THE HISTORY OF THE SALT INDUSTRY IN GRAND SALINE
Sodium Chloride, or common salt, has been an important factor in the history of civilization as far back as the memory of man. It is a necessity to human and animal life, and to supply this need nature has been very generous. Besides being present in the waters of all the oceans, there are numerous deposits of salt in varying forms scattered all over the globe. The Gulf Coast states of Louisiana and Texas are particularly fortunate in having within their borders a number of salt deposits in the form of domes. These domes are literally mountains of salt which have been thrust up through the earth's strata from some huge subterranean deposits.

The Cherokee Indians acquired land by treaty in 1834 around what is now Grand Saline and made the first in this area by evaporating the water from a salt marsh which lies on the surface over the center of the dome. Later the land was thrown open for settlement, and there is a record of a partnership agreement for the purpose of making salt, between John Jordan and A.T. McGee, dated December 17, 1845. At this time the settlement was known as Jordan's Saline, and salt was made by boiling down the brine from the marsh in iron kettles.

In January, 1850, Jordan and McGee leased all their interests in the salt works to Frederick J. Hamm. Salt manufacture by the use of iron kettles was then carried on by Hamm and in December, 1857, he bought all of Jordan and McGee's interests. The output of salt during this period was very small due to the crude methods of manufacture, and to poor transportation facilities, all the salt being hauled by wagon or cart to towns further East.

In January 1859, S.Q. Richardson came to Grand Saline from Kentucky and bought the Hamm interests. He made some improvements in the salt works by digging shallow wells, and installing a pump operated by oxen and a treadmill. Gum logs, hollowed out and joined together, formed a pipe line from the pump to the kettles.

During the Civil War, the Richardson salt works was taken over and operated by the Confederate Government. The output of the plant at this time was about 100 sacks (100 lbs. each) of salt per day. After the war the plant was turned back to Richardson, who, from time to time enlarged it, and gradually brought the output up to about 250 sacks per day.

In 1872, the Texas and Pacific Railroad was extended from Marshall to Dallas, passing through Jordan's Saline. A depot was erected, and the name of the settlement was changed from Jordan's Saline to Grand Saline. The railroad crossed the north rim of the dome running east and west, and the present townsite of Grand Saline lies immediately north of the railroad.

In 1875, Richardson leased his salt works to a Saint Louis company organized by G.M. Overlease. This company replaced the original kettles, with large square shallow pans using the heat of the sun for evaporation. After several years operation and some litigation, the plant was again turned back to Richardson. It was about this time that the first well was drilled down into the salt dome. Brine obtained from this well had a much higher percentage of salt than the surface water, and consequently was more suitable for salt making.

Richardson's plant was located just across the railroad track from the southeast corner of the present townsite. In 1891 Major Byron Parsons came to Grand Saline, obtained some land at the southwest corner of the present townsite on the North side of the railroad track, organized the Lone Star Salt Company, drilled a well into the dome and erected a plant using improved open evaporating pans. Major Parsons installed steam pipe lines in the evaporating pans which greatly accelerated the evaporation process. A year later Richardson also installed steam lines in his pans, and salt production was increased in Grand Saline to about 600 barrels (280 lbs. each) per day. This increased salt production brought an in-
crease in population, and on December 16, 1895, Grand Saline became an incorporated town.

In 1901 the Fielder Salt Company was organized. This company obtained a site across the railroad track several hundred yards south of the Lone Star Company plant. They also drilled a well and erected an open evaporator steam plant adding a 300 barrel production to the Grand Saline output. About 1903 Southern Salt Company was organized, and located their well and plant several hundred yards southeast of the Fielder Company plant. This added another 300 barrels to Grand Saline's output of salt.

In 1904, B.W. Carrington and Company bought the Fielder Salt Company holdings, and started operating with B.W. Carrington as manager. During the next two years the Southern Salt Company and the Lone Star Salt Company were also absorbed by B.W. Carrington and Company. The Southern Salt Company plant was never operated after this transaction, but the other plants continued to operate with a combined capacity of approximately 1,000 barrels (280 lbs.) per day.

During this period, the Richardson plant passed through several changes of management and ownership. S.Q. Richardson died in 1900, and after his death, the heirs to the estate employed several different managers, and finally sold their holdings in 1904 to the Grand Saline Salt Company, which was organized by Emerson Carey and J. Kirk. The plant was enlarged and improved, and in 1905 T.S. McGrain obtained an interest in the company, and came to Grand Saline as manager. McGrain brought the capacity of the plant up to approximately 750 barrels (280 lbs.) of salt per day, and operated it until 1919. This plant was destroyed by fire in 1917, rebuilt and put in operation only to be again destroyed by fire in 1919. The plant was never rebuilt after this second fire, and the holdings of the company were sold to the Morton Salt Company in 1920.

In the meantime, B.W. Carrington and Company continued to operate the Fielder and Lone Star plants up to 1913. The Fielder plant was then abandoned and extensive improvements made in the original Lone Star Plant. Installation of a battery of three vacuum pans was completed in 1914. These pans increased the capacity of the plant, and also made a finer grade of table salt.

In 1918 another battery of three vacuum pans was added to the plant. This additional modern equipment, together with the old open or grainer pans, brought the capacity of the plant up to 2,000 barrels per day.

In 1920 the Morton Salt Company took over the holdings of the B.W. Carrington & Company. As time passed, most of the evaporated salt producing companies in Grand Saline faded out of existence, and Morton Salt operations were consolidated with the Lone Star Plant which was operated until it burned in 1948.

The only mine which has ever been in Grand Saline is the Morton Salt Mine, located one mile south of town. The shaft for this mine was completed in 1931. After the mine and rock mill was established at the present site in 1931, Morton operated what amounted to two separate plants until the evaporator plant was located adjacent to the mining operation following the 1948 fire. Although many modifications and improvements have been made to the Grand Saline plant over the years, the basic configuration of the plant has remained the same since the post fire rebuilding program.

The mother bed of salt is a remnant of an ancient sea which dried up during an extremely arid period in the earth's history. The salt beds were formed during the Permian age, approximately 250,000,000 years ago. The top of this evaporated deposit of salt now lies 14,000 feet below the surface in the Grand Saline area and it has a thickness of 4,000 feet. The salt in Grand Saline's dome is 98.2 to 98.5 percent pure NaCl. The major impurity is calcium sulphate. The salt is pure and unusually hard and stable. This property permits the
Grand Saline mine to be operated without the expense of a roof bolting program. Because of this and other advantages, the mining cost per ton is competitive with the much larger mines elsewhere.

The Mine is 750 feet below the surface (-310 sea level elevation) in a dome of salt 20,000 feet from top to bottom and 1.5 miles in diameter at the 750 feet level. The Mine temperature is around 80° and varies only approximately one degree due to seasonal temperature changes.

Salt that could be mined from this Mine (with modifications) going to a depth of 4,000 feet would amount to approximately 3,791,508,184,000 tons. Considering that 24,239,750 tons of salt was produced in the United States during 1978, the Grand Saline Mine could supply the entire country for many thousands of years.

Salt is mined by the room and pillar method, using belts and front loaders for production. Rooms are 75 feet wide, and 25 feet high, leaving pillars for support blocks 130 feet square. Future benching will enlarge the rooms to a total of 75 feet in height from floor to roof.

Grand Saline is one of the two plants in the company producing both rock and evaporated salt, so this plant will be able to capitalize on future customer demands regardless of their requirements. This, along with the fact that Grand Saline is situated in the high growth southwest, should insure a profitable future for this facility.

Grand Saline produces all major grades of evaporated salt including dendritic salt. It also is the sole producer of shaker products and potassium chloride (salt substitute) for the Morton Salt division. The plant has a workforce of approximately 167 hourly employees and 45 salaried employees.

The portion of the plant commonly referred to as the Mill is the hub of the plant operations. More personnel and expense are involved in the milling operation than the combined total of all other departments.

Several products produced at Grand Saline are mixtures of salt and some ingredients, in most cases used to provide anti-caking properties. Other ingredients are sometimes mixed into the salt to provide a nutritional benefit.

Grand Saline has a usable warehouse space of approximately 63,000 square feet of which 60 percent is utilized for finished goods storage and the remainder for package material. Material is removed as needed by loading crews. The plant has eight spots for truck loading and ten for car loading.

Morton Salt has undergone mergers and name changes since it began operating under the name "Morton Salt". On May 10, 1965, the board members voted unanimously to change the name of the company to Morton International. Then in April of 1969 Morton merged with Norwich-Eaton Pharmaceuticals to form a new company called MortonNorwich Products, Inc. As a result of a merger with Thiokol, Inc. on July 19, 1983, the name of Morton Salt’s parent company was changed to MortonThiokol, Inc. Morton Salt is one of the four major divisions of MortonThiokol, Inc.

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