NEWSTROM RANCH (manganese) Lake Creek area

"This property and the Tyrrell mine are classed by Wells (39) as the most promising manganese-bearing localities of the Lake Creek area. A red tuff strip 1000 feet wide, a mile long and 200 feet thick rests on lava and underlies lava. The lower part of the tuff is crowded with small cavities and vesicles in which manganite and other oxides are found.

"Generally manganite unmixed with other material forms compact bodies from the size of a grain of wheat to that of a walnut. The manganite assays 58 percent manganese, 5 percent silica, 2 percent iron, and but little phosphorus. Pardee was unable to find appreciable material rich enough to be classified as ore. However, the character of the material indicates that further prospecting might be warranted.

"Location: sec. 34, T. 36 S., R. 2 E., on the divide between the forks of Little Butte Creek.

"Authority: Hodge (37) reports that a 48-foot tunnel, now caved, was reported by Mr. A. Pech, and that it contains material similar to that of the Tyrrell property.

"Pardee (21:220-221) reports as follows:

"'Manganese-bearing material is found about 2 miles north of the Tyrrell mine, on the Newstrom ranch. Here the red tuff underlies a strip 1,000 feet wide and a mile long that curves around the west and north slopes of the broad uneven ridge that separates the north and south forks of Little Butte Creek. The tuff is at least 200 feet thick, rests upon an uneven surface of dense platy basaltic lava, and at the top apparently grades into a dark-gray lava, the layers of which dip at a moderate angle to the northeast. The middle and lower parts of the tuff are fine textured and crowded with small cavities or vesicles. The top layer is rather dense and somewhat like a tuff-breccia. In a few places, the most noteworthy of which are on the north slope, the tuff crops out prominently, but generally it is concealed by a deep surface mantle. In all the exposures seen it is more or less decomposed, the freshest tuff observed being an opaque claylike material in which small feldspar laths are embedded.

"'Manganiferous material is shown in several open cuts and natural exposures distributed through an area of 40 acres or more and at different levels from top to bottom of the tuff layer. The largest working, a cut 30 feet long and 12 feet deep, at an altitude of 2,500 feet, exposes the lower part of the tuff bed. Here the material in general is very poor in manganese, but small portions of it contain as much as 10 or 15 percent. Similar materials are shown here and there in other cuts, and the richer portions are generally found at a depth of a few feet. The ore consists of manganite and one or more unidentified soft brown to black oxides derived from it by alteration in place. Most of it is in pores or vesicles, the soft oxides as a rule in that part of the tuff just below the surface and practically all the manganite in the next deeper part. Generally manganite unmixed with other material forms compact bodies from the size of a wheat grain to that of a walnut. A sample of these bodies is reported to contain approximately 58 percent of manganese, 5 percent of silica, 2 percent of iron, and but very little phosphorus. Many of the vesicles are empty, and others contain calcite, gypsum, or zeolites. No considerable amount of material rich enough to be classified as ore is developed.'"

Reference: Libbey & Others, 42:15 (quoted)