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N.Y.

(143)

Item 28

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The Future Possibilities of the Property of
The Nevada Sulphur Company,
Sulphur, Nevada.

The property comprises about one thousand acres located four miles east of the town of Sulphur, and a mile and a quarter from the warehouse and siding on the Western Pacific Railroad. Fair wagon roads lead to the town and warehouse. Coal is obtained from Utah and Wyoming and a sufficient supply of water for the camp and mill is piped five miles from springs owned by the Company. The present water supply can probably be doubled by further work at the springs.

The mines have been worked for over thirty years and were acquired by the present owners about two and a half years ago. The property has been described by I. C. Russell in the Transactions of the New York Academy of Science, 1882; and by George I. Adams in Bulletin 225, U. S. Geological Survey, pp497-502, 1904. Charles S. Haley examined the property in 1917 and the property was purchased by the Nevada Sulphur Company through his recommendation. His report contains an accurate and conservative estimate of the tonnage to be expected from the openings examined by him and is the most valuable and detailed report now available. The present writer has been employed by the Company during the last two years as consulting geologist and in the course of several visits has become thoroughly familiar with the property as a whole.

The claims lie in a compact group on the western slope of the Mamma Mountains which are composed of rhyolites and other lavas. The western slope is covered to a depth of about five hundred feet by gravels washed from the mountains. Former hot springs have flowed from fissures in the underlying bed rock up through the gravels and

and elsewhere have altered the gravels and filled the interstices with sulphur, alunite and other minerals typical of hot spring action.

The sulphur occurs as kidneys and large lenses and masses in rudely circular areas of the altered gravels that are more or less closely related to open cracks and fissures maintained by the ascending hot waters. The deposits so far opened have occured near the surface and have been developed through tunnels driven into the sides of the ravines. About ten of the known areas have been opened up, and two or three completely exploited. Haley estimated a probable production of 64,000 tons of better than twenty per cent ore in the ten areas developed sufficiently to be measured.

The work of the present company has been largely confined to the P 1, 6, and 245 mines and have shown that Haley's estimates were conservative. In the latter two mines considerable more ore than was expected has been developed. A hundred foot shaft south of the present workings has been sunk in high grade ore, a large body of ore outcrops in the Devil's Corral, and stillanother near the northern boundary of the Shoel 6 claim. As no development work has been done at these points accurate estimates of the tonnage and grade of the ore cannot be made at present but in my opinion they give promise of at least ten thousand tons apiece of twenty per cent ore.

The sulphur has formed near the surface through the partial oxidation of hydrogen sulphide, a gas that accompanies all hot springs depositing silica in Nevada at present. This incomplete oxidation of the gas takes place near the surface in gravels, sands, or other permeable formations where a limited contact between the gas and the air is possible. As the building up of the gravel slopes took

a long period of time and the hot spring were evidently flowing during the same period it is probable that similar deposits of sulphur were formed in the lower layers of the gravels and that deeper development will disclose their location.

If the ore already developed and reasonably expected in the present openings be added to the potential possibilities of the areas not known and undeveloped, together with the unknown factor of ore at present concealed at deeper depths, an estimated minimum production of the property of 100,000 tons of ore is a very conservative statement of the future possibilities of the property.

About 100,000 tons of waste from the plant lie in the dump which will probably run better than ten percent sulphur. The present method of recovering the sulphur from the ore is inefficient and one has but to break some of the lumps in the dump to see that a large percentage of the sulphur has not been recovered. Should the proposed method of treatment originated by Mr. Crowley be successful this material in the dump is favorably located for treatment at low costs.

March 16th, 1920,
Reno, Nevada,