

Senator Duncan's Cinabara Mine  
Harney Co., SW. of Burns.

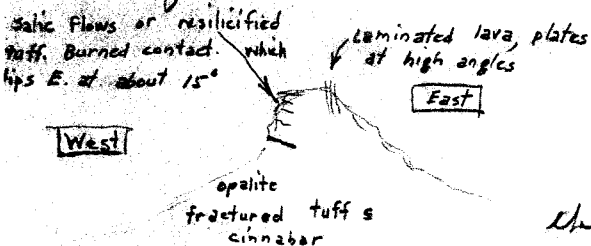
Nov. 25, 1939

Land is owned by an Ore. road-graft Co. An attempt is being made to secure property for private rather than Company ownership.

There is no production. Cinabara shown spotted by a shepherd employed by Duncan. At one time the property was prospected for gold and a shaft & inclined adit was the development. There has been none additional.

Topography. SW. facing slope of 15°, edge best covered. Slope uniform to road trail entering area from Burns-Bend Hwy. Hill rises 100' N.E. of shaft, capped by rock outcrop of a sort of rimrock type. The rocks are all volcanic, either pyroclastics or flows. No timber. No water, although there are hot springs to the south. Snow during winter months. No power.

Geology Regional geol. is unknown to me. The rocks are volcanic & consist of siliceous pyroclastics & flows, which tend to form rimrock. At the west side of the ridge & also forming the top is a siliceous flow with a burned contact with tuff. Contact dips E or NE at about 15°. This flow(?) may be a re-consolidated tuff - consolidated while tuff was hot. Bits & chips of obsidian are scattered over the surface but none could be found in place. Along E.



side of the ridge, a fine grained, dark colored lava (basalt?) is highly fractured into  $\frac{1}{4}$ " plates that are standing on end. This may represent a dike or a fault zone.

The tuff is resulfidified in upper portions, forming an "opalite". Lower portion is less sulfidified & somewhat broken. Sequence is interpreted as: tuff was invaded from below by thermal waters which abstracted silica. Solution became more concentrated in silica until deposition & solution became nearly balanced. Solution outcropped near the surface & excess silica was deposited as sinters and an opalite. Cinabara-bearing solutions invaded the tuff, the opalite acting as a sort of capping, & cinabara was deposited in tuff & in opalite. (see discussion of analysis)

Analyses State Assay Lab. reports 12# Hg in opalite & 12# Hg in tuff.

(Continued)

Metallurgy None at present but in event of operation, it is planned to return the cinnabar at the property.

Remarks If the ore proves to be of commercial grade, there should be a fair tonnage "in sight". It is doubtful if the ore will increase in value, and may decrease with depth if the interpretation of method of silicification is correct. Fuel is scarce, ~~locally available to some extent~~ scrap from a Bureau mill - or ~~oil~~ fuel oil. Mr. Duncan is quite enthusiastic about the quantity of ore present, - at least as to the quantity of tuff available to act as a carrier of cinnabar if cinnabar vapors were widespread in their occurrence. Only drilling or other prospecting will prove this point.

At the locality visited, mining methods could probably be reduced to open-pit variety + tuff might be handled by steam shovel operations. Mining costs should be low.

R. C. Bush