

Something About Utah's Great Gypsum Deposits.

IT IS a well known fact that nature has been exceedingly generous to our great state and has lavished upon Utah some of her choicest gifts in unstinted quantities. Just east of Sigurd, Sevier county, lies what is conceded, by the highest authorities, to be the largest and most valuable gypsum deposit in the United States. It is not in the world. In support of this fact a quotation is here given from Dr. James E. Talmage, who recently examined these beds for the company owning them. He says: "Extensive outcrops of gypsum occur on all of the claims comprised within the company's lines. As to quantity of material of known occurrence, no accurate amount can be given without accurate measurement of the numerous and colossal outcrops in their entirety. By way of illustration the following data is submitted: A ridge of gypsum occurs approximately 600 feet long, averaging 100 feet high and 25 feet wide, these dimensions apply to the actual exposure, the material being wholly above the eroded surface. (See accompanying photograph No. 2.) Within the lines of these measurements alone there are 107,674 tons of gypsum, another exposure 800 feet long, 100 feet wide, with an average height of 50 feet. This ridge contains 257,132 tons of gypsum above ground. (See accompanying photograph No. 1.) These quantities together represent less than a tenth of the available gypsum actually outcropping within the limits of the company's claims. As to quality, therefore, the material actually in sight and immediately accessible, amounts to millions of tons. It appears to me most advisable to begin the work of gypsum mining on a commercial scale at the place of the small excavation already made at the ridge referred to. (See photograph No. 3.) This outcrop is of excellent quality of material; it is as conveniently accessible as any within company's lines; practically no stripping of surface material is required to reach the compact, compact rock-gypsum and the quantity in this ridge alone insures an abundant mill supply for years to come."

Mr. W. J. Elfrass, another acknowledged authority on gypsum products and whose company has manufactured and placed in operation two-thirds owned mills in the United States made a visit to these gypsum beds for the purpose of determining whether or not it would be profitable to put in a plaster mill, and after he had made a careful investigation he became much impressed with the outlook and many advantages that would accrue to the company in placing a mill on this property. He said: "There is enough gypsum in the one ledge on which the company is now working to keep the mill running at the rate of 100 tons per day for the next 25 years. I have been looking for the greatest gypsum beds in the country and I think I have found them in this county. I may say at least, that it is the greatest deposit that I have ever seen, and I have seen many. In my estimation there is enough gypsum on the company's holdings to supply the world for a century. This valley will probably become one of the world's greatest plaster centers, the situation of the property is good and it will make a solid plaster."

It will be seen from the foregoing that the supply of raw material owned by the company is unlimited. The company has taken a great deal of pains to make every test of gypsum necessary to determine its quality and it has been analyzed by the best chemists in the State of Utah, and every test and analysis has shown the gypsum to be of remarkable purity; in fact, as good as or better than any other that can be found in the United States or in the world. It is almost free from the im-

purities that are usually associated with gypsum and which tend to make it hard to work. Following is one of the tests made by Herman Harms:

Laboratory of Herman Harms, Ph. C. Subject, Analysis of Gypsum. Nos. 48 and 50 South Main Street, Salt Lake City, Utah.

ANALYSIS OF GYPSUM. Sample submitted by H. N. Hayes, City. Date received: March 25, 1908.

Quantity: 51 lbs. in one piece.

Composition:

Calcium sulphate Ca SO₄..... 79.42 per cent.

Anhydrous..... 79.42 per cent.

Water at 212 degrees F..... 10.48 per cent.

2 hours drying..... 10.48 per cent.

Water at 212 degrees F..... 10.48 per cent.

Purity of the gypsum, 99.62 per cent.

REMARKS.

The sample submitted is of remarkable purity, being almost free from the impurities usually associated with gypsum.

Respectfully, HERMAN HARMS.

March 27, 1908.

On this point Dr. Talmage has this to say: "In quality the gypsum is all that could be desired. The deposits wherever uncovered in an unweathered state are generally compact and homogeneous. The results of analysis made at company's instance have been submitted to me and these show a remarkably high grade quality of the material as to chemical composition."

For the purpose of developing this great gypsum deposit into an industry that would be greatly profitable to those

directly connected with it, as well as to the state at large, a few energetic citizens recently organized and incorporated what is known as the Jumbo Plaster and Cement company.

The company has started its operations in a business-like manner and through the vigilance of its president, Judge John P. Chidester, has secured all necessary right of ways and titles.

An excellent site for the mill has been obtained and work on the foundation is being rushed. The company has contracted for the machinery with F. H. Sam & Sons Co. of Enterprise, Kansas, who have agreed to have it ready to ship within the next 60 days. The mill will have a capacity of 100 tons per day, and it is needless to say that it will be modern and up to date in every particular.

Application to the state engineer for

150 second feet of water has been made and the right granted and paid for. There is sufficient fall so that with this amount of water, 200 horsepower (sufficient to run three such mills) can be developed. It is singular that while for many years it has been well known that this was the only place along the river for many miles where water power could be developed, it has remained for this company to utilize it.

The contract for the construction of a canal 30 feet wide on the bottom has been let and the work is rapidly progressing. The water will be taken out about one mile above the mill and led around to the point of the mill east of Sigurd where the mill is to be located. Here the water drops back into the river bed with a fall sufficient to develop the amount of power above mentioned.

The mill will be connected with the main line of the D. & R. G. Ry. by means of a spur, which has already been surveyed by the railroad's engineer. This will, of course, afford excellent shipping facilities.

By means of a light rail tramway the mill and gypsum bed will be connected, thus making a convenient and inexpensive method of handling the raw material.

On the above points Dr. Talmage says: "I note the very regular and easy grade by which the mill site is reached by tramway. The cost of tram construction is greatly lessened by natural features of the ground."

A similarly favorable and easy grade facilitates the construction of a rail spur from the present line of the

Rio Grande Western Railway starting at a point near the town of Sigurd, to the Jumbo Plaster and Cement company's mill.

"At the time of my visit work was in progress on the canal by which water power is to be applied to mill operations, and I am assured that the entire work of canal construction has been completed. The canal has a bottom width of 30 feet."

The mill site lies just east of the Sevier river and is admirably located with reference to transportation facilities, accessibility by railway spur, and proximity to the gypsum beds.

"In regard to the company's enterprise as of assured success so far as quantity and quality of material, favorable location, and natural facilities for operating are concerned."

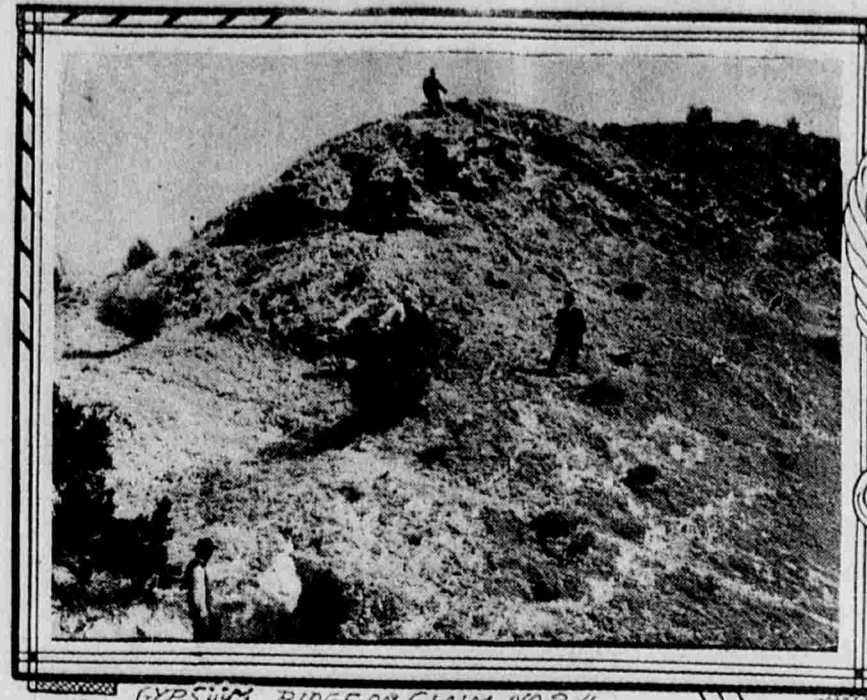
Very few people realize how the gypsum plaster industry has grown within the past few years and what it has meant to the few states in which it is found.

The first deposits of gypsum which were utilized in the United States were those in New York, at the time when the population was largely confined to the Atlantic coast. As settlement extended westward, plaster was produced in Ohio, and Michigan, and later in Kansas and western states and industry greatly enlarged. At the present time the states of Kansas and Michigan are the largest producers in the United States for the reason that in other localities the supply has become exhausted.

In the early period of the gypsum industry the plaster was used for wall plaster. This was due to the many theories on agriculture, discussed by the newspapers and magazines in the early history of our country, in which they called attention to the beneficial effects of land plaster in restoring the fertility of worn-out land. While the use of land plaster has greatly increased, this due to the perfecting of the manufacturing process and the growing demand for strong material in modern architecture as well as a greatly increased demand for plaster of Paris in the arts and sciences. It has become the cheapest and best building material that can be used. Now it is handled by the best and most up-to-date machinery. Up to 1902 in Michigan the industry has been almost entirely a home industry. In the year 1902 there were nearly two million dollars worth of plaster sold in the United States. One reason why the various kinds of plasters have not been manufactured more extensively is because of the great expense of mining it in various parts of the country, but this, as has been shown, is now overcome now by the Jumbo Plaster and Cement company.

There is a growing demand for all kinds of gypsum plasters. This is illustrated by the fact that in 1842 it required only 500 tons yearly to satisfy the demand. In 1860 it took 3,000 tons and the demand has grown to such an extent that in 1902 it required 1,145,251 tons of gypsum for all purposes in the United States to supply the market. A very large amount of the gypsum needed has been imported annually. It comes principally from Nova Scotia and New Brunswick and some from Mexico.

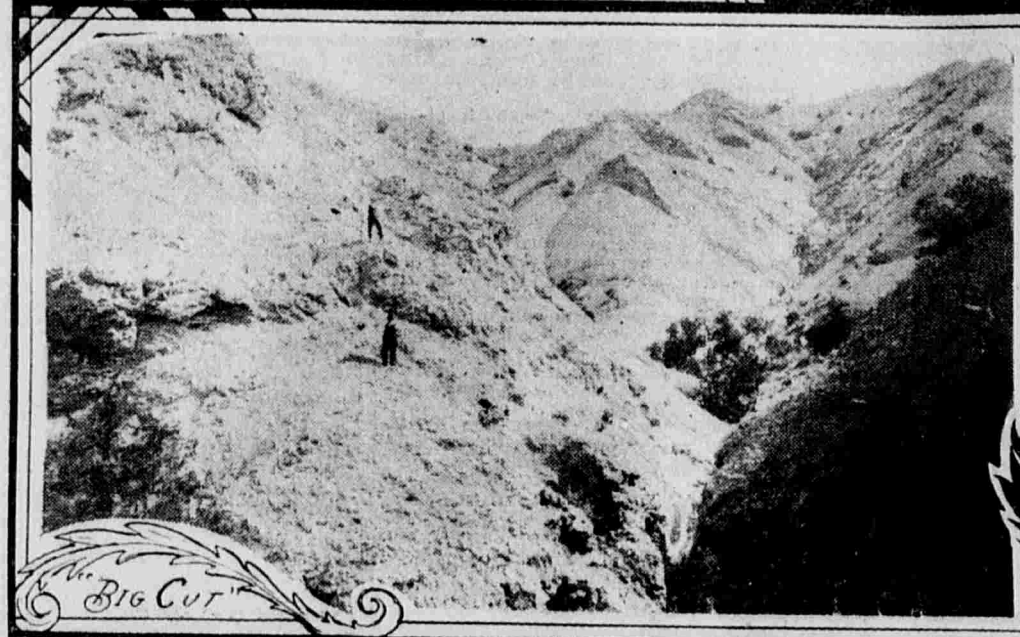
It is the company's aim to have its mill in operation at the earliest possible date. To accomplish this a block of treasury stock is being offered to the investing public. It is gratifying to the management of the company to note that those nearest the property and best posted concerning the merits of the proposition are purchasing shares in liberal amounts. This is as it should be. Too often the people of Utah have failed to see an investment opportunity and the result has been that outside people have taken possession of many of our resources and the profits and dividends have flown into the laps of Easterners. The plaster mill at the mouth of Salt Creek on the Sevier stands as a monument to the foresight and industry of the people who, as a result, are one of the safest and most profitable enterprises in the state.



GYPSUM RIDGE ON CLAIM NO. 4, LOOKING NORTHWEST, LOOKING NORTHWEST, LOOKING NORTHWEST.



MILL SITE, LOOKING NORTHWEST, GYPSUM DEPOSITS IN BACKGROUND.



GYPSUM RIDGE SHOWING EXCAVATION WORK, LOOKING NORTHWEST, LOOKING NORTHWEST.



GYPSUM RIDGE SHOWING EXCAVATION WORK, LOOKING NORTHWEST, LOOKING NORTHWEST.

Around the World with the Fleet

The Official Itinerary of the Voyage and Some Account of the Places of Interest at Which Calls Will Be Made.

UNDER command of Rear Admiral Charles Stillman Sperry the great battleship fleet which Rear Admiral Evans took around the tip end of South America from Hampton Roads to the Golden Gate will depart from San Francisco harbor July 7, the very day on which the Democratic national convention meets in Denver. The fleet is going to return east by way of the west. In other words, it will encircle the globe before it swings into Hampton Roads again on Washington's birthday next year. That is the date selected by the navy department for the homecoming of the globe girdling dogs of war on their present mission of peace. Should all go well, as every good American hopes and trusts, the fleet will have sailed in its fourteen months of cruising approximately 42,000 miles, or nearly as far as twice around the earth. In language strictly American, even as much as the fleet, its officers and men, that will be going some.

Two world's naval records will be smashed by the fleet in this unprecedented cruise. In addition to the aggregate miles sailed, the fleet proposes to prove that it has an easy steaming radius for practical work of at least 3,850 miles, that being the distance between happy Honolulu, Hawaii, and awe inspiring Auckland, New Zealand. The battleships are scheduled to make this run without replenishing their coal bunkers. No warship ever yet sailed from Honolulu to Auckland or any similar distance without stopping to coal. No American doubts that our war vessels will be able to perform that feat, since the navy department has said so. The remarkably successful cruise around to San Francisco under Admiral Evans, with Admiral Thomas as substitute commander toward the end of the trip while "Fighting Bob" was fighting rheumatism at Paso Robles hot springs, is evidence of the fact that this fleet can do any tricks expected of it. Nobody now presumes to smile when the American navy is mentioned. Most people yell, or feel like it.

The official itinerary of the fleet on the rest of its around the world cruise reads thus: Leave San Francisco July 7; arrive Honolulu July 16, remaining seven days; arrive Auckland Aug. 9, remaining six days; arrive Sydney, New South Wales, Aug. 20, remaining seven days; arrive Melbourne, Victoria, Aug. 29, remaining seven days; arrive Albany, Western Australia, for coal, Sept. 11, remaining six days; arrive Philippines Islands Oct. 1, remaining nine days; arrive Yokohama, Japan, Oct. 17, remaining seven days.

From Yokohama the first squadron of the fleet will proceed to Manila, reaching the Philippine metropolis Oct. 31, and the second squadron will steam to Amoy, China, arriving Oct. 29. After a stay of six days at Amoy, the squadron will go to Manila, rejoining the other half of the fleet Nov. 7.

At Manila and its vicinity the ships will remain nearly a month, letting our

Filipino brethren get acquainted with their Uncle Sam's naval power and prowess. There is to be a lot of target practice in Manila waters, such as was had in Magdalena bay, on the west coast of Lower California, Mexico, on the way up to the Golden Gate.

The fleet is to begin the homeward voyage by way of the Suez canal about Dec. 1. On the homeward stretch there will be stops at Singapore, Colombo, Suez, Malta and several of the Mediterranean ports which are to be visited by sections of the fleet. Then the big ships will come straight back home to Hampton Roads and get the barnacles off their bottoms, while the 15,000 men aboard, more or less, will engage in a contest with each other for immediate shore leave so that they may tell their folks and the rest of the folks in the home town all about the marvels they have seen on the world voyage.

That there will be wonders enough to keep every man Jack talking until he grows gray is not to be doubted for an instant. Every man who makes this trip will be the envy of every man in the navy who is not privileged to go with the fleet. Forty years from now, even fifty years, there will be old men in American towns and villages who will entertain their grandchildren and their great-grandchildren, not to speak of the crowd at the postoffice and the corner store, how they went around the world by water in the historic fleet voyage of 1907-8 and what they did, saw, heard and imagined. Already they have gone ashore at several South American ports, discovering wonderfully up to date cities in our southern neighbor republics, and they have been feted, feasted and favored in truly foreign ports. Of these the Australasian cities are perhaps the most interesting, because they are the least known to the American seamen of the navy.

Auckland, New Zealand, as we see by the itinerary, is booked for a six days' tarry. Maybe the average seaman will not care to study deeply the unique sociological situation in New Zealand, where the government is administered for the benefit of all the people, but that city of Auckland will make every man take notice, for it is built in the crater of an extinct—or presumably



ADMIRAL RAWSON, GOVERNOR GENERAL OF NEW SOUTH WALES, AND HIS DAUGHTER, WHO WILL WELCOME THE FLEET TO SYDNEY.

extinct—volcano. The center of the crater is the center of the city. Only a few miles away are the "steaming" plains of Rotorua, where water bubbles from the ground in which Jack may boil eggs, if he has the eggs handy, and where he may stick his cane in the earth, if he carries a cane, and set the end of it on fire. If he likes the novelty he may take a boat ride on Lake Rotomahana and hear the hot waves hiss against the sides of the craft. To the southward the sailor may find something cooling—two snow clad mountain peaks, though their tops are smoking volcanic cones.

It is devoutly to be hoped that crater set Auckland will not erupt during the visit of the American naval contingent. The native Maoris call it the city of the sparkling waters, and it is fair to look upon from Mount Eden, overtopping the town, whence one sees on every side the giant of waters.

Next in line as a stopping place is Sydney, one of the queerest cities of Australia, with a harbor always described as magnificent before the beholder can think of any other word. Sydney is a sort of Australian Chicago. It was first settled the same year in which Chicago was incorporated, 1837, and it has

It Is Expected That the Great Armada Will Return to the Point of Starting on Washington's Birthday.

more than half a million of people and is growing as rapidly as a boom town from which we know our Chinese dress like Americans rather than Europeans, and the city absorbs suburbs from time to time just like the "Greater" American cities. The Sydney harbor is landlocked, with 145 miles of water line, with numerous islands, coves, bays, headlands, inlets and rivers. It is said that the natives of the world could ride at anchor in that harbor without the least crowding, yet it is quite safe to say that the section of the American navy which will spend a week there in August will make itself distinctly visible to the naked eye. Sydney is built of brick and yellow stone. Some of the government buildings are as beautiful as any in the world, excepting the capitol and the library of congress at Washington.

Melbourne is the next Australian port to be visited. It is some 500 miles from Sydney. Somebody has called Sydney and Melbourne the London and Liverpool of Australia. Melbourne also has a population of more than half a million. The federal parliament house in Melbourne has the largest hall in the world, and the city has the biggest boom on earth and the best appointed race course on this mundane sphere. The good old summer time in Melbourne falls in December, January and February, our winter months, so that the American seamen, who are to be there in late August and early September, will not find it too hot. It is a city of contrasts, which sometimes causes discomfort to visitors. Being on the opposite side of the earth from us, Melbourne and other Australian cities have a reversed almanac. They have also a different sky view, with their own private stars and constellations. Seamen of an astronomical turn will miss our Great Dipper if they happen to look up at night. The chances are that the electric lights of Sydney and Melbourne will dazzle them sufficiently, for both cities are brilliantly illuminated.

The fortified port of Albany, the third Australian stopping place of the fleet, is a small town of three or four thousand people. It is situated on King George's sound, and the harbor is one of the finest in the island continent. Albany has a big coal depot, which explains the six days' stop of our fleet. The sailors will be busy coaling up the ships that the smallness of the town will not distress them. There is a United States consul at Albany, who probably is lonesome and will be glad to greet the visitors from home.

One of the highly interesting points to be touched at by the fleet is Amoy, which is a treaty port of China. For six days the Americans will have opportunity to study Chinese life, not forgetting the British element, which is large. Amoy was taken by the British in 1841, and by the treaty of Nanking a British consul and British subjects were permitted to reside there. In the sixteenth and seventeenth centuries the Portuguese and the Dutch maintained trading establishments there. The export trade from Amoy

with the United States leads that with all other nations. Amoy is the place from which we carry our Chinese tea. When the Panama canal is finished, Amoy very probably will be the most important port in China as to commercial relations with the United States.

ROBERTUS LOVE.

FIRST PHILIPPINE ASSEMBLY.

The assembly knows that the people are watching and criticizing and is that it must share the responsibility for success or failure and that the Americans can no longer be entirely blamed for whatever goes wrong. The members know that back in their districts are a number of ambitious and aspiring politicians who are eagerly seeking an opportunity to oust them and get their seats. A new element has been injected into the insular political game from the standpoint of the local politician, and a new interest is attracting the voter and diverting him from the usual idea of independence. Regarded purely as a political move, in the narrow sense of the term, the creation of the assembly is the cleverest action Uncle Sam has yet taken here.

There are not lacking those who attribute the good along the good assembly has made so far to the uncertainty of its members as to its powers and limitations and their lack of familiarity with the roles they have been suddenly called upon to assume and who predict that the present behavior will not last long. "Wait until about the third session and you will see," is a remark frequently heard among Americans in the islands.

As to this one would hardly care to prophesy. It is perhaps too soon to judge the Philippine assembly and estimate its ultimate value to the islands and people, but already certain tendencies may be observed, and there is no doubt that a good beginning has been made.

ABOUT THE BODY.

At the birth the back has only a third of its subsequent length, the leg a fifth and the arm a fourth. The average length of a newborn child is about nineteen and a half inches.

Extraordinary bodies exist as to the size of the organs of the human body. Many people imagine that their heart must be about the same size as that of an ox; but, as a matter of fact, the heart is always the same size as the closed fist.

In every eye there is a blind spot. It is at the back of the eyeball, just where the optic nerve enters the eye proper. It may be discovered by drawing a tiny star on a sheet of paper and moving it in front of the eye till you find the one position where the star becomes invisible.

Many people are color blind who imagine that their eyes are in all respects perfect. Candidates are constantly presenting themselves for navigation certificates in the belief that they can distinguish all colors, only to discover that they are totally blind to one particular shade.