

SIGNAL BUTTE GROUP (Chromite)

64-  
Gold Beach Area

Located in secs.25, 30, T.36 S., R.14 W., and secs.28, 29, 30, 31, 32, T.36 S.,R.13 W., and sec.1, T.37 S.,R.14 W., and secs. 5,6, T.37 S., R.13 W.

"Thirty-five claims, scattered over about 5 square miles around Signal Buttes, were visited and several of them studied in detail.

"The Signal-Buttes district is one of considerable geologic complexity. The serpentines were intruded into a series of shales, sandstones, banded cherts and quartzites. The dense highly siliceous members such as cherts and quartzites seem to have been left relatively unaltered; sandstones were replaced in all degrees, and shaly sediments seem to have been more or less completely replaced over large areas with only occasional remaining patches, now altered to schist. The "buttes" themselves are later volcanic plugs and

great dikes, which came up along the rectangular lines of weakness which are prominent in the area, and they now stand up as a number of pinnacles and bosses.

"Nearly all the orebodies lie in wide zones of more or less completely altered serpentine, which appears as a soft, finely divided and flaky (or clayey when wet) mass, probably in great part talc, chlorite, and various serpentine minerals. Within these zones are stringers of sandy chromite, which occasionally widen to form the orebodies. Chromite grains also are often scattered through the zones. Magnesite and quartz lenses and stringers of secondary origin are not uncommon.

"These zones may be traced by the strings of small chromite float that weathers out along them. South of Signal Butte, the south-trending ridges are cut by east-west trending soft zones. These soft zones have eroded to form a series of the south-trending ridges. The zones are so wide that the more resistant serpentine often stands as pinnacles. These pinnacles occur in regular lines, parallel to the zones, in several areas. North-south trends of the lines of float are prominent in the area around Signal Butte, as well as farther north. To the northeast the lines run east-west.

"A vertical section through one prospect cut shows bands of harder serpentine (1) in the altered zone. Areas of a light green, flaky serpentine with numerous small soft white pellets of magnesite or chromite occur as narrow stringers and small kidneys (3) in this cut and elsewhere, all lying in the altered zone material.

"In several places banded green chert seems to form the hanging wall of the altered zone, and can be traced for several hundred feet. Its contact with the peridotite grades through a zone of magnesite, and the latter penetrates the serpentine, in a dense network of thin stringers and filaments, for several feet.

"The orebodies south of the Butte are uniformly small, rarely being over 5 feet long and 2 feet wide, and not very closely spaced. The assays show about 50% chromic oxide.

"One deposit had an orebody 20 feet long, 8 feet thick, and 15 feet on the dip. It strikes N.70° W. and dips 30° S. The body is rounded at the edges, and lies near the center of a zone of soft green talcose serpentine, with iron-stained seams and chromite grains scattered through its entire width of 60 feet. A discontinuous 10-foot ledge of quartzite forms the footwall of the zone 30 feet below.

"The ore from eleven of the deposits in the Signal Buttes area averaged over 50 percent chromic oxide; from 14 to 18 percent iron protoxide; and from 3 to 9 percent silica". (Ref: Allen 38:37,40 quoted).