3070 3005

COPY

Before

HERBERT N. WITT
SAN FRANCISCO

October 1, 1942

Mr. Henry C. Carlisle
Ferro-Alloys Section
(Tungsten-Vanadium)
War Production Board
Washington, D. C.

Re: Marginal Tungsten Property

Dear Henry:

When I last talked with you before your departure for Washington you inquired if I knew of any tungsten properties that might be useful in the present emergency.

I therefore send you herewith a brief description of a marginal property which I investigated a short time ago. This property is of interest only in the event of an acute shortage of tungsten, but since that condition appears to be imminent, this data had best be in your hands.

Some time ago at the request of the U.S. Geological Survey, I deposited with them copies of a large number of my private reports on tungsten properties extending over several years. To complete this file I am sending a copy of this letter to Mr. Nolan of the U.S.G.S. A copy will also be sent to the R.F.C. and the Metals Reserve Company, to which I am now acting as consultant. I will also send a copy to Mr. Joralemon in San Francisco.

This property, known as the Baker Property, is five miles north of Lovelock, Nevada, a few hundred yards east of the road to Seven Troughs. It is in the first low rolling hills rising out of the Lovelock Valley. Power, water, highway and rail transportation are all available at Lovelock.

The scheelite ore on this property occurs in minute quartz veinlets in granite, apparently underlying a considerable area. Wherever, in excavation, the granite has broken to these veinlets, the result, under the ultra violet lamp, isquite spectacular and gives a false impression of the average value. The ore deposition is similar physically to that in the protores of the so-called "porphyry coppers". You will recall that in these copper regions, particularly at Bagdad, Arizona, the protore on the dumps has the appearance of a fresh granite that has been splashed with yellow sulphides. These granitic scheelite ores, under the lamp, have an analagous appearance.

COPY

HERBERT N. WITT

SAN FRANCISCO

Surface panning has revealed that scheelite is present over a considerable area of granite float on this deposit. Two 20' shafts have been sunk which reveal scheelite in many veinlets with widely varying strike and dip and of erratic occurrence. The dump material shows scheelite plastered on some of the larger fragments, and the fines from the disintegrated surface granite on this dump assayed well (.6% WO_3).

It was obvious that the average tenor would be very low, probably one-tenth of 1%, but if the friable scheelite could be broken from the granite and screened out with the fines, the property might have possibilities, particularly since the ore could be mined in large quantities by cheap open cut methods, and the separation of scheelite from the quartz and granite gangue would probably present no metallurgical problem. On my first visit to the property in November, 1941, I took one sample of the fines from one of the shaft dumps. This assayed .61% WO_3, obviously too high to be representative of the deposit but suggesting the possibility of screening. I also covered a considerable area with the ultra violet lamp but was disappointed in the surface showings which did not compare with those in the two shafts. However, it was obvious that any liberated scheelite would be at the bottom of the surface debris and not visible with the lamp. Obviously, channel sampling of the shafts was useless. I therefore persuaded my clients to let me attempt the screening of the entire dump from one of the shafts to see if there was any concentration of values in the fines. Unfortunately the dump was found to be quite damp and a considerable portion of the fines adhered to the large boulders. Furthermore a wet snow began falling during the screening operation, which was thus stopped when only twelve tons of material from the toe of the dump had been screened. The results of this partial screening were disappointing but were not necessarily conclusive.

The following procedure was followed in the screening operation (March, 1942):

The large boulders were stacked to one side for later sampling. The rest of the dump material was shovelled on to a 1½" punched screen, the oversize being thrown onto the boulder pile for later sampling. About 40% of the material handled went through this screen. The -1½" material was shovel-sampled by saving every tenth shovelful during the process of shovelling it onto a 3/8" mesh screen. About 75% of this -1½" material passed through the 3/8" screen. The +3/8" material was coned and quartered to produce a 50 lb. sample. The -3/8" material

was shovel-sampled by saving every fifth shovelful. This material was coned and quartered to produce a 30 lb. sample. The assay results were as follows:

-1½" to +3/8"	.09% WO_3
-3/8"	.06% WO_3

These results were sufficient to discourage further interest and no attempt was made to complete the screening of the entire dump. It should be emphasized that the material handled was at the toe of the dump where there would be a concentration of coarser material. None of this coarser material had been crushed and the boulder pile was not sampled. It is quite possible that a screening of the entire dump, including the finer material, might give more encouraging results. However, the disintegrated surface granite constitutes less than one-quarter of the dump material, and it is likely that the scheelite was released into the fines only from this disintegrated material. A coarse crushing (i.e. 1½") of all of the dump material and a subsequent screening to 1/4" would undoubtedly give a final answer.

I do not present this property as anything of startling interest. It is not a project that private capital could undertake except under government subsidy. Further investigation is obviously justified only in the face of an acute shortage of tungsten. There are many low-grade garnet deposits with a higher average content than this granitic ore, but it is doubtful if any of them could be explored as cheaply, nor equipped at as low a cost, nor mined in such volume as might be feasible at this property. Its accessibility, the possibility of large scale low cost operation, and the simplicity of mining and milling may possibly overcome the disadvantage of the extreme low grade of this ore.

My client had an option on the Baker Group of six lode claims and one placer claim on very reasonable terms. Had the results of screening been satisfactory, the adjoining Southern Pacific lands would have been placed under option.

If the tungsten situation is sufficiently acute to warrant interest in such a property, I believe it could again be placed under option on very lenient terms. However, I believe it should be tied up by private negotiations before any interest on the part of the government is disclosed. If this

COPY

HERBERT N. WITT

SAN FRANCISCO

October 1, 1942

is desirable, I would be glad to undertake the optioning of both properties, on behalf of any government agency, without profit to myself and without compensation for my services.

I trust that you and Mary reached Washington after the summer heat had subsided, and that this letter will find you comfortably settled.

Sincerely yours,

Herbert N. Witt

HNW:LB

Cc: U.S.G.S. ✓
Reconstruction Finance Corporation
Metals Reserve Company
Mr. Joralemon