MEMBER
OF
CHAMBER OF COMMERCE
OF THE
UNITED STATES OF AMERICA

PORTLAND CHAMBER OF COMMERCE

PORTLAND, OREGON,
824 S. W. FIFTH AVENUE

CABLE ADDRESS: PORTOREGON
ATWATER 9411

Washington, D. C. November 13, 1940

Mr. F. W. Libbey, Mining Engineer,
State Department of Geology and Mineral Industry,
702 Woodlark Building,
Portland, Oregon.

Dear Mr. Libbey:

I acknowledge yours of November 6th in re. the ore samples from Harney County which were thought to contain tin.

I appreciate your frankness in giving me your opinion. The occurrences of these ores and the test being made by pilot plant have been put on such a basis here that they commanded siderable attention. The two Senators naturally felt that the governmental agencies should act with quickness and thoroughness.

The spectrographic tests which you refer to are undoubtedly final if the ores used in the test were average of the deposit. The spectrograph would surely indicate the metal regardless of what process might be used in the assaying office or reduction plant.

As you and Earl get further information on this subject we would appreciate being informed.

Sincerely yours,

W D B Dodson

W. D. B. Dodson

WDBD/w

November 6, 1940

Mr. W. D. B. Dodson
400 Senate Office Bldg.
Washington, D. C.

Dear Mr. Dodson:

Thank you kindly for your letter of November 4th. Just as soon as Mr. Nixon is able, he has told Judge Duncan that he would, in company with Mr. Lancaster, our Field Engineer at Baker, visit the property and make a thorough investigation.

Answering your last question, I can not conceive how different processes of analyses would explain the fact that all of the reliable laboratories to which we have submitted samples failed to find any tin in the ore.

If tin is in the ore, no matter in what form, spectrographic analysis would show the tin even in the most minute quantity. Samples which we submitted for spectrographic analysis failed to show any tin.

I suppose that there is a bare possibility that certain small spots, not differing in character of rock discernible to the eye, might contain a little tin, and that so far our samples haven't contained any of this type. It is an extremely long shot, but Mr. Nixon is going to have that in mind when he visits the property.

Sincerely yours,

F. W. Libbey
Mining Engineer

FWL:ac

PORTLAND CHAMBER OF COMMERCE

PORTLAND, OREGON,

824 S. W. FIFTH AVENUE

MEMBER OF CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA

CABLE ADDRESS: PORTOREGON

ATWATER 9411

Washington, D. C. November 4, 1940

Mr. F. W. Libbey,
Department of Geology and Mineral Industries,
Woodlark Building,
Portland, Oregon.

My dear Libbey:

I had Senator Holman's office send to the Bureau of Mines several samples of the ore forwarded here from the Harney County operation where it is claimed tin is secured.

Dr. Sayers reports today that they have analyzed the ore samples and find no tin therein.

In your report to me earlier you stated that one or more buttons secured from the pilot plant operation near Burns did assay tin.

In the light of this complexity what suggestions have you or Earl to make. Is this difference in results due to different processes of analysis?

Sincerely yours,

W D B Dodson

W. D. B. Dodson

WDBD/w

November 4, 1940

Mr. W. D. B. Dodson,
400 Senate Office Building,
Washington, D. C.

Dear Mr. Dodson:

Thank you very much for your letter dated October 31st relating to the tin area on Juniper Ridge.

It is now planned to do some further work in the way of investigation by this Department just as soon as Mr. Nixon returns to the office. We should be much interested if you hear anything further about investigations conducted by the National Defense people.

I will show your letter to Mr. Nixon.

Yours sincerely,

F. W. Libbey
Mining Engineer

FWL:ac

PORTLAND CHAMBER OF COMMERCE

PORTLAND, OREGON,

824 S. W. FIFTH AVENUE

CABLE ADDRESS: PORTOREGON

ATWATER 9411

MEMBER OF CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA

Washington, D. C. October 31, 1940

Mr. F. W. Libbey, Mining Engineer,
State Department of Geology and Mineral Industries,
702 Woodlark Building,
Portland, Oregon.

My dear Libbey:

I have neglected to thank you for yours of October 24th which I do herewith.

The property on Juniper Ridge and the pilot plant demonstration being conducted there is attracting considerable attention.

Judge Duncan not only wrote me at length on the subject but also addressed similar letters to Senators McNary and Holman.

I was sent a batch of the ore taken from either the property of this group or a contiguous property and through Senator Holman have asked Dr. R. R. Sayers, Director of the Bureau of Mines, to have it given careful analysis and determine whether further immediate investigation should be conducted. We have no reply from this request as yet.

I am also informed that ore has been sent to the Phelps-Dodge Company and the United Metals Company both of which have had considerable experience in tin recovery as a by-product of other metal operations. I have no reports from them as yet.

Senator McNary placed the Judge Duncan letter written him in the hands of the National Defense Advisory Commission with the suggestion that thorough checking should be done quickly as possible. He has been assured that this will be undertaken. In this connection I have been informed that experts for the National Defense Advisory Commission had already learned of the property and the work being conducted there.

I have urged the National Defense group to work closely with Dr. Sayers and your own Department in Oregon in order that definite and dependable data might be secured quickly as possible. I am hopeful that of these various moves something of a tangible nature will soon develop.

Will you convey to Earl Nixon my sincere hope that he recovers quickly and suffers no serious impairment of health as a result of his operation.

Sincerely yours,

W D B Dodson

W. D. B. Dodson

WDBD/w

October 24, 1940

AIRMAIL

Mr. W. D. B. Dodson
333 Senate Office Building
Washington, D. C.

Dear Mr. Dodson:

I want to acknowledge receipt of your letter of October 22nd to Mr. Nixon, since he is now in the hospital recovering from an appendicitis operation. His progress is normal, and I imagine he will be able to resume his activities within a matter of two weeks.

As reported in some of the newspapers, among other visitors, I visited the property near Burns on October 11th. Their so-called fuming furnace had been started up, and although the operators claimed that the temperature was not up to the desired point, they were obtaining an oxide product in their bag house. I obtained samples of this oxide, and in my presence, the oxide was reduced with a potassium cyanide flux and a metallic button was obtained, which I brought back to Portland. I also obtained samples of the rock being fed to the furnace and some samples of the ore in the ground. Upon returning to Portland, I had a qualitative test made of the metallic button obtained from the oxide, and this test showed that the metal was largely tin. I took the rock samples to Corvallis, cut them down and obtained triplicate samples from each. One was left with the Oregon State College Chemical Engineering Department, one was sent to the U. S. Bureau of Mines at Reno, and one was sent to Laucks Laboratory in Seattle. I have returns on the samples sent to Reno and Seattle - both reports show no tin. A sample was also sent to Dr. Lloyd Staples of the University of Oregon for a mineralogical analysis, and his report states that no tin minerals could be identified.

In the light of these results, Mr. Nixon wrote a letter to Judge Duncan giving the results of the analyses. He told Judge Duncan that he was much concerned about these regults and suggested that if he (Judge Duncan) was willing, we would ask the United States Bureau of Mines to make a thorough investigation. Day before yesterday, I received a telephone call from Judge Duncan saying the he would welcome such an investigation, and that he was eager to have the investigation made at the earliest possible moment. I then wired a request for an examination to Dr. Edmund S. Leever in charge of the U.S. Bureau of Mines Station at Reno. Today, I have a letter from Dr. Leever saying that our request had been referred to Mr. R. S. Dean, Chief Engineer, Metallurgical Division of the Bureau, Salt Lake City. There the matter rests at present, but I trust that the Bureau will make this investigation in the very near future. In the meantime, we are very cautious about making any statements

and suggest that the above be kept more or less confidential.

I have been told that a man who owns property west of the Juniper Ridge locality which contains much the same character of rock (tuffaceous obsidian classed as perlite) has sent samples of his rock to the Phelps-Dodge Refining Corp, who if reports are correct will build a tin smelter somewhere on the Atlantic Coast, possibly at Laurell Hill.

Your letter will be kept confidential and will be placed before Mr. Nixon just as soon as he is able to take over any activities.

With kind regards, I am,

Sincerely yours,

F. W. Libbey
Mining Engineer

FWL:ac

PORTLAND CHAMBER OF COMMERCE

PORTLAND, OREGON,

MEMBER OF CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA

824 S. W. FIFTH AVENUE

CABLE ADDRESS: PORTOREGON

ATWATER 9411

Washington, D. C. October 22, 1940

air mail

Mr. Earl K. Nixon, Director,
Bureau of Geology and Mineral Industries,
Woodlark Building,
Portland, Oregon.

Dear Earl:

I have received newspaper clippings and two letters regarding another ore deposit on Juniper Ridge, 37 miles west of Burns.

Confidentially, Judge Duncan who is acting as attorney for the interests effected has written me asking if I can bring this matter to the attention of the Federal officials.

I noticed in the report sent me that F. W. Libbey of your staff was at the public demonstration and I am also told that you are expected to make a personal inspection soon.

I would naturally gladly do anything to bring to the attention of the National Defense Advisory Commission, Bureau of Mines and other Federal agencies a proposition in Oregon that has promise of tangible developments. I would be a little reluctant, as you can appreciate, in urging Federal examinations without some fairly tangible evidence that was worthwhile.

Have you taken any steps to bring this proposition to the attention of the Federal Agencies or do you think it proper that I should do so at this stage of the program.

I am told that shipments of ore have been or are being made to the American Metal Company, Ltd., 61 Broadway, New York and the Phelps-Dodge Refining Company, Laurell Hill, L.I., New York. Both of these companies are experimenting in tin smelting just now but they inform me that their practices so far have been for the recovery of tin as a by-product of copper or other metals.

Extraordinary effort is now being made to get Bolivian tin ores delivered into this country for smelting and I am informed that a project of this character is taking rather definite form for an operation at or near Galveston, Texas. The intense feeling about tin would naturally accentuate interest in any production we could undertake.

Give me your views on the whole proposition by air mail if you are ready to make any kind of a statement and keep my inquiry to you in confidential form.

Sincerely yours,

Dod

W. D. B. Dodson

WDBD/w

December 2, 1940

Mr. Albert Burch
Black Oak Ranch
Medford, Oregon

Dear Mr. Burch:

Thank you for your letter of November 30th with copy of letter from Mr. Raymond. It appears that Dr. Charlton here has assayed the Department of the Interior engineer's samples by orthodox wet test methods and found no tin. Then, he states, he is getting some metallic buttons by potassium cyanide fusions and the buttons do seem to carry tin. He does not have quantitative results. Dr. Charlton is very much up in the air, and so are we. It may be necessary to demand that the Bureau of Mines go to the bottom of this, although they have already indicated that they don't care to.

Mr. MacNaughton's secretary is putting the date of December 27th at 10 o'clock in the morning on his calendar for our last Board Meeting of the year.

With best wishes, I am

Cordially yours,

EKN:vm

Director

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

704 LEWIS BUILDING
PORTLAND, OREGON

Medford, Oregon

November 30, 1940

Mr. Earl K. Nixon, Director
State Department of Geology and
Mineral Industries
Woodlark Building
Portland, Oregon.

Dear Mr. Nixon:

I am in receipt of your letter of November 28th regarding tin, and I am enclosing herewith a copy of my final report from Mr. Raymond upon the specimen which I sent him.

The three samples which I have had assayed were blanks and I am now of the opinion that if there is any tin there at all the deposit is very spotted indeed.

Very truly yours,

A. Burch

AB

Encl

THE MOUNTAIN COPPER COMPANY, Limited

Matheson, Shasta Co., Cal.

Mines at
Iron Mountain
.O. Address Matheson

November 27, 1940

Mrs. Albert Burch
Black Oak Ranch
Medford, Oregon

Dear Mr. Burch:

OREGON "TIN" SPECIMEN

A very delicate test with Rubidium Chloride indicates that the brown mineral in the matrix of the volcanic glass does not contain tin; hence is not cassiterite.

In view of this I am positive that the specimen which I called a Volcanic Vitrophyre does not contain tin.

Yours truly,

L. C. Raymond

Copy: W.F. Kett

November 16, 1940

Mr. Albert Burch
Black Oak Ranch
Medford, Oregon

Subject: Burns Tin Property.

Dear Mr. Burch:

Mr. Kinsley, engineer of the U. S. Department of the Interior, was in the office yesterday seeking information in regard to having samples run for tin. He had just come from the tin property between Burns and Bend where, I understood, he has spent considerable time in the last month. Kinsley stated that a Department of the Interior hearing is to be held December 11th to determine upon the validity of the 90-odd tin claims held by Mr. Selle and his group. It seems that a group of the claims were staked on land which conflicts with grazing leases, and the Department of the Interior felt that the tin claims might have been taken up for the purpose of acquiring land rather than for mining reasons.

In any event, Kinsley made a statement which was interesting to me because it mentioned you. He said that Judge Duncan seems to be of the opinion that your reaction was quite favorable to the tin enterprise after your visit over there.

Of course, Kinsley may be mistaken or Judge Duncan may be mistaken--or I may be mistaken in the attitude I have taken toward the feasibility of the tin enterprise. As I expect to visit the area again next week or not later than the early part of the following week, I would appreciate any ideas you care to express covering your reaction to the entire tin set-up.

The first week of December a year ago I made a visit to the property with Judge Duncan and G. Earl Hagey and took some samples in the test pits at points where Hagey indicated to me their sampling had shown the presence of tin in commercial quantities. I personally cut my own channels, sent them to the U. S. Bureau of Mines at Reno for spectroscopic and chemical tests, and the reports came back, 'No tin detected'. Attached is copy of letter which I wrote to Senator Duncan on December 19, 1939, pertaining to this tin matter.

Fred Draper, metallurgical engineer who is now in Portland conferring with us in regard to an electrolytic zinc smelter, made an examination of the tin property near Burns about a year ago, he tells me, sampled the pits where the party from Los Angeles stated they had obtained tin, took the samples along with the Los Angeles party to Abbot Hanks Laboratory in San Francisco, and had him run the samples in front of their eyes. No tin was detected in

material which the parties, promoting the idea, claimed had been giving tin assays.

Recently, after various notables--at Judge Duncan's request--visited the property, I suggested that we ask the Bureau of Mines to make an investigation. Judge Duncan was quite agreeable to this. After samples taken by Mr. Libbey from the test pits and from the furnace feed had been tested for tin by the Bureau of Mines' laboratory in Reno, they declined to carry out an investigation on the basis of its merely being a waste of time. I can't blame them much. We sent portions of the same samples to Laucks Laboratory in Seattle and to Charlton Laboratories in Portland, and all gave blanks on tin, although Charlton reported tin in a metallic button made from bag house material. I think you can draw your own conclusions. I did not know until recently that William F. Hayden has been mixed up in this proposition for the past several months.

I am prepared now to take a group of representative samples from the pits from which the "ore" has been taken for smelting and to send these samples to the Bureau of Mines Station at Reno for spectroscopic analysis. If these show no tin as I anticipate, then we will release to the newspapers--they are after the story--a modest statement of facts obtained. I think that will cook the tin proposition.

I regret the length of this letter, but I thought you should know the background of the situation from our angle. If you have any personal ideas which you would be willing to convey to me, I would appreciate them very much.

With best wishes, I am

Sincerely yours,

EKN:vm
encl.

Earl K. Nixon, Director

OREGON STATE COLLEGE
SCHOOL OF SCIENCE

DEPARTMENT OF CHEMISTRY

CORVALLIS, OREGON

Dec. 26, 1940.

Mr. F. W. Libbey
State Dept. Geol. & Mineral Ind.
Portland, Ore.

Dear Mr. Libbey;

Just a line to let you know that I guess I'll have to admit I'm a poor chemist...anyways I have not as yet found a bit of Tin in the sample you gave me the other day.

Sincerely,

Joseph Schulein.

Joseph Schulein

Tin

November 19, 1940

Mr. Hugh K. Lancaster
State Assay Laboratory
Baker, Oregon

Dear Hugh:

Thanks a lot for your letter of November 18 pertaining to the tin situation at Burns. The information you have conveyed is very interesting and very important. I am very pleased to have it indeed. Kingsley, Engineer of the Department of the Interior, is in Portland, and I have had two long discussions with him. He is very much on the fence but seems inclined to feel that there is no tin of importance present. He has had his ups and downs both with the Judge and with Hayden. I understand that the latter has gone back to St. Louis, and Kingsley says he doesn't think he will return.

Mr. Libbey reacts quite promptly to your statement that Hayden is reporting that he, Libbey, found some free gold in the rock. Libbey says Mr. Hayden is mistaken in his ideas, but he does not put it that delicately.

Have just written Judge Duncan telling him that I would like to defer decision as to what steps to take further until we receive the results of Kingsley's sampling or until after the hearing which I understand is pegged for December 11. Kingsley states that if the samples show no tin, the Department of the Interior is prepared to vacate mining claims unless the claim owners can supply an adequate defense, and he does not think they can.

It is all very smelly, and I am so sorry that Judge Duncan became involved in it. If the matter blows up, and I think it will, it will probably redound to our credit because we pegged it right from the start and advised Duncan not to become involved in it.

With best wishes

Sincerely yours

Director

EKN:hk

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
702 WOODLARK BUILDING
PORTLAND, OREGON

November 18, 1940

Mr. Earl K. Nixon, Director
702 Wooklock Building
Portland, Oregon

Dear Mr. Nixon: Re: Burns Tin Situation:

I made a trip to John Day, Canyon City, Burns, and Fields last week. During that trip I visited the tin property near Burns and talked with their engineer, Mr. Hayden. In view of this visit, I shall not meet you in Burns unless you wish me to do so.

I shall describe more or less in detail the events that have to do with the so called "tin" deposit.

About 11 o'clock Wednesday, I dropped into the sheriff's office in Canyon City to see Mr. I. B. Hazeltine. For a few minutes we talked about his chrome and then he asked, "What do you know about Burns tin?" I replied, "Nothing." At this he said, "Judge Duncan is upstairs and free. Let's go see him."

From that time until 1:30 the Judge talked about tin. He had a hearing at 1:30 or he would have talked longer. Judge Duncan is absolutely sold on the tin process and tells a very convincing story for the uninitiated. All I did was to listen. He believes you are unfair and should give the outfit a lift. He gave me two metallic tin samples, one reduced from the "ore" and one from the bag house product. The Judge also described the tin analysis in detail. According to him, the analytical procedure must be carefully done. I am enclosing a copy of this analytical procedure, which is the same as given by Hayden and Hagey.

One thing that the Judge insisted I do, was to call on Mr. William Hayden at the Arrow Head Hotel in Burns. I did this on Wednesday night. Our meeting was very interesting.

On Thursday I made a trip to Fields and on my return to the Arrow Head on Thursday night, Mr. Hayden called on me. One thing that impressed me was Mr. Hayden's apparent sincerity. He is an excellent "show master" or is himself sold on the process.

Mr. Hayden is an elderly man, say 60 to 65 years old. He believes you have been hasty in making statements and advising people about his deposit. I assured him that if his deposit lived up to his claims, you would give him favorable publicity. If it did not, you would so state. He feels sure that he will soon have positive and undisputable proof of tin from Mr. Kingsley's report.

Mr. A. C. Kingsley of the Department of Interior, I understand, is in Portland having his samples run in his presence and the presence of William Rhea, the tin outfit's chemist. I understand the analysis will be made at the Charlton Laboratories.

Mr. Hayden is making a trip to St. Louis. He showed me several exhibits which he is taking with him.

1. Several small gold specimens about 2 mm. long and 0.5 mm. in diameter were exhibited in a cellophane covering. These specimens were said to come from the ore. I examined them very closely with my hand lens and thought they were gold filings, hammered and mutilated to remove the file marks. This marking was said to have been caused by tweezers, which were used to remove the gold from the rock. Mr. Hayden said that free gold occurs erratically distributed in the ore. In many cases the free gold is visible and occasionally wire gold several inches long and about the diameter of a lead pencil lead is found. Mr. Libbey should be able to corroborate this, for according to Mr. Hayden, he was fortunate enough to find a piece showing free gold during his visit.

2. Several ore specimens resembling broken obsidian.

3. A bag house product resembling a gray powder.

As I was leaving for bed, Mr. Hayden asked me is I would be interested in his plant. I replied that I would. He invited me to make a trip the next day and telephoned Mr. Hagey that, although he would not be able to be present, he would like to have me see the plant.

I visited the property Friday. Snow covered most of the claims and all of the pits were half full of water and ice. I took three samples of ore and one from the bag house product. Les and I will analyze these soon. I feel sure that I was not salted,as the samples were never out of my hands.

Now, a few notes on Mr. Hagey. He praised Mr. Kingsley very highly for his thoroughness and expressed a great deal of confidence in an expected favorable report. According to him, other investigators have been too hasty in their examinations and condemnations. He criticized Mr. Libbey for his cursory examination and said that in some of your letters you made derogatory statements. He dislikes your attitude. I

told him that he misunderstood your motives and that you had bumped into many fleecing schemes. There was no doubt of your favorable attitude as soon as the presence of tin had been definitely established. Then he said, "What the hell is your attitude?" I guess I stuttered for an instant, but told him all I wanted was positive proof one way or another. Until positive proof was obtained, I would be skeptical, but would not praise or condemn.

Since Mr. Bee, chief chemist for Abbott Hanks, has been able to find tin, his stock has risen.

Mr. Libbey has undoubtedly gone through the same song and dance to which I have been exposed. This may be an endeavor to convert me so that I may favorably influence you and other members of the staff.

By chance, I stopped at Father Curran's rectory in Burns Friday night. He made comment about the tin and gave me and every other doubting Thomas held for not cooperating. The administration, especially Ickes, the Department of Interior and the Anglo Amalgamated Tin Company (?). came in for special mention. I explained to him it was a matter of proof and did I get counter attack. He stated, " I saw it with my own eyes. You are unfair etc."

I am enclosing clippings from the Christian Science Monitor and an old Harney County American. This "tin" has acquired national notice. According to Mr. Hagey, the Sunset Magazine, Life, Saturday Evening Post, and the Collier's are clambering for press releases.

My own reaction at present is unfavorable. The only satisfactory proof of the process and deposit is to produce several hundred pounds of tin, which is acceptable to manufacturers of tin alloys and tin products.

Oh, Yes. Judge Duncan and Mr. Hayden mentioned a book "The Metallurgy of Tin" by Lewis published by McGraw Hill in 1909. If possible, I wish you would borrow this book from the Portland library for me. This is a book to which frequent reference is made.

I understand Mr. O. C. Selle, the promotor of this tin outfit has had several unsuccessful tin and gold schemes. He works one field and moves on. I am told that Mr. W. C. Calder of Baker knows the history of some of Selle's earlier schemes. I doubt whether he would discuss them.

Best regards

Sincerely

Hugh

Hugh K. Lancaster
Field Engineer

HKL:aw

Tests At Tin Mine Creates Interest

Harney County American
Burns, Harney Co, Oregon Friday Oct. 18, 1940

Public Invited To Test Sunday

At a test demonstration Friday at the tin mine, located 35 miles west of Burns, F. W. Libby, assistant state geologist, stated that there was evidence to prove that the ore was of commercial value. The demonstration was witnessed by Governor Charles H. Sprague, Secretary of State Earl Snell, H. W. Derry of the Pacific Power and Light company, Carl Abrams of Salem and approximately 75 other interested persons.

Following the demonstration, O. F. Selle, one of the operators of the mine, in an interview with a representative of the American, stated, "The opening of the ore body will no doubt revolutionize mineral production throughout the world."

Associated with Mr. Selle are Earl Hagey of Burns and D. B. Goldman and Charles E. Hoyt of St. Louis.

The public is invited to attend a demonstration Sunday morning.

The method used in obtaining the product is just reversing nature's process of deposition. The ore is sprayed in to a furnace by compressed air. The furnace is heated to 2750 degrees Fahrenheit, and as the ore hits this temperature it volatizes into vapor. The vapor runs through pipes into a bag house, where it is participated as oxide.

This method of recovery was invented by Alfred J. Koebel of Sand Point, Idaho. The fuming plant has a capacity of ten tons per day and the producers hope to step up the capacity so as to supply the market. The ore produces 40 pounds of tin and $8.50 of gold to the ton.

The deposit consists of 2000 acres, which is very clean and can be steam shoveled. Through drilling a water well in the vicinity it was learned that the depth of the ore was 800 feet.

The deposit was discovered eleven years ago by Mr. Selle when he was making a study of lava type ores. It was in the metallurgy of those ores that he found the tin and has since carried on the research.

——: A :——

Oregon Plateau Is Rich in Tin

Special to The Christian Science Monitor

BURNS, Ore.—In a barren area of the eastern Oregon plateau, 35 miles west of Burns, there occurred recently a demonstration which may mean that the United States may no longer need to rely upon the tin deposits of Bolivia or the Dutch East Indies.

The demonstration was on the site of what C. S. Selle, Baker, Ore., mining engineer, declared to be one of the world's greatest tin deposits. It was witnessed by Gov. Charles A. Sprague, Secretary of State Snell and other state officials.

Before the Governor and his party, Mr. Selle made the first sizable smelting of tin from the new ore field, producing enough pure metal to indicate that tin actually appears in commercial quantity in the ore, but leaving unanswered the question of the field's ability to supply the metal in any great quantity.

However, assays, according to Mr. Selle, show that the ore contains from 175 to 190 pounds of tin and from $6.50 to $15 in gold to each ton. Total area of the deposit, he said, is unknown, although 2,140 acres have been covered by claims.

The ore is not in veins, but exists in a solid mass to untold depth, Mr. Selle explained. It is a deposit of an immense lava flow from the slopes of the Cascade Range. The eastern Oregon plateau, geologists have long known, contains numerous deposits of metal ores, both precious and otherwise, but most of the known deposits have proved unprofitable in operation under existing methods of metal extraction.

The Christian Science Monitor
Boston, Friday Nov. 8, 1940

November 12, 1940

Mr. Hugh K. Lancaster
State Assay Laboratory
Baker, Oregon

Dear Hugh:

Thank you for your letter of November 12th. If, and when, Les has a little time, I would be glad if he would try some of the "tin ore" again using just high enough temperature to get a liquid slag. I doubt very much if this will change matters, but it might be a good plan to try it out to make sure. It is my understanding that the U. S. Land Office Engineer took his samples from the tin property to Baker for analyses. Have you any information concerning this or anything about results which he obtained?

Receipt of the mine reports which you enclosed his hereby acknowledged.

Sincerely,

F. W. Libbey
Mining Engineer

FWL:ac

STATE DEPARTMENT OF GEOLOGY AND
MINERAL INDUSTRIES
702 WOODLARK BUILDING
PORTLAND, OREGON

Nov. 12, 1940.

Mr. F. W. Libbey
Mining Engineer
Dept. Geology & Mineral Industries
702 Woodlark Bldg.
Portland, Oregon

Dear Mr. Libbey:

Both you and Mr. Nixon have expressed an opinion on the tin claims near Burns, but I did enjoy your letter to Miss Strayer. Miss Strayer's letter was motivated by a section in the Harney County American which I had showed her. This paper is dated October 18, 1940, and in the sixth column, front page, first line reads as follows: "At a test demonstration Friday at the tin mine, located 35 miles west of Burns, F. W. Libbey, assistant State geologist, stated that there was evidence to prove that the ore was of commercial value." This quotation is followed by a list of guests, plant description, etc. I obtained this paper for our files, but if you wish, I will forward it to you.

The slag Les obtained by fusing the "tin ore" with sodium cyanide was not molten. It resembled a partially fused gold assay charge. We examined it together and found no tin. According to the handbook of chemistry and physics the melting point of KCN is 634.5°C and the melting point of NaCN is 563.7°C. Both of these melting points are higher than the maximum of 500 degrees specified. I would not expect the brecciated obsidian to materially lower the melting point. Les was of the opinion that the 500 degree temperature was 500°F, which is 260°C. This was the approximate temperature at which the fusion was made. If another fusion at 500°C is desired, we will be glad to run it.

I expressed an opinion to Senator Duncan last June, that I believed the tin deposit was a hoax, after talking with him and trying to get in touch with the operators. He stoutly defended it, and promised details about it at a later date.

Mr. Selle was in Baker Wednesday. He had very little to say, but was disgruntled by the Department of Interior investigation.

The Dodge pick-up has been in the garage for two days, with five broken valve springs. It is now finished, and from my trial run, appears to be in excellent shape.

I plan to make a trip to John Day and Canyon City on Nov. 12.

According to local gossip gathered by Ed Hendryx, there is a Gold Nugget Mining Association near Bridgeport. This association is reported to be working a fairly rich channel that is 4 or 5 feet thick, which is tilted at an angle of 45°. It is located near the ancient channel project which is being operated by Knight and Porter, and a Jack Godwin is associated with it. I will verify this report next week.

I am enclosing reports on the Coyote Mine, Dream claims, and the Golden Eagle Mine.

It has snowed intermittently for the last three days. Winter appears to be here to stay. I believe we should place the truck in a garage Nov. 15.

Best regards.

Sincerely,

Hugh

Hugh K. Lancaster,
Field Engineer

October 19, 1940

Mr. Hugh K. Lancaster
State Assay Laboratory
Baker, Oregon

Dear Hugh:

Thanks for your letter of October 15th - am interested indeed to know about Mr. Thomas, the investigator for the Department of the Interior.

For your off-the-record information, we can find no tin in the ore being supplied to the furnace at the tin operation near Burns, but the furnace product shows tin - draw your own conclusions.

Sincerely,

Earl K. Nixon
Director

EKN:ac

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
329 S. W. OAK STREET
PORTLAND, OREGON

October 15, 1940

Replies should be addressed c/o State Assay Laboratory 2102 Court St., Baker, Oregon

Mr. F. W. Libbey
702 Woodlark Bldg.
Portland, Oregon

Dear Mr. Libbey: Re: Tin Claims near Burns.

Mr. J. D. C. Thomas, special agent (investigator) Interior Department was in our office this morning. His address is box 468, San Francisco, California.

Mr. Thomas is investigating the validity of tin claims near Burns. These claims are in conflict with the proposed Squaw Butte Experimental Station of the Division of Grazing. Mr. Thomas states that to date his men have found nothing of value on the claims. The hearing is set for November 14, 1940, at Burns, Oregon.

I assured Mr. Thomas that our department would be glad to cooperate in any manner we could and suggested he write to Mr. Nixon.

The last time I was in Burns, I talked with Senator Duncan and from his description of the claims, gathered they were valueless, although Senator Duncan had great faith in the claims and process for extracting tin. I would be interested in your reaction, if you care to express it.

Best regards.

Sincerely

Hugh K. Lancaster
Field Engineer

HKL:PL

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
RARE AND PRECIOUS METALS EXPERIMENT STATION

Air mail

RENO, NEVADA

October 17, 1940.

Mr. Earl K. Nixon, Director
State Dept. of Geology & Mineral Industries
702 Woodlark Bldg.,
Portland, Oregon.

Dear Mr. Nixon:

Replying to your telegram of October 15, 1940, advising of the three samples being forwarded by Air-Express to be tested for tin.

These samples were received promptly and have been examined as requested. No tin was detected in any of the three samples.

Very truly yours,

Edmund S. Leaver
Supervising Engineer

1

Charge to the account of STATE DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES. $

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
NIGHT LETTER	X	NIGHT LETTER	
SPECIAL SERVICE		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206-B

CHECK

ACCOUNTING INFORMATION

TIME FILED

R. B. WHITE, PRESIDENT — NEWCOMB CARLTON, CHAIRMAN OF THE BOARD — J. C. WILLEVER, FIRST VICE-PRESIDENT

Send the following message, subject to the terms on back hereof, which are hereby agreed to

OCTOBER 15, 1940.

DR. EDMUND S. LEAVER
UNITED STATES BUREAU OF MINES
RENO, NEVADA

SENDING AIR EXPRESS THREE ORE SAMPLES MARKED ONE, TWO, AND FOUR. APPRECIATE IT GREATLY IF YOU WILL MAKE DETERMINATIONS FOR TIN ON EACH STOP REPORTED OCCURRENCE IN CENTRAL OREGON HAS AROUSED INTEREST AND THIS DEPARTMENT WISHES MAKE THOROUGH INVESTIGATION AS SOON AS POSSIBLE IF THESE SAMPLES SHOW ANY METAL.

EARL K. NIXON.

Government's EXHIBIT B ~~for Ident~~ Rec'd
Witness Nixon
CLOYD RAUCH
Reporter
Case No. ----------

FWL:vm
3:50 P.M.

HOMER D. ANGELL
3D DIST. OREGON

HOME ADDRESS:
1212 FAILING BUILDING
PORTLAND, OREGON

COMMITTEES:
RIVERS AND HARBORS

SELECT COMMITTEE ON CONSERVATION OF WILDLIFE RESOURCES

Congress of the United States
House of Representatives
Washington, D. C.

Portland, Oregon
October 30, 1940

Mr. F. W. Libbey
Mining Engineer
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

For your information I am enclosing copy of telegram I received today from R. R. Sayers, Director Bureau of Mines, having to do with the matter you had up with me recently.

Sincerely yours,

Homer D. Angell
M. C.

46 5/8

Charge to the account of _____ $ _____

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
NIGHT LETTER		NIGHT LETTER	
SPECIAL SERVICE		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206-B

CHECK
ACCOUNTING INFORMATION
TIME FILED

R. B. WHITE, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

Send the following message, subject to the terms on back hereof, which are hereby agreed to

COPY

WASHINGTON, D. C.
OCTOBER 30, 1940

HON HOMER D ANGELL
MEMBER OF CONGRESS
1212 FAILING BUILDING
PORTLAND ORG

RETEL SALT LAKE CITY ANALYSES OF SAMPLES FURNISHED BY OREGON STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES DO NOT INDICATE PRESENCE OF TIN INVESTIGATION OF PROPOSED RECOVERY PROCESS NOT NECESSARY.

R R SAYERS
DIRECTOR BUREAU OF MINES.

HOMER D. ANGELL
3D DIST. OREGON

HOME ADDRESS:
1212 FAILING BUILDING
PORTLAND, OREGON

COMMITTEES:
RIVERS AND HARBORS

SELECT COMMITTEE ON CONSERVATION OF WILDLIFE RESOURCES

Congress of the United States
House of Representatives
Washington, D. C.

October 26, 1940

Mr. F. W. Libbey
Mining Engineer
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

I was glad to get your letter of October 25th and have wired Dr. Dean urging that the examination be made.

I appreciate your letter and will be glad to take up the matter with you further a little later.

Sincerely yours,

M. C.

October 25, 1940

Honorable Homer D. Angell, M.C.
Failing Building
Portland, Oregon

Dear Mr. Angell:

You will recall that there was considerable newspaper publicity a matter of a week or ten days ago concerning tin in an area west of Burns. About a year ago Judge Robert Duncan asked Mr. Nixon to examine the area, and samples of the rock then were obtained by Mr. Nixon and sent to the U. S. Bureau of Mines Station at Reno. The report returned on these samples gave no tin contained, and I believe that, besides standard analytical methods, a spectroscopic analysis also was made. The results of these samples were given to Judge Duncan. Therefore, we were surprised to learn about two weeks ago that a furnace had been built on the ground and that a pilot plant operation was to be started for the recovery of tin.

I visited the operation and obtained samples of the ore being fed to the furnace and also samples from ore in place from a locality said, by the owners, to be tin-bearing. In addition, I obtained a sample of the so-called oxide, was present when it was melted with potassium cyanide flux and a metallic button obtained. This is the standard assay method for reducing cassiterite or tin oxide to tin metal.

Upon returning to Portland, I took the metallic button to Charlton Laboratories where they determined it to be largely tin. The ore samples were crushed and triplicates of these samples were sent to the following laboratories: U. S. Bureau of Mines, Reno; Laucks Laboratory, Seattle; and Oregon State College. I have results from the first two laboratories, and both report no tin detected. Also I sent a sample to Dr. Lloyd Staples of the Geological Department at the University of Oregon for petrographic analysis, and he reports that no tin minerals could be detected. Mr. Nixon, who is now in the hospital recovering from an operation for appendicitis, wrote Judge Duncan, giving him the results of these analyses, stating that we were much concerned about the matter, and suggesting that, since we were unable to make a further investigation because of lack of personnel, we get the U. S. Bureau of Mines to make the examination so that the matter could be cleared up. Three days ago Judge Duncan telephoned that he would welcome such an investigation and was eager to have it done immediately. I wired

the Station at Reno, requesting that they make such an investigation. I received an air-mail reply from Dr. Leaver, supervising engineer, stating that they were engaged in strategic mineral investigation and that it was not practical for his station to do the work but that he had sent my request on to Dr. R. S. Dean, chief engineer of the Metallurgical Division, U. S. Bureau of Mines, now at Salt Lake City. I

It seems to this Department that it is quite necessary that this investigation be made and, anticipating that Dr. Dean, like Dr. Leaver, may consider that they have other work much more important to do, I want to respectfully request that you use your good offices, through Dr. R. R. Sayers, Director of the United States Bureau of Mines, requesting that one of Dr. Dean's technicians make this examination as soon as it can possibly be arranged. The discrepancies showing in the sample results and in the contents of the product obtained from the small furnace should be cleared up.

Thanking you for your assistance in this matter, I am

Sincerely yours,

FWL:vm

F. W. Libbey
Mining Engineer

August 9, 1941

Mr. Charles H. Diehl
815 N. First Street
Phoenix, Arizona

Dear Mr. Diehl:

Thanks for yours of August 4 concerning the testing of the so-called tin ore. I was not surprised, and yet there has been so many contradictory reports that we are obliged to make as much of an investigation as we can. This we are now doing with the help of Oregon State College.

With best regards,

Sincerely yours

F. W. Libbey
Mining Engineer

FWL:hj

ARIZONA ASSAY OFFICE

CHAS. A. DIEHL

CONSULTING AND CUSTOM ASSAYERS
AND CHEMISTS

315 NORTH FIRST STREET

P. O. BOX 1148 PHONE 3-4001

PHOENIX, ARIZONA

WHOLESALE
SAMPLING AND ASSAY JOBS
FOR ANY COMMERCIAL OR
LEGAL PURPOSE
TAKEN BY CONTRACT

SPECIALTIES
ORE AND ROCK PROBLEMS
INVESTIGATIONS OF RARE
OR UNUSUAL MATERIALS
BY LATEST METHODS

Aug.4,1941.

Mr.F.W.Libbey,
Mining Engineer,
702 Woodlark Building,
Portland, Oregon

Dear Libbey:

Your tin sample followed your letter closely and I found no tin by the fusion iron reduction method, so I dissolved the ore in HCl-HF, as if doing a tungsten. It all dissolved readily, leaving no residue of tin oxide, which happens normally. Reduction of this solution with Nickel produced no stannous chloride. Thought it might carry Zinc but not a trace.

However it raised more racket and hell in the Braun Pulverizer than anything I have tried to grind up to date and left a lot of round hard unground balls in the machine. It has no resemblance to any tin ore from here or Australia. I am familiar with tin rock. Yours sincerely

Chas. A. Diehl

June 30, 1941

Mr. Chas. A. Diehl
815 North First Street
Phoenix, Arizona

Dear Charles:

Your letter, dated June 22nd, has been received. I am very sorry to learn of Mr. Smith's illness.

Under separate cover I am sending you a small sample of the so-called tin ore. Originally samples were taken by this Department and sent to the United States Bureau of Mines' Laboratory at Reno and to several commercial laboratories. None of the returns showed any tin.

Later an investigator for the Interior Department made quite an extended examination. His investigation consisted of sampling the property, assaying the ore, using a cyanide fusion according to directions given him by the assayer at the property. This assayer had claimed to be able to obtain tin in a majority of his fusions by fusing with potassium cyanide at low temperature. He could not get tin buttons one hundred percent of the time. After trying the method for a considerable time this investigator was, so he states, able to obtain tin buttons. I saw him attempt it once, but he was then unsuccessful. However, one of his samples he submitted to a private laboratory here which, using standard methods, reported no tin. Nevertheless, the chemist of this laboratory took the pulp from which he had been unable to obtain any tin and, using the cyanide fusion according to directions from the investigator, obtained a tin button which indicated a two or three percent ore. Since that time other investigators have been on the property and attempted to get definite results by using the cyanide fusion method. I understand that their results were not positive.

The United States Geological Survey have made an investigation, the extent of which I do not know, and reported to Senator McNary that no appreciable amount of tin could be found. Naturally there is considerable confusion over the matter.

This Department has arranged for a special investigation which will be jointly undertaken by us and Oregon State College. When the results will be available I could not say at present. Just how the tin could be present and still not be in such form that standard methods would recognize it is not clear to me.

If you learn anything of interest from the sample I am sending, I shall be glad to have you tell me about it.

With very best wishes, I am

Yours sincerely,

FWL:vm

F. W. Libbey
Mining Engineer

ARIZONA ASSAY OFFICE

CHAS. A. DIEHL

CONSULTING AND CUSTOM ASSAYERS
AND CHEMISTS

815 315 NORTH FIRST STREET

P. O. BOX 1148 PHONE 3-4001

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SAMPLING AND ASSAY JOBS
FOR ANY COMMERCIAL OR
LEGAL PURPOSE
TAKEN BY CONTRACT

SPECIALTIES
ORE AND ROCK PROBLEMS
INVESTIGATIONS OF RARE
OR UNUSUAL MATERIALS
BY LATEST METHODS

June 22, 1941.

Dear Libbey:

I have gotten back into active service again but Smithie has been out of action for exactly one year today.

About the time his teeth began to wreck him, I came back to myself and began functioning in a way that was not the case for years.

And now the question is "Has anyone checked up the Juniper Ridge Tin Deposit, 34 miles west of Burns, Ore?," (that knows tin.)

Have you seen the ore? I have done a lot of tin work in the past on the ore from the Mt. Bishoff of Tasmania and am curious, after reading what JayPee says in the Calif. Mg. Journal of Auburn. I would like to see a specimen and would write the promoters for same if I had their ad. I just had to move five blocks north because the old place was sold to the Arizona Republic and was torn down, destruction completed yesterday. Have a fine place and better business has resulted, already.

Sincerely

Chas. A. Diehl

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Postal Telegraph

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Form 16A

1941 JUN 24 AM 6 37

FA16 27 GOVT NL

132 SU WASHINGTON DC 23

HON EARL K NIXON

DIRECTOR STATE DEPT OF GEOLOGY 702 WOODLARK BLDG PORTLAND ORE

THANKS FOR LETTER AND I SINCERELY APPROVE OF YOUR ATTITUDE REGARDING THE TIN CONTROVERSY NEAR BURNS. I SHALL AGAIN DISCUSS THE MATTER WITH THE GEOLOGICAL SURVEY. REGARDS

CHAS L MCNARY USS.

RECEIVED
JUN 24 1941
STATE DEPT OF GEOLOGY & MINERAL INDS.

June 16, 1941

Honorable Charles L. McNary
United States Senator
Washington, D. C.

Subject: Burns Tin Controversy.

Dear Senator McNary:

Last week we noted in the press that you gave out the statement of Dr. Mendenhall, director of the United States Geological Survey, that the material in question "contained no significant amount of tin".

The press statement led us to release a statement of our feeling in the matter which is that the position taken by the Geological Survey is premature.

A copy of our press release is attached hereto. You may be pleased to note that we are about to enter upon a research investigation of the entire matter. The text of the release is not to be construed by you as our opinion that tin exists in commercial quantities in the Burns deposits. It is our sincere belief, however, that insufficient attention has been given to the problem and that evidence we have justifies its careful study--this in the light of the national defense emergency.

Sincerely yours,

EKN:vm
dncl.

Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON

OFFICE OF THE DIRECTOR

November 4, 1940.

Mr. Earl K. Nixon, Director,
State Department of Geology and
Mineral Industries,
702 Woodlark Building,
Portland, Oregon.

Dear Mr. Nixon:

Replying to your letter of October 29, regarding reported tin discovery in the State of Oregon and asking for information on Mr. William Rhea:

A check of personnel records of the Bureau of Mines fails to show that Mr. William Rhea ever worked for this Bureau. There was a Thomas Rhea employed as an explosive inspector over 20 years ago who is the only man of that name ever employed by the Bureau.

Cordially yours,

R. R. SAYERS,
Director.

October 29, 1900

AIRMAIL

Dr. R. R. Sayers, Director
United States Bureau of Mines
Washington, D. C.

Dear Dr. Sayers:

In connection with the tin scare in which our Governor, Secretary of State and others have been involved, I am making an effort to check up on some of the people who are connected with the so-called tin operation.

A letter from Circuit Judge Duncan, who is interested in the tin project, contains the following statement - "During the past several months these people (the tin people) have secured the services of Mr. Wm Rhea, who was at one time with the U. S. Bureau of Mines and for five years worked under Colonel Hewitt on the Panama Canal, and while there they did extensive work on the tin ore deposits of Bolivia and Columbia -------"

I want to check up on this man Wm. Rhea - was he ever with the U. S. Bureau of Mines? If not, do you have any information on him?

There is no tin in the rock from which they are making a little tin in a fuming furnace, so as to the origin of the tin, you may draw your own conclusions.

Yours very truly,

Earl K. Nixon
Director

EKN:ac

ESTABLISHED 1907
TELEPHONE VANDIKE 6232

I DO NOT GUARANTEE SATISFACTION-
I GUARANTEE ACCURACY.

JOHN HERMAN, D. SC.
Assayer and Chemist
ORE TESTING
POLAROGRAPH AND SPECTROGRAPH
771 SAN JULIAN STREET
NEAR EIGHTH ST. - ONE BLOCK WEST OF SAN PEDRO ST.
LOS ANGELES, CALIF.

air mail

36
July 28th, 1941.

Mr. Earl K. Nixon, Director,
State Dept. of Geology and Mineral Industries,
702 Woodlark Building,
Portland, Oregon.

Dear Mr. Nixon:

Thanks for your courteous letter of July 18th. I have given it plenty of thought and I still say that the Burns Tin Fake should not have had official encouragement such as your statement that Dr. Mendenhall's statement was "Premature and possibly even misleading". Also I object most emphatically to the statement that any new problem in Physics has been introduced, any more than a new problem in Physics has been introduced by taking a rabbit out of a hat. I do not agree that you must find where the rabbit came from or if the rabbit was there as a "Solid Solution".

You mention the land office man; never have I seen as much lack of confidence in a man as that expressed by those who know him best.

Why, Oh! Why! did you write Charlie Willis that his ill considered editorial about the U.S. Bureau of Mines "removing the blinders from their eyes" was "timely and just"? I think Willis knows better now. Was that showing any respect for Dr. Mendenhall or the Bureau? I question your right to publish such personal opinions. You jumped off the deep end then and there. What are the qualification of your man from the New York State College Faculty or is it the New York State College of Ceramics? Some of us would like to check up on the man who will be your Chief Chemist and Spectroscopist on August 1st.

Here is a carefully considered statement: I have made mistakes but always on the optomistic side and never in my life have I condemned anything which afterward made a success. With that record to maintain I will say I have given this matter all possible thought and TRIALS and say unqualifiedly that the Burns outfit is a fake. Whether there is any chance of tin being found there or elsewhere is beside the point.

I regret having to answer such a courteous letter as yours in this manner but facts are facts.

Mr. Earl K. Nixon # 2

If I could make a deposit of tin in Oregon for the benefit of Uncle Sam I would do so if I had to prove myself wrong a thousand times or if it cost my life but the fact is the thing is a fake. I appreciate the political angles but they do not excuse the volunteered statements.

Yours truly,

John Herman

John Herman, D.Sc.

JH-P

July 18, 1941

tin

Mr. John Herman
771 San Julian Street
Los Angeles, California

Dear Mr. Herman:

I regret exceedingly that I was not present when you called at our office sometime ago. I have heard of you and your good work for so many years that it would be my pleasure indeed to make your acquaintance and to sit down for a good talk.

Before going farther, I want to say sincerely that I appreciate your frankness in writing as you have under date of July 17th. It must be plain to you that this tin business has been one of the most painful headaches I have ever had. I have taken the position so far that I am willing to take the rap from my technical friends until such time as I am fully convinced as to all facts in regard to the tin situation. If it won't bore you too much, I would like to give you a history of my knowledge of the situation from the beginning.

I first examined the property briefly and cut two channel samples of what was alleged to be 14-pound ore on November 25, 1939. I sent these two samples to the United States Bureau of Mines' laboratory at Reno, asked that they be tested for tin, both by regular assay and by spectrographic analysis. The report came back, "No tin". I conveyed the information to Judge Robert Duncan, disinterested financially but interested as a matter of having the public good at heart, and recommended to him that he tell the principals to forget it and get out. I heard nothing further until about the time I was leaving for South America the following April. I then learned that a small furnace had been built and that some test runs were to be made. At that time the Governor of Oregon, Secretary of State, and a number of other people, including myself, were invited to witness a demonstration. I happened to be in San Francisco and could not attend but sent our mining engineer, Mr. Libbey. The demonstration was a failure, of course. I personally visited the property and furnace soon afterward and told them that the furnace was impossible or could not answer the question and advised them to spend money on basic research if they were convinced tin were present. I said I would reserve decision.

Meantime, a Mr. A. C. Kinsley, mining engineer of the Department of the Interior, Division of Public Lands, from San Francisco, came to the property to spend a week and stayed about six weeks. He then came to Portland where I had a chance to talk over the whole situation with him. According to his statement to me, he had personally been taking samples from various pits and making cyanide fusions. In some of these he obtained tin buttons but could not duplicate his quantitative results and could not peg exactly what was happening in the furnace. I believe he was

absolutely convinced that some tin was present. He seemed to be a fair-minded

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However, I feel that we haven't the answer to the problem at all until we can demonstrate how some of these assayers are salting themselves, if that is the answer. There is just enough doubt about the whole thing to cause me to take the position that there has been too much talk and not enough facts in regard to this tin. I do not know, of course, who has quoted me with reference to Dr. Mendenhall. For your information, I am attaching hereto a copy of a press release I issued, the essence of which is that I considered Dr. Mendenhall's statement premature. As a matter of fact, there is no one whom I can think of at the moment in the technical category in public life whom I hold in quite as high regard as to his ethics and intentions as Dr. Mendenhall. No one could have done other than to misquote me if you gained the impression that I made any statement derogatory to the good intentions of the United States Geological Survey or its director. My construction of the action of the U.S.G.S. as premature is merely my personal opinion of the judgment used under the circumstances and my warm feeling toward the U.S.G.S., its personnel, and activities is just as high as ever.

Your mention of the method of salting of a furnace on some previous occasion is very interesting to me. I am starting our new chief chemist and spectroscopist, Dr. H. C. Harrison, on an investigation of the tin assaying business shortly to find out, if possible, where the bug lies. We hope to get the hill-billy tin assayer over from Burns to make a demonstration. If he is salting the furnace or the fluxes in the operation, we hope to catch it. If he isn't, we will be obliged to find out where the tin buttons come from.

I shall truly appreciate any ideas you may have as this work goes on and will be pleased to give you any information if you care to follow up.

I can't think when I have written so long a letter before. Please construe it as my desire to inform you because you may give us some further help.

Very sincerely yours,

EKN:vm
encl.

Earl K. Nixon, Director

ESTABLISHED 1907
TELEPHONE VANDIKE 6232

I DO NOT GUARANTEE SATISFACTION-
I GUARANTEE ACCURACY.

JOHN HERMAN, D. SC.
Assayer and Chemist
ORE TESTING
POLAROGRAPH AND SPECTROGRAPH
771 SAN JULIAN STREET
NEAR EIGHTH ST. - ONE BLOCK WEST OF SAN PEDRO ST.

LOS ANGELES, CALIF.

July 17th, 1941.

air mail

Mr. Earl K. Nixon,
State Geologist,
Portland, Oregon.

Dear Mr. Nixon:

I regret extremely that I was unable to stop in Portland to tell you personally how much I regret seeing your name used as backing the Burns Tin Deposit fake. How do I know it is a fake? Just read the following carefully. Years ago I had made tests which I will describe later in this letter. At that time the same fake, at the same mountain but under a different name for the mountain than it has now, was being perpetrated.

Claims were made that the regular tests would not show tin while their methods would. I tried their methods and the standard methods and recovered no tin. I used the cyanide method and found no tin. I made a complete analysis of the ore and knew there could not possibly be any appreciable amount of tin. I even put it all into solution with hydrofluoric acid and other reagents and the entire amount of metals precipitated with hydrogen sulphide, which includes the tin, was far less than the tin alone claimed by the fakers. The experience of the U.S. Bureau of Mines was the same on this same deposit.

The faker nevertheless invited the Bureau to send representatives and he wouodd show them how it was done. The representatives, including Mr. Marron, went there and tested all his fluxes- finding no tin. They tested the "ores" and found no tin, yet the faker produced tin before their very eyes. They were "stumped" for awhile and then Mr. Marron found that tin oxide was being blown onto the furnace with the air blast. Later on the name of the mountain was changed but at least one of the men who was faking then is faking now, but the name of the mountain is changed and is blossoming under its new name - the Burns Tin Deposit at there.

Since then we have gone through the same proceedure and found no tin in spite of the fact we have added the Spectrograph, of which I have the original camparator (My own Idea), in general use. The Spectrograph shows no appreciable tin in the Burns fake. When we add 0.01% by weight of tin, in any combination we get plenty of tin showing thus proving the efficacy of the Spectrograph, if any proof is needed.

This is not all but it is sufficent if you are open to reason; and as an honest man you owe an apology (if you have been correctly quoted) to Doctor Mendenhall. You owe it immediately and not in the distant future when you will have to make it anyhow.

Yours truly,

John Herman

JH-HRN

January 3, 1941

Mr. J. P. Hall, Editor
California Mining Journal
Auburn, California

Dear Mr. Hall:

This will acknowledge your cards of December 9th and 31st, requesting something on the Burns tin situation.

The situation is no less controversial now than it was some time back when I asked you, as well as editors of Oregon papers, to withhold any publicity on the matter until more facts have been obtained.

I was, figuratively almost mobbed recently by a local technical group when I passed the remark that it was within the realm of possibility that we might have to pull in our horns in regard to the tin situation at Burns. It appears that there is a little tin in some of the rock, but I am in somewhat the same state of mind as the farmer who, after first seeing a giraffe, said, "I still don't believe it". As a matter of fact, I have seen some assay results obtained by varying orthodox assay technique which caused me to feel that the analysts have some tall explaining to do to me. Meantime, I am going to keep my feet on the ground and keep an open mind. It would be fatal, I think, for any of us to take a position based on preconceptions, past history, or bull-headedness.

I think we, or someone who is considering carrying out some research, will have the answer one of these times, but I do not expect it for a couple of months. I shall be pleased to publicize the result, in any event, and I am sure you will be interested. Meantime, I suggest that you advise inquirers that the matter is still very controversial and that the proprietors of the property have not yet succeeded in satisfactorily demonstrating the commercial presence of tin but, nevertheless, the issue is not settled.

With best wishes, I am

Cordially yours,

EKN:vm

Director

FROM A READER OF **EXCAVATING ENGINEER**

INQUIRY

PLEASE SEND ME THE FOLLOWING INFORMATION Date 193

Why do you publish, without investigation, a bunch of bunk about Tin near Burns, Oregon? Get a few samples and have them assayed and you will find there "aint no" tin there.

(Reader should write the advertiser's name and address on other side of this card)

Name_____ Title_____

Company_____

Type of Work_____

Address_____

City and State_____

CALIFORNIA MINING JOURNAL

J. P. HALL, *Owner and Publisher*

AUBURN, CALIFORNIA 12-9-40

Dear Mr. Nixon:— As soon as convenient would like you to give us a follow-up on the Burns Ore. Tin discovery.

The writer of the inc. card thinks he has something on us, but as I understand it, the Burns property won't assay by the ordinary method.

Thanks for some further info.

Sincerely. J.P. Hall

Auburn, Cal., 12-31-40.

Dear Mr. Nixon:—

Can you give us something on the Burns Tin discovery for our February Number, deadline Jan. 20th?

We are getting plenty comment, pro and con here on the matter.

Happy New Year,

J.P. Hall

January 2, 1941

Mr. David L. Evans
Box 1289
Reno, Nevada

Dear Mr. Evans:

Thanks for your letter of December 27. I am pleased to give you the following information on the tin situation in central Oregon. I prefer not to be quoted for obvious reasons because the matter is still quite controversial.

The final result of investigation of the engineer assayer of the Division of Investigation, Department of the Interior seems to be that tin is present in commercial quantities in at least some of the samples he himself took. So far as I am personally concerned, I am not convinced that the tin is or is not present, but I will say that the assayers certainly have some explaining to do to me. One of our outstanding analysts ran a series of the samples in the orthodox manner, got no tin, ran his rejects in another way using a very old but nevertheless orthodox technique with a variation only in respect to temperature control, and obtained buttons of metallic tin that weighed out so as to make the original rock run from 1½ to 5% tin. My personal reaction is to stick with the facts, disregard all preconceptions, and carry on until we have the final answer. It is just too important to disregard.

I suggest that you drop us another note, say in a month from now and ask for any further information on the course of investigations. I do not think there would be any point in your visiting the area at present. Everything within two or three miles has been staked anyway, I understand.

Best wishes, and desiring to be remembered to Doctor Taylor, I am

Cordially yours,

Director

EKN:jr

FREEPORT SULPHUR COMPANY
1804 AMERICAN BANK BUILDING
NEW ORLEANS, LOUISIANA

Box 1289
Reno, Nevada
December 27, 1940

Mr. Earl K. Nixon, Director
Oregon State Dept. of Geology
Portland, Oregon

Dear Mr. Nixon:

Undoubtedly the question I am about to ask you is becoming monotonous to you, but before leaving for Central America I was advised of a tin strike at Burns, Oregon, and since my return have noticed several accounts of same in mining magazines.

I do not know whether Dr. Taylor consulted you on this subject when he was in Oregon, and I am therefore writing to see if you have any information that you might feel free to give us.

Naturally, I know that the subject may be a delicate one and that you might not like to commit yourself on this point until you are convinced of the facts.

I hope that eventually I will get up to Oregon and meetthe geological group of which I have heard so much about from Dr. Taylor. I know that he has appreciated all of the courtesies extended to him on his several trips to your state.

With very best wishes for the New Year, I am

Yours very truly,

D. LeC. Evans.

DLE:all

David LeCount Evans

Tin

October 18, 1940

Mr. Sigfrid Unander
Executive Assistant to Governor
Salem, Oregon

Dear Mr. Unander:

I telephoned this morning to your office and gave a verbal report to one of the secretaries and I am now following up with this letter so that you will have a record of our findings. The material which was sent to us by Governor Sprague through President Erb has been very carefully tested in three departments here at the University.

First, we tested it with a blowpipe and proper reagents to see if we could reduce the oxide of tin, if any were present, to the metallic state, with negative results. Then we applied very delicate microchemical tests which again proved negative. The sample was submitted to the Physics Department with the request that they make a spectroscopic analysis. This is a very delicate means of detecting any metals which might be present. We got no positive results from this; and finally a qualitative analysis was made in the chemical laboratory which also proved negative. This does not mean that there is no tin in the rocks of the region under consideration. It simply means that the material sent to us by the Governor showed no traces of tin as a result of our tests.

If there should be tin in the rocks in that locality similar to a specimen which was secured on the ground by Mr. Fay Libbey, of the State Department of Geology and Mineral Industries, and submitted to us for examination, it would be a most unusual occurrence. There is no record, as far as I know, anywhere in the literature, of such an occur-

rence of tin.

This is not the first time that we have had a tin excitement in Oregon, and in every instance where I have been able to get information, and some of it after personal inspection on the ground, we have been disappointed. I am sorry that we cannot give a more encouraging report, but we can only state the facts as we have been able to obtain them.

There is one genuine occurrence of tin in Oregon on record now, in Baker County, where a few small pebbles of stream tin were found in a sluice box in the hills back of Baker, but as yet, as far as our knowledge goes, no commercial deposit of either stream or lode tin in Oregon has been worked.

Rocks in which tin minerals are most likely to be found are very acid rocks like granites, and generally a variety of granite known as pegmatite. I do not know where any such rock outcroppings exist in the general region between Bend and Burns, where the recent alleged discovery of tin was made. Again let me repeat that we are not presuming to say that no tin can be found in that region, as we have not examined the region in detail ourselves, but from the sample submitted we can give no assurance that a commercial deposit of tin will be found to exist in that locality. We hope that future prospecting and tests may reveal the existence of ore which might contain this valuable metal. I personally would be inclined to recommend that future expenditures of money in looking for tin in Oregon be made in the one region where we have some apparently better prospects, namely, Baker County

Sincerely yours,

Warren D. Smith

Warren D. Smith

October 17, 1940

Sigfrid Unander, Executive Assistant
to the Governor,
Salem, Oregon.

Dear Mr. Unander:

Mr. Nixon has not yet returned from San Francisco but will be in the office in a dgy or so. Just as soon as we have results from the tin samples, he will communicate with you.

A sample of the so-called oxide from the bag house was melted in my presence, and I brought back with me the metallic button obtained. Charleton Laboratories, Portland, determined the buttom to be largely tin. This may or may not be indicative of the character of the ore-body. I simply do not know at this stage of the investigation. Results of previous sampling showed that the ore samples contained no tin.

I have sent away triplicates of the samples which I obtained last Friday to the following laboratories for a tin determination: U. S. Bureau of Mines, Reno; Oregon State College Chemical Engineering Department; and Laucks Laboratories, Seattle. It may be a week or ten days before reports are obtained; and in the meantime, I am cautious about expressing an opinion as to tin possibilities.

Yours very truly,

F. W. Libbey
Mining Engineer

FWL:ac

STATE OF OREGON
EXECUTIVE DEPARTMENT
SALEM

CHARLES A. SPRAGUE
GOVERNOR

October 16, 1940

Mr. F. W. Libbey
Department of Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

Will you please phone me the reports on the tin test when completed, as Governor Sprague wishes the results wired to him in the Middle West, where he is on a speaking tour.

Yours sincerely,

Sigfrid Unander

Sigfrid Unander
Executive Assistant
to the Governor

SU w

PERSONAL & CONFIDENTIAL

Arrowhead Hotel
Burns, Oregon
September 30, 1940

Earl K. Nixon, E. M.
702 Woodlark Bldg.
Portland, Oregon

Dear Mr. Nixon:

I have been in Portland on my way to and from St. Louis upon two or three occasions since March of this year and each time have missed you, but I had the pleasure of meeting, on one occasion, your Mr. F. W. Libby, whom I like very much indeed. I am glad to know you wound up your South American trip and that you are back with us. You possibly know that I have been located here at Burns for the last threemonths where I am doing research work for St. Louis interests, who approached and asked me to undertake work here early this year. The property as you probably know is known as the Squaw Butte group of mining claims, located some 35 miles from Burns on the Central Oregon Highway. I was much surprised when the owners of this group asked me to place in motion, metallurgical inquiry for determinations of tin and gold, the principle constituent of the material according to their claims, being tin. This being the case, you would of course know that I would naturally approach the examination of these claims with a great deal of hesitancy and trepication, since to my knowledge there has never been any known large quantity of tin ore discovered within the confines of the United States, but after examining the claims at which time they presented me with all the data they possessed, which included a number of assay results which indicated the material contained in the Squaw Butte deposit may carry a commercial quantity of both tin and gold.

I then spent several weeks in Los Angeles where I conducted laboratory and mill tests from samples I took during my examination of the claims, in order to, if possible, substantiate the evidence of tin as shown by the assays the owners had given me, and I was amazed to find that the material or ore according to assay and mill sized tests made, carried tin in sufficient quantities to warrant further tests. The mill tests also coincide to a certain degree in the results of assays made. Of course there were some results under a commercial content, and some that should be considered highly commercial in so far as tin was concerned. Knowing that others had tested the material without finding a tin content we were very careful to use standard methods of recovery which in all cases have been employed. We have reason to believe, if the proper flux is used or the flux we have used in making tests, tin values in this material should be the result.

After these weeks of testing, etc. my recommendations to the owners were that while the claims would be classed as commercial in gold content according to our recoveries made, but in so far as the tin recoveries were concerned I could not and that I would

not under any circumstances recommend a commercial plant to be installed upon the property until such times as a pilot mill had been installed and where tests in commercial quantities of this material could be made, even though the small mill tests had been made to show favorable results. During this interim or period, however, a 100 pound mill test was made by the use of a large oxidizing furnace from which a commercial quantity of tin was recovered according to assays made from a resultant reported tin oxides. During the last two months here, many assays have been made, most of which indicate the material of the Squaw Butte claims to carry commercial quantities in tin which stimulated the effort looking toward the installation of a pilot mill.

Because of the above reasons, therefore work was started upon the pilot mill some time ago and has gone steadily forward within the last 6 weeks and within the next 2 weeks we expect to be in operation if nothing unforeseen takes place. The type of pilot mill we are installing is an oxidizing furnace and should treat several tons of this material per day. You can imagine the difficulty we have had to keep down publicity effecting this venture. We hear all kinds of wild stories about stock sales, promotion, etc. This of course is positively untrue. The venture is carried entirely by private capital and they have instructed me to refrain from giving out any information to anyone until the work of testing to be conducted by the use of the pilot mill is completed. Otherwise I would have invited you down, had I been privileged to do so or had you been in Portland when I could have seen and talked with you personally.

As to the Geology of these deposits, while I have been here 3 months, I have not even made an attempt to geologize the large acreage held by my clients but there have been sunk many test pits and shafts upon the property and find values, according to assay reports, to increase as depth is attained. I also find many croppings of this material over the deposits, but the larger areas are found under an overburden which does not usually exceed but two or three feet in depth. We must now have over 100 pits, shafts or shallow developments which expose the deposits made on each and every claim, which number 106.

For the reason that I feel you know even better than I what a tin discovery of such large propositions, as may be indicated here, would mean to this country, particularly at this time, I want to say to you that I have now discussed the matter with my clients as to the importance of writing you with the result that just as soon as the tests are started you will receive an invitation to visit the plant while it is in operation if you desire to do so. Naturally we are doing the best we can with the facilities we have and for the amount of funds available. However, the question of tin contained in the Squaw Butte deposits is not entirely new since tests reported date back for several years which appear to be authentic.

Please understand that I have stated to my clients and I say to you that the responsibility for the assays which show tin to be contained in these deposits must be accepted entirely by the chemists or assayers who have made the assays, as well as the mill tests for the gold and tin.

This letter, because of our mutual acquaintance, is written to you, but for the present in the strictest confidence and is not intended for your department at this time. It is personal information which I want you to have now so that you will know just what has been taking place here and that it is anticipated that commercial quantities of tin may be the results of pilot mill operations. This letter, therefore, as above stated, is addressed to you personally and is personal and confidential until such time as I can get word to you that we are ready to release information. I want the State Department, of course, at the very earliest possible moment to have full and complete information as to just what is taking place here affecting the prospective recovery of tin in the United States.

I am confident you will appreciate the very delicate position in which I am placed and what the release of the above information may mean not only to mining, but the industrial world.

As above stated, I should like to have discussed the matter personally with you but I did not want to delay longer in having you know personally the situation as it exists here. I am sure that when you find the strides we have made and the results of tests for tin by what I consider some of the best authorities on the Pacific coast, you will be very much pleased.

With kind personal regards, I am,

Very truly yours,

Wm. F. Hayden

Wm. F. Hayden
Consulting Mining Engineer

WFH:ew

FASTER and FASTER!

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EARL K NIXON=

PALACE HOTEL SANFRANCISCO CALIF=

RETEL HAYDEN GRINDING TUFFACEOUS OBSIDIAN AND TREATING IN PILOT KOBEL FURNACE LIKE SEUFERTS STOP BAGHOSE DUST YIELDS METAL ALLEGEDLY TIN VERIFY TOMORROW ALSO WILL HAVE ORE SAMPLES TESTED HAYDEN HAS APPARENT DOCUMENTARY EVIDENCE PRESENCE TIN MANAGEMENT INEXPERIENCED UNABLE DETECT ANYTHING SMELLY YET QUIEN SABE WPA PROJECT APPROVED=

F W LIBBEY.

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CHECK
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TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

To F. W. Libbey 19

Street and No. Telephone Residence

Place Portland, Oregon

Am concerned about tin matter. If ~~ford~~ your examination indicates matter has merit or even possibilities suggest you have Charlton make tests also send sample pulps air express Bureau Mines Reno with appropriate accompanying telegram. If satisfied matter phony or unworthy serious attention disregard this.

Earl T. Dixon

Sender's address for reference

Sender's telephone number

October 10, 1940

Mr. Earl K. Nixon
Palace Hotel
San Francisco, California

AIR MAIL

Dear Mr. Nixon:

No doubt when you reached San Francisco, there was a telegram from Robert M. Duncan awaiting you. Mr. MacNaughton also received one just exactly like it and called Mr. Libbey this morning about it. Anyway, we wanted you to know that Mr. Libbey has already left to attend this demonstration, so you would know that the matter is being taken care of.

We also received a telegram from Wm. F. Hayden pertaining to the same matter, and this telegram came this morning.

That is all for the present, and I am mailing this immediately so that it will go right through.

Sincerely,

CLASS OF SERVICE

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BFA228 42 NT=BURNS ORG 9

EARL K NIXON=

1940 OCT 9 PM 10 51

DIR DEPT OF GEOLOGY AND MINERAL INDUSTRIES 702

WOODLARK BLDG PORTLAND ORG=

WOULD LIKE TO SUPPLEMENT JUDGE DUNCANS TELEGRAM IN BEHALF OF MYSELF AND CLIENTS TO VISIT PILOT PLANT TEST OF SQUAWBUTTE ORES FRIDAY. GOVERNOR SPRAGUE EXPECTS TO ARRIVE THERE FRIDAY FORENOON AND TRUST YOU AND ANY FRIENDS YOU WISH TO BRING WILL COME=

WM F HAYDEN.

RECEIVED
OCT 10 1940
STATE DEPT OF GEOLOGY
& MINERAL INDS.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM THE PATRONS CONCERNING THE SERVICE

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LDC9 100 DL XC BURNS ORG OCT 9 325P 1940 OCT 10 AM 9 32

EARL NIXON=

702 WOODLARK BLDG PORTLAND ORG=

FOR TWO YEARS FOUR FRIENDS HAVE BEEN DOING LABORATORY WORK ON TIN FROM NEW TYPE OF ORE RESULTS SATISFACTORY, HAVE JUST COMPLETED FIVE TON PILOT PLANT ON PROPERTY, INITIAL TESTS PROVE COMMERCIAL RECOVERY. ON FRIDAY OCTOBER ELEVEN THIS WEEK THEY WILL MAKE A DEMONSTRATION FOR YOU AND RECOVER TIN OXIDE, REDUCE TO METAL TIN FOR YOUR INSPECTION. UNLIMITED QUANTITIES ORE IN SIGHT. THIS IS NOT A PROMOTION NO STOCK FOR SALE AMPLY FINANCED. IN PUBLIC INTEREST YOUR ATTENDANCE URGED PLACE BETWEEN BEND AND BURNS ONE MILE SOUTH OF PAVED HIGHWAY AT MILE POST NINETY SEVEN MARKED. MOST IMPORTANT PLEASE COME=

ROBERT M DUNCAN.

CLASS OF SERVICE

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1940 OCT 9 PM 6 44

PRA542 103 3 EXTRA DL XC=BURNS ORG VIA PORTLAND ORG 9

EARL NIXON=

PALACE HOTEL SFRAN=

FOR TWO YEARS FOUR FRIENDS HAVE BEEN DOING LADORATORY WORK ON TIN FROM NEW TYPE OF ORE RESULTS SATISFACTORY. HAVE JUST COMPLETED FIVE TON PILOT PLANT ON PROPERTY. INITIAL TESTS PROVE COMMERCIAL RECOVERY. ON FRIDAY OCTOBER ELEVEN THIS WEEK THEY WILL MAKE A DEMONSTRATION FOR YOU AND RECOVER TIN OXIDE, REDUCE TO METAL TIN FOR YOUR INSPECTION. UNLIMITED QUANTITIES ORE IN SIGHT. THIS IS NOT A PROMOTION NO STOCK FOR SALE AMPLY FINANCED. IN PUBLIC INTEREST YOUR ATTENDANCE URGED PLACE BETWEEN BEND AND BURNS ONE MILE SOUTH OF PAVED HIGHWAY AT MILE POST NINETY SEVEN MARKED. MOST IMPORTANT LEASE COME=

ROBERT M DUNCAN.

Western Union Telegraph Office in Lobby

October 19, 1940

Mr. E. B. MacNaughton, President
First National Bank of Portland
Portland, Oregon.

Dear Mr. MacNaughton:

Thanks for the brochure on the Trona deposits at Searles Lake, California - this is a welcome addition to our library.

The tin scare in Harney County I believe is a wash-out. I examined with Senator Bob Duncan last December the deposit, took samples and sent them to the U. S. Bureau of Mines for both chemical and spectroscopic analyses, and the Bureau reported "no tin". Libbey made the trip the other day when the Governor and Secretary of State were present, took samples which we have sent to three different laboratories, including the U. S. Bureau of Mines at Reno, Nevada. They report "no tin" on the ores although the metallic product from the furnace does show tin.

As to the origin of the metallic tin in the final product, you may draw your own conclusions. I happen to be very well acquainted with the "consulting mining engineer, metallurgist and chemist" who is also a registered professional engineer in Oregon, and I hesitate to put in a letter his record.

Am inclined to think we shall ask the U. S. Bureau of Mines to make a formal thorough investigation - they have much better laboratory facilities than we have, and we are short of men anyway.

Sincerely yours,

Earl K. Nixon
Director

EKN:ac

E. B. MacNAUGHTON
THE FIRST NATIONAL BANK OF PORTLAND
PORTLAND, OREGON

Dear Wilson

I thought this brochure might be of some slight interest re our salt deposits. and you may want to add it to your library at the office

E B MacN

Oct 18

October 15, 1940

Hon. Robert M. Duncan, Circuit Judge
Burns, Oregon

Dear Judge Duncan:

I have your letter of the 14th. I am sorry not to have been able to attend the demonstration last Friday. A speaking engagement at The Dalles interfered. I sent Mr. F. W. Libbey of the Department of Geology and Mineral Industries and have been in touch with him several times about his findings.

Mr. Libbey tested the metallic specimen which was given him after the smelting occured and reports that it is tin. He brought back with him ore samples which he had divided into triplicate samples for checking. One sample has been sent to the United States Bureau of Mines at Reno. The second he is sending to Professor Gleeson of the Oregon State College's department of chemical engineering. The third will be sent to the Loucks Laboratories in Seattle, a well known organization, expert in ore testing.

We are asking each one of these groups to give us their report as to the tin content. As soon as the information is available (it may take from one to two weeks), the Portland office will advise you of the reports received.

I want to see the smelter set-up and the ore body, but feel that it is well to wait until the reports are in hand. Mr. Nixon, the Director of the Department, is greatly interested in this project and I hope to be able to go with him when he next pays a visit to the property. As I stated above, we will defer the visit until we hear from the reports. In the meantime, I will appreciate your keeping the Bureau, Mr. Nixon and me in touch with any developments.

Yours very truly,

E. B. MacNaughton

EBM Re

C
O
P
Y

CIRCUIT COURT NINTH JUDICIAL DISTRICT
Burns, Oregon

October 14, 1940

Mr. E. B. MacNaughton
Portland, Oregon

Dear Mr. MacNaughton:

We were sorry indeed that you were unable to attend the private demonstration and test of the tine ore Friday. We had a fine jury to pass judgement on the project, but have no way of knowing the publicity this will receive from the press, nor the claims that may be made by them. We were careful not to give them anything but the most conservative estimates and statements, but from what I learned believe that these may be enlarged upon.

Knowing your personal interest in the tin situation in which the nation finds itself, as well as your professional interest in the matter, desire to advise you of plans for the immediate future.

Last evening after the test the plant was shut down. Monday next the 14th, minor adjustments to mechanical parts of the plant will be completed, and by Thursday next will be again smelting ore, and this will continue for at least one week. If you find it convenient to visit the plant at any time from the 17th to 24th of this month you will find the plant in operation. These people would be only too happy yo show you what is being done and you can inspect the ore body. I am confident that the trip will be well worth your time.

Very truly yours,

(Signed) Robert M. Duncan,
Circuit Judge

October 16, 1940

Mr. Wm. F. Hayden, Consulting Mining Engineer,
Arrowhead Hotel,
Burns, Oregon.

Dear Mr. Hayden:

Thank you for your letter of October 12th inclosing the assay certificate from the Gem State Assay Office.

I have had it copied and am returning the original herewith.

Judge Duncan wrote Mr. McNaughton concerning the plant ~~placer~~ operation, and the matter will be placed before Mr. Nixon upon his return from San Francisco the latter part of this week.

Sincerely yours,

F. W. Libbey
Mining Engineer

FWL:ac

Arrowhead Hotel
Burns, Oregon
October 12, 1940

Mr. F. W. Libby
Dept. Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libby:

I am enclosing herewith an original assay sheet from the Gem State Assay office, a copy of which I believe I did not give you. I have some very interesting news wired to me on the gold return. Am waiting on the certificates, but it is especially good.

I want to thank you very much indeed for the kind interest shown us today. It was a real pleasure to have had you with us. Will let you hear from me as soon as I receive the certificate verifying a wire from San Francisco return. Please tell Earl we'll be glad if he can come down with you, but if he can wire in advance it will help.

Very truly yours,

W. F. Hayden

Wm. F. Hayden
Consulting Mining Engineer

WFH:ew

P.S. Judge Duncan will write you that we suspended operation of the plant last night for minor adjustments on the equipment, not the furnace. When we closed down last evening, it was operating at the temperature we require and was making oxides rapidly.

The adjustments will probably take until Tuesday to complete and the furnace then will not be hot enough for complete operation until Thursday. We will then operate continuously for probably a week or ten days and possibly longer.

W. F. H.

December 5, 1940

Burns Times-Herald,
Burns, Oregon.

Gentlemen: Re: The Tin Matter

We have received the impression from one or two sources that there are people interested financially, or otherwise, in the tin claims, or alleged tin discovery, who feel that this Department has been remiss in that we have not aided them in their defense against possible action by the Department of the Interior. This communication conveys our position in the matter, and we would appreciate your giving it whatever publicity the matter rates.

The facts as we understand them are as follows: After the visit to the pilot tin plant about October 11th by various people at the invitation of Judge Duncan, an engineer, Mr. Kinsley of the Division of Investigation, Department of the Interior, spent about three weeks on the property looking into all angles of the situation and sampling the various exposures of alleged ore. In the meantime, our mining engineer, Mr. F. W. Libbey, had taken some samples of the alleged ore and of the material being fed to the furnace, sent them to accredited laboratories including the U. S. Bureau of Mines Laboratory at Reno, and the results came back "no tin".

Mr. Kinsley brought his samples to Portland where they were assayed at a competent custom laboratory. We do not know what the result of this work is, but presumably the Department of the Interior will announce the result at the proper time.

We had promised Judge Duncan, whom we hold in the very highest regard, that we would get to the bottom of this tin matter. This was before we learned that the Department of the Interior engineer had come into the picture and was prepared to give it a careful study. Under the circumstances, we naturally did not feel justified in spending the State's money in duplicating Mr. Kindley's work. If the result of his investigation is not conclusive or not satisfactory, then we shall come into the picture.

As to our Department assisting claim owners or others in their defense against possible action by the Department of the Interior, it must be obvious that we could hardly do this with propriety unless we were absolutely convinced that the claim owners' stand was sound, and that the Department of the Interior's action was unjustified.

As to the latter of these points, we are convinced that the Department of the

Interior is making an unbiased investigation as we have had a number of talks with Mr. Kinsley. The Department of the Interior is just as desirous of obtaining the facts in the situation as we are.

As to the other point, we can not yet be certain that the claim owners' position is sound because the samples taken by our engineer--and samples taken by myself more than a year ago--showed no tin by both spectrographic and orthodox laboratory analytical methods. We are not convinced, however, that there is no tin in the area. It might be present and so spotty as to preclude commercial production; or, it is of course within the realm of possibility that the form in which it occurs would render its assaying difficult. I, personally, am doubtful as to this latter possibility, but it could happen.

No one more than we desires a tin operation in this State, and we shall make every reasonable and honest effort to get to the bottom of the matter if Mr. Kinsley's work is not conclusive.

Cordially yours,

Earl K. Nixon
Director

EKN:ac
cc Judge Duncan

Submitted by Shannon

TREATMENT OF TIN ORES
by oxide fuming

This method of treating ores consists in blowing the finely pulverized ore into an intensely heated furnace, the theory being that tin and certain other metals will oxidize, and that the oxides will be volatile at the temperatures used in the furnace. There is some question as to whether these oxides pass from the furnace as a true vapor, or whether they follow the gas stream primarily because they are in the form of a very fine dust, while the other constituents of the ore have been fused to a fluid slag and are left behind in the furnace. The oxide laden gases are passed through a series of cooling and settling chambers, and finally through a baghouse or other dust filter to recover the oxides.

I was associated with the Seufert Brothers of The Dalles when they were conducting experiments with this process several years ago. They were primarily interested in Lead and Zinc, but a number of tests were also run on these same so-called tin ores. It must be admitted that the tests run at that time were far from conclusive, but they were ample to demonstrate the problems to be solved.

In discussing the ore supply, it may be well to say that any igneous rock, such as the common basalt contains traces of nearly all the metals, including tin. The ores under discussion appear to be volcanic material of some kind. I was able to demonstrate the presence of tin in them with the laboratory apparatus at my disposal, but was unable to make any reliable quantitative measurement. Certain samples tested yielded metallic buttons consisting of both lead and tin indicating about 2% metal in the ore--both lead and tin and not knowing the proportion of each in the button.

When these ores were treated in the fuming furnace, they yielded a small amount of powdery oxide, which when subjected to the same assay methods also yielded a metallic button containing both lead and tin, but again the proportions were not determined. The buttons were secured by mixing the ore or oxide with about five times it's weight of cyanide and fusing the mixture in a crucible. This method is not reliable quantitatively on any tin ore other than cassiterite.

I have every reason to believe that the recent demonstration at Burns was conducted along these same lines. If anything new was tried or discovered, I would be very glad to hear about it.

The commercial application of this process would involve the application of considerable more knowledge than is now available. I would recommend first that the ore fields be carefully surveyed and assayed to determine conclusively just how much tin is present and what form it is in. Then it must be remembered that all ore treated must be pulverized dry to very fine mesh which is a quite expensive operation in itself. It must all be fused and heated to some 25,000 degrees Fahr. using fuel to do so as there is very little fuel value in these ores like there is in lead and zinc sulphide ore. Some ores may require the addition of fluxes to make the slag flow well.

And even after the oxides have been collected, there is the further problem of smelting them to metal, and then separating the lead from the tin unless solder is to be made of it. This should not be difficult--the smelting to metals. Probably could be accomplished in the ordinary lead blast furnace. But the separating of lead and tin is not so easily or cheaply accomplished.

Our furnace was built of ordinary fire bricks, and considerable trouble was experienced, especially when treating ores with high iron content with the bricks eating away wherever they came in direct contact with fluid slag. This slag is usually basic in character due to excess iron while the bricks are acidic due to their silica content. Perhaps the use of magnesia brick would prove a solution to this difficulty.

It can be seen from the foregoing that the whole fuming process only aims to be a method of concentrating the ore. The oxide product may only be considered as a concentrate and has no value in itself. A refinement of this process is in use and is known as the American Zinc Oxide process. In this case the oxides are ready for use in paint making as soon as made. However, in this case every precaution is taken to prevent unfused ore particles to be carried over with the oxide dust. Where the oxides are to be subsequently smelted this would not be so important. We were not able to determine the degree of concentration which we attained. This would have to be determined with reasonable accuracy before use of the process could be justified.

To summarize this list of problems: first to determine if these so-called ores really do contain appreciable quantities of metallic tin; second, to determine the degree of concentration which can be expected from the process; third, to determine a type of furnace lining which can take the punishment; fourth, to determine whether the fuel cost justifies the degree of concentration; and fifth, to determine if the resulting tin-lead alloy can be marketed under conditions which will make the whole operation self-sufficient.

Needless to say, the general aspect of these problems was discouraging enough to cause us to drop the matter at the time. However, our tests were far from conclusive. As I previously intimated, I have no reason to feel that the current demonstration covered any new ground, and the whole matter has the general aspect of a promotion scheme. I have knowledge that certain parties connected with this demonstration have used similar methods on other promotion schemes in the past. Accordingly, I would recommend that some caution be used in dealing with them--not that I would say definitely that the process is unworkable. I do say that to the best of my knowledge it isn't yet ready for commertial application.

John H. Fulton

John H. Fulton

Chemist, Shannon Research Association

Laucks Laboratories, Inc.

BONDED AND AUTHORIZED
NEW YORK PRODUCE EXCHANGE
INTERSTATE COTTONSEED CRUSHERS ASS'N
AMERICAN BUREAU OF SHIPPING
AMERICAN WOOD-PRESERVERS' ASS'N
U.S. TREASURY DEPARTMENT
REFEREE CHEMIST
AMERICAN OIL CHEMISTS SOCIETY

CABLE ADDRESS "LAUX"
PHONE MAIN 4203

Analytical and Consulting
Chemists · Assayers
Metallurgists
Engineers
Samplers · Inspectors
314 Maritime Bldg. Western Ave. at Madison St.
Seattle

TACOMA
PORTLAND
VANCOUVER, B.C.
SPOKANE

CERTIFICATE No. 72871

SEATTLE. October 18, 1940

WE HEREBY CERTIFY THAT WE HAVE ASSAYED THE SAMPLES SUBMITTED TO US BY

State Department of Geology & Mineral Industries
702 Woodlark Building
Portland, Oregon

Attention: Mrs. F.W. Libbey, Min. Eng.

AND THAT THEY CONTAINED THE FOLLOWING PER TON OF 2,000 POUNDS:

ORE SAMPLE MARKED	GOLD		SILVER		TIN				TOTAL VALUE PER TON
	OZ. TROY PER TON	VALUE PER TON	OZ. TROY PER TON	VALUE PER TON	PER CENT	VALUE PER TON	PER CENT	VALUE PER TON	
		$		$		$		$	$
#1	-	-	-	-	None detected		-	-	-
#2	-	-	-	-	None detected		-	-	-
#4	-	-	-	-	None detected		-	-	-

VALUATION

GOLD PER OZ. LEAD CTS. PER LB.

SILVER CTS. PER OZ. COPPER CTS. PER LB.

FOR FURTHER INFORMATION REGARDING THESE SAMPLES REFER TO SAME BY CERTIFICATE NUMBER

RESPECTFULLY SUBMITTED.

Laucks Laboratories, Inc.

BY J. H. Smiley

FORM 120 LITHO IN U.S.A.

Laucks Laboratories, Inc.

BONDED AND AUTHORIZED BY
NEW YORK PRODUCE EXCHANGE
INTERSTATE COTTONSEED CRUSHERS ASS'N
AMERICAN BUREAU OF SHIPPING
AMERICAN WOOD-PRESERVERS' ASS'N
U.S. TREASURY DEPARTMENT
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TACOMA
PORTLAND
VANCOUVER, B.C.
SPOKANE

CERTIFICATE No. 72871

SEATTLE, October 18, 1940

WE HEREBY CERTIFY THAT WE HAVE ASSAYED THE SAMPLES SUBMITTED TO US BY

State Department of Geology & Mineral Industries
702 Woodlark Building
Portland, Oregon

Attention: Mr. H.W. Libbey, Min. Eng.

AND THAT THEY CONTAINED THE FOLLOWING PER TON OF 2,000 POUNDS:

ORE SAMPLE MARKED	GOLD		SILVER		TIN				TOTAL VALUE PER TON
	OZ. TROY PER TON	VALUE PER TON	OZ. TROY PER TON	VALUE PER TON	PER CENT	VALUE PER TON	PER CENT	VALUE PER TON	
		$		$		$		$	$
#1	-	-	-	-	None detected		-	-	-
#2	-	-	-	-	None detected		-	-	-
#4	-	-	-	-	None detected		-	-	-

VALUATION

GOLD PER OZ. LEAD CTS. PER LB.
SILVER CTS. PER OZ. COPPER CTS. PER LB.

FOR FURTHER INFORMATION REGARDING THESE SAMPLES REFER TO SAME BY CERTIFICATE NUMBER

RESPECTFULLY SUBMITTED.

Laucks Laboratories, Inc.

BY

FORM 120 LITHO IN U.S.A.

October 15, 1940

Laucks Laboratories
314 Maritime Bldg.
Seattle, Wash.

Gentlemen:

We are sending you today by prepaid express three samples of ore reportedly carrying tin. Will you make as careful a tin determination as possible and report to us, sending bill, at your earliest convenience.

This Department is making a thorough investigation of the supposed tin ore and desire to be very sure of our ground based on these tin determinations before proceeding further.

Yours very truly,

F. W. Libbey
Mining Engineer

FWL:ac

October 21, 1940

Dr. Lloyd Staples
University of Oregon
Department of Geology
Eugene, Oregon.

Dear Lloyd:

Thank you very much for your letter of October 18th containing the interesting information about the samples of "tin ore" which I sent you. Quantitative results from samples which I sent to the United States Bureau of Mines at Reno and to the Raucks Laboratories, Seattle, give returns of "no tin indicated".

As a matter of possible interest, a man whom I know quite well and whom in other matters, at least, I should consider quite reliable told me last week that it has been known for several years that those volcanics in some parts of central Oregon contain a very small amount of tin, and that the tin exists as tin silicate. I am unable to credit this in the light of the information we have at present unless such occurrences are very spotty, and the samples we have taken in the past have been in the wrong places.

Again thanking you, and with very best regards, I am,

Sincerely yours,

F. W. Libbey
Mining Engineer

FWL:ac

RECEIVED
OCT 19 1940
STATE DEP'T OF GEOLOGY
& MINERAL INDS.

UNIVERSITY OF OREGON
DEPARTMENT OF GEOLOGY
EUGENE, OREGON

October 18th, 1940

Mr. F. Libbey, State Department
Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

I have examined the rock specimen you recently sent me and the following are my conclusions:

DESCRIPTION OF "TIN" BEARING ROCK FROM BURNS AREA

The hand specimen is that variety of volcanic glass called perlite. The ground-up material shows two varieties of glass. That produced by grinding the hand specimen is black (called marekanite) and the dark color is due to a large number of black inclusions. The inclusions are a type of crystallite called longulites. The composition of these has never been worked out; it has been supposed that they represent portions of the rock which are richer in iron, or more likely they are a titaniferous iron. The index of the black marekanite is 1.488. This low index shows it to be a highly siliceous glass. There are some spherulites present.

The second type of glass present is brown. This contains very few crystallites, but in their place are microlites and numerous gas bubbles. The glass is brown probably due to oxidation and larger amount of iron in it. This is indicated by its higher index of refraction which is 1.504. Pumice usually ranges from 1.488 to 1.506. The brown glass has the wavy lines and drawn-out structure of a pumice.

Tin, although normally occurring in deep-seated rocks, has been reported from acid flows (rhyolite) in Bolivia, where granites are closely associated. The perlite examined has a composition close to a rhyolite, but tin has never been reported from glasses. The composition of the microlites in the pumice is not determinable, but it is unlikely that they are a tin mineral. Except for these microlites and bubbles, the glass is clear with no other minerals present.

In conclusion, unless the microlites in the pumice contain some tin compound (we have no such occurrence on record and from the required dynamics of such an occurrence it seems most improbable) there is no reason to believe there is any tin in the specimen examined.

Respectfully submitted,

Lloyd Staples m.w.

LWS mw

Lloyd Staples

P.S. I have obtained some of the processed material (end product?). It is interesting to note that the index of refraction of this siliceous glass is almost the same as pumice. A solid solution with any tin compound in it would raise this index greatly. L.W.S.

Two samples to Staples
(4) single piece - black glass - surface of
(1) crushed material - from prospect hole showing ever-colored glass.

October 15, 1940

Dr. Lloyd Staples
Department of Geology
University of Oregon
Eugene, Oregon

Dear Lloyd:

You no doubt have seen the big spread on the so-called tin occurrence in central Oregon. It is necessary that we make as thorough an examination as we can, and I am sending check samples to various laboratories for tin determinations. At the same time, I would like very much to get some evidence of the existence, if any, of the tin mineral.

At the suggestion of Sam Williston, I am sending you today by parcel post two samples, one of crushed ore and the other a rock specimen. The rock specimen probably is too crumbly for a thin section, but will you do what you can in determining the minerals present.

Appreciating your assistance very much and with very kind regards, I am,

Sincerely yours,

F. W. Libbey
Mining Engineer

FWL:ac

October 29, 1940

Professor George W. Gleeson
Oregon State College
Corvallis, Oregon

Dear Professor Gleeson:

Thank you for your letter of October 24 concerning samples of alleged tin ore. John Allen separated the magnetic material from a sample of this rock and examined it under the microscope. He thinks that most of the magnetic product is made up of spherulites which, I assume, will be radiating crystals supposedly composed of quartz and feldspar, but there would have to be high iron in order to account for the magnetism.

I am enclosing an extract from a letter received from Dr. Lloyd Staples who examined specimens of the rock which I sent him. You will note that Dr. Staples, in speaking of the crystalites, comments that they represent portions of the rock which are richer in iron or, more likely, that are a titaniferous iron. This would be the explanation I have for the magnetic property.

Under separate cover I am sending you sample of the so-called oxide. Also enclosed is a small particle of the metal contained from the oxide. The latter is wrapped in paper. Results from the other samples have been reported and no tin was found. However, Mr. Nixon has a communication from Judge Duncan reiterating that samples of the ore sent to responsible laboratories since the time I visited the property have been reported upon and show appreciable quantities of tin. Statement is made that tin may be obtained by fusing the raw ore with potassium cyanide flux. The critical feature of the operation, so it is stated, is that the temperature should be brought up to be not much above four or five hundred degrees and that the fuses should then be allowed to cool from a half to three-fourths of an hour in order that everything may solidify. In other words, if the fusion is raised to too high a temperature, the so-called tin mineral volatilizes and is lost.

I wish I had some facilities here so that I might test it out. Naturally I can not understand how tin could be obtained in this manner when it

may not be detected by standard chemical methods.

Thanking you,

Yours very truly

F. W. Libbey
Mining Engineer

FWL:hk
Encl.

P.S. Mr. Nixon, who is recovering from an appendicitis operation, has received your letter of October 24 concerning spectrographic equipment and will reply when he resumes some of his activities.

F. W. L.

OREGON STATE COLLEGE
SCHOOL OF ENGINEERING AND INDUSTRIAL ARTS
CORVALLIS, OREGON

DEPARTMENT OF
CHEMICAL ENGINEERING

FILE

October 24, 1940

Mr. F. W. Libbey
State Department of Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

All of the samples of so-called tin ore left with me contain magnetic material which is easily separated from the bulk.

As yet, we have not been able to locate evidence of tin. Professor Fulton is making the determinations.

Do not consider this letter as authoritative, but I would be interested in knowing your opinion of the magnetic content and how it appeared in this igneous material.

Very truly yours,

G. W. Gleeson

George W. Gleeson,
Professor of
Chemical Engineering

GWG:jn

P.S. Prof. Fulton says that he would like to see some of the metal or oxide. Do you have some?
G.W.G

CHARLTON LABORATORIES INC
CHEMISTS BACTERIOLOGISTS

PHONE BEACON 2070 2340 S. W. JEFFERSON ST., PORTLAND, OREGON

October 14, 1940

Mr. W. F. Libby
Oregon State Department of
Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libby:

Metal + oxide
Hege deposit
Sample by
F.W.L. 10/14/40

The analyses of the fragment of a button and the metallic oxide indicate that there is tin in both samples. Not only were we able to produce characteristic metastannic acid from both samples, but also we were able to bring about the characteristic reduction of mercuric chloride to mercurous chloride, which is used as a standard indicator for stannous salts.

Very sincerely yours,
Vernon C. Bushnell
Vernon C. Bushnell, Ph. D.

VCB AH

Tin

STATE ASSAY LABORATORIES
400 E. I ST., GRANTS PASS
RAY C. TREASHER
FIELD GEOLOGIST
ALBERT A. LEWIS
ASSAYER
2102 COURT ST., BAKER
HUGH K. LANCASTER
FIELD ENGINEER
WILLIAM T. BURNS
ASSAYER

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

702 WOODLARK BUILDING
PORTLAND, OREGON

October 24, 1940

Mr. F. W. Libbey, Mining Engineer
State Department of Geology and Mineral Industries
702 Woodlark Building
Portland, Oregon

Dear Mr. Libbey:

Enclosed is the assay report on your sample #4 from Squaw Butte. I ran a two assay ton charge in a 40 gram crucible on this pulp.

Yours truly,

Les Richards

Les Richards, Assayer

LCR:mb
Enclosure

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT

Grants Pass, Oregon
Baker, Oregon

October 24, 1940 19__

Sample submitted by Mr. Libbey, Portland Office, Portland, Oregon

Sample description: ABP #4 Obsidian and Volcanic cinder

The assay results recorded below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results recorded below are from a sample furnished by the above named person. This Department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

	GOLD		SILVER						
Sample Number	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
#4	Nil		Nil						

Market Quotations:

Gold	$	per oz.
Silver	$	per oz.
	$	per lb.
	$	per lb.

RECEIVED
OCT 25 1940
STATE DEPT OF GEOLOGY & MINERAL INDS.

STATE ASSAY LABORATORY

L. C. Richards
Assayer

L. C. Richards

Tin

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT Office Number AG-1402

Grants Pass, Oregon
~~Baker, Oregon~~

November 6, 193 40

Sample submitted by F. W. Libbey, 702 Woodlark Building, Portland, Oregon

Sample description Hege Tin Ore, No. 4--Fractured obsidian, mostly gray with some tan. Panning showed no megascopic heavy concentrate.

The assay results given below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results given below are from a sample furnished by the above named person. This department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

Sample Number	GOLD		SILVER						
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
	Blank		Blank						

Market Quotations:

Gold	$	per oz.
Silver	$	per oz.
	$	per oz.
	$	per oz.

STATE ASSAY LABORATORY

Albert G. Lewis
Assayer

RECEIVED
NOV 7 1940
STATE DEPT. OF GEOLOGY & MINERAL INDS.

TIN

Investigation of Reported Tin Occurrence near Burns, Oregon.

As of Jan 1, 1941 there is ~~as yet~~ no final answer as to the validity of the claims that a body of tin-bearing rock has been found at a point about 30 miles west of the town of Burns in central Oregon.

The facts, so far as they are known to the department, are as follows:-

The director and the chief geologist of the department visited the area in question briefly Nov. 25, 1939 and cut two channel samples of the alleged ore - a granular, rhyolitic obsidian. The samples were sent to the U.S. Bureau of Mines laboratory for chemical and spectroscopic analyses. No tin was detected.

The proprietors of the claims had sent samples ~~to~~ of the alleged ore to various reliable laboratories. Some samples are said to have shown commercial tin assays, some none. A small "fuming" furnace for pilot testing was built on the property and various individuals including State officials and leading mining engineers were invited to a demonstration of the furnace operation.

Samples of the alleged ore as well as samples of the ground and dried furnace feed - and of the furnace product were taken

by a member of the department staff. The ore and furnace feed showed no tin when ~~test~~ analyzed in three respected laboratories including ~~two~~ one of U. S. Bureau of mines and two custom assay laboratories. The furnace product — an oxide powder, did show an appreciable amount of tin.

The Division of Investigation, U. S. Dept of the Int. entered the picture with the idea of vacating the mining claims in favor of grazing if the ~~claim~~ presence of tin in commercial quantities was disproved.

Squaw Butte Tin
Hagey Tin

C
O
P
Y

Copies assays obtained from Wm F. Hayden 10/11/4

GEM STATE ASSAY OFFICE

Boise, Idaho

I hereby certify that the following is a true and correct assay and analysis of the samples submitted by Mr. Earl Hagey on September 12th, 1939

#1	Tin (Sn)	1.00%	24 pounds
2	" "	.90%	18 pounds
3	" "	.80%	16 pounds

From Squaw Butte Group of Claims No. 5-6

H. W. Brose, Assayer

W. D. RHEA-ASSAYER

Hines, Oregon
July 14, 1940

We certify that we have assayed the sample of ore submitted by Wm. F. Hayden, E. M. from the Squaw Butte Mining Claims, with the following results:

Assays per ton of 2,000 pounds

Squaw Butte Mining Claims Sample	Gold Oz./Ton	Tin Per ton	Pounds Per ton-
100A - From bottom No. 2 Shaft Claim No. 5	Not assayed for gold	.393	49 lbs. or
Tin recovered per ton of ore			2-9/20% per ton crude ore

W. D. Rhea, Assayer

Note: Test made by reducing the ore to an oxide and recovering the metal from the oxides, by use of standard methods of recovery

C
O
P
Y

W. D. RHEA ASSAYER

Hines, Oregon
July 16, 1940

I certify that I have assayed the sample of ore submitted by Wm. F. Hayden, E. M. from the Squaw Butte Mining Claims, with the following results:

Assays per ton of 2,000 pounds

Squaw Butte Mining Claims Sample	Oz./Ton	Pounds Per Ton of Tin
101A - From No. 2 Shaft, Claim No. 5	Not assayed for gold.	34 5/8 lbs. per ton crude ore

(Reddish brown ore.)

W. D. Rhea, Assayer

C
O
P
Y

W. D. RHEA - ASSAYER

Hines, Oregon
July 16, 1940

I certify that I have assayed the sample of ore submitted by Wm. F. Hayden, E. M. from the Squaw Butte Mining Claims, with the following results:

Assays per ton of 2,000 pounds

Squaw Butte Mining Claims Sample	Gold Oz./Ton	Pounds Tin Per ton
101 - From No. 2 Shaft, Claim No. 5	Not assayed for gold	48¼ lbs. Per ton crude ore.

(Reddish-Black ore)

W.D.Rhea, Assayer

C
O
P
Y

W. D. RHEA - ASSAYER

August 10,1940

I hereby certify that I have assayed the ore presented to me by Mr. Wm. F. Hayden with the following results:

No. 104, Squaw Butte

Gold	Silver	Tin
Not assayed for Gold	Not assayed For Silver	46 lbs. 11 oz. of tin per ton

W. D. RHEA * Assayer

C
O
P
Y

W. D. RHEA - ASSAYER

August 3, 1940

I hereby certify that I have assayed the ore presented to me by Mr. Wm. F. Hayden with the following results:

No. 102, Squaw Butte

Gold	Silver	Tin
Not assayed for Gold	Not assayed for Silver	34 lbs. 3 oz. of tin per ton

W. D. RHEA ASSAYER

C
O
P
Y

W. D. RHEA - ASSAYER

August 4, 1940

I hereby certify that I have assayed the ore presented to me by Mr. Wm. F. Hayden with the following results:

No. 103, Squaw Butte

Gold	Silver	Tin
Not assayed for Gold	Not assayed for Silver	35 lbs. of tin per ton

W. D. RHEA - Assayer

C
O
P
Y

W. D. RHEA - ASSAYER

August 26, 1940

I hereby certify that I have assayed the sample of ore presented to me by Mr. Wm. F. Hayden, E. M., with the following results:

From Squaw Butte

Gold	Silver	Tin
$8.75 per ton	Not assayed for Silver	Not assayed for Tin

W. D. RHEA, ASSAYER

C
O
P
Y

W. D. RHEA ASSAYER

Hines, Oregon
August 11, 1940

I hereby certify that I have assayed Mr. Koebel's tin oxides with the following results:

No. 106, Squaw Butte

SILVER	GOLD	TIN
Not assayed for Silver	Not assayed for Gold	35 lbs. and 3 oz. of tin per ton

W. D. RHEA * ASSAYER

Note: I personally saw Mr. Koebel Make the oxides, mentioned above, on the first and second day of August, 1940, at his Plant in Sandpoint, Idaho

C
O
P
Y

OFFICE OF W. L. PIERS ASSAYER AND
CHEMIST - 1925 ARAPAHOE ST
DENVER, COLO.

December 13, 1939

To. Mr. Fred A. Fuller

No.	Gold ozs.	Tin per ct.	per ct.
52		0.12	2.4 lbs
84	0.02	0.15	3 lbs
87		0.18	3.6 lbs
90	0.025	0.15	3 lbs
101		0.21	4.2 lbs

W. L. PIERS