

SHORT ANALYSIS OF ROMANIAN MINING

*Dumitru FODOR**

1. Exploitation of the solid useful mineral substances in Romania

The extraction and the processing of solid mineral raw materials in Romania display a very long history and the amount, variety, and importance of the mineral resources turned mining into a trade more than 2,000 years ago, in this European area.

In Romania, the mining industry witnessed, from its beginning, a continual and important growth, until the last decade of the 20th century, when it entered a period of profound changes and adaptations for the transition to the market economy.

Romania has a large number of deposits of useful mineral substances, displaying a variety of types, represented by: mineral fuels of all types, precious metals deposits, ferrous and non-ferrous ores, ores containing rare and radioactive metals, non-metallic deposits, salts and useful rocks of different provenance and category, the manner Figure no. 1 shows.

In the 9th decade of the 20th century, when the production of coal, metallic, non-metallic, and salt ores reached its maximum amount of over 150 million tons per year (Fig. 2), Romania comprised 278 operational mines and quarries, 70 plants and processing installations, of which 30 in the metal ores field, 34 in the non-metal ores field, and 6 in the coal field, spread within 41 mining basins located in 28 counties in the country. The highest yearly production was attained in the field of lignite, pit coal and non-metal ores.

Relying on the production obtained at the time, in Romania, the mining industry provided the full amount requirements of energetic coal, nuclear fuel, precious metals, plumb and zinc in concentrates and a partial amount of concentrate copper, cokes pit coal, iron ore, bauxites and most non-metal ores.

Beside the various types of production mentioned above, Romania yearly extracted important amounts of river mineral aggregates and useful hard rocks having a magmatic, metamorphic, and sedimentary origin used in certain fields of the national economy.

The deposit conditions in Romania generally are difficult and very difficult due to: a complicated tectonics, small reserves, thin layers and veins, small useful contents, deep exploitation, difficult hydrogeological conditions, etc.

Most of the deposits of useful mineral substances in Romania are small and average, at their most. Such deposits only allowed the organizing and development of small size mining exploitations, which, nonetheless, had a powerful and easily detectable influence on the environment factors.

Today, Romania only detains 15 billion tons of total geological reserves of various useful mineral substances, which represents a potential mining wealth representing several hundred billion dollars and is given by the value of the mineral products that can be used after extracting and processing them with nowadays technologies.

Romanian coal is an inferior coal, which only displays 1600 – 1800 kcal/kg, in the case of lignite, up to 3000 – 4000 kcal/kg, in the case of pit coal. Humidity ranges between 42 %, in the case of lignite, and 10 %, in the case of pit coal. Sulphur content ranges between 1.2 and 2 %.

The value of the metal products obtained out of a ton of industrial reserve ores represents maximum 15 \$, as compared with 17 – 20 \$ per ton of reserve, in the case of the deposits currently exploited and transacted worldwide. The deposits of non-metal useful mineral substances also exhibit a relatively decreased quality.

The activity of turning to good account the deposits of useful mineral substances in Romania, both while exploiting them and while processing them, employed classic technologies also implemented in other countries with a developed mining.

Depending on the conditions of the deposit, exploitation occurred in underground mines or in quarries, while implementing the most adequate methods of exploitations and technologies.

The coal and ores extracted from the underground or in quarries was processed in large processing units, where the basic technology implied washing and concentration through flotation, in the case of superior coal and non-iron ores, cyanine treatment, in the case of most gold deposits, and gravitational and combined procedures, in the case of non-metal ores.

* *Prof.eng. Ph.D, University of Petroșani, Romania*

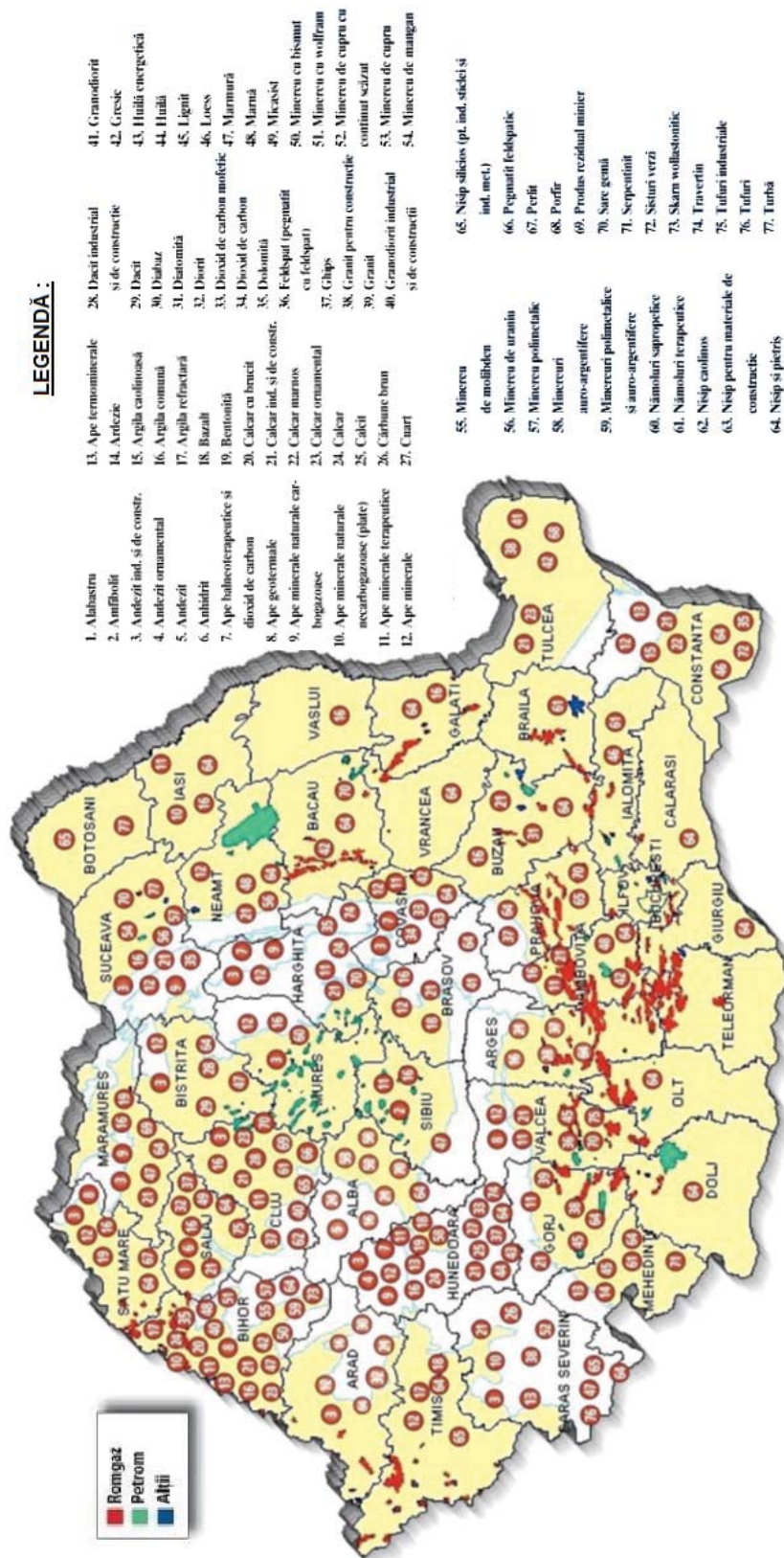


Fig.1. Territory distribution of the mining resources exploited in Romania
Source National Agency of Mineral Resources - Romania

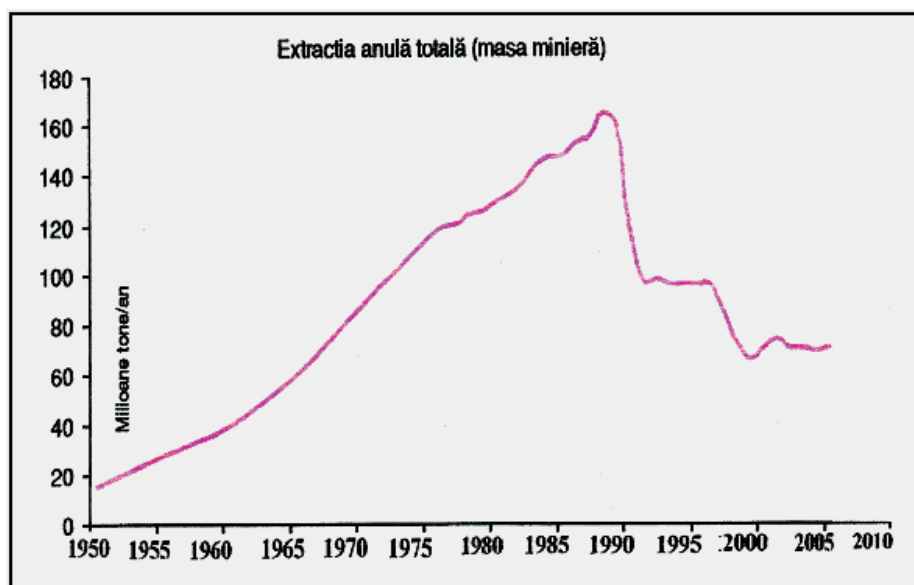


Fig. 2. Cumulated production of coal, metal ores, non-metal ores and salt in Romania, in the second half of the 20th century and the beginning of the 21st century

In Romania, out of the several hundred non-metal deposits, they extract almost 40 types of minerals being especially used in producing cement, glass, porcelain, fine ceramics, sanitary ceramics, faience, various refractory products, enamel, paints, etc.

Carbonate rocks, limestone, and dolomites detain a relatively important part within the non-metallic ores, being mostly used in cement plants.

Both the dry exploitation and the wet exploitation of the salt ores is well developed in Romania, the production being mostly directed to the chemical industry, household consumption, maintenance of roads during winter, etc.

Gypsum is produced in Romania in several quarries belonging to the large cement plants.

Kaolin and quartz sands, of various types, are mainly extracted for the needs of the chemical and pharmaceutical industries, glass, metallurgy and foundries as well as for the industry of construction materials. Common and refractory argyles are extracted in various regions in Romania.

In our country, there are over 50 quarries for marble, limestone, granites, grit stones, conglomerations, breccia, calcites, travertine, tuff, rhyolite, andesite, etc., which are extracted, processed and used for constructions and inner and outer decorative plates. Most non-metal deposits and useful rocks are exploited in quarries.

Nowadays, the production capacity of Romania in the mining field largely decreased as compared with those at disposal before 1990, while the level of their use ranges between 60 and 90 %, being different, depending on the type of mineral substance and the period of time considered.

Table no. 1 displays the productions obtained in the case of various mineral substances and useful rocks during the period 2010-2015.

These productions are highly decreased as compared with those belonging to the extractive industry in Romania before 1990; meanwhile, we should mention that the productions of iron and manganic ores, bauxite, ores containing plumb, zinc, sulphur, etc. disappeared from statistics.

When drawing out a general characterization of the work manner used in Romanian mining at the end of the 20th century and the beginning of the 21st century, we should observe the following facts:

- The exploitation methods and work technologies used underground and in quarries, as well as the preparation technologies were similar to those used at a European and international level;
- The equipment and devices used for extraction and transport were largely manufactured in Romania, while a series of them were produced in cooperation with renowned European companies;
- Due to the difficult conditions in Romanian mines, the technical and economic performance of the technologies employed were lower than those obtained worldwide by the countries displaying a developed mining;
- The financial resources for investments during the last two and a half decades were not enough and did not allow the carrying out of concrete programs of re-technologizing and modernizing of the mines and quarries in the country;
- Although Romania is the ninth country within the European Union as far as its surface is concerned, and although it detains significant amounts of mineral resources, as compared with

the other countries in the area, the attraction of native and foreign private capital and the promotion of investments projects for re-technologizing and modernizing the mining field did not attain the level of existent opportunities.

- During the previous periods, until the beginning of the 21st century, they mainly exploited the reserves of useful mineral substances that were richer and more easily accessible; the poorer reserves, displaying large volumes and requiring performing exploitation and processing technologies were to be further exploited.

Table 1 Evolution of physical production for various useful mineral substances, during 2010 – 2015
(Production reported to ANRM)

Substance or group of mineral substances	M.U.	2010	2011	2012	2013	2014	2015
Coals	(thousand t)	31,183.01	36,062.02	33,460.13	24,787.00	24,773.69	26,705.77
Non-ferrous ores	(thousand t)		33.42	31.70	38.51	40.26	21.77
Ferrous ores	(thousand t)	13.12	3.18	8.99	21.30	12.66	40.26
Non-metallic useful ores	(thousand t)	1,052.33	1,056.47	981.79	1,234.23	1,024.10	1,222.48
Gem salt	(thousand t)	2,353.51	2,219.22	1,867.49	2,113.75	2,042.34	2,079.59
Salt in solution	(m ³)	97,626.00	98,416.00	69,637.00	45,980.00	14,435.00	13,333.00
Useful rocks, of which:							
Sand and gravel	(thousand m ³)	25,132.05	31,358.49	32,369.57	26,753.77	26,689.12	38,830.33
Others	(thousand t)	31,953.67	44,363.85	43,455.14	36,738.85	35,115.67	40,091.39
Ornamental rocks, of which:	(m ³)	25,229.67	22,674.00	19,296.00	37,295.00	18,398.00	26,929.00
Marble	(m ³)	11,920.15	12,726.12	8,887.96	8,363.80	7,138.30	7,189.31



2. Romanian mining during the last 25 years

During the period 1990 – 2015, Romanian mining witnessed a series of important events worth mentioning by a synthetic analysis of the field, as follows:

- Romanian mining units were organized in industrial centres, autonomous administrations, national companies, and companies, which have been active for longer or shorter periods, depending on the restructuring and reorganizing stages of mining and of the national economy as a whole;
- The organizational and managerial restructuring of the mining units, through separating a series of complementary and even basic activities from them and organizing such activities under distinct companies;
- The separation of non-ferrous metallurgy from mining extraction and processing was an important factor determining an accelerated decline, which resulted in the disappearance of both industrial branches, in the end.
- The drastic decrease of production and investments in the mining field. All ore mines and quarries were closed, except for 5 units that are still functional today. Let's also mention that, as far as coal is concerned, all underground lignite and brown coal in the country were terminated. With respect to the superior coal in the Jiu Valley, we should say that of the 14 mines functioning before 1990; only 4 active mines exist today, with a highly decreased production.
- The restructuring of the staff of the mining units and, especially, its massive cut off, determined the human de-capitalization of the Romanian mining field;
- Technological and production restructuring of the mining units exploiting lignite, pit coal, copper, and precious metals deposits;
- Termination of 556 mining and processing units with large decantation ponds and sterile masses all over the country. The mining objectives approved for termination include:
 - ❖ 78 decantation ponds, with a volume of 341 million m³, mining waste, located on areas representing 1,770 ha;
 - ❖ 675 sterile waste dumps, with a volume of 3,100 million m³, mining waste, located on areas representing about 9,300 ha;
 - ❖ 2,500 mining works connected with the surface, consisting in tunnels, pits, inclined plans, and raises, which represent thousands of lineal meters.
- The drastic decrease of research and planning units, which ultimately resulted in the termination of a series of institutes;
- The decrease and termination of the activities of constructions in the mining field;
- The important increase of the number of unemployed individuals at a national level due to the termination of the mines, processing plants, mining research and planning units, etc.;
- The massive decrease of the activity of the machine building industry for the mining field;
- The decrease of the activities connected with the preparation of the employees required by the mining field and of the specialists through drastically diminishing the capacity of the vocational, secondary, and higher education system;
- The decrease and termination of the activities connected with the prospection and research of the deposits and the promotion of useful mineral substances for exploitation and turning to good account;
- The approval, in accordance with OUG no.190/2000, of the export of mining concentrates resulted from the State's subsidizing the exploitation activities, although the country had the capacity of processing such metals, and the State would have retrieved a part of the subsidies allocated (non-ferrous metallurgic units in Zlatna and Baia Mare);
- Beginning with year 2000, BNR stopped buying the gold resulted from processing the mining concentrates from the native agents. Such a fact determined the termination of all the silver and gold mines in Romania;
- Beginning with 1994, the production of pyrite for producing sulphur acid, fertilizers, etc. at the former chemical plants in Baia Mare, Năvodari, Valea Călugăreasca, Turnu Măgurele could no more be capitalized as a result of restructuring the chemical industry;
- The termination of the mining activities in the Romanian metal mines and quarries during a period when the prices of the raw materials tremendously increased worldwide, determined important economic and social losses at a national level;
- The termination of the mining production activities also determined the decline of the other industrial activities; the mining areas, mainly the mono-industrial ones, became activity-void and displayed no perspectives. None of the measures of social protection applied managed to decrease the social impact determined by the termination of the mines. No economic alternatives were created in the areas where the mining units were closed.



The above facts represent only a few aspects of Romanian mining field during the last 25 years, which allow a series of observations.

During two decades and a half (1990-2015) important transformations occurred in Romanian mining through re-organizations, restructuring, leasing, and, mainly, through terminating mines and processing units; all these resulted in negative effects upon the economic and social life of the whole country.

Unfortunately, no analysis of the results of the political and economic measures taken during this period has been drawn out, up to the present moment, in order to settle the direction to follow with a view to come out of depression and even to recover and develop the mining field.

It is the time to settle the required medium and long term corrective measures through technical and financial policies and strategies. The continual lack of investments in the mining, energy, and metallurgy fields will further determine supplemental imports of resources in all these domains, which involve high expenditures and costs.

The existing companies having resulted from the restructuring of the mining field do not own the financial resources required by development and modernizing, while credits imply high costs. As a result, the units that are still active in the mining field are not capable to develop, to modernize or to manufacture the equipment for the protection of the environment necessary and required by European and national legislation.

Owing to the fact that Romania is a member of the EU, the pledges afferent to each stage of restructuring the mining field should have been professionally and efficiently prepared in order to match national interest and the achievement of the common European Union objectives.

The pledges taken by Romania up to now, in the field of the mining field and of industry as a whole, negatively affected the economy and general welfare. As a result, preparing future negotiations should represent a priority of the government and should be carried out by the specialists. An adequate preparation implies first of all the knowledge of the real condition of nowadays mining and of its possibilities of development in accordance with the deposits Romania owns.

During the last 25 years, the Romanian mining field was too often managed by individuals who did not have many connections with this area of activity. People with no qualification in the field were members of the management staff of the mining units and the Administration Councils and they were not capable to take the best decisions for the benefit of the companies that paid them important salaries and allowances.

The invigoration of the industry and economy as a whole should be a priority for the government owing to the fact that they were strongly affected by the frequently chaotic political and economic measures applied.

The country's resources of solid mineral substances are still important and they represent a

medium and long term guarantee for the future in the case we are capable to use them rationally, in our national interest. A policy targeting the increase of the duration of exploitation and exhaust of the reserves should prevail as nobody is able to foresee the future. It is sure that replacing such resources with other produces, in daily activities, will occur only with important efforts and high prices.

Romania ranges among those European Union countries able to provide internally most of the resources of mineral raw materials required on a medium and long term, in the case when correct national policies and strategies drawn out by Romanian specialists are implemented.

We came to depend too much on the external markets, as a result of the political and economic measures taken during the last 25 years and, consequently, we should no longer accept to depend on foreign companies and states, from the point of view of the raw materials, in case we consider the internal possibilities we have and the international economic milieu.

It has been proven that the directions received from the international organisms were not always the best ones and such a fact is testified by the condition of the mining industry, of the banking system, and of the whole Romanian economy. We should observe these facts and become more prudent in the future.

Through the implementation in the Romanian mining field of the mining industry strategy for the period 2004-2010, approved by HG 615/2004, the measures regarding the restructuring of the production capacities, the elimination of the subsidies and the termination of non-viable mines were mainly carried out. The stipulations concerning the reconversion of the employees fired from the mining field and the economic reconstruction of the former mining areas were, nonetheless, less implemented. Meanwhile, the stipulations regarding the remodelling of the environment affected by the mining exploitations were carried out to a less extent.



The new mining strategy they plan today should have in view the economic and social reality as well as the objective needs of the country. It should not rely only on technical, economic, and trade issues, but will have to consider the social issue too, which are multiple and difficult at the level of the entire country.

The mining field should be a first-class factor in supporting the economic increase of the country and the general welfare.

Mining represents a key sector for re-launching the economy. The exploitation of the resources should contribute to the development of the country and generate benefits for the whole society. Consequently, *the Government should not give away natural resources, but should attract foreign participants in their exploitation.* Meanwhile, the whole technological flux should be carried out in Romania, while exports should, if necessary, include only the finite product, namely the metal ingots employing the metal obtained, provides a total income of about 3 times the amount resulted in the case concentrates are exported with a view to be processed abroad.

We are aware that much of our natural resources have been alienated, under terms unfavourable for the Romanian State, but we also consider that such a thing **should no more occur** and required corrections should be implemented.

Courageous measures should be taken by decisional factors and not subordination and negotiations disadvantaging Romania, as we witnessed during the last time. Romania's re-industrialization is tremendously necessary for the economic growth and general welfare.

Romania displays nowadays an increased tendency to promote regenerating resources for the production of electric and thermic energy. Such a promotion is done in the detriment of the energetic groups relying on classic fuels (coal, petrol, and gas).



3. Conclusions

The Government, according to art.135 of Romanian Constitution, should provide the exploitation of the natural resources, in accordance with the national interest, the recovery and protection of the environment, and the maintaining of ecological balance, should create the conditions able to provide the increase of the quality of life and the implementation of the policies of regional development in accordance with the objectives of the European Union. The existing geological reserves in the case of most useful mineral substances may provide production for several decades and represent a reliable resource irrespective of the fluctuations on the international markets, being entitled to investments with a view to invigorate the mining and metallurgical activity. Under the present international circumstances, Romania should adapt its industry, including its defence industry, to its own needs and its geographic position.

In the case there is political determination and support, Romanian mining field as a whole may be invigorated.

The need for fuels, metals, salt and the turning to good account of the other non-metallic mineral substances justify the required works and investments.

In the future, Romania has to concentrate its investments in the field of mineral resources and should mainly target:

a. The capitalization of the deposits displaying poor contents but large reserves, which may be extracted in quarries. At present, several such perimeters are known: Roşia Poieni, Moldova Noua, Valea Arsului-Brad, Valea Morii-Brad, Bolcana, for copper and Aurum (Borzaş), Nistru (Galbena – Lăpuşna), Certej, Roşia Montană for gold and silver;

The technology of quarry extraction allows the attaining of high extraction efficiency, owing to the development of performing equipment, compensating the decrease metal content. Meanwhile, through improving the processing technologies of the preparation plants, namely those belonging to the metallurgy of non-ferrous metals, the retrieval efficiency increased from 60 – 70 % to 90 – 95 %, with a double effect, both economic and ecologic.

b. The re-processing of the mining waste from the waste dumps and decanting ponds containing metals: Bozânta pond (Remin), Flotaţia Centrală pond – Vechi (Remin), Rovina pond – Brad, Ribîta Curteni pond – Brad and others. Durable mining may be also achieved through processing and treating mining waste, with a view

to retrieving the useful mineral substances from the waste dumps and decanting ponds, followed by the storage of the waste under safety conditions in areas where they no more represent a threatening for the communities, without influencing negatively the environment factors, allowing alternative activities in former mining areas.

The treatment of this type of waste targeting its economic use may contribute to the improvement of the environment, landscape, employment and social conditions in the affected communities. Such a solution would partially solve the issues connected with the waste dumps and decanting ponds.

The mining activity determined, owing to its specific character, a large amount of mining waste and various negative effects upon the environment. Due to the out-dated technology and equipment, which determined losses along the technological flux, and to the fact that they were not able to retrieve, through the existing technology, the whole amount of metals belonging to the processed ores, decanting ponds contain important amounts of non-ferrous metals (copper, lead, zinc), precious metals (gold, silver), and a series of rare metals (wolfram, molybdenum, cadmium), whose retrieving was considered non-economic at the time.

As far as the re-processing of the mining waste from the waste dumps and decanting ponds is concerned, after a technological improvement, the extraction efficiency provided, besides the retrieving of the basic metals (Cu, Au, Ag, Pb, Zn), a series of rare metals.

The effects of the re-processing of the mining waste upon the environment are significant owing to:

- The decrease of the metal content of the waste, after re-processing;
- The re-location of the waste containing decreased amounts of pollutants, in deposits according to the present environment standards.

In the future, it is necessary to establish a national program of researching and quantifying the reserves of useful mineral substances contained and possibly retrievable from all the waste dumps and decantation ponds in the country. *No country is allowed not to consider this metal and other useful mineral substances potential existing in the waste dumps and decantation ponds.* Under the circumstances of a significant increase of the prices on the market of non-ferrous metals (3 – 4 times), there are cases when extraction becomes possible and economically advantageous, through re-opening reserves according to underground extraction methods.

c. The re-opening of the reserves that may be capitalized economically through underground extraction methods in the case of the mines of: Cavnic, Baia Sprie, Turț Ghezuri, Șuitor and others. Let's mention that in the case of several mines, the decision of termination was taken although they detained important reserves that could be capitalized and for which they possessed the exploitation licenses.

The re-opening of such mines requires the rebuilding of the infrastructure, both at surface and underground, as well as the proper technical and material endowment, necessary for a competitive extractive and processing activity.

d. The re-opening of the reserves with accompanying rare mineral elements that display an increased economic interest under the present technical and economic context.

e. Continuing the exploitation of the coal deposits.

The future coal production will depend of the electrical and thermic energy production at the level of the country, under circumstances allowing the increased use of regenerating resources for producing energy in the detriment of classical resources: coal, petrol, and gas.

Romania, which observes this general trend, will have to take into account the drawbacks of the new resources, to maintain a system of energetic compensation for a constant energetic capacity. Accordingly, the shift to the new energy resources may be only regulated through energetic capacities relying on coal and the other fossil fuels. As a result, the functioning of the coal quarries in Oltenia and of the power stations operating with this fuel in the area and in the country should be maintained. Meanwhile, we propose the maintaining of 4 coal mines in the Jiu Valley and of the 2 large power stations in Hunedoara County (Paroșeni and Mintia).

Coal industry requires investments both with a view to operate the mining works and with a view to endow the stopes and faces with modern technologies.

We propose the following future actions of general interest for the Romanian mining field:

a. *With a view to invigorating the activity of the extractive units and the capitalizing of the reserves of useful mineral substances registered by ANRM, the ministry in charge should provide an adequate legislative and institutional framework for the functioning of the mining domain, of the sources of financing and of responsible institutions as one of the requirements of the reform of the mining field. Accordingly, projects concerning the change and completion of the mining and environment legislation and of other legislative and regulating*

documents connected with this field as well as the foundation of an institutional entity capable to manage and coordinate all the activities that concern the geological reserves of mineral resources, their extraction and capitalization should be proposed for debates and approval by the Romanian Parliament, in accordance with the new legislation to be elaborated;

b. *The foundation of a national department of mining inspection, which has to observe the rational exploitation of the deposits of mineral resources;*

c. *The resuming of the activities of geological research of the deposits with a view to reconfirm the deposits;*

d. *The national companies, the mining companies or other interested/ responsible economic entities will draw out pre-feasibility studies with a view to settling the technical and financial required for resuming the mining activities of opening, preparing and exploiting within the areas containing useful mineral substances with good potential.*

e. *The identification of new markets, especially exports markets, energy, metals, and goods stock exchanges.*

f. *Depending on the needs of the national economy, mainly of the chemical industry, it is possible to resume the mining activity for the salt deposits, too, where the activity ceased as they are under conservation. There are enough production capacities that mainly require re-technologizing and modernizing along the various stages of the technological fluxes.*

g. *The ministry in charge, together with A.N.R.M should analyse the opportunity of capitalizing those raw materials whose industrial usefulness has increased tremendously during the last years, for instance: graphite that has become a very important raw material in the field of electronic industry; accordingly, the situation determined by the decision of stopping the activity and terminating the graphite exploitations belonging to E.M. Ramnicu Valcea would change.*

h. *The development of the extractive activity within a series of companies displaying a complex activity of exploitation – preparation/ processing – use/ capitalization, or within public/private partnerships; an example is the exploitation of limestone in the quarry of Bistrița and its use in the chloro-sodium products plant in Govora.*

i. *The development of the activities of S.N.S. Salrom S.A. Bucharest towards other related activities determined by the exploitation activities, and mainly the use of underground empty spaces having resulted after salt was extracted. These empty spaces (caverns) might be used for stocking certain*

resources, such as natural gas, as deposits for various products that require certain temperature and humidity conditions, as deposits for industrial or household waste, as leisure and/or medical treatment spaces, etc.

j. The re-opening and resuming of the activity within a series of mining perimeters may be carried out after having settled a strategy of the mining field, elaborated at a national level, approved by the organisms in charge, which should consider the following:

- The mining industry should not be regarded as a negative element that determines the destruction of the environment, owing to the fact that the mining field represents an important part of a lot of national economies;*
- The mining areas contain reserves with important amounts of resources required on the internal and external markets;*
- There opportunities of adequately turning the minerals to good account through implementing new technologies;*
- Qualified, exceeding labour that might be attracted by mining;*
- Re-opening vocational schools and technical mining schools with a view to preparing qualified workers for the mining industry;*
- Reducing the State's financial effort that regard the payment of a series of social components (unemployment aid and other payments for the unemployed);*
- Existence of an infrastructure of utilities (roads and/or transport ways, networks of electricity and water, etc.);*
- The impact upon the environment factors nearby the mining works;*

- The need to improve the specialized management of the exploitation and preparation processes of mineral substances, which is less specialized at present;

- Existence of an organized and specialized structure at a local level and, especially, at each objective or group of objectives; their absence would result in a large number of units that work occasionally with equipment displaying a low efficiency and without any future vision.

As far as the general condition of the exploitation and capitalization of the useful mineral substances is concerned, we may assert that, under such circumstances, it is necessary to reconsider the position and implication of the Romanian State in the mining field, mainly through improving institutional capacity so that the leading role of regulations and promotion in the mining field is emphasized together with the providing of a viable system, where private entities are able to operate and implement financing and management. The State should capitalize its position as owner of the mineral resources through providing a stable, competent, and equitable system of association, taxes and royalties.

Let's finally appreciate and agree with the initiative of the Ministry of Economy and Business Relations that deals with the conception and drawing out of the mining industry strategy for the period 2017 – 2035 and of the new law of the Mines, which would better emphasize the importance of the mining field in the efficient capitalization of the resources of the country's subsoil within the general action providing the durable development of Romania.