

from NBME OFR 83-9  
See also 83-10 for  
geochemical results.

IZENHOOD DISTRICT

(154)  
Item 4

2490 0003

The Izenhood district is located on the west side of the Sheep Creek Range about 40 km. north of Battle Mountain. The known workings which are confined to the south half of T36N, R45E, consist of a few pits and shallow shafts less than 15 m. deep. Many of the workings are not accessible by motorized vehicle, and can not be readily seen from a distance. The prospects are shown on a map by Anctil (1960).

Wood tin was discovered in 1914 in a wash about 1 km. north of Izenhood Ranch. This discovery led to a small rush, and several shafts and prospects were sunk on both lode and placer properties. There was some renewal of activity in the 1930's, and in 1952 (Stewart and McKee, 1977). The area received some exploration activity in the early 1980's as a possible deep porphyry molybdenum target.

The tin mineralization at Izenhood occurs in narrow veinlets, 1-50 cm. wide, which have erratic strike and dip. Lodes 1-2m. in width made up of several narrow veinlets average less than 0.1% tin and cannot be mined economically. Some sorted ore is reported to contain over 7% tin (Vanderburg, 1939). There is no recorded production from the district, but small quantities of sorted ore and concentrate may have been sold (Stewart and McKee, 1977).

" The following description of the mineralization is summarized from Fries (1942). At Izenhood, minor tin-bearing veinlets occur in topaz-bearing, alkali rhyolite flows and domes. The veinlets contain specularite, cassiterite, sanidine, andradite, cristobalite, tridymite, quartz, chalcedony, fluorite, and opal. All these minerals, except possibly cassiterite, together with topaz and pseudobrookite, are likewise present in gas cavities that are widely distributed in the rhyolite. The deposits are believed to have been deposited from fumarolic gases; these gases were most likely generated from rhyolites comagmatic with the wall rocks or from

gases released during high-temperature devitrification of the rhyolite which contains the veinlets." (Garside, 1982).

The rhyolites which form the wallrock for the tin veins are part of an extensive rhyolite flow and dome complex in the northwestern part of the Sheep Creek Range. These rhyolites occur at the intersection of two major structural elements, the Oregon-Nevada lineament and the Midas Trench. Except for some silicification and argillization along the tin veins, the majority of the rhyolites in this extensive complex are little altered. Anctil's (1960) map shows several bleached and iron-stained areas in the rhyolite for about 3 km. to the north of the tin prospects. The rhyolites have been dated at about 14 m.y. (McKee and Silberman, 1970). Presumably the tin deposits are of approximately the same age, if they are directly associated with the period of silicic magmatism.

#### Selected References:

- Anctil, R.J. (1960) Areal economic geology of T36N, R45E and R46E, M.D.M.: Southern Pacific Co., unpublished map.
- Burt, D.M., et al (1982) Topaz Rhyolites-distribution, origin and significance for Exploration: Econ. Geol., v. 77, p. 1818-1836.
- Fries, Carl Jr. (1942) Tin deposits of northern Lander County, Nevada: USGS Bull. 931-L, p. 279-294.
- Garside, L. J. (1982) National Uranium Resource Evaluation, McDermitt Quadrangle, Nevada: U.S. Department of Energy, PGJ/F-045(82), 29 p.
- Knopf, Adolph (1916), Tin ore in northern Lander County, Nevada: in contributions to Economic Geology, USGS Bull. 640, p.125-138.
- McKee, E. H. and Silberman, M.L. (August, 1970) Geochronology of Tertiary igneous rocks in central Nevada: GSA Bull., v. 81, p. 2317-2328.
- Stewart, J. H. and McKee, E. H. (1977) Geology and mineral deposits of Lander County, Nevada: NBMG Bull. 88, p. 82-83.