

## Solar Salt in the Pacific Basin

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### ABSTRACT

A general view of the market covered by Exportadora de Sal is presented and compared with the world's demand, in particular for those markets in which Exportadora de Sal participates. The figures mentioned, together with a brief review of the Mexican economy, lend support to the possibility of increasing actual production and developing a new salt field.

### INTRODUCTION

In 1960, when Exportadora de Sal was only three years old, Japan was importing 2.3 million metric tonnes of salt from over 15 countries all around the world, with unstable supply and irregular quality (Fig. 1). Today ESSA, with over 40% of the supply, is proud to consider itself the most important single supplier to the Japanese chloralkali industry (Fig. 2). We have heard from Japanese salt experts that due to ESSA's reliable supply in terms of tonnage and quality during the 1960s, Japan's chloralkali industry could finally expand and prosper.

### EXPORTADORA'S SALES GROWTH VS. WORLD DEMAND

The chloralkali industry serving the pulp and paper industry of the northwest USA have been purchasing ESSA's salt for the last 35 years. Our supply to this area has grown from an initial shipment of 8,000 t in 1957 to 1.3 Mt in 1991, making ESSA the most important supplier to this industry (Fig. 3).

In recent years, we also have increased our participation in the water softening and deicing markets of the east coast of the USA and we will continue working to expand our sales into these markets.

World salt consumption has had a growth of approximately 1.5% for the last 20 years. In 1970, 146 Mt were produced; the latest production figures including all types of salt indicate that approximately

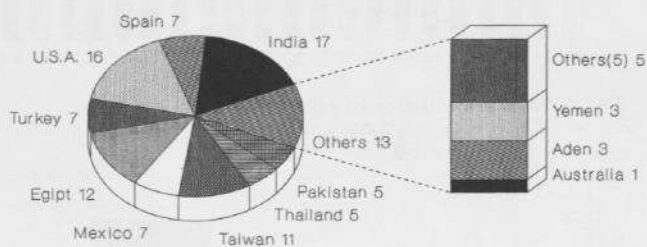


Fig. 1. Japan salt imports by country 1960 (%).

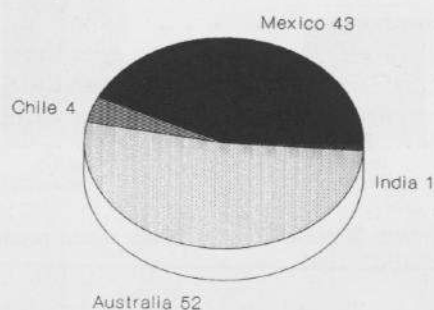


Fig. 2. Japan salt imports by country 1991 (%).

193 Mt were produced worldwide in 1991 (Fig. 4).

Since 1983, world production has increased annually by 2.4%. Compared with this, ESSA's sales have grown yearly at a rate of 5.4% (Fig. 5). Our installed capacity of 6 Mt will be increased and we will be able to produce and ship 7 Mt by 1996 in the same reliable manner as up to the present.

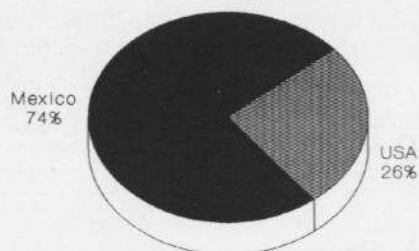


Fig. 3. Chloralkali industry of the north-western USA; salt supply by country 1991 (%).

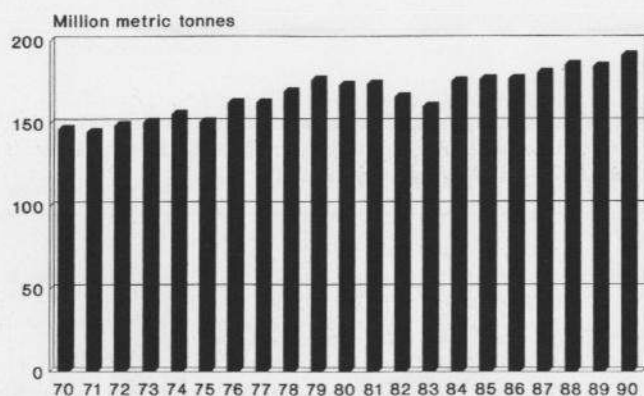


Fig. 4. World production of salt, 1970-1990.

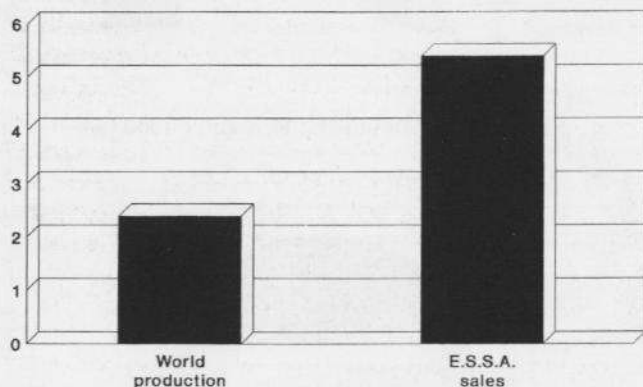


Fig. 5. Average % growth per annum. World production vs. ESSA sales 1983-1991.

### THE MEXICAN ECONOMY — FIRM SUPPORT FOR ESSA'S DEVELOPMENT

Within the last 3 years the Mexican economy has dramatically improved. From an annual inflation in 1987 of 159% coupled with a severe devaluation, to a real inflation of 13% expected for 1992 (Fig. 6). The peso value is almost fixed (Fig. 7) with great possibilities of signing a free trade agreement with the USA and Canada, following that already signed with Chile. This has revitalized the Mexican industry and

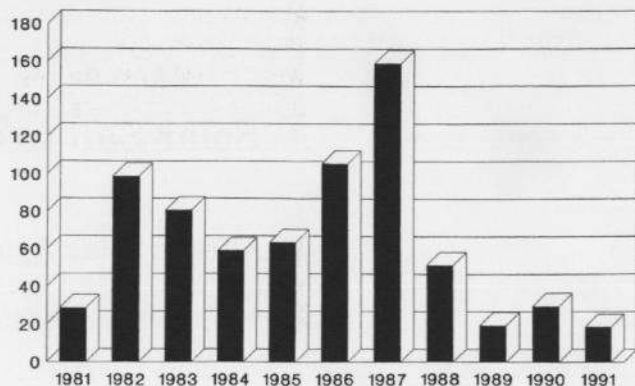


Fig. 6. Inflation in Mexico, 1981-1991 (%).

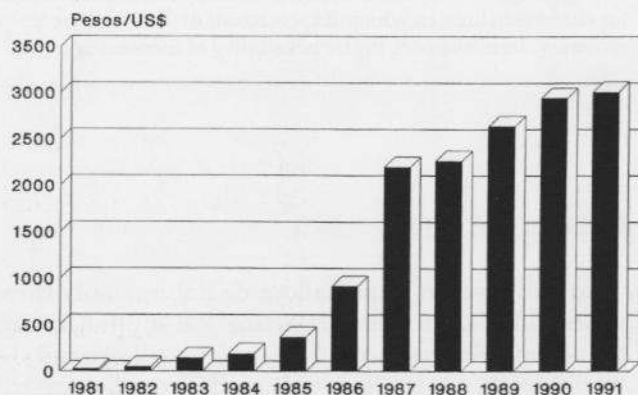


Fig. 7. Mexican Peso to U.S. dollar exchange rate, 1981-1991.

we can now see an important increase in salt consumption in our country in the years to come.

### THE FUTURE OF EXPORTADORA DE SAL

Under this panorama and our experience as solar salt producers, we visualize that for the year 2000, if the 1.5% growth in salt consumption is maintained, the demand in the Pacific Basin will reach approximately 16 Mt.

We also recognize that the only type of salt movement of importance within the Pacific Basin is that of solar salt and as all solar salt operations are climate-dependent, as well as considering the efficiency and competitiveness of the producers, we at ESSA should have a surplus production of at least 15%, so as to maintain absolute reliability.

In order to meet the expected increased demand for salt in the Pacific Basin, we have studied the possibilities of building another salt field in San Ignacio, Baja California, in western Mexico (Fig. 8). Although construction has already begun, the new salt field will not be built overnight as it takes years

to have sufficient concentrated brine to build good salt ponds on which to harvest.

However, when it is completed, this new salt field will have a capacity similar to that of ESSA's current

production area. It will enhance ESSA's reliability together with a higher degree of competitiveness, which will enable us to continue supplying salt to the chemical industry of the 21st century.

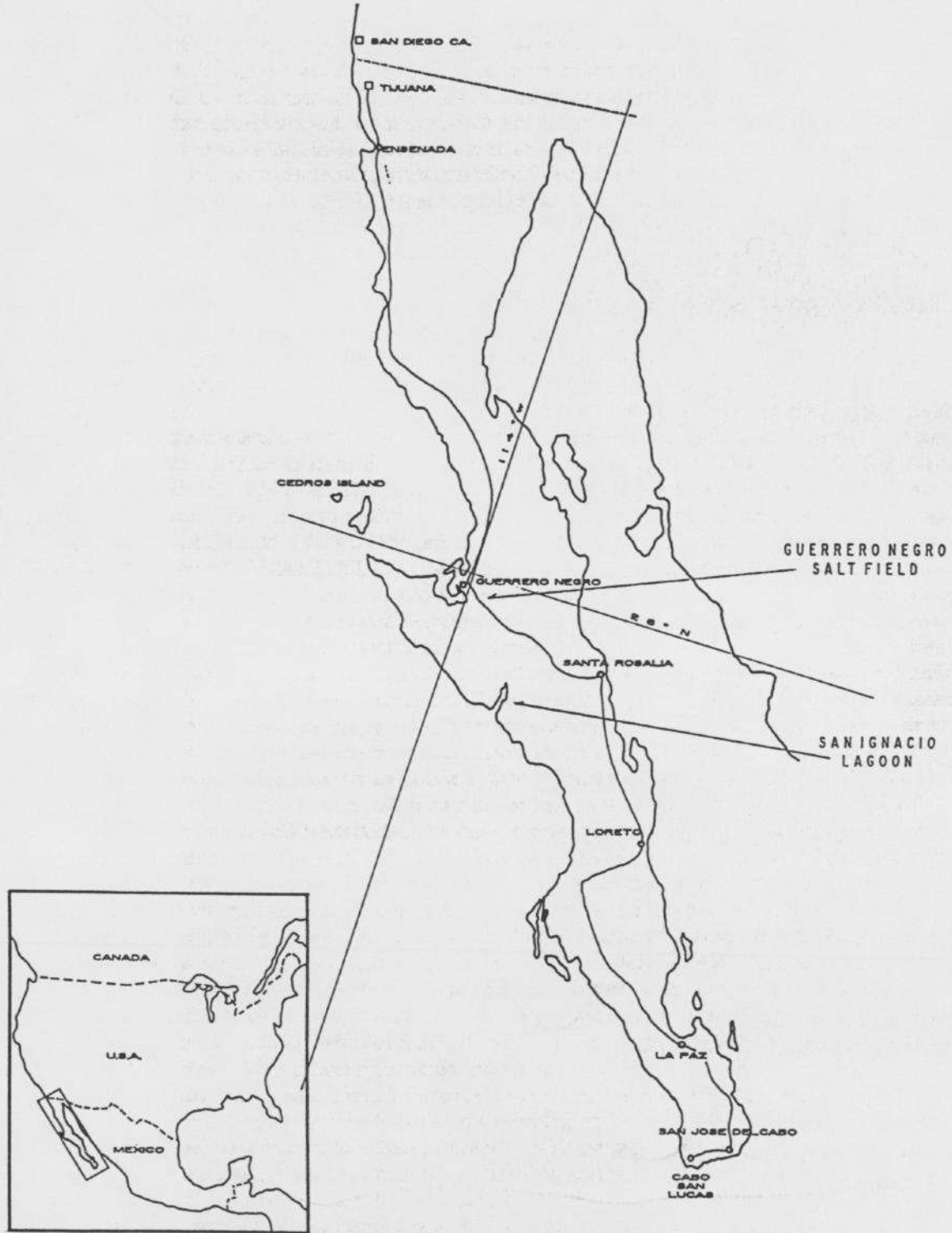


Fig. 8. Location of ESSA's salt fields in the 21st century.