No. 19, Howard Street
Spokane 4, Washington

July 28, 1951

Memorandum

To: A. B. Weissenborn

From: H. E. Dunda

Subject: Examination of property in Ravalli County, Montana, owned by H. H. Dundas

On July 21 I examined a property about 15 miles east of Hamilton, Ravalli County, Montana, with the owner Mr. Homer H. Dundas of Missoula, Montana. Mr. Dundas has requested a RFC exploration loan for bulldozer trenching.

Geology

The deposit Mr. Dundas proposes to develop is a lens 400 feet long by 150 feet wide of very coarse-grained feldspar-pyroxene-garnet-sphene rock. The crystals of the principal minerals range up to 2 inches in diameter. A number of other finer-grained minerals occur in minor amounts, including apatite, magnetite, tremolite (?), and several unidentified minerals. The country rock of the lens is medium-grained skarn consisting principally of one or more ferro magnesian minerals either pyroxene, hornblende, or dark mica. The general area underlain by skarn is probably very large, possibly several square miles. The weathering product of the mica skarn has been prospected locally for vermiculite. Relatively unmetamorphosed sandstone and limy sandstones are exposed on the ridge about a quarter of a mile north of the lens. The coarse-grained lens is interpreted as skarn that has been locally recrystallized by solutions of unknown origin. There is no reason to believe that the vertical continuity of the body is materially greater than the lateral continuity.

Economic Appraisal

No exploratory work has been done on the coarse-grained lens; although some bulldozer cuts have been made immediately north of the lens in search of vermiculite.

Mr. Dundas mentioned a spectrographic analysis of material from the coarse-grained lens, in which manganese, vanadium, chromium, and copper were reported as "present". I did not see this report. In such

reports "present" commonly means greater than about .05 percent, but less than .5 percent or 1 percent. I believe there is no cause whatever for considering this deposit as a potential source of these metals. However, there is a possibility that the skarn contains scheelite or other valuable minerals characteristic of contact metamorphism. So far as Mr. Dunlap knew, his material had never been checked for tungsten or scheelite. Another economic possibility is the garnet, which is abundant and which could probably be concentrated by gravity separation.

Recommendations

I have collected a suite of grab samples of coarse-grained rock from the lens and medium-grained skarn country rock from an area about 600 feet southeast of the lens, and am sending them to you under separate cover. I recommend that these be given a thorough mineralogical examination, and be checked with the ultra-violet lamp. I have also collected a composite soil sample over the coarse-grained lens, which I am sending to the geochemical prospecting laboratory in Denver for tungsten analysis. If any of these examinations indicate the presence of tungsten, I recommend that the area be revisited for a night-time examination with the ultra-violet lamp.

If favorable action is warranted on the basis of these tests, I suggest that some proof of ownership be supplied by Mr. Dunlap. I have a suspicion that he has not yet staked claims to cover the property.

H. E. Hawkes