and cultural resources at Roșia Montană, in accordance with the provisions of Law 378/2001 (revised by Law 462/2003). This programme included the investigation of past underground mining works and a surface investigation that looked for remnants of ancient or medieval structures or artefacts, which started in 2000 and will proceed until the end of 2012. The investigation was undertaken under the directorship of dr. Paul Damian (MNIR), while the rescue mining archaeological program is led by dr. Beatrice Cauuet (UTAH).

The implementation of this research programme has been conducted in close cooperation with the National History Museum of Romania and other specialised institutions, under the monitoring of the Ministry of Cults and Culture in order to develop an inventory of significant archaeological resources for which protective measures would be required, to investigate all the aspects of the cultural heritage of the area and to allow the Project site development plans to be altered as required, thus obtaining required archaeological discharges or outlining the most representative areas for in situ preservation.

RMGC has contributed approximately 9 million dollars (USD) to date to finance this heritage investigation, which has resulted in a new and better understanding of the history of Roșia Montană, along with the historical, ethnographical and architectural studies. The archaeological teams have also created digital maps, mainly based on GPS measurements, and a special GIS application has now been developed for the first time in Romania. All these have and will contribute to the development, for the first time in Romania, of a structured management system for an archaeological programme.

Details of the methodology and results of the investigation to date are presented in the Cultural Heritage Baseline Report.

### 4.4.2 Managing the Archaeological Database

As part of the archaeological programme, a digital archive was developed and used to store the archaeological information gathered to date, including the one on the movable heritage assets. This archive database will allow for future research, and as one of the first database of its kind in Romania it will represent an example for future archaeological programmes in Romania.

### 4.4.3 Storage spaces

Throughout the archaeological campaign, RMGC has funded storage space for archaeological artefacts and other movable items of cultural heritage, located in a house in the Protected Zone of the Roșia Montană comuna. All the items have been recorded, inventoried, and conserved, and are intended to from part of the collections in the new cultural centre and mining museum of Roșia Montană. They were catalogued, inventoried and recorded in the special database specially created for the records of the cultural heritage. Thus, this is the destination for artefacts that have been uncovered during the archaeological programme that have been conserved by staff from the museums in Deva, Cluj, Alba Iulia, and Bucharest.

### 4.4.4 In-Situ Preservation and Restoration

The baseline investigation as detailed in the Cultural Heritage Baseline Report identified the Piatra Corbului, Cătălinea Monulești and the Păru Carpeni underground galleries as representative of Roman workings in Roșia Montană and exhibiting some of the more

---

2 The Alburnus Maior National Research Program was established by MCC in March 2001.
interesting mining techniques, in particular hydraulic works used to remove water. Both of these galleries – Pârul Carpeni and Cătălina - will be fully investigated and researched in addition to being preserved in situ. All artefacts from these galleries will have to be removed to ensure that they are properly preserved. RMGC will commit to opening one of these two galleries for public access and will meet all the necessary safety requirements of proving public access. The decision of which gallery is opened for public access will be made after research has been completed for both galleries and will be made in consultation with UTAH, MNIR, MCC, and local stakeholders. Investigation of these two galleries will continue in the following years under the scientific coordination of dr. Beatrice Cauuet (UTAH) and dr. Paul Damian (MNIR).

When developing a project in an area that contains ancient mining networks, it is essential to research these galleries to learn as much as possible, preserve a portion of the galleries for future research, and lastly, to allow public access to an underground network so that the public can experience what an ancient mining gallery was like firsthand.

Two Roman structures including a Roman Precinct at Tâu Gâuri and buildings with administrative function located on Carpeni Hill, were also determined to be of significant historical importance to determine in situ preservation. Following the initial discovery of these structures, more detailed rescue excavations were undertaken to determine the exact extent of the structures, their condition, and their place in the Roman landscape. In conjunction with MCC and MNIR, the scientific coordinator of the Alburnus Maior National Research Programme, proposals were developed by RMGC for the in-situ preservation of these structures. In addition, site development plans were developed with consideration of ensuring that access to these sites would be maintained throughout the life of the Project, after which they will become the responsibility of the proposed Foundation.

The vestiges from Carpeni Hill, the Roman galleries from Cârnic massif – Piatra Corbului area and the funerary monument from Tâu Gâuri were classified as historical monuments on LMI 2004, thus being ensured the protection of these monuments.

### 4.4.5 Cătălina Monuleşti and Pâru Carpeni

Beyond the value of the underground workings as an important academic opportunity to learn more about Roman mining, these workings also represent an opportunity for the public to see for themselves how ancient mining was conducted. For Romanians, this represents an important part of their country’s history.

Presently in Roşia Montană, public access is available at the RosiaMin mining museum to an underground work that accesses Roman mining works through modern works located under the Orlea Massif. The only entrance consists of a three-metre long gallery followed by a descent of 157 steps down. After continuing along 42 metres of modern aged galleries, one arrives at the entrance to the Roman Gallery. Artificial lighting is provided to the entire complex.

Although the gallery is still open to the public, several improvements are required to make access safe. An additional access point would have to be created in order to provide an emergency exit in case of cave-in or fire. Additionally, the steps, which are 30 years old, would have to be rebuilt to ensure safe access, in particular for younger and older visitors.

The underground works at the RosiaMin museum will be mined during the development of the project and as a result, RMGC has worked with the archaeological team to determine a suitable replacement. The condition of the underground workings investigated by the UTAH team under the direction of Beatrice Cauuet, found the workings in the Cetate massif to be of poor quality and highly degraded by mining activity conducted over the past 35 years by teh Romanian State (in Alburnus Maior I, ed. P. Damian, 2003.). Some portions of the mining workings investigated in the Cârnic massif were found to be in considerably better condition, although frequently flooded or re-exploited by modern miners or used for storing waste rock.
from subsequent excavations. The investigated galleries in the areas of the main pits Cârnic and Cetate appear to contain very few movable heritage items, which were studied and preserved. Public/tourist access to most galleries would be rather impossible, considering the state of preservation, the location, as well as safety access conditions.

RMGC has committed to the *in situ* preservation of a representative underground mining network, to be located in either Cătălina Monulești or Pâru Carpeni, pending the detailed investigation of these two networks beginning in 2007. Additionally, RMGC will also preserve the ancient underground networks under Piatra Corbului for future research, as well as to provide financial means to built a series of replicas of the most representative mining features investigated in other parts of the site, according to the recommendations given by dr. Beatrice Cauuet. These replicas will be integrated in the framework of the future mining museum. All protected zones and preserved features are shown on (Exhibit 4.9.8, *Cultural Heritage Features Slated for Preservation*).

Due to its historical significance and location in the Protected Zone, the Cătălina Monulești has been identified as the best candidate for recovery and possibly the establishment of public access, subject to the feasibility of doing so in terms of ground conditions, relevant regulations, etc. The discovery in 2005, of the Roman water wheel system in Pâru Carpeni, offered a second option. Regardless which will be organised for public access, both will be preserved *in situ*.

### 4.4.6 Roman Funerary Monument –Tâul Găuri

RMGC has undertaken the required measures to preserve the funerary monument from Tâul Găuri, which was discovered in 2002, and is committed to the *in situ* reconstruction of the monument. The archaeological investigations designed to facilitate reconstruction were completed in 2003. The monument has been secured within a fenced enclosure for safety and security reasons. Additionally, during the winter the structure is protected from the elements until research and restoration works can resume in the spring. OPUS, an architectural consultancy from Bucharest that specialises in historic buildings, has been commissioned by RMGC to prepare a plan for the restoration works for this Roman structure, the restoration project being approved by MCC – CNMI in 2004.

### 4.4.7 Roman Constructions on Carpeni Hill

The archaeological investigations on the second building found on Carpeni Hill were completed in 2003. This area was outlined as an archaeological reserve.

### 4.4.8 Preservation in situ of Roman and Medieval Underground Mining Works in Piatra Corbului

In addition to the extensive research of the Roman and Medieval underground mining works in Roșia Montană by the UTAH archaeological team, RMGC is also committed to the preservation of one of the more significant areas of Roman works for future research, which is located beneath Piatra Corbului (Exhibit 4.9.8, *Cultural Heritage Features Slated for Preservation*).

The archaeological investigations over the rest of the project-affected area have ensured the “preservation by record” of other sites and their component features, and the most representative ones will be rebuilt in a series of replicas that will be integrated in the future cultural centre and mining museum, based on the recommendation and expertise of Beatrice Cauuet.
### 4.4.9 Movable Artifacts

Although all artefacts uncovered during the RMGC-funded archaeological campaign are the property of the State as indicated 422/2001, thus MNIR being the custodian of these artefacts and RMGC has provided a storage facility in Roșia Montană where, following conservation and restoration conducted by either the museums in Deva, Cluj, Alba Iulia, and Bucharest, they are catalogued and stored.

The site assessment conducted in 2000 by a team from the Union Museum in Alba Iulia (MNUAI) and the Design Center for National Cultural Heritage (CPPCN), now called the National Institute for Historical Monuments. The site assessment revealed that most of the archaeological remains are movable and perfectly suitable to be preserved in a museum. All moveable archaeological remains uncovered will be moved to the storage facility, which will be further developed in a museum to be funded by RMGC, and this will be one of the lasting positive outcomes of the project.

In the event that no Cultural Heritage Centre/Museum is opened, MNIR in co-operation with RMGC will enter into discussion with the Ministry of Cults and Culture to determine the best location for the artefacts.

### 4.4.10 Chance-Finds Protocol

The chance-finds protocol is an essential part of the Cultural Heritage Management Plan that outlines how the Project will ensure that archaeological remains uncovered throughout the life of the Project will be identified and properly managed.

Activities that potentially pose a threat to undiscovered archaeological resources will exist throughout all phases of the project including the construction, operations and mine closure phases. A monitoring programme will be established to ensure that appropriate “Chance-finds Protocols” as laid out in this section are implemented to ensure proper record of archaeological resources, should they be encountered, both on surface and in the underground.

Project development activities likely to impact unknown archaeological resources are associated with the excavation of the open pits, road construction activities and topsoil stripping. The stripping of topsoil required in the preparation of waste rock dumps and the tailings management facility represents proper management to ensure damage is not sustained to yet unknown archaeological remains.

The first step to ensure that this resource is properly managed was to fund a pre-construction archaeological baseline study of the Project area and to perform preventive archaeological researches for obtaining archaeological discharge certificates were required and possible. These certificates are issued by the Ministry of Culture and Religious Affairs and confirm that RMGC has properly completed its legal duties deriving from the relevant Romanian legislation, respectively providing the means to investigate all potentially impacted areas, to properly managed the archaeological resources discovered, and that no other unique archaeological finds are anticipated.

Baseline studies and excavations undertaken to obtain archaeological discharge certificates identified the Project Area as an area that contains some important archaeological clues regarding the Roman presence in the region in the 2nd and 3rd centuries. In light of the discoveries made during baseline investigation, the “Chance-finds Protocols” represents an important part of the environmental impact assessment documentation process. The following sections detail the project’s commitment to properly identifying significant archaeological resources uncovered as a chance find during topsoil stripping or project mining. The “Chance-finds protocols” will be guided by the following principles:

- Monitoring procedures to identify archaeological resources on surface and underground
Training, awareness and competence;
Rapid evaluation of significance of finds;
Proper recording of chance finds;
Internal and external communication of chance finds;
Procedure for managing chance finds;
Non-conformance reporting and corrective and preventative actions; and,

Regulatory compliance verification (according to the provisions of Law 462/2003).

How identified chance finds are dealt with will be governed by the significance of the discovery. All chance finds might require preventive archaeological researches, based on the results provided so the appropriate decisions beign made according to the legal provisions. The overriding goal of the “Chance-finds Protocols” is to identify, evaluate significance, and preserve unique archaeological resources as appropriate, while imposing minimal disturbance to construction and operation schedules.

If the chance find is determined by the independent team of archaeologists and the legal authorities, namely the Ministry of Culture and Religious Affairs and the County Directorate for Culture, Religious Affairs and National cultural Heritage of Alba county, to be significant, immediately is notified the Manager of Mining and the foremen will relocate excavation activities from the area. Additionally, in cases where authorized regulatory bodies visit the project site, the foremen will be responsible for ensuring that all on-site safety requirements are followed, including provision of safety equipment.

A number of management measures will be implemented as part of the “Chance-Finds Protocols” in order to minimise the potential to impact unknown vestiges of the cultural patrimony. These management measures include the following:

- Extensive baseline investigation: The pre-construction collaboration between RMGC and the Ministry of Cults and Culture and the involvement of Romanian experts in Roman archaeology and international experts on mining archaeology, has produced an extensive understanding of the archaeological history of the project area. This information will help focus chance-find identification efforts to those areas deemed to require greater vigilance during the development and operational phases of the project. The results of the baseline will help cultural heritage and trained non-heritage staff during identification efforts based upon consideration of typical chance finds indicators that may be expected during those phases of the project;

- Surface Stripping Protocol: The majority of chance finds likely will be located in the surface soil and as such, a special protocol will be implemented that requires increased vigilance during soil stripping activities.

- Underground chance finds Protocol: During open pit mining it may be possible to identify underground chance finds. Special protocols will be implemented requiring increased supervision during mining activities within the open pits. Consideration of safety and access may preclude immediate access to every intercept until pit safety conditions improve. Only safe conditions may exist before a team of mining and cultural staff can access the area properly. Confirmation that an area not identified in the baseline may indicate significance in a patrimonial context; the chance finds protocols will be placed into effect in that sector of the ore body.

- Relocation and conservation programme: The programme of relocation, conservation and storage of archaeological finds will continue throughout the life of the Project.

- Site Marking: Areas of high potential chance-find discovery or where a work stoppage order has been issued; based on the mitigation measures and procedures decided by the independent archaeological team and the legal authorities, the foreman will ensure that this area is demarcated with highly visible flagging. Training
sessions, consultation with foremen, and the RMGC Standard Operating Procedures Manual (developed in collaboration with the specialists form MNIR and UTAH) will all clearly explain the meaning of the types of flagging; and,

- Work Stoppage: The independent archaeological monitoring team, in collaboration with the management structure of RMGC, reporting to Director-level company officers, will respond the uncovering of artefacts or mining vestiges and will as required issue temporary or permanent work stoppage where further archaeological research, or relocation activities, or in situ preservation of a monument is required.

Additional details pertaining to the Chance Finds Protocol are provided in the **ESMS Plans, Plan M, Cultural Heritage Management Plan**.

### 4.4.11 Dissemination of Information

#### Archaeological Publications

While the quantity of scientific information published as a result of the archaeological campaign in Roșița Montană is significant, one of the major future aims of the Program is to continue to publish it in the framework of the monographic series, initiated since 2003. The list of future publications is listed below in Table 4.2.

#### Table 4.9-4. Schedule of publications of the Alburnus Maior series

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Estimated publishing date</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Alburnus Maior 3 – Funeral Precinct from Tăul Cornei</td>
<td>quarter. II 2006</td>
<td>2 bilingual volumes Romanian/English</td>
</tr>
<tr>
<td>3.</td>
<td>Alburnus Maior 5 – Funeral Precinct from Jig-Picionarag</td>
<td>quarter III 2007</td>
<td>Bilingual volume Romanian/English</td>
</tr>
<tr>
<td>4.</td>
<td>Alburnus Maior 6 – Funeral Precinct from Țărina</td>
<td>quarter IV 2008</td>
<td>Site research finalized in 2005, 495 incineration tombs being researched so far; 2 bilingual volumes Romanian/English</td>
</tr>
<tr>
<td>5.</td>
<td>Alburnus Maior 7 – Funeral Precinct from Hop</td>
<td>quarter IV 2008</td>
<td>Republishing of researches to approximately 300 tombs; 2 bilingual volumes Romanian/English</td>
</tr>
<tr>
<td>6.</td>
<td>Alburnus Maior 8 – Funeral Precinct from Pârâul Porcului - Tăul Secuilor</td>
<td>quarter III 2009</td>
<td>Ongoing site research for Pârâul Porcului sector that will be finalized in 2006, up to date approximately 275 tombs being studied; 2 bilingual volumes Romanian/English</td>
</tr>
<tr>
<td>7.</td>
<td>Alburnus Maior 9 – Mining Archeology Researches from Roșița Montană. Pârâu-Carpeni Area</td>
<td>2014</td>
<td>On going researches, planned to be carried out during 2007 - 2012 Trilingual volumes - Romania, English, French</td>
</tr>
<tr>
<td>8.</td>
<td>Alburnus Maior 10 - Cercetări arheologice la Roșița Montană. Miscellanea</td>
<td>quarter IV 2009</td>
<td>publicarea cercetărilor din zona Carpeni, tumului din Valea Seliștei, tumului de la Pietrele Albe, galeria Cătălina-Monulești, amenașări miniere moderne (Hăbad și Valea Cornei); volum bilingv română/engleză</td>
</tr>
</tbody>
</table>
| 9.  | Alburnus Maior 11 - IDR III/3a. Supplementum Inscriptioon Daciae | quarte. III 2009 | Publishing of all inscriptions discovered at Roșița Montană since a
It is possible that the Foundation will choose to produce a suite of publications, some of which would be better suited to a less technical audience.

**Ethnography and Oral History**

One of the purposes of the ethnographic research in Roșia Montană was the identification of the potential impacts on both the natural and built environment as a direct or indirect consequence of the mining exploitation at Roșia Montană.

In the framework of the *Alburnus Maior* National Research Programm, funded by RMGC according to legal provisions, has already undertaken significant measures in order to preserve the ethnographical and oral history of Roșia Montană by establishing a digital oral history archive from residents that include memories and perspectives of life in Roșia Montană, and the release of another volume in the *Alburnus Maior Anthropos* series dedicated to the ethnographic studies undertaken in the Roșia Montană, Corna, and Bucium areas during 2001-2003.

The construction of a new cultural centre and mining museum in Roșia Montană will provide an invaluable opportunity to preserve and to display elements of the ethnography and oral history of Roșia Montană. Furthermore, the local participation will be actively sought during the creation of the Foundation, which would ensure that local persons are involved in decisions regarding the preservation and display of their culture and that of their ancestors.

**The Oral History Archive**

The oral history archive that was funded by RMGC, in the framework of the *Alburnus Maior* National Research Programm is presently stored at the Centre for Oral History of the National Broadcasting Company, the National Village Museum in Bucharest, the National History Museum of Romania in Bucharest and in the offices of the Patrimony Department of RMGC.

The construction of a new museum in Roșia Montană will provide a considerable opportunity for making portions of the archive available to the public. The archive will also be made available for academic study, which will further disseminate the experiences and memories of residents of Roșia Montană.
3-D Modelling of Underground Networks in Cârnic

Using the topographic information collected from the investigation of the ancient underground mining networks in Cârnic, the development of 3-D models is already being undertaken for some of the more relevant areas. Using the software 3-D Studio Max, it is possible to simulate the underground networks and show what they look like in ancient times, after words during the medieval and modern reexploitations and how they have been cleared and investigated by the archaeological team. The modelling has been designed to show short movie clips that take the viewer through a completely accurate rendition of the ancient networks. Additionally, a second format for the 3-D models has been developed that allows the viewer to use arrow keys to advance through the network, look left and right, and select their own path as they explore the networks. For the time being, only the more interesting and representative sections are being modelled but the information is available to perform further modelling if the need arises.

Results of the modelling will be available on the website [www.archeomine.org](http://www.archeomine.org) (special web site dedicated to the dissemination of the information related to mining archaeology), the [www.mnir.ro](http://www.mnir.ro) (the official web site of the National History Museum of Romania), [www.gabrielresources.com](http://www.gabrielresources.com) (RMGC’s web site) and for sure on the future web site of the Foundation, and will represent a valuable learning tool that allows exploration of the ancient galleries from anywhere in the world.

### Website

RMGC will continue regularly update their website ([www.gabrielresources.com](http://www.gabrielresources.com)) with new information regarding the ongoing cultural heritage investigation of Roșia Montană. The same information will be posted on the web site of the National History Museum in Bucharest [www.mnir.ro](http://www.mnir.ro). Furthermore, RMGC will participate in a mining archaeology website ([www.archeomine.org](http://www.archeomine.org)), which has been developed to present information about mining projects in Europe. This website has been developed independently from RMGC by Beatrice Cauuet from the University of Toulouse in France, who is the primary editor for the site. The site presents information in French, English, and Romanian, and represents a valuable research tool that includes a searchable bibliography and information that can be downloaded as a PDF.

RMGC will facilitate the setup a weblog, more commonly known as a blog. A blog is a journal (or newsletter) that is frequently updated and intended for general public consumption. Blogs generally represent the personality of the author or the Web site. The blog will present spotlights on various members of the cultural heritage team and their views regarding the researches, the project etc.

### 4.5 Industrial Mining Heritage

The cultural landscape in Roșia Montană has been shaped principally by a history of mining that dates back almost 1900 years. This mining culture has influenced a number of facets of Roșia Montană’s evolution, including settlement patterns, architecture, ethnology, economics and the natural environment of the region. This industrial heritage is preserved in some parts of the old mining works, architecture and oral history of the village.

Two of the mines in the region, Cuprumin and Rosiamin, managed by the Romanian State are intended for closure in the near future. The closure of Rosiamin alone will result in a loss of about 800 jobs and will have significant social, environmental and economic impacts on Roșia Montană and Abrud. The closure of the government-operated mine, Rosiamin, is a direct result of it no longer being economically viable.

Over 50% of the population in the area relies directly on mining and ore processing for their livelihoods (National Institute for Statistics, 1992). The population of the Roșia Montană
comuna has been decreasing the recent years (about -0.7% per year between 1992 and 2002), a trend reflected through most of the 20th century. A similar decrease pattern is observed in Abrud and Campeni, albeit to a lesser extent. The birth rate is low as in the rest of Romania, and the result is an ageing population with females largely predominant in the oldest categories (female widows). Several factors explain this trend: general rural depopulation over the 20th century, a succession of industrial crises having affected gold mining, and depressed economic conditions after the end of the communism.

The proposed mining operation for Roşia Montană will result in the continued existence of a mining culture both through creating a profitable mine and through financing the preservation and promotion of Roşia Montană’s mining heritage. In order for Roşia Montană to enter into the modern era of mining, it is essential that employees be properly trained and that opportunities for mining in the region persist beyond the limited timeframe of the project life.

The project will create a significant number of temporary and permanent new jobs that will require extensive training in state-of-the-art mining methods, operational and personal safety, environmental control and awareness and product quality. Such skills and their related benefits will be transferred to other areas of industry and the commercial sector. These highly skilled workers will contribute to the foundation of a new Romanian labour pool with the skills and qualifications to compete internationally.

During the life of the Project, exploration activities will continue in the region to identify additional ore bodies that could be mined. Identification of new ore bodies could potentially expand the life of the mine or result in future mining activities in the region.

RMGC will encourage RoşiaMin to bequeath the cultural items in its’ museum to the proposed foundation and will undertake assume responsibility for the careful dismantling and storage of such items prior to selection of an appropriate site for reconstruction and preservation.
5 Legislative Framework and Internationally Accepted Guidelines

5.1 Romanian Legislation for the Preservation of Cultural Heritage

There is no comprehensive legislative document in Romania that provides a clear definition or mandate for the protection of cultural heritage or cultural property as a whole. However, many of the components of cultural heritage including archaeological resources and historic monuments are regulated by a series of laws.

The main legislative documents that guide the protection of cultural heritage in Romania include:

- OG no. 43/2000\(^5\) (revised by Law 378/2001 and Law 462/2003), is the main law that regulates activities concerning archaeological and architectural heritage in Romania, outlining the legal framework for archaeological field research, and providing definitions and regulations for areas of protected archaeological heritage. This law also identifies the institutions and special bodies entitled to make decisions regarding the protection of Romania’s archaeological and architectural heritage; regulates archaeological heritage in Romania and provides regulations for the management of this heritage; also establishes the owner or investor as responsible for financing archaeological research required to obtain an archaeological discharge;

- Law no. 182/2000\(^6\), the main law that regulates activities regarding movable heritage, outlining the legal framework for the evaluation, classification and export of movable heritage items, and providing definitions and regulations for movable heritage items. This law also identifies the institutions and special bodies entitled to make decisions regarding the protection of Romania’s movable heritage;

- Law no. 422/2001 Concerning the Protection of Historical Monuments;


- Law no. 311/2003 Concerning the Museum and the Public Collections; and,

- The General Urban Regulation Decision No. 525/1996.

- Governmental Ordinance HG no. 1430/2003 revising Law 422/2001 regarding historical monuments

- Ordinance of the Minister of Culture OMCC no. 2682/2003 regarding the approval of the Methodological guidelines regarding the classification and recording of the historic monuments, the List of Historic Monuments, the Analytical record card for historic monuments and the Minimal record card for recording historic monuments with changes and following updates, respectively Order of the Minister of Culture and Religious Affairs no. 2807/2003 regarding the Methodological guidelines for the classification and recording of the historic monuments

- Ordinance of the Minister of Culture OMCC no. 2392/2004 regarding standard and procedures in archaeology

---


\(^6\) Law no. 182 / 2000 Regarding the Protection of the National Cultural Movable Heritage, published in the Official Gazette no. 530 on 27\(th\) of October 2000, part I.
The General Urban Regulation Decision No. 525/1996 defines the urban plan and regulations, which Local Councils are required to prepare and update for the area within their jurisdiction. The Territorial Planning Plan (TPP) and the General Urban Plan (PUG) and the Regulations constitute the technical and legal basis for any modifications to the area. Collectively, they modify existing land usage in the comună to incorporate and authorize new public utility projects including mining projects. Both the Guide and the General Urban Regulations are part of the Ministry of Public Works and Land Order 80/N/1996. Additional urban plans and regulations include the Urban Zoning Plan (PUZ) and the Detailed Urban Plan (PUD).

The Roșia Montană PUG identified areas adjacent to the Industrial Zone, which have been designated for project-related development as integral parts of the overall project. These areas include:

- The area in the comună of Roșia Montană which is the site for the construction of a new residential area for resettlement of persons, businesses and communal facilities displaced by the project; and,
- A Protected Zone designated for protection of cultural heritage, comprising the area of Roșia Plața, the eastern part of the Roșia Montană locality, including the main town square and a concentration of buildings declared as having architectural value in addition to churches and access to ancient and more recent mine workings.

A separate Zoning Urbanism Plan (PUZ) has been prepared for the area within the Roșia Montană comună proposed for resettlement of persons and activities displaced from the Roșia Montană area, designated the New Roșia Montană development area; the PUZ was endorsed by Alba County Council with Sole Agreement No. 13 of 22 April 2003. The Environmental Permit for the PUZ for the New Roșia Montană development area was issued by the EPI (Alba Iulia), as No. 32 of 30 June 2003. The PUZ was supported by the endorsements of all statutory authorities required under the legislation. This area lies outside the scope of this document and the subsequent Environmental Impact Assessment, which will be submitted for the Roșia Montană Industrial Development Zone.

The National Commission of Historic Monuments, through its authorisations No. 61 of February 2002 and No. 178 of June 2002, has approved the establishment of the Protected Zone. A separate application for a PUZ for the Protected Zone will be submitted to Alba County Council during second trimester 2006.

5.2 International Standards

5.2.1 European Union Guidelines

The primary European charters and conventions concerning the protection of the cultural heritage include:

- The Venice Charter (1966). The International Charter on conservation and Restoration of Monuments and Sites;
- La Valetta Convention (1992). European Convention on the Protection of the Archaeological Heritage; and,
- The Amsterdam Declaration (1975) which recognizes that Europe's unique architecture is the common heritage of all her peoples and which declared the
intention of the Member States to work with one another and with other European governments for its protection.

5.2.2 World Bank Legislation

Operation Policy Note 11.03 is the often-cited direction followed by lending institutions with respect to archaeological resources. Under this policy note the United Nations definition of Cultural property is adopted and is as follows:

“Cultural property” includes sites having archaeological (prehistoric), paleontological, historical, religious, and unique natural values. Cultural property, therefore, encompasses both remains left by previous human inhabitants (for example, middens, shrines, and battlegrounds) and unique natural environmental features such as canyons and waterfalls.”

This policy note also includes the World Bank’s policy of rejecting projects that will significantly damage non-replicable cultural property, and of assisting only those projects that are sited or designed to prevent such damage.

The World Bank is currently developing Operational Policy 4.11 on Cultural Property, which will provide World Bank’s definition of cultural property as well as providing policy and procedural guidance.

5.2.3 ICOMOS Charter for the Protection and Management of the Archaeological Heritage (1990)

ICOMOS is the International Council on Monuments and Sites and is an international non-governmental organization of professionals, dedicated to the conservation of the world’s historic monuments and sites. The ICOMOS charter has built upon the results of Venice Charter and provides global direction for the preservation of archaeological heritage, defined as:

“that part of the material heritage in respect of which archaeological methods provide primary information. It comprises all vestiges of human existence and consists of places relating to all manifestations of human activity, abandoned structures, and remains of all kinds (including subterranean and underwater sites), together with all the portable cultural material associated with them.”

The Charter emphasises the importance of a team of qualified professionals, not limited to archaeologists, conducting a pre-construction survey that forms the basis for future management measures. This initial survey needs to be fully considered in project costing.

The Charter also makes clear the need to abide by the UNESCO Recommendations on International Principles Applicable to Archaeological Excavations (1956), which sets out a clear set of protocols to be followed during archaeological excavations in order to minimise potential damage to archaeological resources.

Another key tenet of the Charter is the requirement to both preserve archaeological resources for future exploration, and to make archaeological heritage available to be experienced by the public.

The Charter also stresses that archaeological heritage is the common heritage of all humanity and therefore, international cooperation is essential in developing and maintaining standards in its management. This international cooperation requires the exchange of information and experience among professionals dealing with archaeological heritage management and may include conferences, seminars, workshops, etc. at global as well as regional levels, and the establishment of regional centres for postgraduate studies.
5.3 Cultural Patrimony in Roșia Montană

The following Table lists the cultural patrimony in Roșia Montană that is specifically protected by local, national or international laws or regulations.

Table 4.9-5. Designations for Cultural Patrimony in Roșia Montană

<table>
<thead>
<tr>
<th>Law no. 5/2000 of 6 March 2000 regarding the approval of the National Townplanning Documentation PATN – Section III – Protected Zones published in the Official Gazette no. 152 of 12 April 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Piatra Despicată, Comuna Roșia Montană 0.20 (Annex 1, no. 2.8)</td>
</tr>
<tr>
<td>• Piatra Corbului, Comuna Roșia Montană 5.00 (Annex 1, no. 2.83)</td>
</tr>
<tr>
<td>• Historic Centre Roșia Montană, village Roșia Montană, county Alba (Annex 3, section g – Urban assemblies, position g)3.)</td>
</tr>
<tr>
<td>• The Roman galleries of the auriferous mining exploitations, Comuna Roșia Montană, village Roșia Montană, county Alba (Annex 2, section l – Industrial architecture, infrastructure, position l)1.)</td>
</tr>
<tr>
<td>• Houses – 18th – 20th centuries - Comuna Roșia Montană, village Roșia Montană, county Alba (Annex 3, section m – monuments of folk architecture, position m)2.)</td>
</tr>
</tbody>
</table>

List of Historical Monuments (issued by MCC and published in the Official Gazette no. 646 bis of 16 July 2004, pp. 13-15, no. 140-146)

<table>
<thead>
<tr>
<th>Archaeological sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Roman settlement from Alburnus Maior, Orlea zone (LMI code AB-I-m-A-00065.01)</td>
</tr>
<tr>
<td>• The mining Roman exploitation from Alburnus Maior, Orlea massif (LMI code AB-I-m-A-00065.02)</td>
</tr>
<tr>
<td>• The Roman vestiges from Alburnus Maior, Carpeni zone (LMI code AB-I-m-A-00065.03)</td>
</tr>
<tr>
<td>• The Roman funerary monument from “Hop-Găuri” zone (LMI code AB-I-m-A-00065.04)</td>
</tr>
<tr>
<td>• The “Cătălina Monulești” gallery from the protected zone of the historic centre of the locality (LMI code AB-I-m-A-00065.05)</td>
</tr>
<tr>
<td>• The Roman galleries from Cârnic massif, “Piatra Corbului” area (LMI code AB-I-s-A-20329)</td>
</tr>
</tbody>
</table>

Historical buildings (see Appendix 1)
### Appendix 1

**Historical monuments located inside the Protected Zone and the buffer zone**

<table>
<thead>
<tr>
<th>No.</th>
<th>LMI code 2004</th>
<th>Denomination</th>
<th>Location</th>
<th>Datation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AB-II-s-B-00270</td>
<td>The historic centre of the Roşia Montană locality – „Târgul satului“, Piaţa, district Berg, Brazilor street and the area upstream of Piaţă towards the lakes</td>
<td>Historic Centre</td>
<td>18th – 20th c.</td>
</tr>
<tr>
<td>2.</td>
<td>AB-II-m-B-00277</td>
<td>House, no. 258</td>
<td>Acces zone to the Historic Centre, buffer zone</td>
<td>1900-1940</td>
</tr>
<tr>
<td>3.</td>
<td>AB-II-m-B-00278</td>
<td>House, no. 273</td>
<td>Acces zone to the Historic Centre, buffer zone</td>
<td>1936-1940</td>
</tr>
<tr>
<td>4.</td>
<td>AB-II-m-B-00279</td>
<td>House, no 275</td>
<td>Acces zone to the Historic Centre, buffer zone</td>
<td>1937</td>
</tr>
<tr>
<td>5.</td>
<td>AB-II-m-B-00280</td>
<td>House, no 324</td>
<td>Historic Centre</td>
<td>1876</td>
</tr>
<tr>
<td>6.</td>
<td>AB-II-m-B-00281</td>
<td>House, no 326</td>
<td>Historic Centre</td>
<td>1876</td>
</tr>
<tr>
<td>7.</td>
<td>AB-II-m-B-00282</td>
<td>House, no 327</td>
<td>Historic Centre</td>
<td>1870-1890</td>
</tr>
<tr>
<td>8.</td>
<td>AB-II-m-B-00283</td>
<td>House, no. 328</td>
<td>Historic Centre</td>
<td>1870-1890</td>
</tr>
<tr>
<td>9.</td>
<td>AB-II-m-B-00284</td>
<td>House, no. 329</td>
<td>Historic Centre</td>
<td>1880-1900</td>
</tr>
<tr>
<td>10.</td>
<td>AB-II-m-B-00285</td>
<td>House, no. 331</td>
<td>Historic Centre</td>
<td>1870-1890</td>
</tr>
<tr>
<td>11.</td>
<td>AB-II-m-B-00286</td>
<td>House, no. 332</td>
<td>Historic Centre</td>
<td>1935</td>
</tr>
<tr>
<td>12.</td>
<td>AB-II-m-B-00287</td>
<td>House, no. 334</td>
<td>Historic Centre</td>
<td>1840-1860</td>
</tr>
<tr>
<td>13.</td>
<td>AB-II-m-B-00288</td>
<td>House, no. 340</td>
<td>Historic Centre</td>
<td>1850-1875</td>
</tr>
<tr>
<td>14.</td>
<td>AB-II-m-B-00289</td>
<td>House, no. 341</td>
<td>Historic Centre</td>
<td>1850-1875</td>
</tr>
<tr>
<td>15.</td>
<td>AB-II-m-B-00290</td>
<td>House, no. 342</td>
<td>Historic Centre</td>
<td>1830-1850</td>
</tr>
<tr>
<td>16.</td>
<td>AB-II-m-B-00291</td>
<td>House, no. 372</td>
<td>Historic Centre</td>
<td>1860-1880</td>
</tr>
<tr>
<td>17.</td>
<td>AB-II-m-B-00292</td>
<td>House, no. 373</td>
<td>Historic Centre</td>
<td>1831</td>
</tr>
<tr>
<td>18.</td>
<td>AB-II-m-B-00293</td>
<td>House, no. 376</td>
<td>Historic Centre</td>
<td>1850-1875</td>
</tr>
<tr>
<td>19.</td>
<td>AB-II-m-B-00294</td>
<td>House, no. 383</td>
<td>Historic Centre</td>
<td>1850, 1875, 1924</td>
</tr>
<tr>
<td>20.</td>
<td>AB-II-m-B-00295</td>
<td>House, no. 389</td>
<td>Historic Centre</td>
<td>1868</td>
</tr>
<tr>
<td>21.</td>
<td>AB-II-m-B-00296</td>
<td>House, no. 390</td>
<td>Historic Centre</td>
<td>1700, 1872, 1899</td>
</tr>
<tr>
<td>22.</td>
<td>AB-II-m-B-00297</td>
<td>House, no. 391</td>
<td>Historic Centre</td>
<td>1700, 1899, 1933</td>
</tr>
<tr>
<td>23.</td>
<td>AB-II-m-B-00298</td>
<td>House, no. 392</td>
<td>Historic Centre</td>
<td>1835</td>
</tr>
<tr>
<td>24.</td>
<td>AB-II-m-B-00299</td>
<td>House, no. 393</td>
<td>Historic Centre</td>
<td>1700, 1819, 1850, 1899</td>
</tr>
<tr>
<td>25.</td>
<td>AB-II-m-B-00300</td>
<td>House, no. 395</td>
<td>Historic Centre</td>
<td>1870</td>
</tr>
<tr>
<td>26.</td>
<td>AB-II-m-B-00301</td>
<td>House, no. 397</td>
<td>Historic Centre</td>
<td>1854</td>
</tr>
<tr>
<td>27.</td>
<td>AB-II-m-B-00302</td>
<td>House, no. 398</td>
<td>Historic Centre</td>
<td>18th – 19th c.</td>
</tr>
<tr>
<td>28.</td>
<td>AB-II-m-B-00303</td>
<td>House, no. 407</td>
<td>Historic Centre</td>
<td>1825-1850</td>
</tr>
<tr>
<td>29.</td>
<td>AB-II-m-B-00304</td>
<td>House, no. 408</td>
<td>Historic Centre</td>
<td>1825-1850</td>
</tr>
<tr>
<td>30.</td>
<td>AB-II-m-B-00305</td>
<td>House, no. 409</td>
<td>Historic Centre</td>
<td>1875-1880</td>
</tr>
<tr>
<td>31.</td>
<td>AB-II-m-B-00306</td>
<td>House, no. 482</td>
<td>Historic Centre</td>
<td>1900-1950</td>
</tr>
<tr>
<td>32.</td>
<td>AB-II-m-B-00307</td>
<td>House, no. 547</td>
<td>Historic Centre</td>
<td>1850-1915</td>
</tr>
<tr>
<td>33.</td>
<td>AB-II-m-B-00308</td>
<td>House, no. 549</td>
<td>Historic Centre</td>
<td>18th – 19th c.</td>
</tr>
<tr>
<td>34.</td>
<td>AB-II-m-B-00309</td>
<td>House, no. 551</td>
<td>Historic Centre</td>
<td>1840-1860, 1915</td>
</tr>
<tr>
<td>35.</td>
<td>AB-II-m-B-00310</td>
<td>House, no. 552</td>
<td>Historic Centre</td>
<td>1860, 1915</td>
</tr>
<tr>
<td>36.</td>
<td>AB-II-m-B-00311</td>
<td>House, no. 553</td>
<td>Historic Centre</td>
<td>18th – 19th c.</td>
</tr>
</tbody>
</table>
### Historical monuments located outside the Protected Zone and the buffer zone

<table>
<thead>
<tr>
<th>Nr. crt.</th>
<th>Nr. crt. Mo</th>
<th>Cod LMI 2004 (ID Code)</th>
<th>Denumire/Name</th>
<th>Localitate/Locality</th>
<th>Adresă/Address</th>
<th>Datare/Datation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>457</td>
<td>AB-II-m-B-00269</td>
<td>Biserica &quot;Adormirea Maicii Domnului&quot; [The Dormition of Virgin Mary Church]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td></td>
<td>1741?, front porch 19th c.</td>
</tr>
<tr>
<td>2</td>
<td>459</td>
<td>AB-II-m-B-00271</td>
<td>Casa parohială ortodoxă [Orthodox Parish House]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td>137</td>
<td>19th c.</td>
</tr>
<tr>
<td>3</td>
<td>460</td>
<td>AB-II-m-B-00272</td>
<td>Casa cu spațiu comercial, azi primărie [House with commercial space, today Townhall]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td>184</td>
<td>1935</td>
</tr>
<tr>
<td>4</td>
<td>461</td>
<td>AB-II-m-B-00273</td>
<td>Casa [House]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td>185</td>
<td>1900-1918?</td>
</tr>
<tr>
<td>5</td>
<td>462</td>
<td>AB-II-m-B-00274</td>
<td>Casa [House]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td>186</td>
<td>1880-1915</td>
</tr>
<tr>
<td>6</td>
<td>463</td>
<td>AB-II-m-B-00275</td>
<td>Casa [House]</td>
<td>Sat ROȘIA MONTANĂ; comuna ROȘIA MONTANĂ</td>
<td>191</td>
<td>1900-1940</td>
</tr>
</tbody>
</table>
6 References


Law no. 182 / 2000 regarding the protection of the national cultural movable heritage, Official Gazette no. 530, October 27 2000, part I.

Law no. 422/2001 Concerning the Protection of the Historical Monuments.


Ordinance no. 43/2000 on Archaeological Heritage Protection and Declaring of Certain Archaeological Sites as Areas of National Interest.


UNESCO. 1956. UNESCO Recommendations on International Principles Applicable to Archaeological Excavations


World Bank. Operational Policy 11.03.


7 Photographs (Exhibit 4.9.1)

Photograph 1. *Impacts of historical mining on the Roşia Valley physical landscape*

Photograph 2. *Roşia Montană town square/central market*
Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

Section 7: Photographs

Photograph 3. Roșia Montană town square/central market

Photograph 4. Roșia Montană Tău Găuri, the Roman funerary monument
Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

Section 7: Photographs

Photograph 5.  Modern underground mining works

Photograph 6.  Roşia Montană, Roman pottery
Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

Section 7: Photographs

Photograph 7. Trapezoidal underground Roman mining works

Photograph 8. Example of successive and overlapping working faces
Photograph 9. Example of high and narrow stripped areas

Photograph 10. Example of Roman lamp niches in underground works
Chapter 4.9 Cultural and Ethnical Conditions, Cultural Heritage

Section 7: Photographs

Photograph 11.  Example of a water drainage system with wood channels

Photograph 12.  Wooden ladder preserved in situ
Photograph 13. Modern gallery with wooden rails used to transport ore to surface
The chamber of the intermediary water wheel camber in the moment of its discovery by the mining archaeologists. Between the wooden elements can be observed a monoxile stair in situ.

Fragments of the wooden channel situated in the upper level of chamber of the hydraulic wheel.

The lateral sides of the compartments of the hydraulic wheel.

The upper part of the hydraulic wheel – detail.

Photograph 14. Roșia Montană, Păru Carpeni mining sector, the water wheel system