

COPY

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

1069 STATE OFFICE BUILDING
PORTLAND 1, OREGON

December 15, 1959

Mr. W. L. Bell
Box 206
Myrtle Point, Oregon

Dear Mr. Bell:

This is in regard to the sample you sent in to our Department on November 18 to have analyzed for graphite. This letter is in explanation of the apparent delay in getting our results to you and also to explain what work was done.

Your sample was analyzed for carbon, which showed only 1.06 percent. This quite obviously was in contrast to the 95.1 percent analysis that you received from California, as mentioned in your telephone conversation with our mining engineer, Mr. Ralph Mason. We were most curious as to this discrepancy and therefore, for our own information, ran a spectrographic analysis. The spectrographic analysis showed a great many elements in the sample that seemed to confirm our carbon determination.

It was not possible to examine the sample under the petrographic microscope as the particle was smeared with a very thin film of carbon. Therefore we next put this in an electric furnace with a draft of air over it to oxidize the carbon. Surprisingly, the carbon burned off rapidly, indicating to us that the carbonaceous material coating the grains was not graphite but probably some coalified material. We next analyzed the sample for silica, with the results as shown on the form - that is, 58.14 percent. All other oxides, which would include iron, titanium, manganese, etc., were grouped together and are reported as R_2O_3 . The bulk of these is the iron oxide.

This sample appeared to us to be a sediment or volcanic that has been involved in a shear zone altering the minerals present to talc. The greasy feel of the sample is due to the very fine grain of the material formed when ground in the fault zone. The black sooty carbonaceous appearing material is also due to a very fine coating of carbon on each one of the particles, also due to grinding action within the fault zone.

I am sorry that we were unable to confirm the California analysis because this would have been of great interest to us and I would have liked to have investigated the occurrence. If you have further questions, I would be pleased to have you contact us.

Sincerely yours,

Hollis M. Dole
Director