INVEST IN ALBANIAN NATURAL RESOURCES

MINERAL RESOURCES

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NATIONAL AGENCY OF NATURAL RESOURCES

Mineral Resources in ALBANIA

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MESSAGE FROM THE EXECUTIVE DIRECTOR

Dear business partners!

National Agency of Natural Resources (AKBN) in August 2010 celebrates its fourth birthday with a very satisfactory record work and achievements. AKBN has added value to the work and programmes of all its partner institutions.

After years of solid growth, Albanian natural resources remain a stabilizing factor in 2010, in the current worldwide economic climate and the National Agency of Natural Resources as the main governmental adviser for mining, hydrocarbon, hydropower and renewable energies issues and promoter of Albanian natural resources wealth has its big responsibilities.

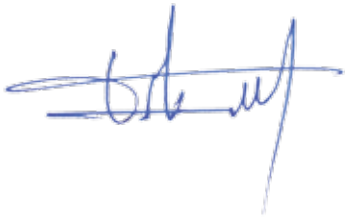
Based on Albanian state legislation, the Albanian Government stimulates and encourages all the interior and foreign investors, interested for investments in mining industry, hydroenergetic, hydrocarbon and renewable energies field.

Invest in the Albanian Natural Resources!

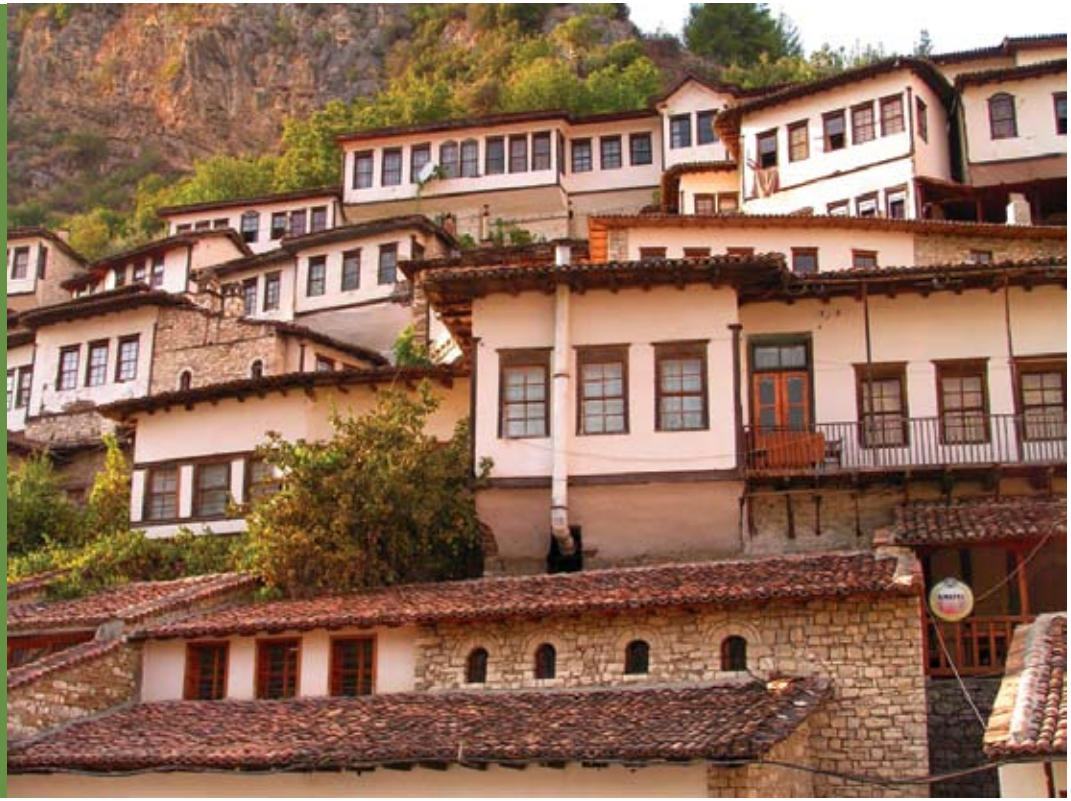
- Get advantage from the Albanian natural resources!
- Get advantage from a new, simple and facilitating legal framework!
- Get advantage from the Albanian geographical position!
- Profit from a new modernized infrastructure!

Trust in an exploding economy!

Taulant Musabelliu



I. ALBANIA OVERVIEW



Albania is located in south-western part of Balkans peninsula, Southeast Europe. The country is linked with the rest of the world via land, sea and air routes.

Characterized by a distinct mountainous landscape, the average altitude of Albania is 700 meters above the sea. Based on the structure, composition and shape of the landscape, four physical-geographic zones are distinguished: Alps, Central Mountainous Region, Southern Mountainous Region and Western Lowland. The highest peaks are those in the Alps and the Eastern Mountains (Korabi 2751 m) and the lowest peaks are located in the western coast area.

The landscape is intersected by the valleys of Vjosa, Devoll, Osum, Shkumbin, Erzen, Mat and Drin rivers, eastward and westward, which enable the connection of Adriatic Sea with the internal part of the country and the Balkans

Albania lies in the Mediterranean climatic zone, characterized by a hot dry summer, strong sunshine and generally mild winter with abundant rainfalls. Annual average rainfall is 1430 mm.

Situated along the Adriatic and Ionian sea coast, Albania constitute one of the key points of intersection for the roads crossing the Western Mediterranean into the Balkans and Little Asia. Albania ensures via sea route the connection with other world countries and that of the central regions of the Balkans Peninsula with the Adriatic coast. The Adriatic Sea and Otranto Strait stand in-between Albania and Italy.

Albania is a Parliamentary Republic
The two main ports are located in Durres and Vlora.

Mother Theresa Civil Airport is based in Rinas, 25 km from the capital city.

The Capital City of Albania is Tirana since 1920, with an estimate population of 1,000,000 inhabitants. Tirana is also the major administrative commercial centre of the country.

Official language is **Albanian**.

Borders

The border via land is 720 km long, 287 km out of which are shared with Serbia, Montenegro and the Republic of Kosovo in north and northwest of the country, 151 km east with the Republic of Macedonia and 282 km south and southeast with Greece. The coastline of the country is 362 km long.

Population

About 3,5 million inhabitants (source: INSTAT). Albania is estimated to be a country with a relatively young population.

II. MINERAL RESOURCES IN ALBANIA

Albania is distinguished for its mineral resources. Most of them have been discovered and exploited from ancient times up to date. There are also other resources pending for further research and study.

Figure 1 *The map of Albania with mining permits according to the districts*

A General Overview in Mining Industry

Albania is a country with rich mineral resources. Mineral exploration, exploitation and processing constitute a key component of the Albanian economy, due to a traditional mining industry, that has been a solid foundation to the country economic sector, generating substantial revenues. Chrome, copper, iron-nickel and coal, are some of the minerals mined and treated in Albania.

Mining industry development in Albania has passed through three main stages:
The first stage includes the period up to the end of World War II. It has been marked by two important events. In 1922, has been compiled the first Geological Map of Albania, which was even the first of its kind in the Balkans. In 1929 has been approved the first Mining Law of the Albanian Kingdom, which paved the way to the exploration and/or exploitation of mineral resources in Albania;
The second stage (1944-1994), marks the period when the mining activity has been organized in state-owned enterprises;
The third stage includes the period from 1994 up to date, during which, it is enabled the transition from an economically centralized type of operation into one based on the free market. In 1994 has been approved the Mining Law of Albania.

Licensing

The licensing process initiated in 1994, upon approval of the Albanian Mining Law.

Up to December 15.10.2009, there were issued 832 mining permits out of which were 680 exploitation permits.

Out of a total of 832 mining permits, 262 permits have been issued for chrome, 37 permits for iron-nickel and nickel-silicate, 282 permits for limestone, 15 permits for marble limestone, 18 permits for copper, 5 permits for coal, 2 permits for bauxite, 5 permits for quartz, 11 permits for gypsum alabaster, 35 permits for clay, 39 permits for limestone tiles, 26 permits for sandstone and 2 permits for plagiogranite.

The rest of exploitation licenses includes stones, like fractured limestones, quartz sands, sandstones, schistes, bituminous sands and gravels, basalts, ultra basic rocks, etc.

Distribution of mining permits per district and annum is illustrated by the Fig.1 and charts 1, 2, below.

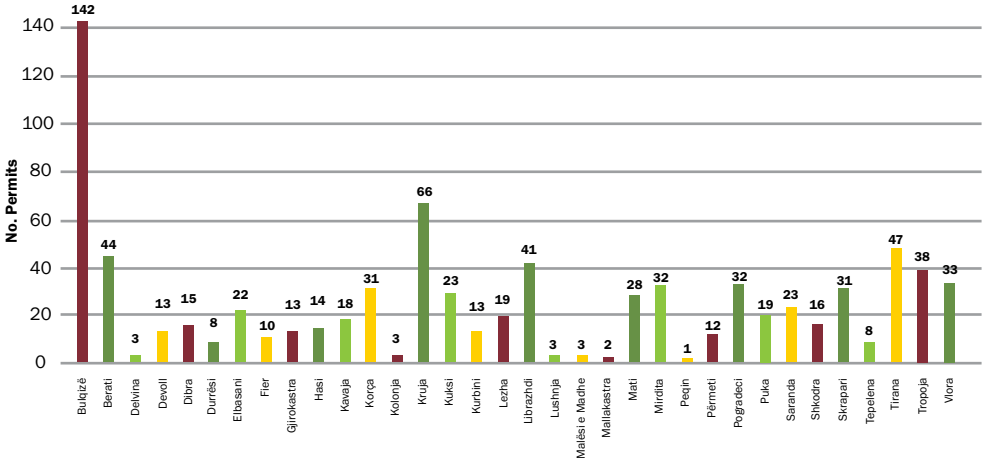


Chart 1 *Number of the mining permits according to the districts*

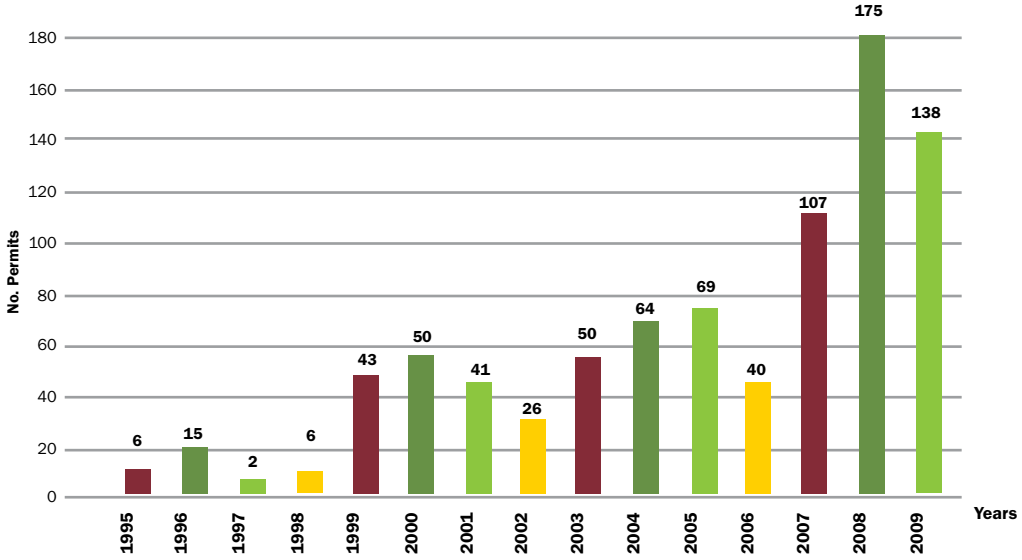


Chart 2 *Mining permits according to the years*

Concessions

In 1995, it was approved the Law “On Concessions”. Concessions on chrome, copper, iron-nickel and bitumen have been given in respect of that law, mainly involving those parts of the mining industry, which required overall investments in prospecting, exploration, exploitation and/or reorganization of the processing industry. There are given on concession:

- Chrome’s mines of Bulqiza, Katjel, Pojska
- Copper’s mines of Lak Rosh dhe Karmë
- Bitum’s mine of Selenica

Mining Potential of Albania

Through many studies carried out by all proper institutions and services in Albania, during the last 50 years, a detailed mapping with relative mineral compositions is now available.

Chrome
36.9
min tons

No.	Minerals	Composition
1	2	3
1.	Chromite	Cr203 (18-42)%
2.	Iron-Nickel	Fe 42.3%; Ni 0.98%; Si02 12.8%; Co 0.063%; Fe 18.3%; Ni 1.3%;
	Níckel-Silicate	Si02 36.9%; Co 0.043%
3.	Copper	Cu (1.3-2.5)%
4.	Coal	3200 KCal/Kg
5.	Peats (Turfs)	2907 KCal/Kg, moisture 11.3%, ashes 30%, S 1.1%
6.	Natural Bitumen	(4.41-9.73)%, rarely 11.94% bitumen
7.	Bituminous sands	(8-10)% bitumen
8.	Bituminous coal	3500-7500 KCal/Kg
9.	Pyrobitumens	2000-3000 KCal/Kg, C (78-80.6)%
10.	Titanomagnetites	Ti02 6%; Fe203 18%; V205 0.2-0.5%
11.	Bauxite	Al203 (40-50)%; Si02 13%; Fe203 (7.8-18.6)%; Ti02 2.1%; Ca0 2.4%
12.	Barite	Ca0 (36-38)%; Mg0 (73-77)%; Si02 (1.9-2.6)%; Fe203 (2.1-3.5)%
13.	Mergele	Ca0 (0.03-0.35)%; Mg0 (18-28)%; Si02 (1.5-4.9)%; Fe203 (0.41-1.5)%
14.	Trepele	Cu 0.25-1.035; Zn 0.15-0.89%; Pb 0.15-0.29%; Au 0.39gr/t; Ag 6.5 gr/t; S 12%
15	Polymetals	Al203 17.74%; Si02 71.2%; Na20 3.47%; K20 4.42%
16.	Feldspat + albitophyres	S - 2-51%
17.	Fluorite	
18.	Sulphur	
1	**2**	**3**
19.	Pyrophylite	Ca0 0.37%; Mg0 1.09%; Si02 68.4%; Al203 18.58%
20.	Talc	Mg0 62%; Si02 1.66%; Al203 74%; Ti02 0.23%; Ca0 53.05%; HK 42.37%
21.	Chalk	Ca0 (50-55)%; Mg0 (0.25-4)%; Si02 (0.1-3)%; Fe203 (0.1-0.8)%
22.	Limestones	Ca0 30.34%; Mg0 18.21%; Fe203 (0.14-0.43)%
23.	Dolomites	Ca0 50%
24.	Carbonatic Decorat. Stones	Si02 47%; Fe203 10%; Al203 13%
25.	Basalts	Mg0 35-39%; Si02 11-13%; Ca0 3.6%; Fe203 1.9-2.2%
26.	Magnesites	P205 4-12%; Ca0 48-50%; Si02 5-8.5%; U308 > 0.005
27.	Phosphorites	Al203 (0.18-0.82)%; Mg0 (47-49)%; Si02 (37-39)%; Fe203 (0.2-5.2)%
28.	Olivinites	CaS04 2H20=88-98%
29.	Gypsum-anhydrites	Al203 (9.8-10.7)%; Mg0 (0.4-0.9)%; Si02 63.4%; Fe203 (1.1-5)%;
30.	Volcanic Glass	Ca0 4.6-4.8%; Ti02 (0.27-0.64)%; Na20 (1.4-2)%; K20 0.27%
31.	Granites	NaCl=76-82%
32.	Rock Salt	Al203 (11-14)%; Mg0 (2.6-7)%; Si02 (43-51)%; Fe203 (0.4-11)%;
33.	Clays	Ca0 (0.7-0.8)%; Ti02 (0.3-0.7)%
34.	Kaolin	Al203 (29-35)%; Mg0 (2.8-8)%; Si02 (43-46.8)%; Fe0 3.38%; Ca0 (1.4-1.9)%,
35.	Silica sands + quartzites	Over 80% Si02, about 10% Al203 and up to 1.5% Fe203
36.	River-bed gravels	Sand and gravel
37.	Ophiolitic decorative stones	Ca0 (31-52)%; Mg0 (0.3-18.3)%; Si02 (0.25-0.96)%; Fe203 (0.1-0.8)%

Table1. *Average contents and compositions of the most important minerals*

No.	Sort of mineral	Unit	Production			
			2005	2006	2007	2008
1	Chrome	ton	162 772	212 581	199 771	207 104
2	Copper	ton	68 312	35 071	98 000	105 000
3	Iron-Nickel and Nickel-Silicate	ton	800	79 000	369 559	353 290
4	Coal	ton	2 640	3 800	4 000	1500
5	Bitum + bituminous sand	ton	13 955	9 000	6 785	23 968
6	Limestones	m3	1 337 373	1 339 440	1 716 122	3 837 529
7	limestones flags	m3	-	23 193	29 263	27 900
8	Marbled limestones	m3	-	11 620	2 805	4 264
9	Silica sands	m3	3 200	3 200	4 400	12 077
10	Clays	ton	315 085	562 469	855 675	724 282
11	Gypsum	ton	14 770	19 683	46 200	77 633

Table2. *Production and export of some main minerals*

Chrome

Albania is a well known country with high chrome potential, as compared to other Mediterranean countries. The main deposits of this mineral are situated in the Ophiolites of the Eastern Belt area, along the direction Tropoja-Kukes-Bulqiza-Shebenik. Less development is identified in the deposits of this mineral in the western belt of ophiolites. From the geographic perspective, there are three main regions where chrome is located:

- North-eastern Region (Tropoja and Kukes Ultrabasic Massifs);
- Central Region (Bulqiza Ultrabasic Massif);
- South-eastern Region (Shebenik-Pogradec Ultrabasic Massif).

Figure 2 *Chrome's deposits*

The Ultrabasic Massif of Bulqiza is the massif with the biggest chrome potential. In this massif is explored and is being exploited the chrome mine Northern Bulqiza.

Present Geologic Reserves of chrome in these regions are:
Category B+C1 21.8 million tons
Category C2: 15.1 million tons
Total: B+C1+C2: 36.9 million tons

• Tropoja Ultrabasic Massif
Geological reserves:
6.1 million tons x 26.48% Cr2O3
Perspective deposits:
Zogaj, Vlahnë, Qaf-Perollaj

• Kukës Ultrabasic Massif
Geological reserves : 6.8 million tons x 21.4% Cr2O3
Perspective deposits : Kalimash, Përroi Batrës

• Bulqiza Ultrabasic Massif
Geological reserves : 12 million tons
Geological reserves, more than 38% Cr2O3: 7.5 million tons
Geological reserves: 1.2 million tons, more than 38% Cr2O3
Perspective regions: Katjel-Pojskë; Bushtricë-Përroi Govatës.

Copper

Based on the geologic conditions, their morphology, genetic and mineralogical components, there are distinguished four main types of copper deposits:

- Hydrothermal-metasomatic and volcanogenic-sedimentary deposits, such as Munella, Qafe-Bari, Gurth, Rruga e Rinisë, etc.;
- Volcanogenic-hydrothermal-metasomatic deposits, such as Tuç, Spaç, Derven, Paluca, etc.;
- Volcanogenic-sedimentary deposits, such as Munella, Gjegjan, Palaj, Karma, Rubik;
- Massif sulphide metasomatic deposits, such as Kurbnesh, Golaj, Thirra, Nikoliq, etc..

Iron-Nickel and Nickel-Silicate

Iron-nickel and nickel-silicate are mainly located in Devoll (Bilisht, Bitincka, etc), Pogradec (Guri Kuq, Çervenaka, etc.), Librazhd (Prrenjas, Skroska, Xixillas, Bushtrica), Kukes (Mamez, Trull Surroj, Nome).

The deposits are composed by the following mineral ores:
- Nickel-silicate ore of the remaining crust or primary crust;
- Iron-nickel ores;
- Re-deposited or secondary crust nickel-silicate ores.

Some perspective zones for iron-nickel and nickel-silicate exploration and/or exploitation may probably be the areas of Bilisht-Kapshtica, Skroska-Bushtrica, Prrenjas deposit (deepness), Trull Surroj-Mamez and Kukes-Has region.

Fig.3 Copper's deposits

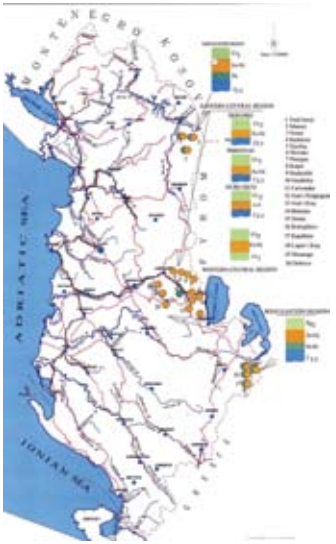


Fig.4 Nickel's deposits

Fig.5 Coal's deposits

No.	Region	Fe%	Ni%	SiO2%	Co%
1.	Devolli				
	Nickel-Silicate	16,60	1,20	35,12	0,0397
	Iron-Nickel	38,66	1,074	12,2	0,056
2.	Coal				
	Nickel-Silicate	21,73	1,057	40,12	0,053
	Iron-Nickel	37,22	1,029	26,93	0,0547
3.	Bitum + bituminous sand				
	Iron-Nickel	44,72	0,97	17,22	0,074

Table3. *Average content of nickel-silicate and iron-nickel according to the regions*

The nickel ore is in form of iron-nickel (Pogradec, Librazhd) of a grade of 0.8-1.1 % Ni and in form of nickel-silicate (Devoll, Kukes) of a grade of 1.1–1.4 % Ni.

NICKEL MINERAL RESERVES ACCORDING TO THE REGIONS

Region	Quantity 000/ton	Fe%	Ni %	SiO2%	Co %
Total Ni-Si	52 179	16.60	1.20	35.12	0.0397
Total Fe-Ni	59 193	38.66	1.074	12.2	0.056
Kukësi					
Total Ni-Si	29 221	21.73	1.057	40.12	0.053
Total Fe-Ni	65 504	37.22	1.029	26.93	0.0547
Librazhd-Pogradec					
Fe-Ni	105 592	44.72	1		
Total Fe-Ni	230 000				
Total Ni-Si	81 400				

Coal

Albania has considerable coal reserves . The reserves are estimated about 794 million tons and are mainly located in three coal reserves areas:

- Tirana region, about 86% of reserves;
- Korça-Pogradec region, 10% of reserves;
- Memaliaj region, 4% of reserves.

Albanian coal reserves are of the lignite type, with a calorific analytic power in the limits between 2000-5600 KCal/Kg. The coals could be washed after mining increasing so their calorific value in concentrates can be up to 4500-5500 kcal/kg.

Peats (turfs)

Peats constitute another energetic resource and are located in the South-eastern part of Albania (Maliq) , with these content indicators:

- Calorific power: 2200 KCal/Kg
- Humidity: 11%
- Volatile particles: 39%
- Sulphur presence: 1,1%

Natural Bitumen and Bituminous Substances

Albania is characterised by a significant presence of natural bitumen, which results from the natural transformation of petroleum in the oil deposit areas, particularly near the major tectonic falls. They are mostly occurring between limestone and bituminous dolomites, in schistes and sands.

Natural Bitumen

The high-quality bitumen deposit is located in Selenica (Vlora region). From this mine is extracted a porous bitumen, which is plastic and polished. It is high quality bitumen containing 15-17% ashes, with a melting point of 105-115° C.

Bituminous coal

Like the natural bitumen, this mineral is found in Selenica and contains free carbon at 70-92% and releases a calorific power of 3500-7500 KCal/Kg (or 14,7-31,5 MJ/kg).
Bituminous sands

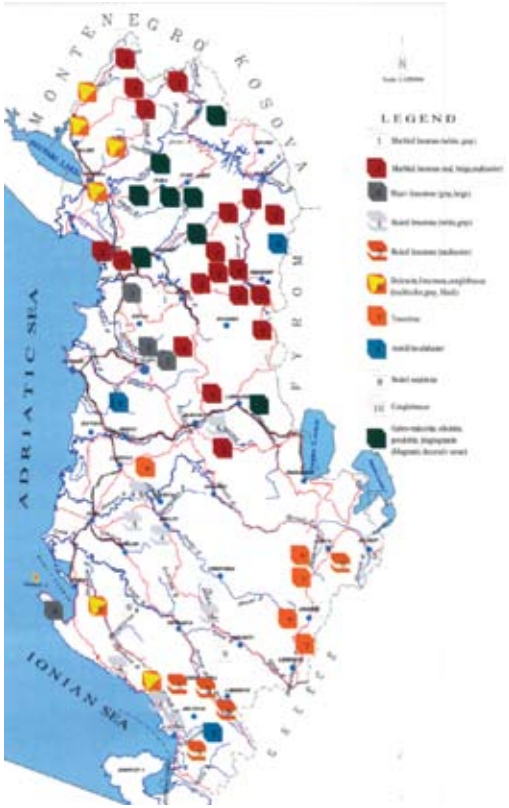


Fig.6 Deposits of non-metalliferous minerals

Considerable deposits of bituminous sands are discovered in the areas of Treblova, Kasnica and Visoka.
Bituminous sands in Albania present the petroleum floating asphalt and the gas stratifications. The mode of forming is the same with that of tar sands formed in Venezuela, Canada (Alberta), etc.

Non-Metalliferous Minerals

Albania is rich on non-metalliferous industrial

minerals, which constitute an extraordinary asset for the country that needs to become a marketed component as their best use possible could have a significant impact on the economic consolidation.
Each of the non-metalliferous minerals has a specific importance, but the most needed ones are those found in considerable amount and which have a broad scope of application, such as limestone and dolomites, clays, gypsums and anhydrites, all types of decorative stones, basalts, etc., without excluding olivinites, caolines, volcanic glass, granites, phosphorites, etc..

Limestone

Limestone represent the carbonatic raw material, distributed from the oldest Triassic-Jurassic depositaries up to the youngest ages of Cretaceous and Eocene, in the form of massifs, layers and belts, in almost all districts of the country as: Tropoja, Kukes, and Shkodra, in the North up to Korça, Kolonja and Gjirokastra in the South.
There are recognised about 60 deposits of limestones objects calculated with huge quantities with an open perspective to enlarge. Limestones are used for the cement productions, lime and construction aggregates.

Dolomites

Dolomites as limestones are widely spread in Albania in the form of seams, packs and belts of considerable dimensions.
Dukati deposit is the main deposit with an average content of MgO, 18-21 %. Dolomites seams are located in the Borsh, Kurbin and Kruja region with an average of 18%. There are more than 33 deposits of dolomites, travertine, marls and trepel, with huge quantities of reserves.

Carbonatic Decorative Stones

Carbonatic decorative stones are mainly located in the Korabi zone, in the peripheral parts of Mirdita tectonic zone. In the Alps regions, in Krasta-Cukal, Kruja and that Jonic, starting from Tropoja and Kukes in the North, continuing in the South with Dibra, Bulqiza, Mati, Librazhdi, Pogradeci, Korca, Kolonja and the zones of Lezha, Kruja, Tirana, Elbasan, Lushnja, Vlora, Tepelena, Gjirokastra and Saranda, in the South.
There are about 90 deposits of decorative carbonatic and ophiolitic stones in huge quantities, with opened perspective to be enlarged. Actually, the usage of decorative stones in construction sector is low.

Phosphorites

The phosphorites deposits are located mainly in the carbonatic rocks of Jonic tectonic zone, in the regions of Tepelena (Gusmar), Gjirokastra (Fush-Bardha), Saranda, etc.. Actually, have been discovered 12 phosphorite deposits, with a considerable quantity of reserves.

Limestones and carbonatic decorative stones

1335

min tons

Clays

There are huge quantities of clay reserves. There are over 90 deposits of different kinds of clays as follows:
Porcelanous clays in Tamara and Burrel;
Montmorillonite, atapulgite clays in Shëngjin and Burrel;

Flysch Clays are deposited in over eight occurrences such as: Bradashesh (Elbasan), Drisht and Tarabosh in Shkodra, Brar in Tirana, etc. A specific characteristic of these clays is the high CaO presence, making them suitable for the cement production.
Silica Sands and Quartzites

Findings speak of almost 30 deposits of quartzes and silica sand with considerable mineral reserves. Silica sands are used in glass production, abrasive and metallurgy. The average contents of silica sand are above 80% SiO2, about 10% Al2O3 and Fe2O3.

Gypsums Anhydrites

Thanks to the geological workings an important quantity of gypsum reserves has been discovered. The main gypsum deposits are located in Dumre, Kavaja, Vlora, Saranda and Diber regions.
Rock Salt
The main deposits of rock salt are located in Mengaj, Tile and Dhrovjan areas. The quantity of reserves estimated in these deposits is more than some hundred million tons with a content of NaCl=76-82%.

River-bed Gravels

Almost 52 deposits of river-bed aggregates (sand and gravel), have been studied and discovered throughout all the rivers of the country, with a huge quantity reserves estimated.

Olivinites

The olivinite deposits are mainly locate in the Eastern Belt of ultrabasic massifs. The most important deposits are located in Kukes and Tropoja Ultrabasic Massifs. The olivinittes may be used as a refractory material, when they are fresh and the MgO content in them is at 46-48%, but they may also be used as decorative stones.

Volcanic Glass

Volcanic glasses are represented by volcanic middle-acid lime rocks and acid aquiferous rocks, which, subjected to a technologic process at the temperature of 900-1200° C, may be expanded within 30-60 seconds, enlarging the volume with 5-20 times. Volcanic glasses deposits are located in the volcanic complex of Central Mirdita, mainly in the western part of Munella Mountain, from Marshterkor in south up to Lak Rosh in the north.

Magnesites

Magnesites deposits are located in the ultrabasic rocks which are connected with

moulder and serpentized peridotites in the massifs of our country (Gomsiqe, Levrushk, Korthpula, Shahinaj, Shengjun, Lucana, and Devoll).

Granites

Albania has several massifs known as bearers of small granite occurrences (Trokuza, Levrushk, Fierza, Radomir, Peladhi, etc.). The mineralization in Levrushk granite massif is represented by (feldspar quartz), which can be used in glass and ceramics production.

Ophiolitic Decorative Stones

These kinds of stones can be found in Mirdita area, from Tropoja to Kukes in north, down to Korca and Kolonja in south. There are 20 discovered deposits of ophiolitic decorative stones, which contain more than some million m3 of reserves. The further geological study of these deposits can be a source for the increase of its using direction and enlarge the quantity of reserves.

Basalts

Basalts are located in Mirdita tectonic zone, in the northern part of Kukës region, Puka, Mirdita, as well as in Korca and Kolonja. By these huge quantities of reserves, located from North to South, can be fulfilled not only the requests of the country but they can also be used for export.

Development of Mining Industry in Albania

Based on the Albanian Strategy on Mining Industry, there are some priorities to be taken into consideration, like the:

• Production increase of the traditional, such as chrome, copper, nickel, as well as enhancement of their processing scale, in order to make them competitive in supplying the domestic and foreign market;

• Expansion of the production range and processing of other minerals, such as bituminous sands, olivinites, basalts, decorative stones, etc.;

• Promotion of all the existing reserves, enabling the exploitation, processing and marketing of the products, both for the domestic and foreign market;

• Application of updated technologies in mines and processing units (enriching plants, breaking-fractioning-grinding plants, metallurgic factories, etc.), enabling a complex mineral exploitation;

• Enhancement of management methods. Effective utilization of the existing mineral resources and of those to be found in the future, in order to introduce them in the market and eye an increase of revenues from their exportation, as well as raw or processed products.

III. PERSPECTIVE ZONES

The estimated quantities of different kind of ores reserves in Albania are as below:

- Chrome - 36.9 min tons
- Copper-27 min tons
- Iron- Nickel and Nickel-Silicate -311 min tons
- Coal -794 min tons
- Decorative stones and ophiolitic - 230 min tons
- Basalts-1064 min tons
- Olivine- 108 min tons
- Gypsum – 170 min tons
- Lime stones and carbonatic decorative stones - 1335 min tons
- Sand stones - 860 min ton and other minerals.

Some of the perspective zones for research, exploration and exploitation are:

Chromium:

There are three main regions of Ultrabasic Massifs of chrome in Albania:
1. North-East Region (Ultrabasic Massif of Tropoja and Kukës)
2. Central Region (Ultrabasic Massif of Bulqiza).
3. South-East Region (Ultrabasic Massif of Shebenik-Pogradecit)

Present Geologic Reserves of chrome in these regions are:
Category B+C1 21.8 million tons
Category C2: 15.1 million tons
Total: B+C1+C2: 36.9 million

- Tropoja Ultrabasic Massif

Geological reserves: 6.1 million tons x 26.48% Cr203 Perspective deposits: Zogaj, Vlahnë, Qaf-Perollaj

- Kukës Ultrabasic Massif

Geological reserves : 6.8 million tons x 21.4% Cr203
Perspective deposits : Kalimash, Përroi Batrës

- Bulqiza Ultrabasic Massif

Geological reserves : 12 million tons
Geological reserves, more than 38% Cr203: 7.5 million tons
Perspective deposits: North Bulqiza, Qaf-Buall, Batër, Krasta in depth, Thekna in depth, intermediate region of Batër-Liqeni Sopeve-Thekën-Tërnovë

- Shebenik-Pogradec Ultrabasic Massif

Geological reserves: 1.2 million tons, more than 38% Cr203 Perspective regions: Katjel-Pojskë; Bushtricë-Përroi Govatës.

- In Manazdren- Selishtë- Shtrungëz area;
- In Lura massif;

Copper

- In Munellë area;
- Around Perlat area;

• Around Rehovë area.
Iron- Nickel and Nickel- Silicate
• In the depth of Përrenjas mine and Bushtrica drift;
• In the area between Bitinckë and Kapshticë areas;
• In Kukës- Krumë area.

Carbonatic decorative stones

- Bedded limestone In Rasfik, Rubik area;
- Decorative marble limestone in Kolosjan- Skavicë- Kovashicë of Kukës- Dibër- Bulqizë areas;
- Conglomerate In Bilisht- Kapshticë area;
- Decorative limestone ate locates in QafShtamë and Mat area.

Silica sands decorative stones

- Leskovik- Përmet- Këlcyrë- Ballaban region;
- Corovodë- Polican- Berat region;
- Plovisht- Mesmal in Korça District;
- In Shushica river- bed, Vlora region.

IV. LEGISLATION

Legal framework

• Law no.10081, dated 23.2.2009 "On Licensees, Authorizations and Permits in the Republic of Albania";
• Law no. 7796 dated 17.02.1994 "Albanian Mining Law" as amended;
• Guideline no. 1028, dated 10.12.2009 "On the content of the documentation to grant a mining permit" from the Minister of Economy, Trade and Energy

According to the Albanian Mining Law the legal entities and individuals have the right to conduct mining activities. These entities for acquiring mining permits for minerals of group 1,2,3,4 must present a request to the National Registration Centre according to the procedure predicted in Articles 17, 31, 32, and 33 of the Law " On licenses, Authorizations and Permits in the Republic of Albania. "

According to Guideline No. 1028, dated 10.12.2009 "On the content of the documentation for granting mining permits" documentation should include:
• Request for granting a mining permission, defining exactly the coordinates of the area and the surface asked for exploitation. Brief description and a map of the mining area of scale 1: 25 000 (defined by its coordinates in plan and its surface).
• Verification Act conducted by the National Agency of Natural Resources (AKBN), according to the format prepared by the Agency for each type of required mining permit.
• The Decision of National Registration Centre as a legal entity, where the object of activity in registration form have to be approved as development of mining activities with work in surface or underground, according to the type of permit requested.
• Financial resources needed for investment that are predicted to be completed
• The juridical persons who apply for a mining permit, where they themselves declare that had not exercise before any business activity, must submit their financial sources through one of documents as below:
- A statement from the Bank to confirm that the legal entity has opened account number, which should have deposited at least 30% of the projected investment. A declaree from the Bank that confirms that the legal person has an account and where are deposited at least 30% of the predicted investment value and/or:
- A document certifying that the legal person

has secured a loan from a bank or any other financial entity with a value which covers the value of investments predicted to be completed, and/or
- A contract with an investor who provides financial support for implementation of investment program. In this case the company must submit a notarized document, in which are expressed willingness of investors to support this investment, as well as documents to provide the financial resources of investors. (bank guarantee, or balance sheet of the company in which the investor is sole or majority shareholder).

For the legal persons that apply for mining permits, that have previously developed a mining activity or any other business activity, as documents for the accomplishment of financial sources will be considered:
• Accounting Investments done.
• Physical Inventory with main investments as buildings, machinery, office equipments, etc.
• Financial balance sheet of the last year.

Types of permits and the required documents
For Exploration Permits of minerals of group 1, 2, 3, the application must contain the conditions set out in Article 25 of the Albanian Mining Law :

"The demand for an Exploration Permit must have:
a. Name and address of the applicant.
b. Specification of financial resources and technical skills that are needed to the license applicant, and his experience in the mining industry.
c. A description of the requested area, including a map.
d. Specifications of the proposed research program to be performed, the proposed working methods, an assessment of costs and terms of carrying out the program. "

The term of this Permit is defined by point 23 of this Law where is cited: "The maximum term will be a year and it is not an object to a time extension."

• For the Prospecting Permit of minerals in Group 1, 2 and 3, the request must contain the conditions set out in Article 31 of the Mining Law of Albania, where it is cited as below":
"The demand for a Prospecting Permit shall include::
a) identity and address of applicant;
b) statement of relevant experience;
c) statement of financial and technical resources available to the applicant for purposes of the requested concession;
ç) proposed area of concession, including map;
d) mineral or minerals (Group 1, 2 or 3) for which the concession is sought;
dh) proposed method of explorations
e) proposed work program and anticipated schedule and expenditure for carrying it out. An exploration concession shall specify the minimum worse program to be undertaken by the concessionaire.

Performance of produced minimum worse program shall be guarantied by a guarantor acceptable to the Minister. The form and substance of produced guarantee shall also be subject to the Minister's prior approval.

According to Article 34 of Albanian Mining Law , the initial term of an exploration concession shall be for two years, subject to up to three extensions of one year each if requested by the

concessionaire at least thirty days before the end of the then current period.

For the Exploitation Permit for minerals in Groups 1, 2 or 3, the request must include the conditions as predicted by Law in article 45 of Albanian mining Law, as it is cited below "The request for en exploitation Permit shall:

"The request for an Exploitation Permit shall include:
a) identity and address of applicant;
b) specify the area over which the mining concession is sought (including map);
c) specify the mineral or minerals in Groups 1, 2 or 3 for which the mining concession is sought;
ç) give details of the mineral deposits in the area over which the mining concession is sought, including details of all known minerals proved, estimated or inferred, ore reserves and mining conditions;
d) be accompanied by a technical report on mining, treatment and value added possibilities within Albania and the intention of the applicant in relation thereto;
dh) provide a proposed development and investment program and schedule;
e) give particulars of the proposed mining operations, including:
(i) estimated capacity of production and scale of operations,
(ii) nature of the products,
(iii) proposals for the prevention of pollution, the treatment of wastes, the safeguarding of natural resources, the progressive reclamation and rehabilitation of land disturbed by mining and for the minimization of the effects of mining on surface water and ground water and on adjoining or neighbouring lands,
(iv) the anticipated residual effects on the environment of the mining operations and proposals for their minimization on and mitigation, and
(v) any particular risks (whether to health or otherwise) involved in mining the mineral and proposals for their control or elimination;
ë) give a detailed forecast of capital investment, operating costs and revenues and the anticipated type and source of financing;
f) give particulars of the applicant's proposals with respect to the employment and training of citizens of Albania, and
g) shall give particulars of expected infrastructure requirements and arrangements

According to Article 49 of Albanian Mining Law "The duration of a mining exploitation permit shall be till to twenty years from its effective date, subject to up to four renewals of till to five years each if requested by the Owner of the Permit not less than one year before the expiry of the previous term.

• To permit the prospecting and exploration of minerals in the 4th Group the request must contain the specified conditions according to Article 64 of the Albanian Mining Law as below:

The application for a prospecting and exploration permit for group 4 of minerals shall include:
a) identity and address of applicant;
b) statement of financial and technical resources available to the applicant for purposes of
the requested concession, statement of relevant experience in prospecting and exploration for group 4 of minerals;
c) proposed area of concession, including map;
ç) mineral or minerals (Group 4) for which the

concession is sought;
d) proposed method of explorations and proposed worse program and anticipated schedule
and expenditure for carrying it out.

The duration of a the Permit shall be till to two years from its effective date, the maximum area for a prospecting and exploration concession is thirty contiguous square kilometers.The extension of the permit depends on the specifics of the activity the person wants to accomplish" - The second paragraph of Article 63 of the Mining Law.

• To permit the exploitation of minerals in the 4th Group, the application must contain the conditions set out in Article 70 of the Albanian Mining Law, cited as below:

An application for quarry permit shall include:
a) name and address of the applicant;
b) indicate the minerals or materials of the 4th Group for which the permit is sought;
c) specify the initial duration for which the permit is sought;
ç) provide particulars of the financial resources available to the applicant to pay for the minerals and materials to be extracted;
d) In the case of a type 1 quarry permit, indicate the minimum and maximum quantities on an annual basis and the specifications of each mineral or material for which the permit is sought.
dh) in the case of a type 2 quarry permit,
(1) specify the exact location of the applicant's proposed quarry,
(2) give details of the deposit over which the quarry permit is sought,
(3) provide a proposed development and investment program and schedule,
(4) give a detailed forecast of capital investment, operating costs and revenues and the
anticipated type and source of financing,
(5) give particulars of expected infrastructure requirements and arrangements for provision,
(6) provide a detailed list of construction materials and minerals to be produced from the quarry, estimated capacity of production and scale of operations, and planned markets for the production,
(7) detail the experience of the applicant in operating quarries and in marketing minerals and materials of the type to be produced from the quarry;
(8) give particulars on environmental aspects of the proposed quarry operation,
including:
i) proposals for the prevention of pollution, the treatment of wastes, and the safeguarding of natural resources,
ii) the anticipated residual effects on the environment of the quarry operations and proposals for their minimization, and
iii) any particular risks (whether to health or otherwise) involved in mining the materials and minerals and proposals for their control or eliminations
and
9) give particulars of the applicant's proposals with respect to the employment and training of citizens of Albania.

Under Article 69 of this Law "Is authorized to provide two types of permits quarries":
a. Type 1 quarry permit, is a permit that permits the exploitation of minerals and construction from a public quarry on payment of produced fee as may be imposed by the Minister in the given permit and the value of this payment is

predicted in Regulation. The maximum initial duration of a type 1 quarry permit is one year, subject to renewal for successive periods of six months as requested by the holder.
b) Type 2 quarry permit, being an exclusive permit to develop and mine a quarry for minerals or construction materials in consideration of paying the fee specified in permit as may be imposed by the Minister in the given permit and the value of this payment is predicted in Regulation
The maximum initial duration of a type 2 quarry permit is ten years, subject to renewal for successive one year periods if requested by the holder.
• In exceptional cases, when the term of the grant of permission required usage mining up to 99 years, the Relevant Ministry negotiates with the individual/subject who asks for a Permit , approval of which is done by Council of Ministers. This Agreement shall enter into power once approved by Parliament.
• To permit the exploitation of minerals in Group 1, 2, 3 and 4 the request must also contain:

• Local Government opinion of the Commune or the Municipality, for the permition of g mining activity development and mineral exploitation in the object that is required. In cases when the land is a private property owned by a legal person should be submitted the agreement with the owner of land for the exploitation permition.

• Opinion of the Forest Service Directorate of the District to allow the development of mining activity in the object sought to be used, for the case when the object is in the forest fund.

• Environmental Permit issued by the National Licence Centre. Environmental permit can also be given to an area smaller than that required for the mining permit, but that is part of it, provided that;

The mine exploitation to be started from this area.

Before the exploitation start outside this surface, must be taken the new environmental permit, which must be submitted to AKBN. The contract with the technical director who shall be a mine engineer except when it is not going to be used explosives could be an geologist engineer.

The Albanian legal framework related to the mining industry is constituted by the following laws:

- The Law “Mining Law of Albania”, No.7796, date 17.02.1994, amended by Law No.9261, dated 22.07.2004 and Law No.9667, dated 29.12.2006;
- The Law “On civil using of explosives in the Republic of Albania”, No.9126, dates 29.07.2003;
- The Law “On Concessions”, No. 9663, dates 18.12.2006;
- The Law “On National Taxes”, No. 9975, dates 28.07.2008.

The draft of a new law on mining, after being consulted with all groups of interest, is already in pipe and soon it will be discussed and approved by the Albanian Parliament.

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