

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

WATROUS QUICKSILVER LAND

Tillamook County

Owners: F. L. Watrous, Manhattan Beach, Oregon

Location: In the East $\frac{1}{2}$ of section 20, T. 2 N., R. 10 W., on the east side of the Coast Highway, just north of the town of Manhattan Beach, Oregon.

AREA In the summer of 1939, the property was visited by Ray Treasher of the State Department, who reported that some trenching had been done, and a shaft started. Since that time, the shaft has been dug to over fifteen feet in depth by Mr. Watrous. Further trenching has also been completed.

Development: A fifteen foot two-compartment shaft, well timbered, has been dug at a point 600 feet east of and about 100 feet in elevation above the Highway, just north of Manhattan Beach. In the creek bed 100 feet to the northwest of the shaft, a 25-foot trench, about 5 feet deep has been dug. South of the shaft about 300 feet two trenches are dug in the top of a small knoll. One east-west trench is five feet deep and 10 feet long, another at right angles comes within a foot of intersecting it. It is five feet long, and five feet deep. A small pit 2 feet deep lies halfway between the shaft and the highway.

General Description ^{and sampling:} The area in which mercury has been found lies near the center of a landslide or slump basin about 700 feet in diameter, bounded by steep walls on the north, east and south. Slumping has been governed and directed by basaltic intrusions which stand up as well defined knolls within the basin.

Highly weathered sandstones and shales have been intruded by a diabasic and basaltic dike or dikes, which vary in width from 10 to 60 feet and up to 300 feet of traced length. The dikes have been badly dislocated by the movement, and subsequent or contemporaneous erosion has caused them to stand out as a group of steep knolls. Basaltic and shaley breccias are well-developed, especially along the margins of the intrusives. Clay gouge is abundant at several localities, especially in the bed of the creek north of the shaft; where small multiple slickensided fault planes strike N. 55° W. and dip steeply to the south.

The shaft and large open cut above it lies for its upper 5 feet in blocky shale or breccia, cut by oxidized zones. A composite sample across 4 feet of one of these zones gave a trace of quicksilver.

Most of the shaft lies in a basalt breccia. Four samples taken around the sides of the shaft 3 feet from its bottom were as follows: East wall, trace; west wall, none; north wall, 0.01%; southwall, trace.

A 3-foot sample from the bottom of the north-south cut in the southern knoll and a 3-foot vertical sample from the east-west cut at the same locality both in sandstone gave no quicksilver.

A vertical 3-foot channel in the clay along the trail 50 feet west of the shaft gave none, and clay from the fault gouge in the creek to the north also gave a blank.

A 3-foot horizontal channel across a fault in basalt breccia 200 feet west of the shaft gave a trace.

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No cinnabar has been seen on the property; all the mercury is native. It is still a question whether the mercury is a result of the reduction of cinnabar in place, or whether it is derived from concentration by stream action of the erosion products of a more distant lode. The mercury is most abundantly found in the more or less open breccias. ~~Probably the cinnabar was originally deposited by mineralizing vapours accompanying the intrusion of the diabase; and have been weathered and concentrated in the native form.~~ The highly broken character of the ground as evidenced both by the topography and the actual faults and gouge and breccias indicate that no continuity of the deposit is to be expected. There are no well-defined zones or veins to guide prospecting or development; and there is no general dissemination of values throughout the area that would permit large-scale operation as a low-grade property. Even if an ore body of commercial grade should be discovered, it is highly probable that it would be cut off at a shallow depth by low angle faulting associated with the landsliding. The elevation of 250 feet above sea level would also make deep exploration difficult.

Revised J.P.A. 12/30/40
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John Eliot Allen
Wessley Paulsen