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James Doyle Sell Mining Collection

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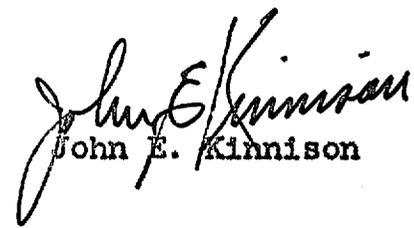
November 18, 1964

Mr. Reed Welch:

Total Wreck Mine

The Total Wreck mine, about 30 miles southeast of Tucson in the Empire mountains, has in the past produced a small quantity of high-grade oxidized silver-lead ore, and has been considered by most mining people to be worked out.

I suggest that there is a long-shot chance of a blind ore shoot existing, which by comparison to the other principal shoot might contain 5,000 - 10,000 tons of, possibly as much as 50-ounce, silver ore. The workings are open and accessible for inspection; the exploration would probably have to be done by digging exploration openings, which might cost about \$50,000. I believe a small but competent mining organization would be well advised to look into the matter.


John E. Kinnison

JEK:bam

Notes

The Total wreck was examined by F. C. Schrader (U.S.G.S. Bul. No. 582) in 1912, and summary notes are included in an Arizona Bureau of Mines Bull, 158 Part II. My acquaintance with the deposit consists of a few hours underground in 1953. A sketch of the workings made by Schrader is attached.

The ore which has been stoped occurred as bedding replacements controlled by two principal fissures, which are about 90 feet apart and strike west. The main stope rakes SE, down-dip with the limestone host rock at about 40°.

The most reliable production report now available states that during 5 months in 1881-2, 7500 tons yielded \$450,000. This ore was treated in a stamp mill for the silver value -- the lead going to the tails. Later, in 1926, 1000 tons of tailings were treated which contained about 7 ounces silver, 6% lead, and 1% copper.

Other production was made intermittently from the 80's up to 1927, as recorded by Bull. 158.

From my visit I recall that "vein matter" 5 to 8 feet wide was exposed in the workings and had not been stoped. A sample of a vein in the wall of a stope, which I cut during that visit, assayed 1% Pb and 4.7 ounces silver. However, I do not propose that particular emphasis should be placed on the vein matter which remains exposed, although even this might be mined if silver goes high enough in price. I would like to call attention instead to a breccia on the 450-level, and my interpretation of it.

An angular limestone breccia is cut through in a crosscut on the 450-level. It is made of sharp pieces of limestone which form together without cementing material, and might be said to resemble gob. My recollection is that it is exposed for about 30 feet on both walls. It is nearby but is not connected with a mineralized vein. My interpretation is that this breccia is a "slump-breccia" such as is sometimes formed over an oxidized lead-zinc body. If this is the case, what might we expect of such a mineral body, in this mine? Certainly it is possible to speculate that a shoot similar to the principal one previously mined might there exist.

Examining the production record mentioned above, the \$450,000 recovered from 7500 tons shows a recovery of \$60 per ton, and at the price of silver in 1881-2, which was \$1.14/oz., this shows a metal content of 52-1/2 oz. Ag per ton. Since the best recovery we could imagine would not exceed 80%, the heads probably ran about 65 ounces Ag. per ton.

Recommendations

I do not know what the present property status is. In 1953 one patented claim covering the workings was owned by the Vail Co.; Pima Co. assessors office Patented claims Book 15, p. 98. If the breccia is examined by a company interested in this sort of venture, and if they agree in principal to the possibilities outlined, then the mine must first be leased or purchased, mapped, and then appropriate exploration steps could be carried out.

worked by C. I. Roberts, who found several thousand tons of low-grade ore remaining in old workings, discovered some new bodies, and shipped considerable ore until March, 1908. In March, 1909, the property was bonded to E. P. Drew, of Tucson, and work was resumed on a small scale. Some ore, in part high-grade lead-silver ore, was produced, but early in 1911 it was reported that the work had been discontinued. The production, which so far as learned seems

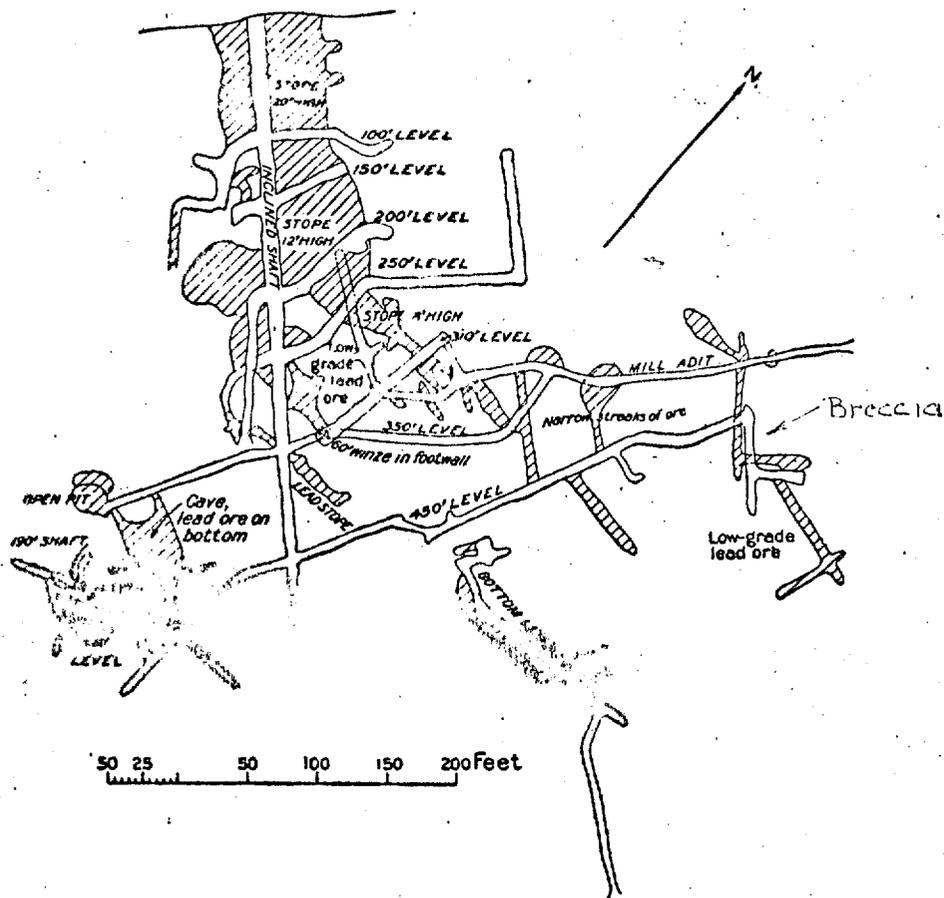


FIGURE 16.—Plan of underground workings, Total Wreck mine.

to be more than 10,000 tons, was mostly made prior to 1902, especially in 1881 and 1882, when the mill was in operation, and a five months' run is said to have produced over \$450,000, or about 7,500 tons.¹

Developments and equipment.—The mine is well developed to a depth of about 500 feet by shafts, tunnels, drifts, inclines, winzes,

¹ Hamilton, Patrick, *The resources of Arizona*, 2d ed., p. 131, San Francisco, 1883.