

Mining Around Lovelock, Nevada

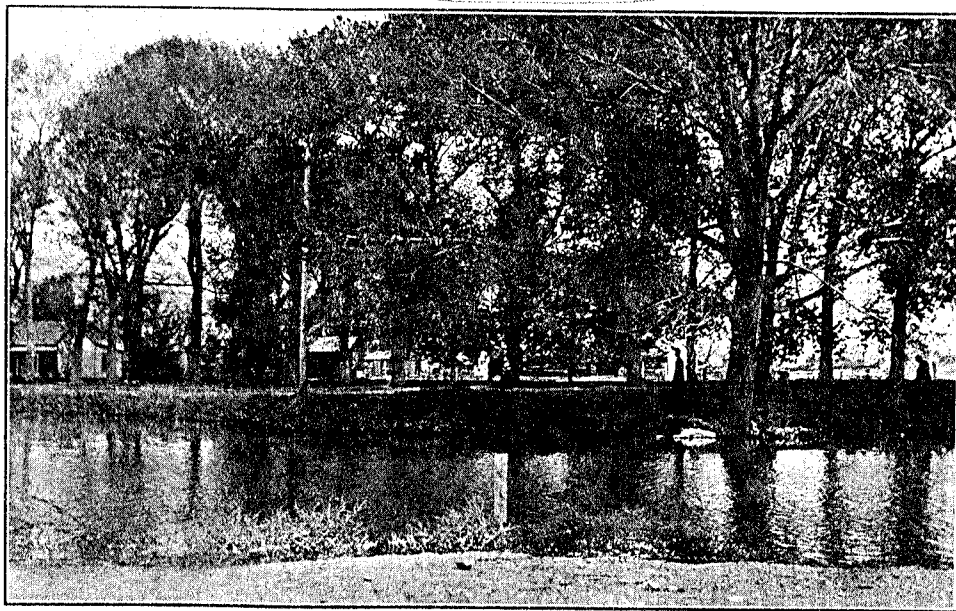
By P. E. McDonald

Nevada has the least people and the most mines of any State in the country. It has more square miles than inhabitants, and for the most part is rightly pictured as an arid waste. There are, however, a few places where conditions favor ranching, and where oases appear in the sage-brush desert. These are the more attractive if they can be used for a headquarters by miners and engineers. Since the coming of the automobile, 30 or 40 miles can be traveled with ease, to give the dust-covered mining man a change of atmosphere at week-ends or between trips. Such an oasis is the town of Lovelock in the north-western part of the State on the main line of the Southern Pacific Railroad, the centre of a prosperous cattle industry and of varied mining activities. By aid of water from the Humboldt river, the valley produces excellent alfalfa for feeding cattle and sheep, which are sent from a wide area in the West to be fattened for the San Francisco market. Lovelock is preferred for this purpose rather than California, because it has no rainy winter.

A two-hours automobile journey south-eastward from Lovelock brings the traveler to the much advertised Rochester silver district, and the same distance northward are the Seven Troughs gold mines. The Humboldt range has long been a famous producer of the precious metals; it was here that the old Queen of Sheba and De Soto mines of George Hearst were situated. Regarding the foundation of the Hearst fortune, a writer in the *Overland Monthly* remarked recently, "Little did the old-timers dream, as they prodded their oxen to brackish water-holes with creaking loads of ore, that the wealth they carried would some day appear in screaming headlines." A number of prospects and small mines are scattered throughout the region. Some are being operated, others are idle, and still others alternate between these conditions. Besides Rochester and Seven Troughs, I may mention Mazuma, Vernon, and American Canyon, all small mining camps. At Rochester a half-dozen silver mines are operating, notably the Rochester Mines, Rochester Merger, Nevada-Packard, and Lincoln Hill; and at Seven Troughs are several gold mines, the more important being the Seven

Troughs Coalition, Seven Troughs Mining Co., and Mazuma Hills. Tungsten has been found west of Lovelock; several mines are now producing tungsten ores, and one or two concentrating-mills are being operated near Toy, along the edge of the Humboldt sink. South-east of Lovelock, about 60 miles, is Bernice, near which are the antimony mines described recently by Willard Mallory.*

The two principal mines with headquarters at Lovelock are the Rochester Mines Co. and the Seven Troughs



WATER IN NEVADA. A SCENE AT LOVELOCK.

Coalition Mining Co. The former, a silver mine working on wide veins of moderately rich ore, is the largest producer in the Rochester district; it has extensive workings well developed by adits, and a 10-stamp continuous-decantation cyanide-mill of a capacity of 120 tons per day; the company recently accomplished the payment of an indebtedness of \$200,000. The Coalition mine, in the Seven Troughs district, is a spectacular producer of high-grade but pockety gold ore; its output last year was \$335,736, of which \$180,382 was paid in dividends. A 10-stamp mill extracts the gold by amalgamation, the concentrate being shipped to the Selby smelter on San Francisco bay. A cyanide-plant was destroyed by a cloud-burst several years ago, when 10 lives were lost. The mine is 1650 ft. deep, and the vein has been much faulted. In one month, October 1915, over \$60,000 was produced, at the rate of \$2000 per day from a 10-stamp mill—a pleasant performance while it lasted!

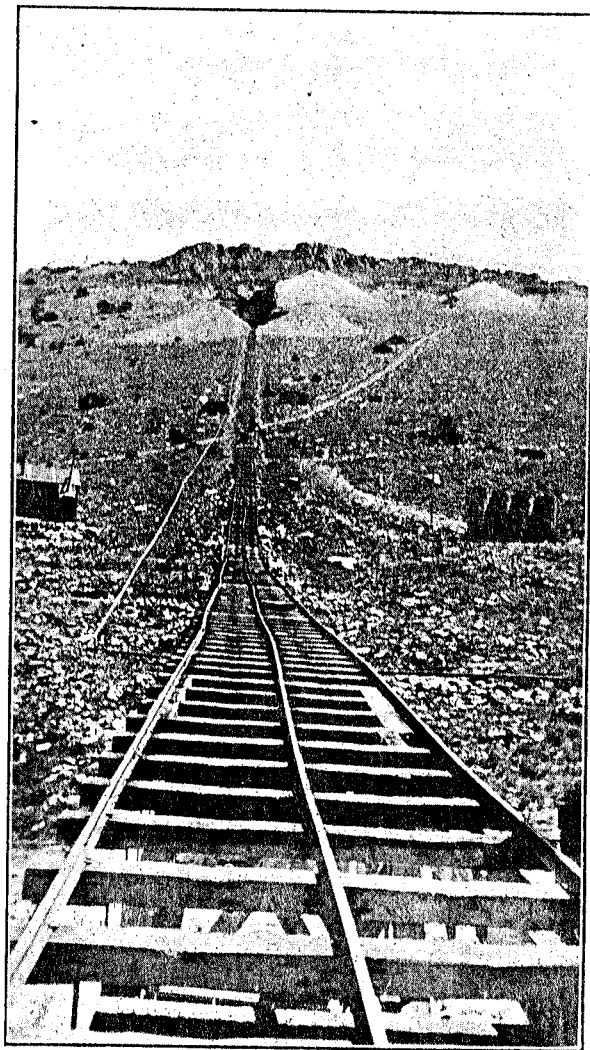
*M. & S. P., April 15, 1916.

The Rochester mine was operated under a leasing system up to a year ago. This did not prove satisfactory; it became apparent that the lessees were working the 300-ft. blocks as separate mines without any regard for the future. Drifts in the various blocks were not on the same level. Accordingly, the Rochester Mines Co. purchased the three leases for \$40,000; also the adjacent Weaver claims were secured. The lessees had produced \$938,515, all from ore averaging over \$20 per ton. The company, operating its own mine, has produced in nine months \$433,606, part of which was from purchase of custom ore. The machinery has been centralized at the mouth of the lower or Friedman adit. The upper or transportation adit has been straightened, widened, and laid with 12-lb. rails. There are three productive veins; the stopes vary up to 15 or 18 ft. wide, and the ore runs as high as \$90 per ton, but most of it averages \$10 to \$30 per ton. The ore is hand-picked before being sent to the mill. The cost per ton of mining during the nine months to May 15, 1916, was \$3.35, of which underground tramping absorbed 30c., timbering 35c., ore sorting 9c., and surface tramping 13c. Explosives cost 22c., and power 23c. per ton. For the month of May, 1916, the total cost of mining was \$3.10 per ton, showing a slight reduction. At present two shifts are worked; the night shift drills and breaks the ore, the day shift loads, trams, and sorts it. By this arrangement everything is made ready for the drill operators so that they have a minimum of interruption and bother. Also the requirement for power is distributed to equalize the demand; this is helped further by doing the coarse crushing at the mill when no power is needed for drilling. Power is furnished to the mine and mill by the Nevada Valleys Power Co., which derives it from the Lahontan dam, a government irrigation project 85 miles distant. The power is bought at \$8 per horse-power per month.

The mill was started to operate in March, 1915. A feature of the practice is the grinding of 93% of the ore to 200-mesh. The mill was designed by G. W. Wood of the Dorr Co. It is a continuous counter-current decantation cyanide-plant, using Dorr thickeners without a filter. A complete description of the mill, written by Mr. Wood,† was published in this paper a year ago. The cost per ton of treatment in the mill during the year ending May 15 last was \$2.69, of which coarse crushing and sampling took 16c., stamping 33c., tube-milling 60c., thickening 7c., agitation 52c., decantation 17c., and precipitation 49c. The cost for power was 56c. per ton. For the month of May 1916, the total cost of milling per ton was \$2.14, showing an appreciable reduction. Adding to this the cost of mining, \$3.10, the total is \$5.24. Indirect expense, such as transportation, water-line, taxes, etc., was 89c. per ton, making the total of all expenses \$6.13 per ton. This figure seems high but the practical difficulties overcome have been considerable.

The president of the Seven Troughs Coalition Mining Co. and the Rochester Mines Co., is L. A. Friedman of

Lovelock. Mr. Friedman has persisted in operating the Coalition mine since the rush to the Seven Troughs district, which came as an aftermath of the Goldfield boom



THE ROCHESTER MINE; ENTRANCE TO THE TRANSPORTATION ADIT.

in 1907. The Coalition mine has had a hard row to hoe, in spite of its high-grade ore. Faults in the vein, the disastrous cloudburst, and internal disagreements among stockholders have interfered with regular production. It has been necessary to go deep for the ore, and at times it has required considerable faith to keep going. Later, Mr. Friedman secured control of the Rochester Mines Co. His management has been criticized at various times. He has run things in a vigorous way to get results, and has conducted a wide publicity campaign for making the stock known on the mining exchanges. As indicative of the internal differences that have arisen, I may mention the recent statement by Mr. Friedman to the stockholders concerning the previous management. He said: "How men can do what has been done in the affairs of your company and escape the penalty of the law is beyond my comprehension." In a general way it should be remembered that any energetic man with a definite policy makes enemies; and to achieve results, he must be allowed to manage a mine according to his understanding of conditions.

†M. & S. P., August 28, 1915.