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**COUNTY**

**AREA**

**Elevation**

**Road or Highway**

**Distance to Shipping Point**

**Present Legal Owner(s)**

**Address**

**Operator**

**Name of claims**

**Area**

**Pat.**

**Unpat.**
STRICKLAND BUTTE QUICKSILVER MINE

Owners: R. S. and M. L. Page, Prineville, Oregon

Location: Near the center of section 14, T. 13 S., R. 17 E., 100 yards east of Strickland Spring, at the headwaters of a tributary to the north fork of Evans Creek, a tributary of Mill Creek. About 19 miles from Prineville, Oregon; 14 miles by good road; 3 miles by poor forest road, two miles by truck trail.

Area: 8 unpatented lode claims. Other claims south of this property belong to Oscar Watson, the Carnagey family, and Dave Brown.

History: Located March, 1940, by the Page Brothers and C. E. Carnagey. Carnagey later sold out to the Page's. Furnace built during the summer of 1940, and about 11 bottles were retorted.

Equipment: Champion rotary furnace, wood fed. Turned by small gasoline engine. Truck.

Geology: The property lies in the upper portion of the Clarno formation, within the rhyolite series. The north-south ridge immediately to the east of the mine, is composed of light gray to pink, fine-grained, essentially non-porphyritic, well-banded rhyolite, of considerable thickness. Just below the mine, and exposed in the lower workings, is a dense aphanitic red clay, with numerous included replacements of chalcedony. Probably this represents a typical red tuff interbedded in the Clarno, much altered. The flow planes in the rhyolite dip to the east on the west side and to the west on the east side of the steep ridge. It is possible that this ridge represents a viscous outflow similar to those of Crater Lake and Virginia City, and that the fracture up which they came was later followed by the quicksilver-bearing solutions.

The ore lies just above the flat-lying contact of altered rhyolite over red altered tuff. (See plate) It is never found in the tuff, but always near it. The dip of this contact is usually very flat, but occasionally as steep as 45°. An east-west fault dipping 80° south has dropped the contact 16 feet down on the south side. From the relationships, it is probable that the mineralization occurred after the faulting. The ore shoots apparently are about 5 feet wide, and run generally north-south or a little west of south. Two have so far been worked for distances of about 20 and 30 feet. The best ore is said to occur directly over vertical seams coming through the red tuff, within lenses of cheesy pale olive green semi-opalite.
Development: There have been numerous small test pits dug; about 50 feet of open cut work, about 200 feet of tunnel, two shafts 18 and 15 feet deep, and some 12 feet of drift on the lower level.

Miscellaneous: The mine is at an elevation of over 5,000 feet, in a forested country which usually has a few inches of snow and rain during the winter months, but is fairly dry during summer months. Roads often do not open before April, with the exception of a few main roads and the Othoco highway. Water is obtained from a good spring just below the mine, which is only a hundred feet below the crest of the ridge.

April 19, 1941
John Eliot Allen
Geologist
The Bear Creek Buttes area is an erodionally dissected portion of the Eocene to mid-Oligocene Clarino Group. The stratigraphically lowest unit which underlies most of the study area is a series of basaltic andesite lava flows, mud flows, and volcaniclastic sediments. These are part of the lower Clarino. Eruption of basalt flows, silicic tuffs and emplacement of two rhyolite domes occurred after erosion of the lower Clarino. These basalts and rhyolites compose the upper Clarino in the area.

Hydrothermal alteration has affected rocks of the upper and lower Clarino in the Bear Creek Buttes area. Within these alteration zones are the abandoned Platner and Oronogo mercury mines and the Admunsen claim, currently being worked. The host rocks are silicic tuffs and a mafic intrusion at the Platner mine; mafic intrusion and minor silicic tuffs at the Admunsen claim; and basaltic andesite at the Oronogo mine. Alteration is most intense at the Platner mine where hydrothermal breccias are associated with silicified and argillized (kaolinite) rocks. Minor mercury mineralization occurs in quartz veinlets. Primary mineralogy and textures have been strongly modified or destroyed. At the Admunsen claim, to the south of the Platner mine, argillization (kaolinite and montmorillonite) and fine quartz veinlets affect the mafic intrusion and tuffs have been silicified. Carbonate fracture coatings developed late. At the Oronogo mine, the northernmost property, alteration zones are confined to broken rocks along a northwest trending fault. Alteration is silicification with minor argillation of plagioclase phenocrysts in basaltic andesite lavas.

The northwest controlling structure along which the Platner mine is located contains the highest concentrations of Hg, As, Sb, and U. Although concentration of U is lower at the Oronogo mine compared to the Platner mine, more samples from the Oronogo mine are U bearing.

Trace element geochemistry indicates Sb concentrations (10 ppm, average 44 ppm) are highest in the area of the Platner mine and decrease more gradually northward along the controlling structure than to the south of the mine. Arsenic concentrations increase northward along the controlling structure from the Platner mine (45 ppm, average 12 ppm). Hg is irregularly distributed along the structure and has its highest concentration south of the Platner mine, where concentrations to 4 ppm were detected. Trace amounts of U occur along the alteration zone, the highest concentration is at the Platner mine (1.7 ppm).