UNITED STATES
DEPARTMENT OF INTERIOR
OSCAR L. CHAPMAN-SECRETARY

DEFENSE MINERALS ADMINISTRATION

Report by Examination Team
Region II

DMA-1/SAX - Argonaut Mine

Baker County, Oregon

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U. S. Bureau of Mines

October 3, 1951

ARGONAUT MINE
Baker County, Oregon

DMA Docket No. 14641

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## RECOMMENDATIONS

The Argonaut Mine is primarily a gold property. The grade and tonnage of the indicated ore appear inadequate to permit a profitable operation under present conditions. The recoverable base metals are not present in sufficient quantity to justify the participation of the Defense Minerals Administration in an exploration project. Indications are not considered particularly favorable for the disclosure of minable base metal ore shoots. It is recommended, therefore, that the application be denied.

## APPLICANT

The applicant is the Argonaut Mine, Ltd., John Arthur, Manager, P.O.Box 207, Baker, Oregon.

## LOCATION

The Argonaut property consists of the following 21 (surveyed) quartz mining claims: The Argonaut Nos. 1 to 15, inclusive, and the Wilmot claims, Nos. 1 to 5, inclusive. These claims are in secs. 13, 24 and 25, T. 8 S., R. 36 E., and secs. 18, 19 and 30, T. 8 S., R. 37 E., W.M.

The property is 12 miles northwest from Sumpter, Ore., over a maintained mountain road. Baker, Ore., 29 miles east of Sumpter, is the nearest railhead and is reached by an improved and partly oiled highway.

## OWNERSHIP

Title to the property presumably is held by the applicant. The alleged ownership was not verified, however, because of the remote possibility of executing an exploration contract.

## HISTORY AND PAST PRODUCTION

The deposit is one of several quartz gold veins of the Cracker Creek or Bourne district, first exploited in 1880-90. The Argonaut mine first was explored by shallow shafts about 1890. At that time a 3-stamp mill and roaster chlorination unit was built on the property. A small amount of quartz gold ore was claimed to have been treated in this mill.

In 1900 about 1,600 feet of drifts and crosscuts were driven on the upper level. Apparently, no mining was done on this level at the time. After 1900 the mine reputedly was idle until 1938. The several camp buildings now on the property were built in that year.

The lower adit was driven during 1938 and 1939. In the period 1938 to 1940 several lessees mined gold ore from both the lower and upper levels. According to John Arthur, net smelter returns on gold ore mined since 1938 totaled about $25,000.

## DESCRIPTION OF PROPOSAL

The applicant proposes to:

1. Extend a drift on the upper level.
2. Crosscut an aplite dike on the lower level and search for the presumed continuation of the gold vein.

The applicant also directed attention to a small vein containing gold and a minor amount of antimony which he proposed to explore by bulldozing and subsequent drifting.

## GEOLOGIC SETTING

The Argonaut mine is in an area of thinly laminated siliceous argillites which are invaded locally by small irregular bodies of granitic rocks. In the mine area the surface exposures are highly siliceous metasediments, irregularly cut by several aplite dikes. The lower level of the mine is in a granitic rock of about the composition of granodiorite.

Two veins have been explored. One vein strikes N. 30° E. and the other N. 30° E. The respective dips of these veins are 45° to 55° southeast and 60° to 70° south. Both veins are in well defined fault fissures

The siliceous highly crushed vein material is localized in discontinuous shoots. Much of the so-called ore is chiefly brecciated quartz and intermixed clay. Locally, small stringer veins extend 10 to 15 feet into the walls at high angles to the main fissure. These gash-fracture veins, according to the applicant, often contain unusual amounts of gold.

The vein to be explored for zinc and lead is similar in appearance to other gash veins found along the N. 30° E. fissure. This vein locally contains a few scattered bunches of sphalerite, galena, and chalcopyrite. None of these minerals, however, have been found elsewhere in the mine. The zinc-lead gash vein has not been found in the upper level although the drift extends well beyond the area in which it appears in the lower drift.

The proposed exploration program contemplates a drifting on the N. 30° E. vein on both the upper and the lower levels. Combined

surface and face exposures suggest that this vein probably extends an additional 100 feet or more to the northeast. However, good surface exposures of this vein over about 600 feet combined with drift exposures along 400 to 500 feet of the same section at a depth of 260 feet reveal only one erratic, weakly metalized, lead-zinc vein. Throughout this fairly extensive exploration of the N. 30° E. vein structure and similar explorations on the N. 30° E. vein structure only narrow discontinuous quartz-gold mineralization and a single weak subsidiary quartz-zinc-lead stringer have been found. It, therefore, appears obvious that the geologic probability of encountering a marked transition to base metals by drifting a few hundred feet farther on the vein is remote. This conclusion is further strengthened by the conspicuous absence of base metals in other mines in the district, many of which have been more extensively explored.

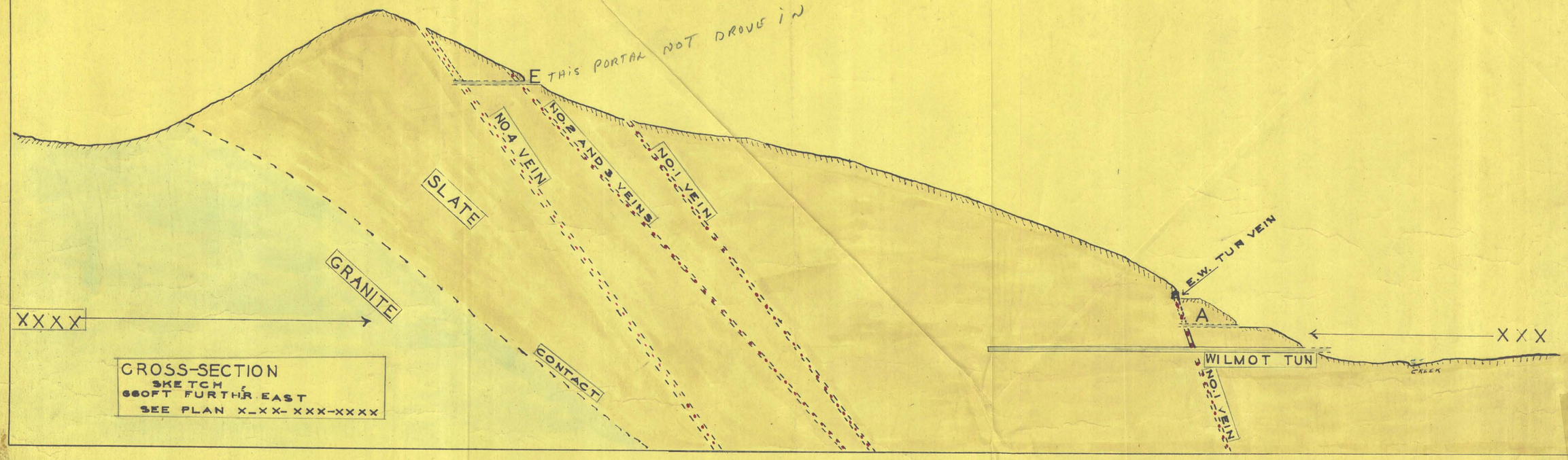
## MINE WORKINGS

The mine consists of two main adits at a level interval of about 160 feet. Average backs above the upper level range from 250 to 300 feet. Two raises have been driven from the lower sill. One raise, currently inaccessible, connects with the upper adit. The other raise has not been driven through to a connection.

Aggregate lateral development on the two levels approaches 3,000 feet; the upper level entirely in argillites and slates, and the lower level partly in granite. Both levels stand well with minimum support. The workings are in good condition with the exception of small areas intersecting minor fault zones.

## DISCUSSION OF PROPOSAL

The applicant's intent to include trenching exploration of an antimony prospect refers to an old prospect dump about 1,000 feet northeast of the Argonaut area. According to the applicant, vein material containing a small amount of antimony has been found on the dump. Presumably, there is no other evidence available. The applicant expressed no enthusiasm over this prospect except that he thought there should be some trenching performed to investigate it further. The applicant discouraged a trip to the prospect because "There is nothing up there to see but the dump." It appears that the proposed antimony exploration was attached to the original proposal as an afterthought designed to qualify the proposal as a venture concerned with strategic minerals.

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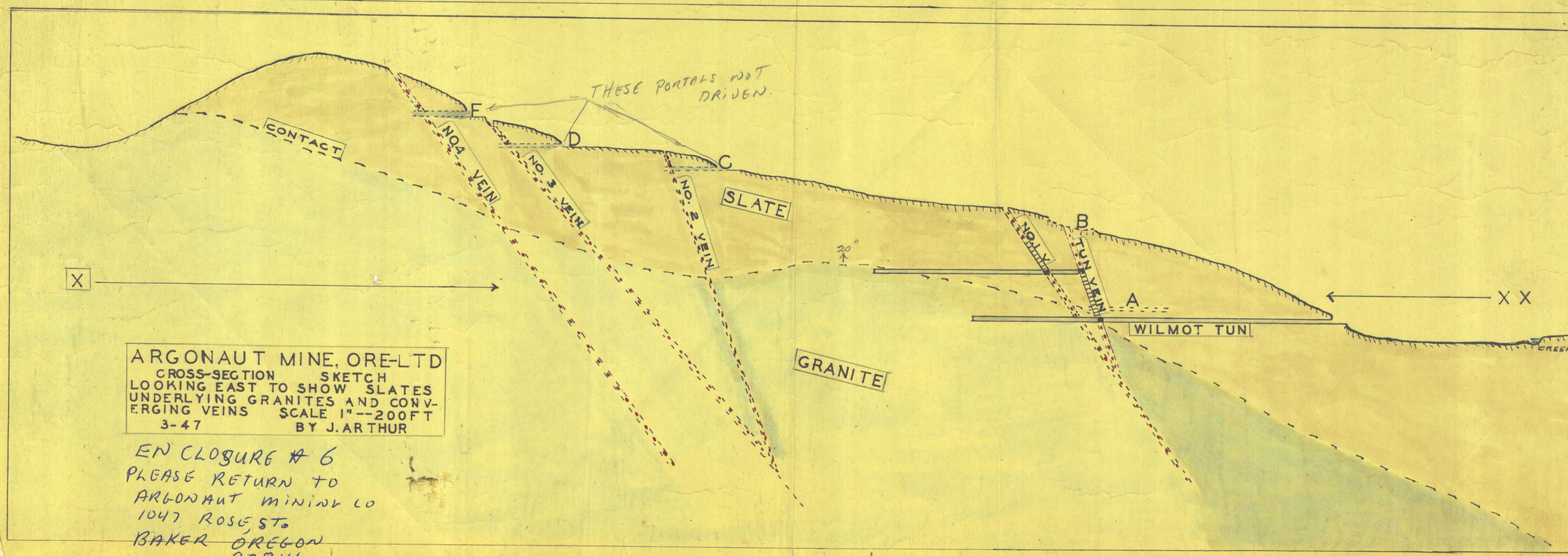


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