

DRAINAGE TUNNEL WOULD RESTORE

PROSPERITY HERE.

BY

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HERALD DEMOCRAT

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Since the beginning of lode mining in the Leadville District the necessity of pumping water has been the cause of great expense to the miner. This handicap has become intensified as mining operations have been carried to greater depths, with increased pumping costs and usually decreased value of the ore recovered. Due to periodic depressions of metal prices, many situations have developed in the past wherein the cost of pumping has amounted to the difference between profitable and unprofitable operation, resulting in the closing and flooding of mines that have remained idle over long periods. Then, as metal prices improved to the point where mining could be conducted profitably in the flooded areas, the heavy cost of unwatering and rehabilitation has caused an undue prolonging of these periods of inactivity.

At the present writing a great part of Leadville's productive area is under water, this area embracing most of its silver and base metal deposits that have yielded more than eighty per cent of the mineral wealth of the district. The water level in the mines involved has risen to maximum elevations for the first time in many years. In the light of the present outlook it seems unlikely that any attempt will be made in the near future to pump out the water that has filled the many miles of workings in the flooded mines.

The question arises, where is the way out of the difficulty, and the answer seems to lie in the fact that the only quick solution of the problem would be the construction of a tunnel that would unwater and permanently drain the flooded areas. Accordingly, an application has been made to the Government for a loan to defray the cost of a drainage tunnel for Leadville.

The tunnel as now planned would start on the east side of the Arkansas valley, at a point about four miles south of Malta and at an elevation of 9400 feet above sea level. It would run in a northerly direction about five miles to the Penrose shaft and about a mile further to Fryer Hill. A lateral 8300 feet long, driven easterly from the Penrose shaft, would reach the Carbonate Hill and Iron Hill areas. With the exception of a limited amount of workings in the Downtown and Carbonate Hill areas lying at comparatively shallow depths below the elevation of the proposed tunnel, the complete drainage of the four basins comprising the flooded area would thus be accomplished. It has been estimated that by sinking one or two shafts along the line of the tunnel and driving more than one heading the construction of the tunnel could be completed in less than three years. About two hundred men would be employed continuously during the construction and additional employment would be afforded as the several basins became successively drained. With the project completed as proposed extensions of the drainage system into other areas could be made, whenever such extensions should become useful, and the drainage of the entire district could eventually be effected.

Investigations by geologists, engineers and practical mining men familiar with Leadville have shown that this project is feasible, that in the light of past experience no serious difficulties would be encountered in doing the work, and that the cost would be well within the bounds of reason. Comparing the two alternatives of unwatering and draining by pumping and by a drainage tunnel, the cost of pumping out all the flooded areas would in all probability amount to about one half the cost of the drainage tunnel; and, with the additional heavy annual expense of maintaining the drainage after unwatering, expenditures for pumping, in a very few years, would equal the entire cost of the tunnel.

The flooded areas probably could be recovered by a drainage tunnel in much less time than would be required by pumping. When completed, the tunnel project would be permanent and not liable to quick destruction that might result from the ever recurring slump in the metal market.

In considering this project from an economic standpoint the question may be asked as to the amount of available ore reserves upon which a tax or royalty could be levied for purposes of returning the investment in the tunnel. Under conditions of cheap drainage as would be afforded by the proposed tunnel, mining could be conducted profitably in many places within the flooded area when drainage was completed, and activity would increase rapidly as metal prices became normal. Geologists familiar with Leadville have indicated that substantial amounts of new ore may reasonably be predicted in localities adjacent to deposits that have been worked within the area to be served by the tunnel. Government geologists in their reports on the district have pointed out favorable mineral possibilities in unexplored sections within this area and in areas that can be reached by laterals from the tunnel and, while no appraisal of these sections can be given in dollars, past experience has shown that the exploration of such favorable localities has resulted repeatedly in the finding of many million dollars worth of valuable mineral.

The Yak Tunnel is an outstanding example of the value of tunnel drainage in the Leadville district. By its facilities the usefulness of many mines has been prolonged and, in some cases, the production of mines has, since the tunnel was driven, exceeded the production prior to its construction.

Due to the erratic nature of the ore deposits and the diverse ownership of mining property, it is doubtful that at any time in its past history Leadville has been able to show more than a few years' supply of ore blocked out and definitely assured, yet, in the course of its life of more than fifty-five years it has produced more than a half billion dollars in mineral wealth. Taking into account this past history together with geological information pointing to future possibilities, common sense would be sufficient basis for the conclusion that there is ample justification for the expenditure of a fraction of one per-cent of the value of Leadville's past production in the construction of a feasible project that would reclaim its flooded areas and make available its valuable metals.

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