

Harney County Red Butte

October 28, 1964

Len has written asking me to send you a copy of my report concerning the Red Butte claims in Harney County, T. 20 S., R. 35 E., S. 35.

This prospect is novel insofar as eastern Oregon stibnite prospects are concerned. Rather it was novel. The way the score stands now, another geologically similar occurrence has come to light since the Red Butte first came to my attention in 1958.

The thing that is novel about the Red Butte is that the stibnite occurs in massive bunches in a fairly clean-cut vein in Tertiary volcanics and sediments which show substantial evidence of dormant hot spring activity and related hydrothermal alteration. There is even a cinnabar prospect nearby in the same volcanics and the whole kit and kaboodle of stibnite, cinnabar and altered volcanics probably inter-relate. Except for the other geologically similar occurrence that has come to light since, all other stibnite prospects I know of in Oregon rate as old quartz-gold-stibnite veins in pre-Tertiary country rock.

At the time of my visit to the Harney County Red Butte prospect, the owners had a tone to a ton and a half of stibnite mined and stockpiled. This consisted of massive chunks some of which were more or less comparable to five gallon drums in bulk. They contained stibnite to the assay tune of 30 to 40 percent Sb which shows they were pretty well loaded.

These chunks originated from a zone of hydrothermal crud that was pretty well defined for a width of around two feet. The stibnite, however, was not in the form of a single, solid lens. Instead, the chunks and knots were distributed irregularly throughout the portion of the vein zone that had been explored up to the time of my visit. This exploration consisted of a dozer trench across the strike and a shaft on the vein to a depth of around 30 to 35 feet.

The hell of it is that the vein didn't trace laterally any distance worth a damn till all semblance of structure and vein became obscured by the general mess of broken down hydrothermal material and characterless rock-soil debris that occupies the land surface for a wide surrounding area. What the owners may have done in the line of new work subsequent to my visit, and what, if any, new discoveries they may have made since my visit, I can't say. All I know for sure is that they sank the shaft a bit deeper. My guess is that they have done little else since because of the unattractive market conditions that have prevailed for antimony until recently.

Speaking of the shaft brings up the need to mention that even in it I couldn't see too very much of the structure in a manner that lent itself to the making of any very learned report because the nature of the surface material penetrated required fairly tight lagging. For this reason I never have written a formal file report describing my examination; hence this letter summarizing my notes.

What intrigued me about the prospect at the time of my examination, and what intrigues me even yet when I think about it, is not so much the strength of the observable stibnite occurrence that had been found, but the fact that it was there at all and in the form of chunks of massive stibnite and not just occasional disseminated crystals. Since the surface indications of hydrothermal alteration and dormant hot spring action are fairly widespread, it follows that there must be some sort of a major fracture zone at depth. How deep, and where, is something else again as you can readily understand. But down where the hot water emanated from before it hit all the fractured surface lavas and tuffs and etc — what is the mineral picture there?

As I said before, the basic setting intrigues me because of its geologic implications, or at least because of the implications I read into it. And the other Tertiary volcanics occurrence I mentioned is the same way, but even more extensive area-wise with more conspicuous hydrothermal hot spring evidence. There are five or six scattered locations at which the stibnite occurs and it occurs as veins of massive mineral too, albeit in stringers of only one to five inches wide with comparably short strike distance.

Since this is a letter rather than a formal report, I have probably let my hair down further than I would have had I written a report. And certainly I have used informal, off-the-cuff terminology in a place or too. Therefore, please treat this as a personal communication; hence confidentially within reasonable limits.

Sincerely,

Wag

Harney County Red Butte

July 2, 1965

Mr. Hollis Dole
1069 State Office Building
Portland, Oregon

Dear Hollis:

On December 10, 1957 you wrote Darrol Harkey, Burns, Oregon regarding assay sample P-22290 which was massive stibnite that assayed 33.3 percent antimony. You sent me a copy of this letter with a footnote to the effect that I should contact Harkey and arrange for an examination of the occurrence since it represented a new discovery about which we had no previous information. The prospect is located near Drewsey, T. 20 S., R. 35 E. Sec.35.

I made one examination on May 7th, 1958 and another follow-up examination a month later. The observations made on these examinations were reported to you at the time but I made no formal file report because I hoped that the claimants would do more exploration work and thus expose the prospect in a manner that would permit the preparation of a more comprehensive report than was possible with the observations available from the initial examinations.

The way it turned out they did little more than assessment work during the ensuing years because of the fact that the prevailing price for antimony offered little incentive during the interim. However, now that the demand for antimony has become acute, and the price has risen accordingly, Mr. Harkey reports that he and his associates have dug a couple new exploration trenches in at least one of which a new showing of stibnite was made. In this connection I refer you to sample YB-52, submitted July 22, 1964 — assay value 12.87% antimony. The material was a clayish tuff containing a sprinkling of long, thin crystals of stibnite.

Where this prospect is unusual is that it occurs in a setting of Tertiary volcanics and tuffaceous lakebeds which have been locally sheared and subjected to hydrothermal alteration. There is only one other geologically comparable situation in Oregon that I know of. This is located in an area of now dormant hot spring activity near Hereford and it has a half dozen or more little two to six inch stringers of solid stibnite scattered around at various places. Also cinnabar. Incidentally there is a cinnabar prospect near the Harkey stibnite took in the same general host formation a couple miles to the southeast (Woodson Long prospect, page 203, Bulletin 55).

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Neither of these stibnite prospects show a sufficient amount of ore to be meaningful from a mining standpoint in their present states of exposure. However, the fact that the showings which they do exhibit are in both instances associated with centers of hydrothermal activity in Tertiary host rocks sets the stage for some provocative thinking concerning the nature of the mineral potential at depth. Both prospects certainly merit more study in this respect before they can be properly evaluated, especially since the stibnite in all the rest of the known occurrences in Oregon is associated with quartz veins in formations of pre-Tertiary age.

I am refreshing your memory relative to Mr. Harkey's prospect because now that the antimony situation is as critical as it is I am sure you will be interested in learning that the claimants have done some new exploratory work. This I will arrange to examine in the near future.

Sincerely,

N. S. WAGNER

NSW/tm

cc: Mr. Harkey