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**Case Study: Borsac Mineral Water**

**Dipl. Eng. Doina Tuluca**

| | | |
|---|---|---|
| Name of the indication | BORSEC MINERAL WATER | |
| Country | Romania | |
| Protection status | Protected Designation of origin under the Romania Law on Marks and Geographical Indications. | |

# 1 Product Information

## *1.1 Product description*

Due to the geologic composition, the mineral waters inside Borsec watery, by composition and characteristics, essentially differ from all thousand sources studied from the hydro geologic and hydro chemical point of view inside Carpathian arch and along the areas inside and outside it. According to the composition, the natural mineral waters in Borsec watery can be divided into the following categories:

a). Natural mineral water, naturally carbonated.

b). Plane natural mineral water.

c). Mineral water used in balneotherapeutic (medicinal) purpose.

The natural mineral water, natural carbonated from the Borsec watery is characterized by:

- relatively reduced total mineralization
- high concentration of carbon monoxide
- the presence of iron in small quantities, which confers them the typical character of table water of the highest quality. At the mentioned qualities shall be added the high stability of carbon monoxide, which can be lost in the water if the bottles are constantly agitated.

The characteristics of the balneotherapeutic mineral waters in the Borsec watery with the original denomination (geographic indication) Borsec are:

- Digestive waters carbonated with sodium, calcium, magnesium and mixed, are characterized by a reduced total mineralization, are always ferruginous and have a high content of carbon monoxide. These waters have healing effects on the digestive apparatus (stomach, intestines, biliary ducts), kidneys, gall bladder as well as on the external circulatory system.
- Ferruginous waters (used especially in anemia), due to the storage in the crystalline limestone, contain small quantities of iron.

For the exploitation of Borsec mineral waters with the Original denomination (geographic indication) Borsec the following conditions are established:

- The exploitation of the deposit only after rigid hydro geological protection potential areas have been established for the mineral waters sources. The potential area of rigid protection is considered to be, the territory necessary for the protection of the deposit, containing the hydro mineral deposit and the supply and draining area (source).
- The development of the deposit versus the mineral waters reserves.
- The positive influence on the natural balance of the deposit, directly or indirectly, through the performed works.
- The maximum extraction from a source to be done without exceeding the capacity of debiting of the deposit, meaning without urging it.
- The sources exploitation at regime flows established by prospecting and exploiting works.
- Tapping exploitation by methods and adequate materials.
- The constant maintenance in perfect functioning status of the tipping and distribution plants in view of maintaining the physical and chemical qualities of the extracted useful mineral substance.
- The pursuit of the functioning way of the plants and the operation way of the used materials.
- The periodical pursuit of the quantitative and qualitative variations of the mineral waters, through measurements and physical, chemical and bacterial analysis, related to meteorological data.
- The measurements assurance in order to avoid the pollution of mineral waters, both in the deposit and after the extraction.

For the bottling and transportation of the mineral waters with the original denomination (geographic indication) Borsec is established in the following conditions:

- The transportation through pipes has to be done at the deposit's pressure, without loosing $CO_2$;
- The bottling has to be done under $CO_2$ pressure;

The deposit of the finite product under proper conditions, in vertical position, at a temperature of 4-25°C safe from direct sun beams or safe from freeze, according to SR 4450/1997.

Bottling of Borsec commenced over two hundred years ago; since modernization in 1992, the facility outputs two million litres per month of its legendary "Regina Apelor Minerale SA Borsec" (Mineral Water Queen Borsec). The curative properties of the water were already known in the 1600s, and for centuries it was transported by carts in wooden casks to be served in the Royal Court in Vienna. It was Emperor Franz Josef who dubbed Borsec the "Queen of Mineral Waters." The pH, although slightly acidic, is near enough to neutral to distinguish Borsec from other naturally carbonated waters whose carbonic acid origin tends to create much lower final pH levels in the harvested water. The Calcium is massive at 310 milligrams per liter. Magnesium and Bicarbonate - much like Apollinaris - are robust at 97 and 1,800 milligrams respectively. However, the Sodium level is very low for a high mineral water at only 53 milligrams per liter. Unfortunately, data is not provided concerning Nitrate level. Traditionally, Borsec has been indicated for circulatory disease, anaemia, disease of the endocrine glands, nervous disease, rickets, renal disease, diabetes, and even for obesity, in addition to its wonderful and most popular use today as a super-healthy drinking water.

**Characteristics of spring's water**

| Trademark | Location/spring | $HCO_3^-$ (mg/l) | $Cl^-$ (mg/l) | $SO_4^-$ (mg/l) | $Ca^{++}$ (mg/l) | $Mg^{++}$ (mg/l) | $Na^+$ (mg/l) | PH* | Dry Residuum (mg/l) | Type of water |
|---|---|---|---|---|---|---|---|---|---|---|
| **BORSEC** | Borsec/ Main Spring F4 | 1647 | 20 | 57 | 353 | 87 | 80 | 6,2 | 1322 | NC |
| **BORSEC** | Borsec/ Spring F5 | 305 | 4 | 46 | 64 | 28 | 3 | 7,4 | 300 | P |

**Note:**

NC = Mineral water, natural carbonated

P = Mineral water, natural still water

**Composition chemical mg/l**

| | | Sonda nr. 1 | Izv. nr.1 |
|---|---|---|---|
| **Anioni** | | | |
| Clor | Cl- | 76,5 | 51,7 |
| Brom | Br- | 0,07 | 0,02 |
| Nitric | $NO_3$- | 0,6 | - |
| Sulfuric | $SO_4$ -- | 0,9 | 1,0 |
| Bicarbonic | $HCO_3$- | 3849,1 | 3019,5 |
| **Cationi** | | | |
| Sodiu | Na+ | 470,7 | 250,1 |
| Potasiu | K+ | 53,9 | 33,6 |
| Litiu | Li+ | 0,14 | 0,39 |
| Amoniu | $NH_4$+ | 0,9 | - |
| Calciu | Ca++ | 588,2 | 580,5 |
| Magneziu | Mg++ | 168,4 | 118,0 |
| Mangan | Mn++ | 0,25 | 0,6 |
| Fier | Fe++ | 5,5 | 13,4 |
| Aluminiu | Al+++ | 0,5 | - |
| **Altele** | | | |
| Acid metasalicilic | $H_2SiO_3$ | 92,6 | 59,9 |
| Acid metaboric | $HBO_2$ | 19,71 | 15,8 |
| Bioxid de carbon | $CO_2$ | 1545,0 | 2417,0 |
| **Mineralizare** | | 6873,37 | 6563,11 |

According to the European Community regulations, the definition of BORSEC naturally sparkling mineral water is a "microbiologically wholesome water, originating in an underground water table or deposit and emerging from a spring tapped at one or more natural bore exits"[1].

[1] http://www.firstmineralwater.com/site/1516834/page/45030

Old all-season resort of national importance (from 1804), with numerous springs of mineral carbonated, bicarbonated, calcic, magnesian hypotonic waters known and recommended for their beneficial effect since the late 16th century. The therapeutic qualities of these mineral springs were recognized internationally and awarded several distinctions such as the medal of the Vienna International Fair (1873), the silver medal and diploma of honour in 1876 at the Berlin and Trieste exhibitions, respectively, the diploma of honour of the Paris Exhibition (1878).

### *1.2 History*

The fame of the mineral waters of Borsec dates back to the 16th century. Documents from this epoch prove that the mineral water from Borsec was transported by carts in wooden casks to the royal court in Alba lulia in the year 1594. Owing to the curative effect and empirical experience the mineral waters from Borsec were bottled in sealed pitches which then were put into sacks and were transported on horseback to Transylvania, Moldavia, Wallachia and Hungary beginning with the 18th century.

At the end of the 18-th century the healing fame of the mineral waters gives Borsec renown. At the beginning huts are built, then chalets and primitive bathing establishments which

make it possible for many patients to come here and cure the illnesses they suffer from. There are records from 1767 which say that "Borsec is the place where desperate patients from the country and from abroad gather during the summer".

There are over 15 sources of carbo gaseous natural mineral water at Borsec. Their chemical composition is almost similar , stable, their flow varies. In the terms of the flow and quality sources no. 1 and 2 are the most important ones. Besides the natural sources there are drilled ones which show the potential of mineral water resources.

Through their composition these waters have curative effect on diseases of the digestive system (stomach, intestines, biliary canal), kidneys, urethra as well as on the peripheral circulatory system. The main characteristics of mineral waters from Borsec are the low contents of minerals, the high concentration of free and very stable CO2 and also the very small content of iron, which makes Borsec one of the best quality table waters.

In the year 1803, the citizen Valentin Gunther from Vienna, after drinking the waters of Borsec recovered from an illness considered incurable. Back to Vienna he suggests to a relative of his, Anton Zimmetshausen, a counselor of the municipality that they should start trading the Borsec mineral water. For this reason they had to lease Borsec - a small hamlet at that time - from the communities of Lazarea and Ditrau which owned Borsec.

He brings workers speciaIized in glass manufacture from Austria, Bavaria, Bohemia and Poland. The names of these workers have survived in their descendants like Siller, Talmaier, Birman, Kamenitzki, Fokt, Eigel, a.s.o. 1806 marks the beginning of the industrial bottling of the miner al water in bottles made at Borsec. In the first year 3 million litres of mineral water were bottled and were transported by carts to all four corners, even to Vienna. The water of the sources no.1 and 2 was collected in a well, then it was poured into bottles which were corked and waxed for tightening. It is interesting that the bottling was done on sunny days only when the atmospheric pressure was the highest, consequently the contents of CO2 was at the maximum.

### 1.3. Possible substitutes

The Romanian bottled water is equal to the water of the one third of the all European mineral and thermal springs. There are about 20 brands of mineral waters in Romania. The bottling industry in Romania is very well developed and the competition is serious. So, possible substitutes of the mineral water from Borsec are all other bottled mineral waters in the country and the different soft drinks too. Of course there are some difference between

the separate springs and the composition of the waters. The comparison between the characteristics of Borsec water and two other mineral waters from Romania is shown below:

### *Compare Borsec to Perla Harghitei*

| | Borsec (Romania) | Perla Harghitei (Romania) | difference |
|---|---|---|---|
| Acidity (PH) | 6.45 | 5.9 | -8.5% |
| Total Dissolved Solids (TDS) | 1402 mg/l | | |
| Calcium (Ca++) | 310 mg/l | 142.02 mg/l | -54.2% |
| Magnesium (Mg++) | 97 mg/l | 59.8 mg/l | -38.4% |
| Sodium (Na+) | 53 mg/l | 58.5 mg/l | 10.4% |
| Potassium (K+) | 12 mg/l | 13.6 mg/l | 13.3% |
| Bicarbonate (HCO3-) | 1800 mg/l | 994.21 mg/l | -44.8% |
| Chloride (Cl-) | 29 mg/l | 17.7 mg/l | -39.0% |
| Sulphate (SO4--) | 24 mg/l | 5.3 mg/l | -77.9% |
| Iron (Fe++) | 0.018 mg/l | | |
| Hardness | 66.2 | | |

### *Compare Borsec to Aqua Leggera*

| | Borsec (Romania) | Aqua Leggera (Romania) | difference |
|---|---|---|---|
| Acidity (PH) | 6.45 | 6 | -7.0% |
| Total Dissolved Solids (TDS) | 1402 mg/l | 1640 mg/l | 17.0% |
| Calcium (Ca++) | 310 mg/l | 270.7 mg/l | -12.7% |
| Magnesium (Mg++) | 97 mg/l | 84 mg/l | -13.4% |
| Sodium (Na+) | 53 mg/l | 102 mg/l | 92.5% |
| Potassium (K+) | 12 mg/l | 7.2 mg/l | -40.0% |
| Bicarbonate (HCO3-) | 1800 mg/l | | |
| Chloride (Cl-) | 29 mg/l | 95 mg/l | 227.6% |
| Sulphate (SO4--) | 24 mg/l | 12.34 mg/l | -48.6% |
| Iron (Fe++) | 0.018 mg/l | | |

| | |
|---|---|
| Hardness | 66.2 |

## 2 Geographic Information

### *2.1 Area of production*

Romania is situated in Central Europe, in the northern part of the Balkan peninsula and its territory is marked by the Carpathian Mountains, the Danube and the Black Sea. Borsec (Borszek) is situated in the Eastern Carpathian Mountains of Transylvania and its attitude is 900 m. it is one of the highest lying town of Transylvania. The number of its inhabitants is 3,053 (2,440 Magyars, 598 Romanians, 11 other nationalities (1992). Borsec is one of the most renown curative spas in the sub alpine, windless, peat-rich county of Harghita. It is listed in the register of historical monuments.

Borsec SPA is situated at a 26 km distance from the town of Toplita, along the national road connecting Toplita to Piatra Neamt, in the Borsec Bassin, in the north-western part of Harghita County. The spa is at an altitude of 900 m above sea level, which, together with the massive coniferous forests surrounding it explains its special microclimate of a benefactor character. Besides the natural scenery of a rare beauty, the quality of its mineral waters assures Borsec Spa a privileged position among spas in Romania and abroad.

Borsec, contains 19 natural springs and 13 drillings, all being situated on the administrative (territorial) surface of the locality Borsec. Among these, the most important from the flow point of view are:

- For the plain natural mineral water:
- the springs in Valea Hantker, the area 7 Izvoare, Manzului stream and Ascuns spring;
- For the mineral water used in balneotherapeutic purpose:
- springs 3 (Horia); 5 (Closca); 6 ( 6 Martie); Crisan; 10 (Kossuth); 11 (Petofi); 13 (Pierre Curie); 8 (Izvorul Caprelor); Carierei; de Picioare; Pastor; Nadas; Sf. Ion.

Borsec locality is situated at 26 km from Toplita city, on the national road Toplita-Piatra Neamt, in the depression with the same name from the North-West of Harghita County, at 900 meters altitude towards the sea level.

Surrounded by Calimani, Bistritei, Ceahlau and Giurgeu Mountains, Borsec Depression has a relief characterized by a vast variety of surface forms which confers it a special picturesque, accessible only through the two pitches Creanga at south-west and Tulghes at East.

Borsec Depression marks the crystalline area of Gheorghieni Mountains and the volcanic chain of Caliman Mountains, the geographic form being related to the formation and development of Oriental Carpathians, and is tectonic-corrosive nature.

Borsec watery stretches on a surface of 9.236 ha and is formed, from the geologic point of view, of:

- crystalline schist
- crystalline limestone and andesite agglomerates, which forms the frame of the basin
- polycene loamy arenaceous deposits
- quaternary deposits, constituted especially from travertine, inside the basin.

### *2.2 Alternative Regional Land Uses*

From point of view of its economy, its extractive industry (limestone, pitch-coal), wood- and food-processing are very significant for the region.

## 3 Legal protection

### 3.1. Status of protection/ Legal Acts/ Certification schemes (if applicable)

Protected Designation of origin under the Romania Law on Marks and Geographical Indications. Registration numbers of the Designation of origin are IG 00009 – registration year 10.04.2001 and IG 00011- registration 12.02.2002

- **The legal framework**
  - Law no.84/1998 on Marks and Geographical Indications
  - Regulations for Implementing the Law no. 84/1998 concerning the Marks and Geographical Indications

- Goverment ordinance no. 41/1998 concerning the fees in the field of industrial property protection and the use thereof

Geographical indications of products can be protected in Romania by their registration with the State Office for Inventions and Trademarks in accordance with the Law on marks and GIs or with the international conventions to which Romania is party and may be used only by those persons who manufacture or market the products for which they have been registered. The associations of producers pursuing production activities in the geographical area relating to the products stated in the application are entitled to apply for registration of a geographical indication to the State Office for Inventions and Trademarks. The State Office for Inventions and Trademarks registers geographical indications and afford to the applicant the right to use them after the Ministry of Agriculture and Food or, as appropriate, the competent authority of the applicant's country of origin has certified:

(a) the geographical indication for which registration is sought;

(b) the products that may be marketed under that indication;

(c) the geographical area of production;

(d) the characteristics that the products must possess and the manufacturing criteria they must comply with in order to be marketed under that indication.

Geographical indications may not be registered if:

(a) they do not comply with the provisions of item (f) of Article 3;

(b) they are the generic name of goods;

(c) they are liable to mislead the public as to the nature, origin, manufacturing methods and quality of the goods;

(d) if they are contrary to public policy or to accepted principles of morality.

If the application satisfies the requirements of the law, the State Office for Inventions and Trademarks decides to register the geographical indication in the National Register of Geographical Indications and to afford the right of use in the indication to the applicant. The right to use a geographical indication, obtained by registration, belongs to the members of the association entered on the list communicated to the State Office for Inventions and

Trademarks. The State Office for Inventions and Trademarks publishes the geographical indication in the Official Bulletin of Industrial Property and shall issue a registration certificate to the applicant affording him the right to use the geographical indication, within two months of the date on which the decision to register is taken, against payment of the prescribed fee. Registration of a geographical indication on behalf of an association of producers can not prevent registration of the same indication for any other association having the required capacity under The law of marks and GIs. The term of protection of geographical indications begins on the date on which the application was filed with the State Office for Inventions and Trademarks and shall be without limit in time. The right to use a geographical indication is afforded to the applicant for a period of ten years, renewable an unlimited number of times, if the conditions under which the right has been obtained remain applicable. The application for renewal is subject to payment of the prescribed fee. Persons authorized to use a geographical indication for certain goods are entitled to use it in the course of trade, but only for those goods, in business papers, advertising or brochures and they may affix on such products the term *registered geographical indication.* It is prohibited for non-authorized persons to use a geographical indication or an imitation thereof even if the true origin of the products is shown or if terms such as *kind, type, imitation,* and the like are added. The right to use a geographical indication may not be transferred.

3.2. Standards for Borsec mineral water

Borsec mineral water is supplied with ISO 9001 international quality certification, by TUV-CERT Germany.

**3.3. Specification (special requirements for protection related to sustainable development)**

1. Romanian Law on Waters;
2. Romanian Government Decision no. 786/02.12.1997for establishing the National Society for Mineral waters – published in the Romanian Official Bulletin no. 356/15.12.1997 ;
3. Romanian Government Decision no 695/26.08.1999for the approval of licences for exploitation between the National Agency for Mineral Resources and the national Society for Mineral waters / published in the Romanian Official Bulletin no. 419/31.08.1999
4. Romanian Government Decision no 760/26.07.2001 for the approval of the Regulation for the conditions and the order for the exploitation an commercialization of the natural mineral waters;

### 3.3. Monitoring and control of environmental criteria (Frequencies and implementation agencies)

National Agency for mineral resources and National agency for Protection of consumer**.** They monitor the compliance with the Romanian Government Decision no 760/26.07.2001 for the approval of the Regulation for the conditions and the order for the exploitation an commercialization of the natural mineral waters

The chemical composition of the natural mineral water, naturally carbonated, from Borsec watery is certified by the National Center for Verification and Report of LAREX Products in Romania, according to the Conformity Certificates.

The control of products quality is performed according to the SN EN ISO 9001:1995 conditions.

## 4 Environmental effects

### *4.1 Soil*

### *4.2. Water*

. *The fame and the development of the bottling industry and the spa centres stimulates the preservation of the underground water and the springs as an object of national treasure.*

### *4.3. Landscape*

*The springs are the most important element of the landscape of the region attracting a lot of tourists and patients.*

### *4.4. Biodiversity*

### *4.5. Energy/ resources/ waste*

The value of the transactions at the Energy Exchange stood on January 4 at 38,158 euros, while the next day it tripled to 136,000 euros. Thus, a value of 175,000 euros was registered in the first two days of 2005 trading[2]. A number of 6 participants was registered each day, according to the data provided by the representatives of OPCOM, the operator and administrator of Romania's electric energy market, in the context in which only the actors on

[2] Ziarul Financiar daily reports on January 6, 2005

the free energy market - generators, distributors or eligible consumers, who have a minimal consumption threshold established by the Sectoral Regulatory Authority - can currently conduct transactions on the Energy Exchange. The Bucharest Energy Exchange, at present in an experimental phase and where only physical transactions (energy quantities) can be done for the time being, will function completely by yearend, and will become afterwards a regional exchange of the Balkans. The platform of financial trading between the participants on the market is expected to be operational by the same time.

### *4.6. Air/Climate*

Town in NE Romania (Harghita county), in the intramontane depression with the same name in the Eastern Carpathians, towerd by the Bistrita, Calimani, Giurgeu and Ceahlau Mountains, elevation 900 m, 27 km NE of Toplita railway station; population 3,242 (July 1, 1991). Cool subalpine climate (July average temperature 15°c; January average -7°C). Low winds. Annual average temperature 5°C or so. Moderate precipitations (700-750 mm annually).

Old all-season resort of national importance (from 1804), with numerous springs of mineral carbonated, bicarbonated, calcic, magnesian hypotonic waters known and recommanded for their beneficial effect since the late 16th century. The therapeutic qualities of these mineral springs were recognized internationally and awarded several distictions such as the medal of the Vienna International Fair (1873), the silver medal and diploma of honour in 1876 at the Berlin and Trieste exhibitions, respectively, the diploma of honour of the Paris Exhibition (1878).

## 5 Economic data/ effects

Year 2004 was the fourth consecutive year of economic growth for Romania. Furthermore, it was the year this growth was the more substantial of the past 15 years. According to preliminary estimates, the GDP rose by about eight percent, inflation dropped, for the first time again, below 10 per cent, and foreign direct investments exceeded three billion euros. Moreover, the evolution of the currency exchange rate in 2004 year, when the national currency appreciated significantly against both the euro and the dollar, brought additional value to theGross Domestic Product calculated in euro. in 2004 Romania has registered a 4.5 percent economic growth, while the Institute of International Economic Studies in Vienna (WIEW) expected the index to reach a mere 4.2 percent. The growth was mainly fuelled by agriculture, where the yield exceeded 9 million tons, three times higher than in 2003, and by

construction operations, the share of the two sectors in the GDP constructure reaching 46.6 percent. On October 6, 2004, in Brussels, the most important assessment of the Romanian economy was announced: Romania meets the criteria for being regarded as a functioning market economy. The statement was included in the annual country report approved in Brussels by the European Commission.

In Borsec is to be find the largest mineral water bottling factory (2 million liter/month), the Apemin Borsec named "Regina Apelor Minerale SA Borsec" (Mineral Water Queen Borsec) in 1992. The industrial bottling of the mineral water has continuously been functioning since 1806 up to the present. There were two short periods of stagnation during the two world wars. The tradition was continued by "Regina Apelor Minerale Borsec S.A." and presently by Romaqua Group S.A. - Borsec. The bottling technology has become more up-to-date, more efficient bottling lines have been set up.

Borsec Mineral water is exported in Bahamas, Canada, Denmark, Korea, Germany, Holland, Hungary, Belgium, Moldova, Taiwan, Greece, Israel, United Kingdom, USA, etc.

Borsec was awarded a GOLD medal at 2004 Berkely Springs, WV USA International Water Tasting event held February 19-21st, 2004 for carbonated waters.

During the centuries, Borsec mineral water was the guest to the well known and sophisticated European kingdoms like Viena, Paris, Budapest and Berlin and it's acknowledgement conducted to be awarded with more than 30 medals during the last two centuries.

The emperor Franz Josef grant to Borsec mineral water the title of "The Queen of the Mineral Waters" in 1873 due to it's qualities.

Franz Josef 1873

World exhibition 1873

Vienna 1873

"The Queen of Mineral waters"

Budapesta 1885

Berlin &Trieste 19876

World exhibition 1878

Gold Trademark 1999

Gold Trademark 2000

Gold Trademark 2001

Gold Trademark 2002

Romania

Romania

Romania

Romania

Moscow 2002

Gold Medal

Poland 2004

Gold Medal

Berkley USA 2004

"The best mineral water of the world"

Bruxelles 2006

Special Gold Medal

### *5.1 Production*

Borsec awared more that 30 medals during the last 2 centuries of life.

In 2004, Borsec was awarded GOLD medal carbonated waters at the 2004 Berkely Springs International Water Tasting.

In 2005, Borsec was awarded SPECIAL GOLD medal for natural carbonated mineral water and GOLD medal for still mineral water.

### *5.2 Costs of Production/ Sales*

The price of one pack, which includes 12 shrink-wrapped plastic bottles of 0.5l Borsec mineral water is 36$. If it is in sale the price is: for one pack - 27$, for 2 packs – 26 $, 5 packs – 25$, 10 packs – 24$ and for 50 packs 22$ per unit. The price of 500 ml PET bottle is for 3$. If order 6 bottles the price is 2.25$ per one. *All prices are in New Zealand dollars.*

The price of 1.5 l. bottle Borsec mineral water is 1.99 USD. It is the same for 1.5 l. bottle Perla Harghitei mineral water.

### *5.3 Supply Chain and employment*

**Supply Chain**

***Employment***

The development and the popularization of the industry create more free positions for the population of the region .Stimulates the rise of people with higher education who find realization in the bottling companies and in the spa centres. Recently, the inhabitants work in the travertine- and coal-mines, in the bottling factory and at the spa.

**Regional Integration**,

### *5.4 Subsidies / Promotion Programmes (local & national)*

*Over 33 mil. Euros*

## 6 Synergies with other sectors

### 6.1. Education

*The possibility of finding a job in a specific area stimulates the ambition for gaining specialized education.*

### 6.2. Health and Balneology

Borsec is one of the most significant spas of Transylvania and one of the atmospheric alpine resorts of Harghita county. Borsec resort is recommended for the treatment of cardiovascular diseases (compensated mitral and aortic insufficiency, high blood pressure, varices), endocrinological diseases (hyperthyroidism, Basedow disease, prepubertal conditions in overweight children), hepatobiliary (biliary dyskinesis, noncalculous chronic cholecystitis), digestive diseases (hypoacid chronic gastritis, chronic constipation, nonspecific chronic colitis), kidney and urinary system disorders, asthenic neurosis, dermatologic, metabolic and nutrition diseases, etc. All experts agree that the climate there exerts over the body an action which determines an increase of the appetite and the accumulation of vitamins, a normalization of metabolism, higher resistance to disease and fast recovery of the physical and intellectual potential. Installations for warm baths with carbonated mineral waters in tubs, indoor pool with warm carbonated water, fountains for internal cure with mineral

waters, electrotherapy and hydrotherapy equipment, installations for baths with herbs, paraffin packing, gyms. Given the pleasant, acidulated taste of the Borsec mineral waters which preserve their therapeutic qualities, they are bottled at the APEMIN Enterprise of the resort.

### 6.3. Tourism

Borsec has become famous for its carbonic and alkaline mineral water springs. Among other values, the mud, the peat saturated with mineral water (11 m average thickness in the Újsáros field) as well as the windless, subalpine climate, the fresh air can be mentioned. The mineral waters and the spa tourism and treatment are deeply rooted in culture, traditions and the social life of Borsec – one of the spa centres in Romania and the Carpathian Mountains. Borsec is situated in the Eastern Carpathians, in the circular basin created by the Calimani, Bistritei, Ceahlau and the Giurgeului Mountains. It can be approached along the Transylvanian circular railway as far as Toplita, then along a small railway. To the Borsec baths 28 km more should be done along National Road 15. It lies 91 km far from Bicaz, 44 km from Deda, 125 km from Miercurea-Ciuc and 186 km from Brasov. The Fagului Peak (1,300 m) and the Chiurezu Mare Peak (1,492 m) can be approached from here. From Ditrau we can reach it through the 870 m high Orotva Peak. The 6 km long Capu Corbului - Borsec railway was built in 1952. Spared from mass tourism because of its out-of-the-way position, Borsec spa has perhaps the most beautiful surroundings in Transylvania, having excellent endowments for further development: besides its mineral water, the fresh, subalpine climate and the picturesque forests attract the visitors.

Borsec resort is recommended for the treatment of cardiovascular diseases (compensated mitral and aortic insufficiency, high blood pressure, varices), endocrinological diseases (hyperthyroidism, Basedow disease, prepubertal conditions in overweight children), hepatobiliary (biliary dyskinesis, noncalculous chronic cholecystitis), digestive diseases (hypoacid chronic gastritis, chronic constipation, nonspecific chronic colitis), kidney and urinary system disorders, asthenic neurosis, dermatologic, metabolic and utrition diseases, etc. All experts agree that the climate there exerts over the body an action which determines an increase of the appetite and the accumulation of vitamins, a normalization of metabolism, higer resistance to disease and fast recovery of the physical and intelectual potential. Installations for warm baths with carbonated mineral waters in tubs, indoor pool with warm carbonated water, fountains for internal cure with mineral waters, electrotherapy and hydrotherapy equipment, instalations for baths with herbs, paraffin packing, gyms. Given the

pleasant, acidulated taste of the Borsec mineral waters which preserve their therapeutic qualities, they are bottled at the APEMIN Enterprise of the resort.

Extensive recreation facilities (sports grounds, cinema halls, blazed mountain trails, ski and sleigh runs in winter, etc.).

**Views**

**Vilas**

**Bridge at the entrance of Borsec**

## 7 Marketing & Consumer Protection

There have been a number of social and economic factors that have continued to drive the bottled water market forward. These include the acceptance of `buying water', with drinking bottled water becoming a more mainstream activity, in the late 1980s and through today, compared to being viewed more as exclusive or trendy, prior to that time. Additionally, changes in work and lifestyles have benefited the market and the acceptance of bottled water.

### International Acknowledgement

Owing to a well-balanced chemical composition, which is stable in time and contains no iron the Borsec mineral water has a very pleasant taste. It is one of the most appreciated mineral waters in the world and it is exported to several countries like the U.S.A., South Africa, Sweden, Spain, the Lebanon, Israel, Greece, Jordan ans.

Owing to its exceptional quality the Borsec mineral water won several medals and diplomas at the international Fairs and Exhibitions from Vienna, Berlin, Triest and Budapest and it was awarded the honoring title "Queen of the Mineral Waters" by Emperor Franz Josef. In the same context of the international recognition, Romaqua Group SA is the only romanian bottler member of the Organisation Mondiale de la Propriete Intelectuelle.

Therewith, on the occasion of " Spring of Life " Mineral Water Manifestation organized by UGIR 1999 and 2000 editions, Borsec mineral water was awarded with Diploma of Honor,

the " Golden Brand " medal for the best naturally sparkling mineral water and for excellency in romanian industry. At the 2001 edition of the same manifestation organized by UGIR, Romaqua was awarded with "Golden Brand" for the naturally sparkling mineral water "Borsec" and " Platinum Brand " for excellency in Romanian industry and tradition. Also, the company was awarded for excellency in the product quality supervision - 2000- by the National Center for Testing and Expertising of the Products (LAREX).

In June 2001, the Accreditation Association from Romania (RENAR) gave Romaqua an accreditation certificate, with European recognition, for the competence of the company's laboratories for performing testes in the mineral water field, according with the actual standards and procedures.

2000 Larex

2002 TUV

2004 TUV

2001 RENAR

2002 Moskow

2002 Moskow

European Asociation

2002 Bucuresti

2004 Berkeley Springs

2004 Berkeley Springs

### *7.1 Importance of the GI label compared to a trade mark*

The Borsec mineral water is with very special characteristics and using the GI label is the best advertisement of the product, because it underline the origin of the water and guarantee its composition.

### *7.2 Messages embodied in the GI logo / Promotion campaigns*

### *7.3 Environmental connotation in promotion*

### *7.4 Existence of specific distribution channels*

The bottled mineral water is distributed in the whole country. It can be found in the supermarkets, cafés-bars and restaurants and in the small pavilions even. A great part of it is exported abroad because its properties, it is breeding in ecologically clear area and the technology of the bottling is in compliance with the best European practice.

## 8 Stakeholders

### 8.1. ASOCIATIA DE PRODUCATORI ROMAQUA GROUP

| | |
|---|---|
| **Member** | SC ROMAQUA GROUP SA< SC ROMAQUA SERV SA, SC ROMPACK SA, SC ROMAQUA PREST SA |
| **Register No** | IG 00009 |
| **Date of registration** | 10.04.2001 |
| **Goods** | Mineral waters |
| **Geographical area** | Borsec, Romania |

### 8.2. SOCIETATEA NATIONALA A APELOR MINERALE SA

| | |
|---|---|
| **Owner** | **SOCIETATEA NATIONALA A APELOR MINERALE SA** |
| **Register No** | IG 00011 |
| **Date of registration** | 12.02.2002 |

| | |
|---|---|
| **Goods** | Mineral waters |
| **Geographical area** | Boresec, Romania |

## 9 Summary

Borsec is one of the finest mineral waters in the world, with more than 400 years of tradition being largely acclaimed at Imperial Court of Viena. Borsec is naturally carbonated, its quality being certified by over 24 medals and lots of diplomas won over the years. The last recognition came in 2004 from the International Water Tasting Contest in Berkeley Springs - West Virginia/USA where Borsec won the gold medal for the best tasting carbonated bottled water. Borsec is bottled at source in Transilvania/Romania, and is exported in many countries worlwide.

Owing to a well-balanced chemical composition which is stable in time and contains no iron the Borsec mineral water has very pleasant taste, it is one of the most appreciated mineral waters in the world and it is Owing to its exceptional quality the Borsec mineral water won several medals and diplomas at the International Fairs and Exhibitions from Vienna, Berlin, Triest and Budapest and it was awarded the honoring title "Queen of Mineral Waters" by Emperor Franz Josef. Exported to several countries. It contains 300 mg calcium magenesium 98 mg it is bottled from the source in borsec Romania. It is different than other Romanian mineral waters and this combination of natural composition and nice taste makes it very demanded on the market. The curative properties of the water attract many tourists in the spa centres in the region and this additionally stimulates the economy development Borsec and its inhabitants.

## 10 Bibliography


Buletin Oficial de propriatate industriala Sectiuna Indicatii Geografice Volume 2, No.12/2001;

Buletin Oficial de propriatate industriala Sectiuna Indicatii Geografice Volume 2, No.9/2002;

wwww.romaqua-group.ro;

http://www.finewaters.com/Bottled_Water/Romania/Borsec.asp

http://www.pmgeiser.ch/mineral/index.php?func=disp&parval=514

http://www.firstmineralwater.com/site/1516834/page/45030

http://www.eurofoodmart.net/MINERAL_WATERS_s/48.htm
http://www.eurofoodmart.net/BEVERAGES_s/47.htm

http://www.finewaters.com/Bottled_Water/Index.asp

http://www.alibaba.com/catalog/10867265/BORSEC_Mineral_Water.html

http://qdbeveragesgroup.en.alibaba.com/group/50206093/Mineral_Water.html

http://www.firstmineralwater.com/site/1516834/product/46-7471252

http://www.worldwayuk.com/offer.htm

http://bizbb.com/FERAXCasadeComertsrl/offer/3/

http://www.cchr.ro/jud/turism/eng/6/67/6701borszek.html

http://berlin.mae.ro/pdf/hightlight_ian_10.pdf

http://www.aquamaestro.com/step1.asp

http://www.cchr.ro/jud/turism/rom/7/71/71borszek.html