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Los Angeles Mining Review

## DANBY DRY LAKE

### Interesting Story of a Desiccated Bed Containing Large Deposits of Salt, Soda, Gypsum, Etc.

WRITTEN FOR THE MINING REVIEW BY DR. STEPHEN BOWERS, OF LOS ANGELES.

**T**HIS REMARKABLE dry lake is situated about thirty miles south of Danby, a station on the Santa Fe railway, some forty miles west of Needles, in San Bernardino county, California. The salt it furnished was the chief dependence in chlorinizing silver at the famous Waterman and Waterloo mines near Daggett; also at the Providence mill near Fenner. The latter produced more than two and a half million dollars in silver, and the two former produced many millions. The native salt was first hauled out on wagons and packed on burros, but in 1890 Colonel Osborn constructed a road from Danby to the lake, and put on traction engines and wagons. He paved each side of the road with lava ejecta and other rocks obtained from the desert, to keep the heavy wheels from sinking into the sand. A thriving business was done here before the depreciation of silver, some of the salt bringing \$200 a ton. But the production ceased years ago, and one great traction engine and wagon may be seen rusting and falling into decay at Danby, and another a few miles out from Daggett.

This interesting lake bed is about three by twelve miles in extent. It has been reported upon by several experts, among them being Professor G. E. Bailey, Ph. D. Mr. Bailey was formerly professor of Chemistry in the University of Nebraska and at a later period Geologist of Wyoming. He is now a resident of Los Angeles. I examined these deposits for the Saline Valley Chemical Works last month and fully agree with him and others, in their high estimate of the great extent and the remarkable purity of these deposits. They consist of salt, sulphate, and carbonate of soda, salt brines, soda brines, clay, gypsum, ce-

ment material, and minerals not yet developed. It is a desiccated lake bed in which the salts derived from the surrounding mountains and plains have concentrated for untold ages, and have formed large and valuable deposits.

#### ROCK SALT.

This mineral underlies from six to eight hundred acres, possibly much more, territory. It has been penetrated to a depth of about sixty-five feet without passing through the deposit. Water is reached at depth varying from seventeen to thirty-five feet, when the rock salt becomes as clear as the purest ice and can be taken out in blocks of any desired size. The deposit is practically inexhaustible. The brines are almost chemically pure and while they have the appearance of limpid water, they contain a heavy percentage of salt which crystallizes when evaporated. They gave Professor Bailey 99 per cent. of sodium chloride and traces of lime and alumina. The surface salt is very abundant.

At one place on the old lake bed the salt is still forming in beautiful botryoidal forms and acicular points, nearly as white as driven snow. Halite or rock salt is forming in the same place and side by side with the other forms mentioned.

#### NATIVE SODA.

There are large deposits of native soda in the forms of sodium carbonate and sodium sulphate. The former appears as an opaque white salt. Combined, they cover several hundred acres from two to five feet deep. Analysis has shown them to contain a large percentage of the respective sodiums even when mixed with clay, sand, etc.

#### GYPSUM.

There is a large deposit of gypsum covering several hundred acres of this desiccated lake bed. It is a selenite gypsum, remarkable for its purity. It appears in skeleton form, like thimble, in hillocks and on the surface and is vast in its extent.

#### LIMESTONE.

Near this lake is a mountain of limestone rising above the surrounding plain, a conspicuous object for miles distant. It consists of crystallized limestone, or marble. Some of it is dolomitic and beautifully crystallized in snowy white crystals, and also bluish. There is also a large deposit of variegated marble suitable for inside finish and all kinds of ornamental work.

The company owning these deposits is preparing to put them on the market, for which there is a demand. The Arizona and California, railway company has made a survey for its road along the margin of this old lake which will make transportation easy.

#### ROCK SALT HOUSE.

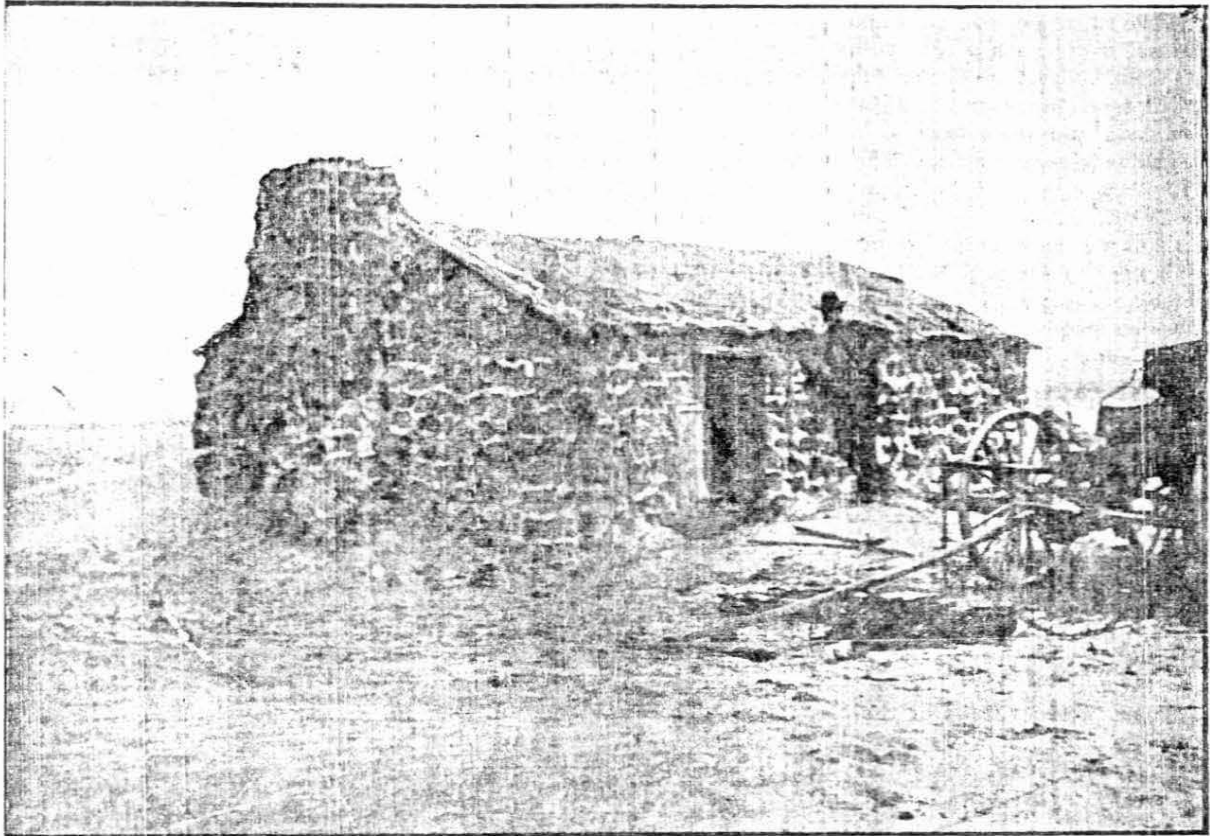
One of the accompanying engravings shows a house erected on Danby Lake bed wholly constructed of rock salt, excepting the roof. Blocks of this mineral were quarried and placed in the walls, after which natural brine was poured over them which thoroughly cemented them together, leaving the joints as hard as the blocks themselves. The building is about 16 by 25 feet in size. The engraving does not show the full height because of the sands that have drifted around it since its construction fifteen years ago. It is as solid as when erected, due doubtless, to the dryness of the climate.

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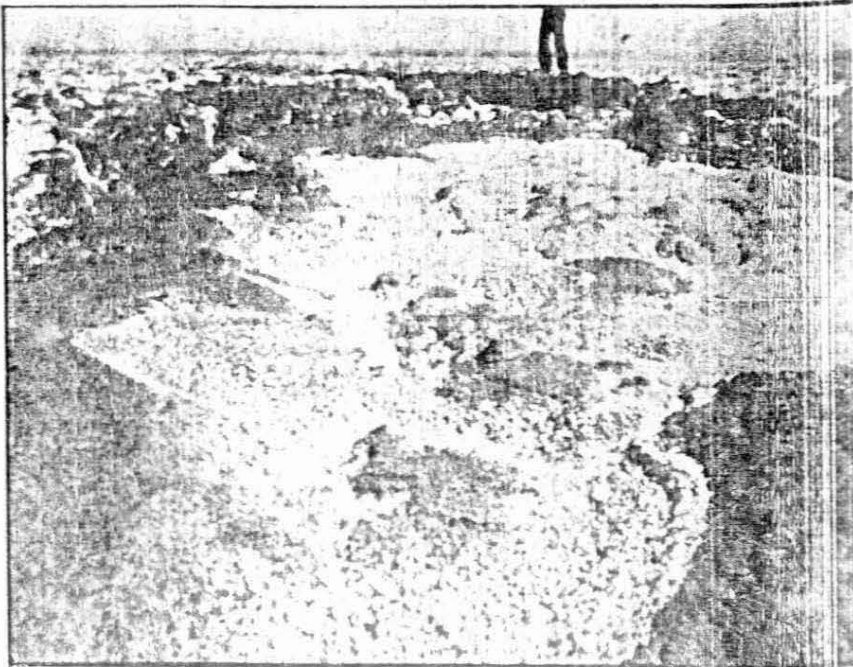
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HOUSE BUILT OF BLOCKS OF ROCK SALT



SALT FORMING ON DANBY DRY LAKE