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Item 39COTTONWOOD CANYON OR ANTIMONY KING MINE NEAR BATTLE
MOUNTAIN, LANDER COUNTY, NEVADA

Location & Accessibility: The Antimony King mine is about 8 miles southwest of the town of Battle Mountain on the eastern slope of Antler Peak in Cottonwood Canyon about 4 miles west of the base of the range. It is in Sec. 2, T. 31 N., R. 43 E. The mine is easily accessible by dirt road from Battle Mountain.

Ownership: The deposits are said to have been known in 1871, and have been owned and worked by many different people since that time. G. E. Mitchell of Battle Mountain has owned the deposit in recent years, and Mrs. Lily Pesi of Battle Mountain is said to be a joint owner with Mitchell since 1941. The three patented claims are named the Antimony King, and Antimony King #1 and #2.

Investigation: The deposit was visited by D. E. White, W. Wagner, and D. MacMillan of the Geological Survey in October, 1939, and by White and R. J. Roberts on November 5, 1942.

History: The deposits have been owned and worked by many different people since their discovery in 1871. The total production is not known, but is probably not more than a few hundred tons of ore. The mine was not in operation when visited in 1939, but Mitchell reported a production of 44 tons of ore containing 24 per cent in antimony for 1939, 9 tons of ore containing 29 per cent in antimony during 1940, and 70 tons of ore containing 34 per cent in antimony during 1941. The property was inactive when visited both in 1939 and 1942.

Workings: Most of the recent production has come from an inclined shaft on the north side of the North Fork of Cottonwood Canyon. The shaft has a depth of about 100 feet on the incline. Much of the early production came from the workings on and near the ridge between the two forks of Cottonwood Canyon (see sketch). On the crest of the ridge, an inclined shaft on the vein, now inaccessible, is said to be about 100 feet deep. In addition, the area was prospected by a 50' vertical shaft, and about a dozen short tunnels or pits.

Geology: As shown on the accompanying map, the rocks of the area consist of a formation of dark, thin-bedded, contorted chert and siliceous shale, which is overlain by a gray and greenish gray quartzite and grit. The antimony veins are in or are related to a normal fault of at least several hundred feet displacement, which strikes about N. 15° E. and which dips 55° to 70° west. The antimony ore from the southern part of the area has come from veins and stringers in and near the main fault zone. The recent work in the northern part of the area has been on a vein which strikes N. 65° to 80° W., and which dips 45° to 60° north. The northwest vein is in a fault which probably has a small displacement, and which cuts a porphyritic latite dike. The dike is one of a series of similar dikes which strike from due north to N. 25° E., dip steeply to the east, and are believed to have been intruded during the late stages of the main period of faulting in the area. Near the southern end of the known deposits, a dike is cut by the major fault, without appreciable displacement.

The best ore in the southern deposits was seen in a short tunnel north of the ridge. A number of stringers and veins of ore up to 4 inches in width are found in a crevassed

zone with a width up to 4 feet. In any one place, not more than 20 per cent of the zone is ore, consisting of stibnite, some antimony oxide, and intermixed quartz. The average antimony content of the whole zone is probably from 5 to 10 per cent. The zone near the crest of the ridge contains antimony veins and stringers through a length of 800 to 1000 feet.

The ore in the northern vein is found in a northwest-striking fault of small displacement where the fault intersects a porphyritic latite dike. Only a minor amount of ore has been found in the main fault a few feet to the west, or on the intersection of the main fault with the smaller northwest-striking fault.

Tonnage and Grade: From 1939 to 1941, 108 tons of sorted ore containing an average of 30 per cent in antimony were produced. The deposits probably contain 200 tons of shipping ore of a similar grade, and in addition several thousand tons of mill ore containing 3 to 5 per cent. Most of the ore, including the bulk of the mill ore, is contained in the southern vein. In addition, the old dumps constitute at least 2000 tons of material which probably contain 3 to 5 per cent in antimony.

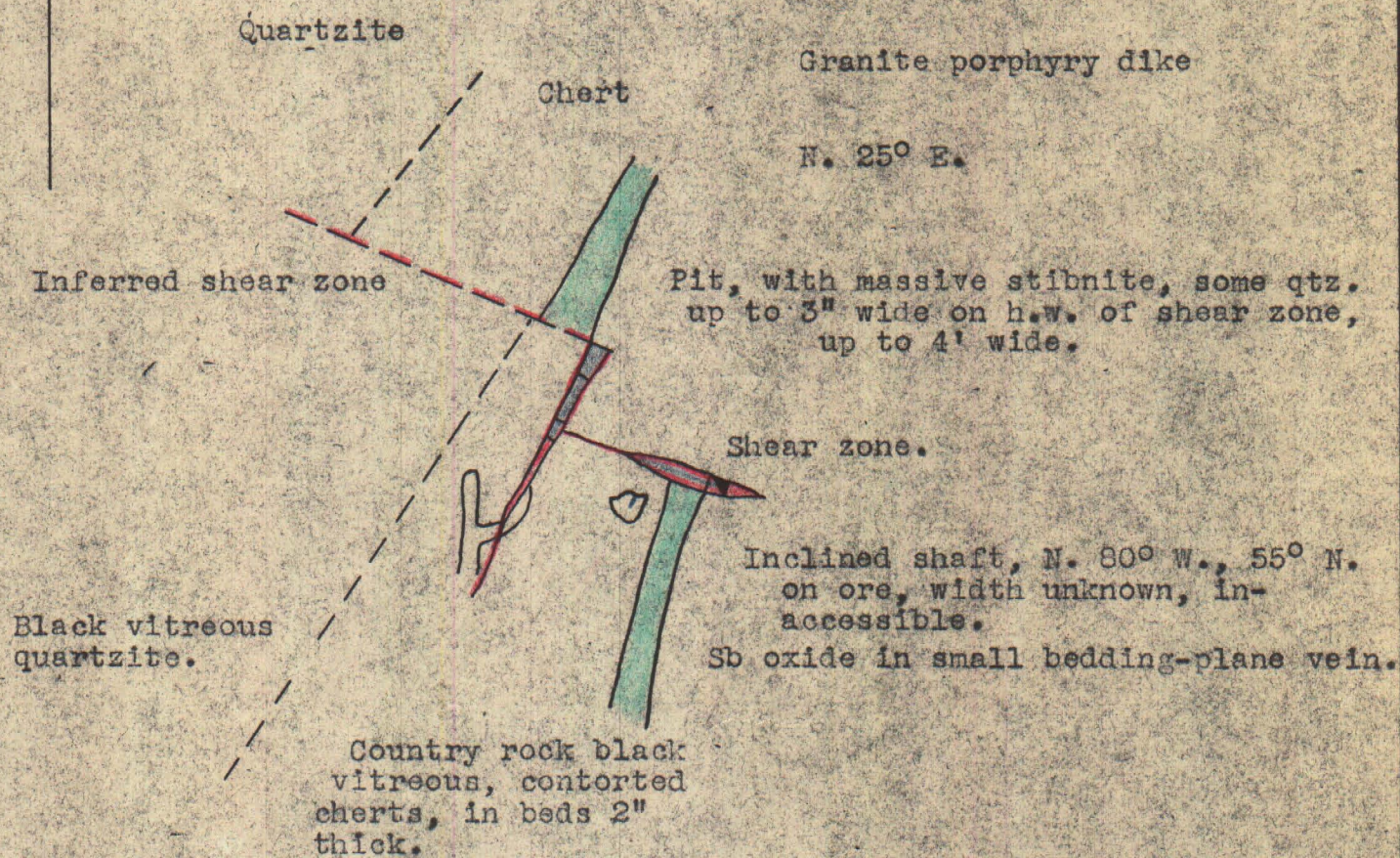
Possibilities: The northern deposit can yield some shipping grade ore from greater depths in the present workings. The intersection of the northwest vein with the main fault has been explored only on the surface, where a little ore was found. A drift from the bottom of the inclined shaft to the intersection of the two structures should reveal additional ore. The southern vein has been explored on the surface, and in one shaft about 100 feet deep. A fairly large tonnage of low grade ore is revealed, from which some shipping ore could be sorted. The deposit is one of the best in Nevada, although much of the ore is low grade.

Donald E. White

November 16, 1942

U. S. Geol. Survey
C O N F I D E N T I A L
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SKETCH MAP OF COTTONWOOD CANYON, OR ANTIMONY KING MINE
LANDER COUNTY, NEVADA



Scale, 50' = 1"



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