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# Sustainable Development in The Salt Industry of Romania

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ABSTRACT: At present, in Romania are 7 salt exploitations (Slänic Prahova, Tg.Ocna. Ocnele Mari, Ocna Mures. Ocna Dej and Praid). In the last 13 years, the salt exploitations are in a production reorganisation.

#### 1 INTRODUCTION

# /. / The rock salt

Salt has always represented one of Romania's main assets. It has been identified over 200 salt massifs, which generally contain much NaCI (97-99%). In salt, there are the following mineral associations with generally subunit values: oxides ( rare hematite aggregates as well as minerals belong to quartz family);sulphides(marcasite aggregates, associated with cubic pyrite crystals, crystals of chalcopyrite and yellow-brownish sphalerite), carbonates (dolomite rhombohedrons occur 0,3-0,5mm); sulphates (gypsum crystals, anhidrites, hunlitts ); more rarely grains of glauconite and fragments of reddish-brown rock spotted with green, as well as several remains ot volcanic glass . In salt massifs there are organic residues made up of wood fragments silicifiation, bituminous coal fragments and amber fragments. There are also forms of nannoplanctons and foramimfers.

The main mineral - NaCI - often present in surface made historically possible not only barter relations but also the development of a road network through different peoles wondered.

# 1.2 The salt mines

Alter thousands of years' activity, salt has been extracted from 46 salt massifs. Several exploitations are already closed. Some of them had ephemeral existence, others worked for hundreds of years (Slänic. Praid. Târgu Ocna. Cacica), and others have continuity since antiquity until today (Ocnele Mari. Ocna Mures).

At present there are 7 salt exploitations (Figure 1) out of which 3 with gema salt (Slanic Prahova, Ocna Dej and Praid), 2 with gema salt and in solution (Râmnicu Vâlcea, Târgu Ocna) one with solution



Figure 1: Map of the salt exploitation from Romania.

and crystal ised( Ocna Mures) and one with gema salt and recrystalized ( Cacica).

### 2 THE ECONOMIC MONOPOLY

In the Middle Ages, salt was under the rulers' monopoly (those who noticed the opening or closing of an exploitation), sometimes in the property of princes, of ride boyars, monastries. or peasant community. During the lanariot princes confirmed by Ottoman Empire, at about 17S0 salt exploitation started to be leased for sums of money paid at different periods of time, I-2 years.

Documents certified the names of those who bought and exploited: loan Moscu (1791, 1797, 1803. 1812) Dragoman Manu (Manuc Bei - 1809), Russian commenders Kokieaki (1810-1811); Filiph and Stefan Meitani (1827-1829. 1830-1834). After

thei Russia Turkey war ( 1828-1829) under the influence of Russian occupation, a new set of laws appeared known as 'Organic Regulations' and sail is owned by the state in 1834 at Elbna Ocnelor( the first state owned salt company). Pont the old economic relations were stronger than the lames and on the I"1 January, 1836 Eforia Ocnelor was abolished and leased again by Otätäiäsescu (1840) and then by others. After the union of the two provinces, "Tara Româneaseâ" and "Moldova"( 1859). the slate started to exploit salt again on 9<sup>th</sup> July. In 1929 it change into C.A.M.t Autonomous House of State Monopolies. In 1949 salt passed to the Ministry of Food Industry, in 1952 to Ministry Of Chemical Industry, in 1961 to Ministry of Mines, Oil and Geology) After 1968 salt exploitation belonged to the same Ministry but was organized by Salt and Nemetaliferous Bueharest-C.S.N.(I968-I990). In 1981 CSN became subordinated by the Ministry of Mines, in 1986 by Ministry of Mines, Gas and Geology and since 1987 by the Ministry of Mines. In 1990 CSN became the Autonomous Administration of Salt Bucharest. It was under the management of the Ministry of the Industries (1991- 1997) R.A.S Bucharest was reorganized under the form of National Salt Society in 1997 and was subordinated to the Ministry of the Industries and Trades (1997-2001) and since 2001 it has been managed by the Ministry of Industries and Resources.

#### 3 ACTUAL TIMES

Since 1990 there has been a change in salt exploitation in Romania. These changes will be dealt with under the following aspects: legislative frame, exploitation activities, new equipments, standardization, production reorganization, reusing mining holes, entering in profile associations, privatization program.

## 3.1 Legislative frame

Mining activity in the last century has had the following evolution: an important event took place in 1895. which was the Law of Mines, which confirmed the State property of the underground. After a new Constitution appeared in 1921, another law of mines was necessary in 1929. As a result of the social changes occurred after 1989 in Romanian society the issue of a new Constitution was needed (1991) which by article 135 alinéa 4 claimed that underground resources are exclusively public property and can be leased, confessed or hired. Afterwards, in 1998, mineral resources capitalization was regulated by a new law called Mine Law. On its basis, in 1990, Salt National Society- Share societygets exploitation licenses for twenty years for all its branches

#### 3.2 Exploitation activities

On the basis of the increase of geological research the following activities were materialized: opening new mines(S15nic Prahova - Cantacuzino Mine-1990) Ocnele Mari (Coceneşli Mines-1993); putting into service new exploitation derricks.

#### 3.3 New Equipment

For both mining and grinding and packing activities great efforts have been made in order to get new equipment! perforation: Secoma- France, sifting -Italy; packing machines Italia).

#### 3.4 Standardization

A new quality system was started in 1994. The subunits were certified with standard ISO-9001 (2002) a CONDEX ALIMENTARIUS.

#### 3.5 Production Reorganization

As a result of setting new markets and of closing of some chimie factory a new market configuration was reshaped. The number of the employees was also modified. In the last 13 years, employees have been made redundant for times in September 1994, in 1997 with the aid of a rambursy, loan from World Bank, in 1999 and 2002. At present only half of the staff employed 13 years ago still work in the mine field.

# 3.6 Reusing mining holes

Ten years exploitation created underground spaces of thousands of square meters. They were used for ami asthma sanaloriums (Slanic Prahova, Praid. Tagu Ocna), museums (Slanic Prahova, Praid), churches (Cacica. Târgu Ocna). tourism (Slanic, Ocna Dej, Târgu Ocna, Praid, Cacica).

### 3.7 Entering in profile organizations

In order to prom ovate the image of the Romanian salt, S.N.S. Bucharest has joined the European Salt Producers Association (ESPA).

#### 3.S Privatisation

In order to improve this activities S.N.S. Bucharest and its branches were included in PSAL-2 privatisation program.

# 4CONCLUSIONS

Salt exploitation in Romania, has a long tiddmon and in oder to keep it ertoits have to be made and the best ways of development must need to be found

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