DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMEA ~~DMX~~ Docket No. 2632

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EXPLORATION PROJECT

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To: Code 700, Rm. 4640 Date 7-29-52

To: Opr. Committee Date 8/4/52

To: Acting Adm. Date

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Schmidt
Ellis
Lemmon
Johnson
H. Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

AUG 11 1952

Mr. [illegible]
P. O. Box 2[illegible]3
[illegible], Nevada

[illegible]

Dear Mr. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Sincerely yours,

C. O. Mittendorf (for) J.N. 8-11-52

C. O. Mittendorf
[illegible]

[illegible]idt/jen
8/1/52
cc to: Mr. Meridian Mile
Docket
Messrs. [illegible]-3061
[illegible]-4204
[illegible]idt
[illegible] Committee
Field Team, Region [illegible] (2)

Notes by Schmidt 7/31/52

I examined this property in 1917 with a view of taking it over . (Iwas manager of Copper Canyon Co) It did not interest me because the veins were very narrow and erratic and the cassiterite content va ried extremely. I thought if there was any value to the project at all it would be in possible placer deposit though even this did not look propitious. I discussed the property with many other engineers that examined it and thought as ~~ti~~ I did. I know that Roy Hardy is not interested because there is nothing to stop him as manager of the Getchell mine or even in his own interests, from taking it over any time he wants.

The Paul Licking referred to in the report of Benson Mount Weather confidential was my former brother in law . I have kept in touch with developments on this project.

I do not see any justification for spending money on this p rospect .

Schmidt

8/5/52 gla

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

August 5, 1952

Memorandum

Re: DMEA-2632
Sue Magee Gamble
Lander County, Nevada
Exploration - $45,000
Tin

To: Mr. E. Wm. Ellis

From: E. T. McKnight

Subject: Recommendation for denial

The deposits proposed for exploration lie in a general east-west belt about 10,000 feet long. They were discovered in 1914, and by 1916, when a report was written on them 1/, an inclined shaft 45 feet

1/ Knopf, Adolph, Tin ore in northern Lander County, Nevada: U. S. Geological Survey Bull. 640-G, pp. 125-138, 1916.

deep had been sunk at the west end of the mineralized belt, a 20-foot tunnel had been driven near the middle of the belt, and an open cut 10 feet deep had been made near the east end of the belt. Up to the present time, the inclined shaft at the west has been deepened 20 feet, the open cut at the east end has been deepened to a 60-foot shaft, and several open cuts have been made at intervening places, chiefly to satisfy assessment requirements.

The mineralization occurs as irregular veinlets in rhyolite, averaging 1/4 inch thick and not over 20 feet in maximum length. Local and exceptional pods may be up to 6 inches thick. These veinlets contain grains of cassiterite and numerous gangue minerals. Individual veinlets are insignificant, but they may be aggregated into lode zones 4 to 6 feet wide and 15 to 20 feet long. Such zones occupy tension cracks in the rhyolite, believed to have been formed by differential contraction in the cooling, and as such they lack the continuity that would be necessary for the deposits to hold any economic promise. A strategic mineral report was prepared on these deposits in 1942 2/ in

2/ Fries, Carl, Jr., Tin deposits of Northern Lander County: U. S. Geological Survey Bull. 931-L, pp. 279-294, 1922.

which the statement is made that no large body of rock in the area contains even 0.2% pound of tin to the ton. There has been no record of tin production from the area. Distinct tin bearing veinlets have been found at only 4 places along the 10,000-foot belt of mineralization and these are all short as above indicated, with no reason or hope for continuity.

Specific proposal for this application is to (1) diamond drill 5 holes an average of 400 feet each in the neighborhood of the 65-foot inclined shaft, and (2) deepen the shaft to the 100-foot level and drift and crosscut "in mineralized zone" a total distance of 400 feet. Counting roads, mining equipment, contingencies, etc., the estimated cost is $45,000.

The mineralization on which the inclined shaft was sunk pinches out before the bottom of the present shaft was reached (see Fries, op. cit., p/ 290), although applicant states that additional tin mineralization was encountered at the bottom of the present shaft. The original veinlets do not extend into open cuts made on the surface a short distance on each side of the shaft. Hence, all that the drilling and additional underground work can hope to find is new showings of mineralization, and the lack of continuity and large gaps in the mineralization already showing would seem to preclude success. Channel samples taken across the mineralized zone at 4 places in the top 25 feet of the shaft do not exceed 0.02 per cent tin. Considering that the sampled zone contains the mineralization that prompted the sinking of the shaft, and considering the lack of factors that could be expected to improve the grade in depth, the chances of finding workable ore by the proposed exploration appear slim.

I therefore recommend that this application be denied on the grounds that the chances for success are too remote to warrant the risk of Government funds. I do not believe the docket warrants referral to the field, as the deposit has already been amply investigated. The 1942 report states that selective mining of the tin-bearing veinlets would not pay, owing to their narrowness and discontinuity (see "Outlook", p. 291 of report cited). The applicant has presented no evidence to show that the additional 20 feet driven in the bottom of the inclined shaft shows anything that would alter the picture.

Edwin T. McKnight

Edwin T. McKnight
Geologist

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

August 5, 1952

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Edwin T. McKnight
Geologist

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-2632
Metal or Mineral
Date Received 7-29-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicants*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Sue Magee Gamble, Box 223 Lovelock, Nevada.
partner Harry H. Magee, 4163 Piedmont Ave., Oakland, California

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract reference is made to description of property rights attached hereto

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. book and page numbers attached hereto

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1952

5. *The exploration project.*—(*a*) [redacted]e the mineral or minerals for which you wi[redacted] explore Tin(Cassiterite)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 26th, 1952

Sol Wager Gamble
(Applicant)

By

Harry H. Wager
By Sol Wager Gamble Atty. in fact

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Re: Docket No.177 (Sin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

3. Property rights	name of claim recorded
(Placer) (a)	New Placer Deal Nos.1; 2; 3; and 4. being the NW 1/4 ; SE 1/4; the NE 1/4; SW 1/4 of Sec. 2, Twp. 35 N; Range 45 E.; M.D.B&M. Pages 128 to 131; Book 14.
(Placer)	Tin in Lander Nos. 1;2;3;4;5;and 6. being the SW1/4; SE1/4; the NE 1/4; NW1/4 of Sec. 35; and the NW1/4 ; the SW 1/4; of Sec. 36, Twp. ~~Twp.~~ 36 N; R. 45 East, M.D.B & M. pages 132 to 137, Bk.14
(Lode)	U.R.N. Nos. 1; 2; 3; 4; 5; and 6. Located in Sec. 35 and 36, Twp. 36 N; Range 45 East, M.D.B& M., pages 340 to343,Bk.16
(Lode)	R.C.G. Nos. 1; 2; 3; and 4. Located in Sec. 26 and 27; Twp. 36 N. Range 45 East, M.D.B&M pages 306to 307, Book 13
(Lode)	Duration Nos. 1; and 2. loc ated in Sec. 27, Twp. 36 N.; Range 45 East,M.D.B&M. Located in Secs. 26 and 27; Twp. 36 N; R 45 East, M.D.B.& M. Pages 305 and 306, Book 13.
(Lode)	Basin Nos. 1; and 2. Located in Sec. 26 and 27; Twp. 36 N; R. 45 E. M.D.B.&.M. pages 305, book 13
(Lode)	Magee ~~Group~~ Nos. 1; and 2, Twp. 36 N; R. 45 East M.D.B.&.M. Page 124, Book 14.

The location of these lode claims were taken from the original Township Map on file in the Sur. General's office , Carson City, Nevada. The placer claims were laid out according to a recent survey made on the property.

(b). When first located in 1932, the property was called "The Constellation"

(c). We are the owners, the claims held by location.

(d).

(e). There are no liens or encumbrances on it.

Re: Docket No. 1774X
The Herue Shaft
Box 223, Lovelock, Nevada.

No. 4 SPECIAL RECORDING.

(a) Taking over this property previous to 1933, we continued the work already started on the Lease No. 6 claim (see the Lease No. 1). This incline shaft was sunk from a depth of 45 feet to 69 feet, sloping 60 degrees E., and encountered more certain ground with wood tin nodules embedded in the country rock getting away from the hard frozen stringers of wood tin found on surface. Two open cuts east and north show trend of parallel vein material.
The hillsover claim(now the P.C.G. No.1), an open shaft located near our east to a depth of 60 feet. A cross cut was started to intercept this shaft at depth. Deep but excavation of the engineers from the Lodge tin mining operations work was done investigating the placers already shafts all over the mines. Early spring with water came up, encountered a large flow of underground water. Two pumps could not keep down at 40 ft. Water now to stand around for the one-half per cu. yd., estimated by engineer as 32 cent a yd.

(b) A mill has installed on the hillsover(now the P.C.G. No. 1) produced a 1700 lb. concentrate from the dump. A placer sample of this concentrate assayed 3½ per cent metallic tin, determination by Smith-Emery Co., San Francisco, Calif.

(c) Lode tin (cassiterite) commence in Treasure and Silicified zone, about 20,000 feet in length and 2000 feet in width in a rhyolite intrusive- fully covered in Lodge Engr's Bulletin 640 "P. T. C. S. S. 1916, a copy already sent you with excerpts from the report attached herein. Also attached are excerpts from Mr. C. Tossiman's report F. C. T.C.S., Bureau of Mines, F. W. Hope, of Interior. Reference is made to Dwight's Bulletin 374-A by Earl Pilsbury, Jr. Mr. W. Levis carried on the work of investigating the placers upon the recommendation of Ralph Arnold xxxxxxxx xxxxxxxx that the placers is limited land. Mr. Levis claimed to have found a rich concentrate, but he never recorded had rock and didn't check with Mr. Levis. His notes are on file with the U.S.G.S. be checked. Also a Mr. Mcdarlins was sent by the Bureau of Mines to test the placers, and a pamphlet was issued on his findings. These reports are not available as I have asked them to get them.

(d) Roads.
A line to Market Road has built jointly by the Federal Government and the State of Nevada at a cost of Five Hundred Thousand ($500,000.00) Dollars. From Battle Mountain it crosses the length of two the property. Has continues to other mining property, a distance of some 30 miles or more. It is a graveled road but weather part of the way and in good repair. As access road to reach the top of the range a distance of 3 or 4 miles.

(e) Manpower available in Battle Mountain area, as to also materials, supplies and equipment.

RE: Docket No. 1774X (Tin)
Sue Magee Gamble
Box 223, Lovelock, Nevada.

(e) Water
The water supply is dependent on a spring owned by the Izzenhood Ranch, a large flow of water irrigates this entire ranch. Also on the placer ground is a Govern - ment well. A larger flow of water at Rock Creek a distance of 6 or 7 miles would be available under and arrangment.

Power
High tension electric power has been carried into Potosi District, ten miles distant, could be arranged for. If not available diesel would be used.

NO.5 The exploration project.

(a) Tin (Cassiterite)
(b) Diamond drilling program, consisting of 5 holes spaced ~~ab~~ along mineralized zone from incline shaft on Modoc #6 (now the Magee No.1 claim). Continue to sink 65 foot incline shaft to 100 foot level and drift in mineralized zone. (see Knopf's report)
(c) work to start within 3 months and complete in about 8 months.
(d) Supervision would be under competent Mining Engineer, and if available at that time Mr. Roy Hardy of the Getchel Mine would be contacted for the job. He has previously investigated the property and recommended it for a loan to the R.F.C.

NO.6 Estimate of costs.

Diamond drilling estimated at $6.00 per foot..... about 2000 feet preliminary drilling.....	$12,000.00
Incline shaft sinking to 100 foot level equipment (rental), hoisting, compressor cars etc.	$14,000.00
Sinking etc.....	5,000.00
Drifting and cross-cutting 400 feet.....	8,000.00
Road to top of ridge.....	2,000.00
Overhead and contingencies.....	4,000.00
Total	$45,000.00

(a) All work would be contracted
(b) All covered in estimated costs above
(c) Rentals covered in estimated costs above
(d) Hoist, compressor, drills, cars, track, motile housing, trucks, all in above costs.
(e) None
(f) None
(g) Assaying, book-keeping, insurance, all types to conform with State Laws.

NO. 7

Under an arrangement the proposed project can be agreed upon.

RE: Docket No. 1774 X (Tin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Franklin K. Lane, Secretary

UNITED STATES GEOLOGICAL SURVEY
George Otis Smith, Director

BULLETIN 640-G

TIN ORE IN CENTRAL LANDER COUNTY, NEVADA

by

ADOLPH KNOPF

Excerpts from report

Veins carrying wood tin have been found along the south side of the range in an area that forms, roughly, an eastward-trending belt 10,000 feet long and 2,000 feet wide. The known veins are at an altitude between 5,500 and 5,700 feet. They are inclosed in rhyolite which is petrographically alike at all the occurrences.

The veins are narrow, ranging in width from a fraction of an inch to 18 inches. They occur typically as stringers an inch or so wide, carrying wood tin and granular hematite in a gangue of chalcedony, lussatite (a form of silica resembling chalcedony), tridymite and opal. At some places enough veinlets traverse the rhyolite to constitute stringer lodes, whose greatest thickness is 8 feet. The value of stringers of tin ore, however, are widely spaced in these lodes, and the large quantity of barren rhyolite lying between stringers will necessarily reduce the average tenor of the stringer lodes, if mined as a whole, to a low figure. It is doubtful whether any of the lodes now exposed will average 1 per cent of metallic tin. Not much is known concerning the linear extent or persistence of the lodes. Information on this point is most pressingly needed before the deposits can be exploited. It is clear that individual stringers are likely to prove disappointingly short.

Some brecciation accompanied the fracturing of the rhyolite, as is shown by the occurrence of angular fragments of rhyolite cemented by opal or intersected with chalcedonic hematite, but it appears not to have been extensive. The minerals filling the veinlets are strictly contemporaneous, as is proved by their intergrowth and association.

Developments

Tin ore has been found in the rhyolite at many places along the belt. Some work has been done at eight of these places at least, and the more extensive developments are described in the following paragraphs.

The most work has been done on the Lucky No. 6 claim, which is at the west end of the tin-bearing belt, so far as it is now known. An incline sloping 60 degrees N., has been sunk here to a depth of 65 feet, following a stringer zone or lode about 8 feet thick.

excerpts from Knopf's report
The zone has been cut off near the bottom of the incline by an irregular ill defined fault dipping 45 degrees S. It is apparently a normal fault, in which the hanging wall has slipped down relatively to the foot-wall, and the lode therefor would probably be recovered by drifting to the north. An open cut a few hundred feet east of the shaft is possibly on the eastward extension of the lode shown in the shaft, but no work yet has been done to test this possibility. Another cut has been opened about 100 feet north of the shaft on which is possibly a parallel vein. The prospects on these claims are more favorably situated topographically than any others in the tin-bearing belt, for considerable depth can be obtained under the outcrops by means of tunnels.

On the Black Nugget No. 6 claim, a tunnel 20 feet long, sloping into the hill at a low angle, has been driven on an irregular ledge ranging in thickness from 3 to 18 inches. This prospect is at an elevation of about 5,700 feet and is 6,000 feet east of Modoc No. 6. The vein is mineralogically note worthy on account of its content of coarse tridymite, which forms granular aggregates as much as an inch in diameter. Specular hematite is particularly common, considerably more abundant than the associated wood tin, and fragments of rhyolite are completely incrusted by spherulitic micaceous hematite.

An open cut on the Mayflower claim, 4,000 feet east of the Black Nugget No. 6 tunnel, attains a depth of 10 feet. Here a zone 8 feet wide, showing a number of narrow, irregular stringers carrying wood tin and abundant platy hematite is exposed. In this zone there are some angular fragments of rhyolite cemented by white opal, proving that a certain amount of brecciation accompanied the opening of the veinlets.

Mineralogy of the veins.
The wood tin in the veinlets in the rhyolites of Northern Lander County, Nevada, is the first recorded occurence of this mineral in place in the United States. Of further interest is the association apparently not heretofore observed elsewhere is the association of the tin ore with abundant tridymite.
No topaz, tourmaline or other fluorine or boron minerals were noted in these tin deposits.

Wood tin.
The tin bearing mineral is exclusively in the form of wood tin and invariably shows the characteristic concentric b banding resembling the annual growth mf rings of wood. These forms are of course best displayed in the material recovered from the gravels, where masses of nuggets weighing as much as 2 and 3 pounds have been found.

Analysis of wood tin (A.A.Chambers, Analyst)

SNO2.....	85.14	SiO2.....	1.03	Fe-2-O2.....	13.42
MnO.....	.02	H 2O.....	.20	H2O -1/2.....	.05

RE: Docket No. 1774X (Tin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

I. C. 7043

Bureau of Mines
United States Department of the Interior
RECONNAISSANCE OF MINING DISTRICTS
in
Lander County, Nevada
by
William C. Vanderburg

excerpts from report

The Izzenhood tin-bearing district in Northern Lander County, 22 miles north of Battle Mountain, Nevada, extends east and west along the crest of the Izzenhood Range for about 2 miles. Along this belt the rhyolite has been rifted in an east-west direction, and in the fracture planes there are small stringers of tin-bearing material ranging in width from a fraction of an inch to 6 inch. Along these stringers occasional kidneys of tin ore occur. No regularity in the occurence of such seams or kidneys has been established and not enough prospecting has been done to determine the width of the tin belt. At the western end of the belt an incline shaft has been sunk to a depth of 65 feet on a stringer zone in the rhyolite. Here the stanniferous material is associated chiefly with chalcedony, opal and specular hematite and quartz. A 10 lb. sample from a pile of sorted ore on the dump was taken by the writer and it assayed 7 .35 per cent metallic tin. This was a selected sample of the vein material, and it would by no means be representative of the average value.
At the eastern end a vertical shaft has been sunk to a depth of 50 feet on several stringers, and a grab sample of the *fine vein material on the dump near the shaft and estimated to contain more than 1 per cent tin.

Between the two shafts is a stretch of ground nearly 2 miles long and several hundred feet in width on which chalcedony and opalized float can be found. If trenching were done in the likely spots in this area, stanniferous stringers similar to those exposed in the shafts might be found. The finding of commercial deposits of tin ore depends largely on the occurence of stringers rich enough to carry the intervening rhyolites.
The tin occurs in the form of disseminated grains and as botryoidal nodules of wood tin.

PLACER TIN

On the South side of the tin-bearing belt the mountain range is traversed by four steep ravines ranging from one half to nearly one mile in length. Nuggets of wood tin ranging in size from a pea to a marble can be found in these concentrations. The base of the range is skirted by an alluvial bench approximately 2 miles long and 1/2 mile in width. Here the alluvium consists of a heterogenous mass of sand, subangular pebbles and boulders. Farther out where the gradient is less a flat is formed comprising an area of several thousand acres. Here the alluvium consists mainly of gravel covered with a mantle of soil 20 feet thick as shown by several shafts 40 ft. deep sunnk in this area.

* the finevein material was rejects from the jig operation.

7/31/52

Reports made availabel by Renick commodity man on tim and returned to him

Reports obtained from Bureau Mines Mount Weather Technical files No 70.16

preliminary report on Gamble Tin by W.T.Benson ⟶ no title given UJune 1946

Unfavorable report Does not consider it wirth working

File 75.6009 a ddressed to C.D.Julihn by S. Ricker Sr Mining engineer Bureau Mines

dated July 20, 1941

Report practically worthless but thinks showings do not justify a sampling job.

Sch.

7/31/52 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 30 1952

July 30, 1952

DMEA-2632-Tin
Exploration Loan
Sue Magee Gamble
Box 223
Lovelock, Nevada

Memorandum

To: E. William Ellis

From: Abbott Renick, Base Metals Branch

Subject: Application for DMEA assistance submitted by Sue Magee Gamble, Oakland, California.

Applicant submits a request for a tin exploration loan, estimated to cost $45,000, consisting of the following:

(a)	Diamond Drilling, 2000 feet	$12,000
(b)	Equipment	14,000
(c)	Shaft Sinking	5,000
(d)	Drifting and Cross-cutting 400 feet	8,000
(e)	Road Work	2,000
(f)	Overhead and Contingencies	4,000
	Total	$45,000

Tin deposits of Northern Lander County Nevada, Geological Survey Bulletin 931-L, by Carl Fries, Jr., Strategic Mineral Investigations 1941, (Pages 279-294), reads as follows:

Abstract

"Tin-bearing veinlets are exposed in a small area near Izenhood Ranch, 22 miles north of Battle Mountain, Nev. They occur in thich rhyolitic flows of Miocene (?) age, and wood tin, found in the gravels of arroyos that head in the surrounding rhyolite, presumably comes from other veinlets not yet discovered. The exposed veinlets are about 20 feet in maximum length and a quarter of an inch in average thickness. Parallel and reticulating veinlets form lodes 4 to 6 feet thick and 15 or 20 feet long. Virtually no cassiterite is disseminated in the wall rock.

The veinlets contain specularite, cassiterite, sanidine, andradite, cristobalite, tridymite, quartz, chalcedony, fluorite, and opal. All these minerals, except possibly cassiterite, together with topaz and pseudobrookite, are likewise present in cavities that are widely distributed in the rhyolite. The similarity of the mineral assemblage in the veinlets to that in the cavities indicates that the tin originated in the rhyolite magma, and spectrographic analyses indicate that the average rhyolite contains about 0.001 percent of tin. It is therefore believed that the incrustations were deposited in fumarolic vents along fissures formed by differential contraction during the cooling of the lavas.

There is no record of any production of tin from the area. Possibly a few tons of the metal might be produced from the exposed veinlets by narrow stoping and hand sorting. No large body of rock in the area, however, contains even 0.2 of a pound of tin to the ton; and the amount of tin recoverable would be only a small part of that shown by assay, for not all of the tin is in grains of cassiterite large enough to be concentrated by ordinary methods.

Placer deposits of commercial grade occurs in small draws that head in the area where the veinlets are exposed, but as they are only a few inches thick and of small volume, they could yield only a few tons of cassiterite. There is a large area of alluvium in the valley bottom below the tin-bearing veinlets that has not been thoroughly sampled, but a few tests indicate that the tin content of the upper 40 feet is less than 0.1 of a pound to the cubic yard."

The writer considers that a suitable exploration objective has not been presented by the applicant and that the applicant be denied for this reason.

Abbott Renick

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-263d
Metal or Mineral
Date Received 7-29-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Sue Magee Gamble, Box 223 Lovelock, Nevada.

partner - Harry H. Magee, 4163 Piedmont Ave., Oakland, California

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract reference is made to description of property rights attached hereto

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. book and page numbers attached hereto

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1952

16—66551-1

5. *The exploration project.*—(*a*) [illegible]te the mineral or minerals for which you wi[illegible]o explore Tin(Cassiterite)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 26th, 195 2

Sue Mayer Gamble
(Applicant)

By

Harry H. Mayer
By Sue Mayer Gamble Atty. in fact

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Re: Docket No.177[illegible] (Tin)
Duo Magee Gamble
Box 223 Lovelock, Nevada.

3. Property rights — Name of claim recorded

(Placer) — New Placer Lode Nos.1; 2; 3; and 4. being the NW 1/4 ; SE 1/4; the NE 1/4; SW 1/4 of Sec. 2, Twp. 33 N; Range 43 E.; M.D.B&M. Pages 128 to 131; Book 14.

(a)

(Placer) — Tin in Lander Nos. 1;2;3;4;5;and 6. being the NW1/4; SW1/4; the NE 1/4; NW1/4 of Sec. 35; and the NW1/4 ; the SW 1/4; of Sec. 36, Twp. ~~34~~. 36 N; R. 43 East, M.D.B & M. pages 132 to 137, Bk.14

(Lode) — U.S.E. Nos. 1; 2; 3; 4; 5; and 6. Located in Sec. 35 and 36, Twp. 36 N; Range 43 East, M.D.B.&M., pages 140 to 43, Bk.16 R.C.G.

(Lode) — Nos. 1; 2; 3; and 4. Located in Sec. 26 and 27; Twp. 36 N. Range 43 East, M.D.B&M pages 306to 307, Book 13

(Lode) — Eureka Nos. 1; and 2. lies about in Sec. 27, Twp. 36 N.; Range 43 East, M.D.B&M. Located in Sec. 26 and 27; Twp. 36 N; R 43 East, M.D.B.& M. Pages 305 and 306, Book 13.

(Lode) — Basin Nos. 1; and 2. Located in Sec. 26 and 27; Twp. 36 N; R. 43 E. M.D.B.&.M. pages 305, book 13

(Lode) — Magee ~~xxxx~~ Nos. 1; and 2, Twp. 36 N; R. 43 East M.D.B.&.M. Page 134, Book 14.

The location of these lode claims were taken from the original Township Map on file in the Sur. General's office , Carson City, Nevada. The placer claims were laid out according to a recent survey made on the property.

(b). When first located in 1932, the property was called "The Constellation"

(c). We are the owners, the claims hold by location.

(d).

(e). There are no liens or encumbrances on it.

Docket No. 27748 (Tin)
Sue Kagee Gamble
Box 223, Lovelock, Nevada.

No. 4 PHYSICAL DESCRIPTION.

(a) Taking over this property previous to 1933, we continued the work already started on the Boise No. 6 claim (now the Kagee No. 1). This incline shaft was sunk from a depth of 45 feet to 65 feet, sloping 60 degrees E., and encountered more portable ground with good tin nodules embedded in the country rock getting away from the hard frozen stringers of good tin found on surface. Two open cuts went out north above crest of parallel tain material.
The Kagelcoor claim(now the R.U.G. No.1), an open shaft 10feet deep was sunk to a depth of 60 feet. A cross cut was started to intercept this shaft at depth.
Under the supervision of two engineers from the Eclipse tin fields extensive work was done investigating the placers claiming shafts all over the valley. Nearly spring with potortable w., encountered a large flow of underground water. Two pumps needed some shafts to keep sun at work. Water used to advice gravels for tin content per cu. yd., estimated by engineer as 70 cent a yd.

(b) A small jig installed on the Kagelcoor(now the R.U.G.No. 1)produced a 1500 lb. concentrate from the dump. A picked sample of this concentrate averaged 55 per cent metallic tin, determination by Smith-Emery Co., San Francisco, Calif.

(c) Lode tin (cassiterite) occurring in fault and silicified zone, about 10,000 feet in length and 8,000 feet in width is a possible alternative- report contained in Ralph Knopf's Bulletin 848 "C", U. S. G. S. 1936, a copy already sent you with excerpts from the report attached hereto. Also attached are excerpts from Dr. G. Vanderburg's report I. C. 7043, Bureau of Mines, U. S. Dept. of Interior. Reference is made to Bul.3-5 Bulletin 831-A by Ford Price, Jr. Dr. G. Levin carried on the work of investigating the placers upon the recommendation of Ralph Knopf~~xxxxxxxxxx~~ ~~xxxxxxxxx~~ that the placers be looked into. Dr. Levin claimed to have found a rich concentrate, but on hard crushing had rock and client check with Mr. Levin. The notes are on file with the U.S.B.M. be placed. Also a Mr. Vredenburg was sent by the Bureau of Mines to test the placers, and a pamphlet was turned on his findings. These reports are not available as I have tried hard to get them.

(d) Roads.
A line to Barrot Road was built jointly by the Federal Government and the State of Nevada at a cost of Five Hundred Thousand ($500,000.00) Dollars. From Battle Mountain it crosses the length of the tin property, and continues to other mining property, a distance of some 20 miles or more. It is a gravelled road the greater part of the way and in good repair. An access road is needed to reach the top of the range a distance of 3 or 4 miles.

(e) Manpower available in Battle Mountain area, as is also materials, supplies and equipment.

RE: Docket No. 1774% (Sin)
Duo Cages Group
Box 223, Lovelock, Nevada.

(c) Water
The water supply is dependent on a spring owned by the Izzenhood Ranch, a large flow of water irrigates this entire ranch. Also on the placer ground is a Government well. A larger flow of water at Rock Creek a distance of 6 or 7 miles could be available under any arrangement.

Power
High tension electric power has been carried into Toiyabe District, ten miles distant, could be arranged for. If not available diesel could be used.

NO.5 The exploration project.

(a) Tin (Cassiterite)
(b) Diamond drilling program, consisting of 5 holes spaced at along mineralized zone from incline shaft on Lodes #6 (now the Cages No.1 claim). Continue to sink 65 foot incline shaft to 100 foot level and drift in mineralized zone. (see Knopf's report)
(c) work to start within 3 months and complete in about 6 months.
(d) Supervision would be under competent Mining Engineer, and if available at that time Mr. Roy Harty of the Catchel Mine would be contacted for the job. He has previously investigated the property and recommended it for a lease to the R.F.C.

NO.6 Estimate of costs.

Diamond drilling estimated at $6.00 per foot..... about 2000 feet preliminary drilling.....	$12,000.00
Incline shaft sinking to 100 foot level equipment (rental), hoisting, compressor cars etc.	$14,000.00
Blasting etc.....	$ 3,000.00
Drifting and cross-cutting 400 feet.....	$ 8,000.00
Road to top of ridge.....	$ 8,000.00
Overhead and contingencies.....	$ 4,000.00
Total	$45,000.00

(a) All work would be contracted
(b) All covered in estimated costs above
(c) Rentals covered in estimated costs above
(d) Hoist, compressor, drills, cars, track, mobile housing, trucks, all in above costs.
(e) None
(f) None
(g) Assaying, book-keeping, insurance, all types to conform with State laws.

NO.7 Under an arrangement the proposed project can be agreed upon.

RE: Docket No. 1774X (Tin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Franklin K. Lane, Secretary

UNITED STATES GEOLOGICAL SURVEY
George Otis Smith, Director

BULLETIN 640-G

TIN ORE IN NORTHERN LANDER COUNTY, NEVADA
by
ADOLPH KNOPF

excerpts from report

Veins carrying wood tin have been found along the south side of the range in an area that forms, roughly, an eastward-trending belt 10,000 feet long and 2,000 feet wide. The known veins are at an altitude between 5,500 and 5,700 feet. They are inclosed in rhyolite which is petrographically alike at all the occurences.
The veins are narrow, ranging in width from a fraction of an inch to 18 inches. They occur typically as stringers an inch or so wide, carrying wood tin and specular hematite in a gangue of chalcedony, lussatite (a form of silica resembling chalcedony, tridymite and opal.
At some places enough veinlets traverse the rhyolite to constitute stringer lodes, whose greatest thickness is 8 feet. The veins or stringers of tin ore, however, are widely spaced in these lodes, and the large quantity of barren rhyolite lying between stringers will necessarily reduce the average tenor of the stringer lodes, if mined as a whole, to a low figure. It is doubtful whether any of the lodes now exposed will average 1 per cent of metallic tin. Not much is known concerning the linear extent or persistence of the lodes. Information on this point is most pressingly needed before the deposits can be exploited. It is clear that individual stringers are likely to prove disappointingly short.
Some brecciation accompanied the fissuring of the rhyolite, as is shown by the occurence of angular fragments of rhyolite cemented by opal or incrusted with micaceous hematite, but it appears not to have been extensive.
The minerals filling the veinlets are strictly contemporaneous, as is proved by their intergrowth and association.

Developments

Tin ore has been found in the rhyolite at many places along the belt. Some work has been done at eight of these places at least, and the more extensive developments are described in the following paragraphs.

The most work has been done on the Modoc No. 6 claim, which is at the west end of the tin-bearing belt, so far as it is now known. An incline sloping 60 degrees N., has been sunk here to a depth of 45 feet, following a stringer zone or lode about 8 feet thick.

excerpts from Ahnert's report

The zone has been cut off near the bottom of the incline by an irregular ill defined fault dipping 45 degrees S. It is apparently a normal fault, in which the hanging wall has slipped down relatively to the foot-wall, and the lode therefor would probably be recovered by drifting to the north. An open cut a few hundred feet east of the shaft is possibly on the eastward extension of the lode shown in the shaft, but no work yet has been done to test this possibility. Another cut has been opened about 100 feet north of the shaft on which is possibly a parallel vein. The prospects on these claims are more favorably situated topographically than any others in the tin-bearing belt, for considerable depth can be obtained under the outcrops by means of tunnels.

On the Black Nugget No. 6 claim, a tunnel 20 feet long, sloping into the hill at a low angle, has been driven on an irregular ledge ranging in thickness from 3 to 18 inches. This prospect is at an elevation of about 5,700 feet and is 6,000 feet east of Lodge No. 6. The vein is mineralogically note worthy on account of the content of coarse triphylite, which forms granular aggregates as much as an inch in diameter. Specular hematite is particularly common, considerably more abundant than the associated wood tin, and fragments of rhyolite are completely incrusted by spherulitic micaceous hematite.

An open cut on the Mayflower claim, 4,000 feet east of the Black Nugget No. 6 tunnel, attains a depth of 10 feet. Here a zone 8 feet wide, showing a number of narrow, irregular stringers carrying wood tin and abundant platy hematite is exposed. In this zone there are some angular fragments of rhyolite cemented by white opal, proving that a certain amount of brecciation accompanied the opening of the veinlets.

Mineralogy of the veins.

The wood tin in the veinlets in the rhyolites of Northern Lander County, Nevada, is the first recorded occurrence of this mineral in place in the United States. Of further interest is the association apparently not heretofore observed elsewhere in the association of the tin ore with abundant triphylite.

No topaz, tourmaline or other fluorine or boron minerals were noted in these tin deposits.

Wood tin.

The tin bearing mineral is exclusively in the form of wood tin and invariably shows the characteristic concentric banding resembling the annual growth rings of wood. These forms are of course best displayed in the material recovered from the gravels, where masses of nuggets weighing as much as 2 and 3 pounds have been found.

Analysis of wood tin (A.A. Chambers, Analyst)

SnO2.....95.10
SiO2.....1.92

Re: Docket No. 1774X (Tin)
SueMegee Gamble,
Box 223 Lovelock, Nevada

I. C. 7043

Bureau of Mines
United States Department of the Interior
RECONNAISSANCE OF MINING DISTRICTS
in
Lander County, Nevada
by
William C. Vanderburg

excerpts from report

The Izenhood tin-bearing district in Northern Lander County, 22 miles north of Battle Mountain, Nevada, extends east and west along the crest of the Izenhood Range for about 2 miles. Along this belt the rhyolite has been rifted in an east-west direction, and in the fractures planes there are small stringers of tin-bearing material ranging in width from a fraction of an inch to 6 inch. Along these stringers occasional kidneys of tin ore occur. No regularity in the occurrence of such seams or kidneys has been established and not enough prospecting has been done to determine the width of the tin belt. At the western end of the belt an incline shaft has been sunk to a depth of 65 feet on a stringer seam in the rhyolite. Here the stanniferous material is associated chiefly with chalcedony, opal and opaquiar hematite and quartz. A 15 lb. sample from a pile of sorted ore on the dump was taken by the writer and it assayed 7 .56 per cent metallic tin. This was a selected sample of the vein material, and it could by no means be representative of the average value.
At the eastern end a vertical shaft has been sunk to a depth of 50 feet on several stringers, and a grab sample of the vein material on the dump near the shaft and estimated to contain more than 1 per cent tin.

Between the two shafts is a stretch of ground nearly 2 miles long and several hundred feet in width on which chalcedony and opalized float can be found. If trenching were done in the likely spots in this area, stanniferous stringers similar to those exposed in the shafts might be found. The finding of commercial deposits of tin ore depends largely on the occurrence of stringers rich enough to carry the intervening rhyolites.
The tin occurs in the form of disseminated grains and as botryoidal nodules of wood tin.

PLACER TIN

On the south side of the tin-bearing belt the mountain range is traversed by four steep ravines ranging from one half to nearly one mile in length. Nuggets of wood tin ranging in size from a pea to a marble can be found in these concentrations. The base of the range is skirted by an alluvial bench approximately 2 miles long and 1/2 mile in width. Here the alluvium consists of a heterogeneous mass of sand, subangular pebbles and boulders. Farther out where the gradient is less a flat is formed comprising an area of several thousand acres. Here the alluvium consists mainly of gravel covered with a mantle of soil 20 feet thick as shown by several shafts 40 ft. deep sunk in this area.

The placerite material was rejected from the jig operation.

EXPLORATION

Subject: DMEA-2632
Re: Exploration Loan
Constellation Mine
July 29, 1952

Mrs. Sue Magee Gamble
Box 223
Lovelock, Nevada

My dear Mrs. Gamble:

This will acknowledge receipt of your application dated July 26, 1952, for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2632 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2632 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operation's Control
and Statistics Division

7862

DMEA-2631

Re: Docket No. 1774X (Tin)

Lovelock, Nevada.
July 26th, 1952.

Defense Minerals Exploration Administration
Mr. Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division
Washington, D. C.

Dear Mr. Ellis :

I hand you herewith an application for a loan on the "Tin in Lander County, Nevada" property.

I do hope this application can be approved and that it fulfills the requirements of form # MF-103, there is so much to be added in favor of the property, the extensive area it covers, that tin is the only mineral so far noted other than associated with the tin, over this entire area a distance of 3 miles or more. Surely the development program at some depth will prove worthy of any investigation made on the property.

I feel the recommendation of Adolph Knopf that the Modoc No. 6 incline shaft the most workable area should be followed out.

I sincerely trust that this project be given your personal attention and I ask your further patience for anything I have overlooked.

Yours very truly,

Sam Mazzei Jr.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1952

Re: Docket 1774X(Tin)

DMEA-2632

Lovelock, Nevada.
July 26th, 1952

Mr. Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division, DMEA
Washington, D. C.

Dear Mr. Ellis :

In mailing you the application today I failed to put in one copy. Herewith is the 4th copy.

Yours very truly,

S. M. Mayer Gamble

Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1952

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-2632
Metal or Mineral
Date Received 7-29-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Sue Magee Gamble, Box 223 Lovelock, Nevada.

partner - Harry H. Magee, 4163 Piedmont Ave., Oakland, Calif.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract reference is made to description of property rights attached hereto

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. book and page numbers attached hereto

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) [redacted]e the mineral or minerals for which you wis[redacted] explore Tin (Cassiterite)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☐ Money ☒ Use of equipment owned by you ☒ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 26th, 195-2

Joel Magee Gamble
(Applicant)

By

Harry H. Magee
By Joel Magee Gamble, Atty. in fact

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Re: Docket No.17[illegible]X (Tin)
Sue Magee Gamble
Box 223 Lovelock,Nevada.

3. Property rights — name of claim recorded

(Placer) (a) New Placer Deal Nos.1; 2; 3; and 4. being the NW 1/4 ; SE 1/4; the NE 1/4; SW 1/4 of Sec. 2, Twp. 35 N; Range 45 E.; M.D.B&M. Pages 128 to 131; Book 14.

(Placer) Tin in Lander Nos. 1;2;3;4;5;and 6. being the SW1/4; SE1/4; the NE 1/4; NW1/4 of Sec. 35; and the NW1/4 ; the SW 1/4; of Sec. 36, Twp. ~~Twp.~~ 36 N; R. 45 East, M.D.B & M. pages 132 to 137, Bk.14

(Lode) U.R.N. Nos. 1; 2; 3; 4; 5; and 6. Located in Sec. 35 and 36, Twp. 36 N; Range 45 East, M.D,B& M.;pages 340 to 343,Bk.16

R.C.G.

(Lode) Nos. 1; 2; 3; and 4. Located in Sec. 26 and 27; Twp. 36 N. Range 45 East, M.D.B&M pages 306to 307, Book 13

(Lode) Duration Nos. 1; and 2. loc ated in Sec. 27, Twp. 36 N.; Range 45 East,M.D.B&M. Located in Secs. 26 and 27; Twp. 36 N; R 45 East, M.D.B.& M. Pages 305 and 306, Book 13.

(Lode) Basin Nos. 1; and 2. Located in Sec. 26 and 27; Twp. 36 N; R. 45 E. M.D.B.&.M. pages 305, book 13

(Lode) Magee ~~Group~~ Nos. 1; and 2, Twp. 36 N; R. 45 East M.D.B.&.M. Page 124, Book 14.

The location of these lode claims were taken from the original Township Map on file in the Sur. General's office , Carson City, Nevada. The placer claims were laid out according to a recent survey made on the property.

(b). When first located in 1932, the property was called "The Constellation"

(c). We are the owners, the claims held by location.

(d).

(e). There are no liens or encumbrances on it.

RE: Docket NO. 1774X (Tin)
Sue Magee Gambl
Box 223, Lovelo, Nevada.

NO. 4 PHYSICAL DESCRIPTION.

(a) Taking over this property previous to 1928, we continued the work already started on the Modoc No. 6 claim (now the Magee No. 1). This incline shaft was sunk from a depth of 45 feet to 65 feet, sloping 60 degrees N., and encountered more workable ground with wood tin nodules embedded in the country rock getting away from the hard frozen stringers of wood tin found on surface. Two open cuts east and north show trend of parallel vein material.
The Mayflower claim(now the R.C.G. No.1), an open shaft 10feet deep was sunk to a depth of 60 feet. A cross cut was started to intercept this shaft at depth. Under the supervision of two engineers from the Malaya tin fields extensive work was done investigating the placers sinking shafts all over the valley. Early spring with water table up, encountered a large flow of underground water. Two pumps needed down shafts to keep men at work. Water used to sluice gravels for tin content per cu. yd., estimated by engineer as 50 cent a yd.

(b) A small jig installed on the Mayflower(now the R.C.G.No. # 1)produced a 1500 lb. concentrate from the dump. A picked sample of this concentrate assayed 35 per cent metallic tin, determination by Smith-Emery Co., San Francisco, Calif.

(c) Lode tin (Cassiterite) occurence in fractured and silicified zone, about 10,000 feet in length and 2,000 feet in width in a rhyolite extrusive- fully covered in Adolph Knopf's Bulletin 640 "G", U. S. G. S. 1916, a copy already sent you with excerpts from his report attached hereto. Also attached are excerpts from Wm. C. Vanderburg's report I. C. 7043, Bureau of Mines, U. S. Dept. of Interior. Reference is made to U.S.G.S Bulletin 931-L by Carl Fries,Jr. Wm. G. Davis carried on the work of investigating the placers upon the recommendation of Adolph Knopf that the placers be looked into. Mr. Davis claimed to have found a rich concentrate, but we never reached bed rock and didnt check with Mr. Davis. His notes are on file with the U.S.G.S. he stated. Also a Mr. Fredericks was sent by the Bureau of Mines to test the placers, and a phamphlet was issued on his findings. These reports are not available as I have tried hard to get them.

(d) Roads

A Mine to Market Road was built jointly by the Federal Government and the State of Nevada at a cost of Five Hundred Thousand ($500,000.00) Dollars, from Battle Mountain it crosses the length of the tin property, and continues to other mining property, a distance of some 30 miles or more. It is a graveled road the greater part of the way and in good repair. An access road is needed to reach the top of the range a distance of 3 or 4 miles.

(e)

Manpower available in Battle Mountain area, as is also materials, supplies and equipment.

RE: Docket No. 1774X (Tin)
Sue Magee Gamble
Box 223, Lovelock, Nevada.

(e) Water
The water supply is dependent on a spring owned by the Izzenhood Ranch, a large flow of water irrigates this entire ranch. Also on the placer ground is a Government well. A larger flow of water at Rock Creek a distance of 6 or 7 miles would be available under and arrangment.

Power
High tension electric power has been carried into Potosi District, ten miles distant, could be arranged for. If not available diesel would be used.

NO.5 The exploration project.

(a) Tin (Cassiterite)
(b) Diamond drilling program, consisting of 5 holes spaced along mineralized zone from incline shaft on Modoc #6 (now the Magee No.1 claim). Continue to sink 65 foot incline shaft to 100 foot level and drift in mineralized zone. (see Knopf's report)
(c) work to start within 3 months and complete in about 8 months.
(d) Supervision would be under competent Mining Engineer, and if available at that time Mr. Roy Hardy of the Getchel Mine would be contacted for the job. He has previously investigated the property and recommended it for a loan to the R.F.C.

NO.6 Estimate of costs.

Diamond drilling estimated at $6.00 per foot..... about 2000 feet preliminary drilling.....	$12,000.00
Incline shaft sinking to 100 foot level equipment (rental), hoisting, compressor cars etc.	$14,000.00
Sinking etc.....	$ 5,000.00
Drifting and cross-cutting 400 feet.....	$ 8,000.00
Road to top of ridge.....	$ 2,000.00
Overhead and contingencies.....	$ 4,000.00
Total	$45,000.00

(a) All work would be contracted
(b) All covered in estimated costs above
(c) Rentals covered in estimated costs above
(d) Hoist, compressor, drills, cars, track, mobile housing, trucks, all in above costs.
(e) None
(f) None
(g) Assaying, book-keeping, insurance, all types to conform with State Laws.

NO. 7
Under an arrangement the proposed project can be agreed upon.

RE: Docket No. 1774 X (Tin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Franklin K. Lane, Secretary

UNITED STATES GEOLOGICAL SURVEY
George Otis Smith, Director

BULLETIN 640-G

TIN ORE IN NORTHERN LANDER COUNTY, NEVADA

by
ADOLPH KNOPF

excerpts from report

Veins carrying wood tin have been found along the south side of the range in an area that forms, roughly, an eastward-trending belt 10,000 feet long and 2,000 feet wide. The known veins are at an altitude between 5,500 and 5,700 feet. They are inclosed in rhyolite which is petrographically alike at all the occurences.
The veins are narrow, ranging in width from a fraction of an inch to 18 inches. They occur typically as stringers an inch or so wide, carrying wood tin and specular hematite in a gangue of chalcedony, lussatite (a form of silica resembling chalcedony, tridymite and opal.
At some places enough veinlets traverse the rhyolite to constitute stringer lodes. whose greatest thickness is 8 feet. The veins or stringers of tin ore, however, are widely spaced in these lodes, and the large quantity of barren rhyolite lying between stringers will necessarily reduce the average tenor of the stringer lodes, if mined as a whole, to a low figure. It is doubtful whether any of the lodes now exposed will average 1 per cent of metallic tin. Not much is known concerning the linear extent or persistence of the lodes. Information on this point is most pressingly needed before the deposits can be exploited. It is clear that individual stringers are likely to prove disappointingly short.
Some brecciation accompanied the fissuring of the rhyolite, as is shown by the occurence of angular fragments of rhyolite cemented by opal or incrusted with micaceous hematite, but it appears not to have been extensive.
The minerals filling the veinlets are strictly contemporaneous, as is proved by their intergrowth and association.

Developments

Tin ore has been found in the rhyolite at many places along the belt. Some work has been done at eight of these places at least, and the more extensive developments are described in the following paragraphs.

The most work has been done on the Modoc No. 6 claim, which is at the west end of the tin-bearing belt, so far as it is now known. An incline sloping 60 degrees N., has been sunk here to a depth of 45 feet, following a stringer zone or lode about 8 feet thick.

excerpts from Knopf's report

The zone has been cut off near the bottom of the incline by an irregular ill defined fault dipping 45 degrees S. It is apparently a normal fault, in which the hanging wall has slipped down relatively to the foot-wall, and the lode therefor would probably be recovered by drifting to the north. An open cut a few hundred feet east of the shaft is possibly on the eastward extension of the lode shown in the shaft, but no work yet has been done to test this possibility. Another cut has been opened about 100 feet north of the shaft on which is possibly a parallel vein. The prospects on these claims are more favorably situated topographically than any others in the tin-bearing belt, for considerable depth can be obtained under the outcrops by means of tunnels.

On the Black Nugget No. 6 claim, a tunnel 20 feet long, sloping into the hill at a low angle, has been driven on an irregular ledge ranging in thickness from 3 to 18 inches. This prospect is at an elevation of about 5,700 feet and is 6,000 feet east of Modoc No. 6. The vein is mineralogically note worthy on account of its content of coarse tridymite, which forms granular aggregates as much as an inch in diameter. Specular hematite is particularly common, considerably more abundant than the associated wood tin, and fragments of rhyolite are completely incrusted by spherulitic micaceous hematite.

An open cut on the Mayflower claim, 4,000 feet east of the Black Nugget No. 6 tunnel, attains a depth of 10 feet. Here a zone 8 feet wide, showing a number of narrow, irregular stringers carrying wood tin and abundant platy hematite is exposed. In this zone there are some angular fragments of rhyolite cemented by white opal, proving that a certain amount of brecciation accompanied the opening of the veinlets.

Mineralogy of the veins.

The wood tin in the veinlets in the rhyolites of Northern Lander County, Nevada, is the first recorded occurence of this mineral in place in the United States. Of further interest is the association apparently not heretofore observed elsewhere is the association of the tin ore with abundant tridymite.

No topaz, tourmaline or other fluorine or boron minerals were noted in these tin deposits.

Wood tin.

The tin bearing mineral is exclusively in the form of wood tin and invariably shows the characteristic concentric b banding resembling the annual growth rings of wood. These forms are of course best displayed in the material recovered from the gravels, where masses of nuggets weighing as much as 2 and 3 pounds have been found.

Analysis of wood tin (A.A.Chambers, Analyst)

SNO2.....85.14
SiO2.....1.03
Fe-2-O2.....13.42
MnO.....02 H2O..... .20 ....H2O 1½ total 99.86

RE: Docket No. 1774X (Tin)
Sue Magee Gamble
Box 223 Lovelock, Nevada.

I. C. 7043

Bureau of Mines
United States Department of the Interior
RECONNAISSANCE OF MINING DISTRICTS
in
Lander County, Nevada
by
William C. Vanderburg

excerpts from report

The Izzenhood tin-bearing district in Northern Lander County, 22 miles north of Battle Mountain, Nevada, extends east and west along the crest of the Izzenhood Range for about 2 miles. Along this belt the rhyolite has been rifted in an east-west direction, and in the fracture planes there are small stringers of tin-bearing material ranging in width from a fraction of an inch to 6 inch. Along these stringers occasional kidneys of tin ore occur. No regularity in the occurence of such seams or kidneys has been established and not enough prospecting has been done to determine the width of the tin belt. At the western end of the belt an incline shaft has been sunk to a depth of 65 feet on a stringer zone in the rhyolite. Here the stanniferous material is associated chiefly with chalcedony, opal and specular hematite and quartz. A 10 lb. sample from a pile of sorted ore on the dump was taken by the writer and it assayed 7 .56 per cent metallic tin. This was a selected sample of the vein material, and it would by no means be representative of the average value.
At the eastern end a vertical shaft has been sunk to a depth *fine of 50 feet on several stringers, and a grab sample of the*vein material on the dump near the shaft and estimated to contain more than 1 per cent tin.

Between the two shafts is a stretch of ground nearly 2 miles long and several hundred feet in width on which chalcedony and opalized float can be found. If trenching were done in the likely spots in this area, stanniferous stringers similar to those exposed in the shafts might be found. The finding of commercial deposits of tin ore depends largely on the occurence of stringers rich enough to carry the intervening rhyolites.
The tin occurs in the form of disseminated grains and as botryoidal nodules of wood tin.

PLACER TIN

On the South side of the tin-beARING belt the mountain range is traversed by four steep ravines ranging from one half to nearly one mile in length. Nuggets of wood tin ranging in size from a pea to a marble can be found in these concentrations. The base of the range is skirted by an alluvial bench approximately 2 miles long and 1/2 mile in width. Here the alluvium consists of a heterogenous mass of sand, subangular pebbles and boulders. Farther out where the gradient is less a flat is formed comprising an area of several thousand acres. Here the alluvium consists mainly of gravel covered with a mantle of soil 20 feet thick as shown by several shafts 40 ft. deep sunnk in this area.

* the finevein material was rejects from the jig operation.

I. C. 8043

FILE COPY
SURNAME:

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

JUN 30 1952

Mrs. Sue Magee Gamble
P.O. Box 223
Lovelock, Nevada

Re: Docket No. D[illegible]-177[illegible] (tin)
North of Battle Mountain, Nevada

Dear Mrs. Gamble:

With reference to your above-docketed application, we acknowledge receipt of your letters dated June 2[illegible], 1952, together with the copy of report made by Mr. Rudolph Knopf on the tin property in Lander County, Nevada, which you forwarded under separate cover.

It is noted that you wish to have the aforementioned report returned to you, and we will comply with your request as soon as it has served our purpose.

It is further noted that you are endeavoring to complete the DM-103 application form as soon as you obtain the necessary data. Of course, we are glad to allow the additional time that you will require to complete your application for an exploration project, but trust you may be able to do so within the next 30 days. In the meanwhile, we will hold this docket in abeyance until we receive your further advice.

Sincerely yours,

Signed

E.N. 6-30-52

Ernest W. Ellis, Chief
Rare and Misc. Metals Division

EWEllis/GLA/jem
6/27/52
cc to: Adm. Reading File
Docket
Messrs. A.Renick-3041
LTMcKnight-4204 GSA
Ellis
Field Team, Region III (2)

6/26/52 gh

Lovelock, Nevada.
June 23rd, 1952.

Mr. Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division
Defense Minerals Exploration
Washington, D. C.

Re: DocketNo.DMA-1774X (Tin)
North of Mattle Mt.,Nev.

Dear Mr. Ellis:

I am asking for more time in which to get the necessary data required for application forms (MF-103) on the property known as Tin in Lander County, Nevada.

I have just returned from there getting the assessment work done for the year ending July 1st, 52. Between now and June 30th, doesnt give enough time to have an engineer complete the data and give it proper consideration on a property as extensive as the tin . Shortage of man power, county bridge washed out, and lack of horses make conditions there very trying and in order to bring in a good engineer I must get things in order.

I am sending you under separate cover a copy of Bulletin 640 G, USGS, made in 1916. I feel this report by Adolph Knopf covers the lode more comprehensively than any other, and much work has been done since then. He states the lode extends for two miles, a stringer lode system, more recent prospecting has shown it to be more extensive. This report 640 G is out of print in case you have access to a copy I would like this copy returned.

Thanking you to grant a further time limit in which to make this application for a loan, I am

Sincerely yours

Sue Magee Gamble

Sue Magee Gamble
Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 25 1952

6/26/52 gla

Lovelock, Nevada
June 23rd, 1952.

Mr. Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division
Defense Minerals Exploration
Washington, D. C.

Re: Docket No. 1774X-DMA
(Tin) North of
Battle Mount ain

Dear Mr. Ellis:

I hand you herewith a copy of the report made by Dr. Adolph Knopf on the tin property in Lander County, Nevada.

If you have access to a copy of this Bulletin # 640 - G, please return this copy to me. I wanted you to see the extent of this property, and for accessability, its one of the hardest trips to make to cover it in one day examination.

Sincerely yours,

Sue Magee Gamble

Sue Magee Gamble
Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 25 1952

DEPARTMENT OF THE INTERIOR

Franklin K.Lane, Secretary

UNITED STATES GEOLOGICAL SURVEY

George Otis Smith, Dirt.

B U L L E T I N 640 G

TIN ORE IN NORTHERN LANDER COUNTY, NEVADA

by
ADOPPH KNOPF

Contribution to economic geology, 1916 Part 1.
(pages 125 - 138)
Published September 8,1916

WASHINGTON
Government Printing Office
1916

oOOo

(Please return to-
Sue Magee Gamble , Lovelock,
Nevada.)
Re: Docket No. 1774X DMA
(Tin) North of Battle Mt.

TIN ORE IN NORTHERN LANDER COUNTY, NEVADA

by
Adolph Knopf

Location and Discovery

Tin ore has recently been found in northern Lander County, Nev., in an unnamed short range of hills lying 20 miles north of Battle Mountain, a town on the Southern Pacific System. The discovery was made by employees of the cattle ranch in which the range is situated.. Near the base of the range is the old Izenhood ranch, which had been established at a large spring, known as Warm Spring, whose waters are used for irrigation. This ranch is now part of the extensive cattle ranch held by Mr. George Russell, sr., of Elko, Nev.

The range in which the tin occurs trends northeastward.. It rises steeply from a broad, flat valley and attains an extreme elevation of 6,000 ft., which is about 1,500 feet higher than the valley. A few miles northeast of Warm Springs the range is separated by a low broad pass from the northern extension of the Shoshone Mesa, as it is called on the map of the Fortieth Parallel Survey, though this name appears not to be locally known. Some float wood tin has been found at the north end of Shoshone Mesa. As seen from Battle Mountain, Shoshone Mesa is a prominent feature consisting of a high, broad table-land and capped by a great thickness of black basalt, but to the North the basalt capping is absent and the mesa becomes a sharp crested ridge. The topography of the region is roughly shown in figure 17, which is reproduced, with some changes and additions from a part of Plate 1V of the atlas of the Fortieth Parallel Survey. The region is readily accessible by level roads.

Tin ore in the form of a nugget of wood tin was found on the wash at the base of the range in April, 1914, by an employee of the Russell cattle ranch. What the substance was, however, remaind unknown until the fall of that year, when it was taken to Battle Mountain, where an engineer, Mr. M. G. Thurston, who had prospected a tin-bearing vein in Mexico, chanced to see it and recognized it as wood tin. The specimen was then sent to the University of California for further examination, and late in the year the report came back that the mineral was high-grade tin ore. The subsequent discovery of wood tin in its bedrock source at a number of localities was made by Edward Larson, who has done most of the development work so far undertaken.

The prospects were examined by me early in June 1916, and it gives me much pleasure to acknowledge my indebtedness to Mr. George Russell, sr., and Mr. George Russell, jr., for their hospitality, and to Mr. Edward Larson, whose intimate familiarity with the region greatly aided this examination.

General Geology

Rhyolite consisting of a series of superposed lava flows is the main rock of the tin-bearing area. Basalt appears in small quantities at the west end of the belt and becomes increasingly prominent farther west. Alluvial wahes, so characteristic of the Nevada region, are amassed along the base of the range, and in places they carry wood tin.

Re: Docket No.DMA1774X
(Tin) North of Battle Mt.

Rhyolite

Rhyolite is the predominant rock of the region. It makes up nearly all the main tin-bearing range, as well as the northern extension of Shoshone Mesa, and as shown by King, is part of one of the largest areas of rhyolite found by the Fortieth Parallel Survey, and area aggregating nearly 1,500 square miles. The thickness of the rhyolite series is thought by W. H. Emmons to exceed 2,000 feet.
The rhyolites are monotonously alike. They are highly porphyritic lavas, light/gray on fresh surfaces but rather dark on weathered surfaces, so that their rhyolitic character is not obvious in distant views. They have a strongly merked flow layering, which commonly gives them a stratified appearance. As a rule the layering stands at high angles, yet in places it changes from horizontal to vertical within short distances. This feature gives the ranges, when seen from a distance, the aspect of having an irregular and confused internal structure, and, taken in connection with the petrographic uniformity of the rocks, makes it impossible without close study to determine how much the rhyolites have been faulted and tilted since they were erupted. According to Emmons the rhyolites are the oldest Tertiary lavas in this part of Nevada, and their eruption probably began early in Miocene time.

The rhyolites as a rule are massive porphyries crowded with phenocrysts of quartz, generally smoky, and of glassy feldspar, consisting predominantly of sanidine. The phehocrysts make up nearly one-half the bulk of the rocks, and their abundance gives the rhyolites on casual examination somewhat the appearance of granites. Biotite and hornblende are notably absent. In texture the rhyolites are rather porous. Lithophysal structure is not uncommon, but the lithophysae are not large. In a rhyolite of this kind that was especially examined the groundmass is composed wholly of delicate, extremely thin-walled lithophysae averaging one-fourth inch in diameter. Flow breccias also occur in the region. In short the rhyolites bear abundant evidence that they consist of a superposed succession of lavas flows.

Under the microscope the dominant porphyritic component of the rhyolite is found to be quartz, which generally contains dihexahedral inclusions of glass, each inclosing a glass bubble. The feldspar, as is apparent to the unaided eye, proves to be mainly sanidine, whose optic axial angle is practically zero. Some oligoclase, however, averaging near Ab70 An30 in composition, occurs in some rocks is abundant enough to show that they have affinities with the group called in recent years quartz latite. The microscope shows further that, although biotite and hornblende are not recognizable in hand specimens, hornblende at least was originally present, but has been pseudomorphously altered to specular hematite. The accessory minerals apatite, titanite and zircon are extremely rare, but specular hematite is common, although it is evidently not wholly a pyrogenic mineral. The groundmass is generally cryptocrystalline and partly spherulitic ; tridymite is locally abundant.

Rhyolite from the Modoc No. 6 claim has been analyzed in part by Mr. A. A. Chambers in the laboratory of the Geological Survey.

Partial analysis of rhyolite from Lander Co.Nev.

SiO_2	76.25
CaO	.44
Na_2O	4.05
K_2O	5.18

The chemical analysis amply confirms the microscopic determination and shows that the rhyolite is a variety high in potassa, soda and silica.

Basalt

Basalt occurs at the extreme west end of the tin-bearing belt, where it forms a small patch over the rhyolite. It is a fine-grained, highly vesicular varity. Father west basalt becomes more prominent. To the south in the Shoshone Mesa, it attains a thickness - as much as 1,500 feet. As shone by S. F. Emmons in the Fortieth Parallel Survey, the basalt flowed over and buried a surface of very irregular relief eroded in the rhyolite.

Alluvium

Alluvial washes skirt the base of the range, extending to elevations 300 to 400 feet above the valley bottom. They consist of rhyolite detritus and are rather bowldery, containing many blocks 3 to 4 feet in diameter. In places the alluvium has been channeled by storm waters to depths of 15 to 20 feet.

Tin-bearing veins
occurence and character

Veins carrying wood tin have been found along the south side of the range in an area that forms, roughly, an eastward - trending belt 10,000 feet long and 2,000 feet wide. The known veins are at an altitude between 5,500 and 5,700 feet. They are inclosed in rhyolite which is petrographically alike at all the occurences.
The veins are narrow, ranging in width from a fraction of an inch to 18 inches. They occur typically as stringers an inch or so wide, carrying wood tin and specular hematite in a gangue of chalcedony, lussatite (a form of silica resembling chalcedony), tridymite and opal. At some places enough veinlets traverse the rhyolite to constitute stringer lodes, whose greatest thickness is 8 feet. The veins or stringers of tin ore, however, are widely spaced in these lodes, and the large quantity of barren rhyolite lying between stringers will necessarily, reduce the average tenor of the stringer lodes, if mined as a whole, to a low figure. It is doubtful whether any of the lodes now exposed will average 1 per cent of metallic tin. Not much is known concerning the linear extent or persistence of the lodes. Information on this point is most pressingly needed before the deposits can be exploited. It is clear that individual stringers are likely to prove disappointingly short.
Some brecciation accompanied the fissuring of the rhyolite, as is shown by the occurence of angular fragments of rhyolite cemented by opal or incrusted with micaceous hematite, but it appears not to have been extensive. The minerals filling the veinlets are strictly contemporaneous, as is proved by their intergrowth and association. The wood tin was probably somewhat more copiously deposited during the early stages of vein formation. It is in places manifestly brecciated, angular particles of it being inclosed in a cement of hematite, chalcedony, and opal. This brecciation was probably not produced by movement along the fissures, but appears to be more reasonably interpreted as due to the setting of colloidal silica or to the bursting of colloidal membranes by osmotic forces, as in the classic example of the bursting of copper ferrocyanide membranes when immersed in a dilute solution of potassium ferrocyanide.

A notable feature of the deposits is the comparativelt small amount of alteration of the rhyolites near the veinlets. The microscope shows that the groundmass of the rhyolite close to the ore has been wholly replaced by an aggregate of hematite, chalcedony, and other forms of silica, but the sanidine and oligoclase phenocrysts have remained intact. From the foregoing description it appears the the deposits resemble the tin-bearing veins of Durango, Zacatecas, Guanajuato, and other Mexican States in their association with extrusive rhyolites, in that the tin-bearing mineral is exclusively wood tin, in the presence of abundant specular hematite in the ore, and the character of the gangue, which consists chiefly of chalcedony. There are some differences but the resemblance is close. Deposits of this type differ very widely from all other kinds of tin-bearing lodes, which are invariably associated with intrusive granite and occur either in the granite itself or in the adjacent rocks invaded by the granite. It is to be noted, however, that rhyolite has essentially the same chemical composition as granite but was erupted upon the earth's surface and has cooled under conditions widely different from those that prevail where granites have cooled, and in consequence the rhyolite has assumed a texture widely different from that of granite.

Developments

Tin ore has been found in the rhyolite at many places along the belt. Some work has been done at eight of these places at least, and the more extensive developments are described in the following paragraphs.

The most work has been done on the Modoc No. 6 claim, which is at the west end of the tin-bearing belt, so far as it is now known. An incline, sloping 60 degrees N., has been sunk here to a depth of 45 feet, following a stringer zone or lode about 8 feet thick. The zone has been cut off near the bottom of the incline by an irregular illdefined fault dipping 45 degrees S. It is apparently a normal fault, in which the hanging wall has slipped down relatively to the footwall, and the lode therefore would probably be recovered by drifing to the north. An open cut a few hundred feet east of the shaft is possibly on the eastward extension of the lode shown in the shaft, but no work has yet been done to test this possibility. Another cut has been opened about 100 feet north of the shaft on what is possibly a parallel vein. The prospects on these claims are more favorably situated topographically than any others in the tin-bearing belt, for considerable depth can be obtained under the outcrops by means of tunnels.

On the Black Nugget No. 6 claim a tunnel 20 feet long, sloping into the hill at a low angle, has been driven on an irregular ledge ranging in thickness from 3 to 18 inches. This prospect is at an elevation of about 5,700 feet and is 6,000 feet east of Modoc No. 6. The vein is mineralogically noteworthy on account of its content of coarse tridymite, which forms granular aggregates as much as an inch in diameter. Specular hematite is particularly common, considerably more abundant than the associated wood tin, and fragments of rhyolite are completely incrusted by spherulitic micaceous hematite.

An open cut on the Mayflower claim, 4,000 feet east of the Black Nugget No. 6 tunnel, attains a depth of 10 feet. Here a zone 8 feet wide, showing a number of narrow, irregular stringerscarrying wood tin and abundant platy hematite, is exposed. In this zone there are some angular fragments of rhyolite

cemented by white opal, proving that a certain amount of brecciation accompanied the opening of the veinlets.

Although no tin ore has yet been found in place in the range south-east of the main tin-bearing belt, nevertheless evidence of mineralization of the dsame general character has been discovered. An open cut at an elevation of 5,600 feet in this range exposes an irregular vein, 6 inches wide at the most, which stands vertical and trends at right angles to the flow structure of the inclosing rhyolites. The vein consists of specular hematite in a gangue of chalcedony, quartz and opal.

Mineralogy of the Veins

The wood tin in the veinlets in the rhyolites of Northern Lander County, Nev., is the first recorded occurrence of this mineral in place in the United States. Of further interest is the association of the tin ore with abundant tridymite - an association apparently not heretofore observed elsewhere. No topaz, tourmaline, or other fluorine or boron minerals were noted in these tin deposits. The minerals found in them are described in alphabetic order in the following paragraphs.

CHALCEDONY - Chalcedony is a finely fibrous variety of silica that commonly occurs in spherulitic masses. To the unaided eye it appears to be the dominant gangue mineral associated with the wood tin; but under the microscope part of the fibrous silica corresponds closely to the mineral called lussatite by Mallard. The chalcedony (and probably the associated lussatite) is of distinctly bluish tinge.

HEMATITE - Specular hematite is a common constituent of the tin ore, occuring intergrown with all the other minerals. It is embedded in the wood tin in amounts ranging from microscopic particles to masses that make up the larger part of the nuggets. The banding of the wood tin invariably wraps around the inclosed plates of hematite. The specular hematite forms also solid layers, as much as an inch thick, of roughly radial structure. Single crystals or the free ends of crystals embedded in other minerals, show complex crystalline habits and are splendently lustrous.

LUSSATITE - The name lussatite was given by Mallard to a fibrous variety of silica whose average refractive index is 1.446, whose birefringence is somewhat less than that of quartz, and whose fibers are optically positive-properties that serve to distinguish it readily from Chalcedony. A mineral having these properties is associated in some abundance with the tin ore at the Modoc No. 6 prospect, As seen uder the microscope it is globular and is in places molded around plates of tridymite. In parallel light it resembles the opal that occurs with it; it has a well marked concentric structure, and its refractive index is distinctly lower than that of the associated tridymite. Between crossed nicols it shows a fine fibrous spherulitic structure like chalcedony, but its elongation is optically positive; its birefringence, as determined by means of the interference color chart is about 0,006. The mineral is therefore indentified as lussatite. It occurs molded upon wood tin also and incloses specular hematite.

Opal Opal is the amorphous hydrated form of silica, carrying from 3 to 10 per cent of water. It is abundantly associated with the other silica minerals that form the gangue of the tin ore. At one locality in the range an open cut has been made on a zone of highly opalized rhyolite. No tin ore has been found in it. The opalized rhyolite consists essentially

of milk -white opal with numerous quartz crystals scattered through it. So thoroughly was the original rhyolite altered that only the quartz phenocrysts remained intact and the remainder of the rock was transformed to opal, though the sanidine phenocrysts were in part changed to a mixture of opal and chalcedony.

Quartz Quartz does not occur in the tin-bearing veinlets as a constituent recognizable by the unaided eye, and it is present only in minute amount as shown by the microscope. As the most abundant porphyritic component of the rhyolites, however, it is a prominent constituent of the ore.

Sanidine, Like the quartz, sanidine is abundantly associated with the ore as one of the prominent porphyritic constituents of the rhyolites. It resembles the quartz closely, from which, however, it is distinguished by its perfect cleavage. The sanidine, although it may occur in the ore or in close proximity to ore, shows no trace of chemical alteration.

Tridymite , Tridymite is a common constituent of the tin ore, but as a rule is only recognizable microscopically. It is most abundant in the Black Nugget No. 6 prospect, where it occurs in plates aggregated in radial or fan-shaped masses as much as an inch in diameter. In places it is well crystallized, showing the characteristic hexagonal plates: some of it incloses plates of hematite. To establish beyond question the identity of the mineral as tridymite, W. T. Schaller has carefully measured the refractive indices of material from the Black Nugget vein. He found that Y- 1.477 ± 0.001 and a- 1.472 ± 0.003 values that agree closely with those determined for tridymite by Mallard.
A determination of silica in the coarse platy aggregates was made by A. A. Chambers in the laboratory of the Geological Survey. He found that they contained 96.68 per cent of silica, a figure that, although determined on a mineral aggregate, compares closely with the figures listed by Hintze under analyses of tridymite, which range from 95.5 to 99.21 per cent silica. Under the microscope such tridymite aggregates are feebly birefringent and show a narrow polysynthetic lamellation like albite; a little quartz is present which has probably inverted from the tridymite, as it has inherited the parting of twinning seams of the tridymite.
Plates of tridymite are embedded in the opal associated with the wood tin, lussatite, and chalcedony at the Modoc No.6 claim. Long ago Rose found that the opal of many localities is commonly filled with microscopic crystals of tridymite. This was proved true of opal from Silesia, Iceland, Carinthia, Hungary, and Mexico, and clearly shows the possibility of the hydrothermal origin of tridymite. These observations appear not to have been often repeated, but it is clear that tridymite is abundantly associated with opal and other forms of silica in the tin-bearing deposits of northern Nevada.

Wood Tin, The tin-bearing mineral is exclusively in the form of wood tin and invariably shows the characteristic concentric banding resembling the annual growth rings of wood. In color it ranges from dark reddish to brown. It is generally in globular masses or in the different modifications of this form that are designated botryoidal, mammillary, and reniform. These forms are of course best displayed in the material recovered from the gravels, where masses of nuggets weighing as much as 2 and 3 pounds have been found. As seen

on polished surfaces and in thin sections, the particles of wood tin commonly contain nuclei of hematite. Some of these nuclei are surrounded by opal, then by hematite, and then by wood tin.
Some angular particles of wood tin occur in the veinlets, and these appear to have originated from the bursting of colloidal membranes by osmotic forces in the manner shown by Liesegang that certain seemingly brecciated agates were produced.
Under the microscope it is found that one of the causes of the banding of the wood tin is the alternation of opaque or nearly opaque bands with translucent bands. The translucent bands react on polarized light, giving a shadowy extinction, suggestive of a radial fibrous structure.
The ultimate origin of the banding is most probably due to rhythmic precipitation effected in colloidal stannic oxide.

A nugget of wood tin was analyzed in the Laboratory of the Geological Survey, and the analysis probably represents the purest wood tin of this region. The specimen analyzed was dark red, homogenous, and showed only faint banding; the powdered material was opaque, even the smallest particles being opaque when immersed in a liquid of refractive index 1.89 . It was selected because of its freedom from inclusions of hematite.

Analysis of wood tin from Lander County, Nev.
(A. A. Chambers, Analyst)

SNO 2	85.14
SiO 2	1.03
Fe-2-02	13.42
MnO	.02
H2O	.20
H2O ±	.05
	99.86

The analysis shows that the wood tin is highly ferriferous, comparable in this respect to the Mexican wood tin, and contains 67.06 per cent of metallic tin. The ferric oxide is surely an integral part of the mineral. The analysis shows further that the wood tin contains no deleterious constituents, such as arsenic or antimony.

The only previously recorded occurence of a tin mineral in Nevada is that by Hoffman, who briefly mentions that small crystals of cassiterite are occasionally found in the Tuscarors placer mines. Tuscarora is 45 miles north east of the tin-bearing area recently found, and as similar rhyolites of the same age occur there it is possible that the stream tin was derived from veinlets like those described in this report.

The simplest test for wood tin, or for cassiterite, which is commoner form of the oxide of tin occuring in nature, is to place the mineral in hydrochloric or sulphuric acid with zinc, preferably granulated zinc, for it is necessary that the mineral and the zinc should be in contact while the acid is acting on them. Immersion for a few minutes is ample, and if the mineral tested is wood tin or cassiterite it will be coated with tin, whose characteristic metallic appearance can be brought out by rubbing with a soft cloth or with the fingers.

Re: Docket No. DMA 1774X
(Tin) North of Battle Mt.

Origin of the Veins, -

Wood tin has generally regarded as of secondary origin ever since Stelzner showed that its abundance in the Bolivian deposits is due to the action of descending solutions, whose tin was derived from the oxidation of stannite or other tin-bearing sulphide. This explanation is doubtless correct in so far as it applies to the Bolivian deposits. Those who have described the Mexican deposits, in which the ore mineral is wood tin, do not explicity consider the question whether the wood tin has been deposited from ascending thermal solutions or from descending oxidizing waters. The wood tin in the Nevada deposits, however, is clearly of hydrothermal origin, as is definitely shown by the intimate intergrowth of tridymite with the opal and hematite associated with it. Tridymite has been repeatedly synthesized in aqueous solutions at temperatures between 300° and 400° C. On the other hand the lowest known temperature at which it forms in nature is 73° C, the temperature of the hot springs at Plombieres, where Daubree found tridymite plates inclosed in hyalite that had formed in the pores of the Roman bricks altered by the hot water. Experiment and observation thus combine to prove that tridymite may be of hydrothermal origin, and as it occurs together with opal, lussatite and chalcedony in the tin-bearing veinlets it affords evidence that they were all deposited from hot waters. The wood tin was deposited* in the colloidal condition, like the associated chalcedony and opal, and its deposition in this form is doubtless the geologic expression of the strong chemical analogy between tin and silicon.

The fissures in which the wood tin occurs were opened by stresses that were accompanied by movement sufficient to brecciate slightly the adjoining rhyolite; at least this is true of some of the fissures, and from this it follows that the veins occupying such fissures are not merely fillings of jointa or shrinkage cracks.

It is concluded therefore, that the veins were formed by ascending hot waters soon after the eruption of the rhyolites; that these waters deposited the wood tin and associated minerals in channels formed by dynamic action; and that it is reasonable to expect that along the more strongly fissured zones the ore will persist in depth.

Placer Tin, -

The examination of the occurence of the wood tin in place in the rhyolites leaves a strong impression that the range is an ample source for placer tin. Certainly the relatively small amount of prospecting already done has disclosed more deposits in bedrock than have been discovered, for example, in the drainage area of Buck Creek, Alaska, whose placers are now being profitably worked; but this abundance, although highly favorable to the accumulation of workable placers, is only one of several conditions necessary for their formation. Large amounts of alluvium lie on the south flank of the range and should be carefully examined as to their content to the cubic yard and the quantity available. The placers will be difficuly to work on account of the coarse gravels, bowlders 3 and 4 feet in diameter being common, and because of the lack of water supply. It may be necessary to work them by dry placering. A small attempt of placer mining was made in the spring of this year by the use of the very scant supply of water available from melting snow. A short sluice box was set up in a steep gulch only a few yards below the cliffs against which it heads- obviously a place unsuitable for commercial operations and considerable wood tin, mixed with perfectly faceted hematite, was recovered, sufficient to show that

is richly tin bearing.
Some float wood tin has also been found in the range west of Warm Srping, in the northern extension of Shoshone Mesa. It has not yet been traced to its source in bedrock.

Practical Considerations,-
That the tin occurs in narrow veins inclosed in rhyolite lavas of Tertiary age stamps the deposits immediately, as already pointed out, as belonging to a type heretofore only known from Mexico. Unfortunately, the Mexican deposits have not yielded largely or steadily , because they are bunchy and dicontinuous. The greatest depth to which any vein has been worked is 200 feet.
The placers , however, according to the most recent description, hold promise of economic value. The resemblance of the Nevadan to the Mexican tin veins will therefore, it must be recognized, create a presumption against their value and will doubtless compel the discoverers to develop the deposits more extensively than is generally necessary.
In view of the scant knowledge of the Mexican veins, especially of matters that are essential to the valuation of similar deposits occuring elsewhere, it would be idle to draw too heavily on mere resemblance. The Nevada deposits should be prospected and developed on their own merit.
What appears necessary to be done now is to concentrate development at a few of the most favorable outcrops. The prospecting so far done proves that tin ore occurs in bedrock at many places but has not been of the kind adequately to determine the continuity of any one deposit along its strike; in fact, the number of openings at widely seperated points is likely to create the adverse impression that the tin ore invariably occurs in small discontinuous veinlets. It is necessary, therefore, to determine whether some, at least, of the stringer zones or lodes persist along the strike and whether they continue in depth; in short, it must be shown that ore is available in commercial quantities.
As the price of tin fluctuates rather abruptly and widely, it will be advisable to base all estimates of the value of tin ore on the possible minimum price of the metal, namely 30 cents a pound, as indicated by the average annual prices since 1905, which have ranged 29.54 to 46.43 cents. It is probable that only ore carrying in excess of 1 per cent of metallic tin can be worked profitably.
The known tin-bearing belt is a small fraction of the great area of 1,500 square miles or more underlain by rhyolites similar to those associated with the tin ore in northern Lander County. This rhyolitic area extends at least as far north as the Nevada-Idaho State line. Clearly it is a region that merits further attention from the prospector, especially such parts as have been but superficially examined because barren of precious-metal deposits.

Summary,- The tin ore of northern Lander County, Nev., occurs in a series of rhyolite flows of middle Tertiary age. The stanniferous mineral is exclusively wood tin, which is inclosed in narrow veinlets together with specular hematite,

chalcedony, lussatite, tridymite, and opal. The veinlets are sufficiently numerous in places to form low grade lodes, but because of the small development so far done not much is known of the persistence and tenor of these l lodes.

The deposits are clearly of hydrothermal origin, and consequently the deposition of the tin ore in the veinlets is in nowise due to the action of descending surface waters.

The deposits resemble closely those of the Mexican S States of Durango, Zacatecas, and Guanajuato, and with the exception of these they are wholly unlike all others tin deposits, which are generally associated with intrusive granites. Tin ore has been found in place at a number of localities over a considerable area, and furthermore, placer tin ore has been found not only in all the gulches heading in this area but also in some of those in the nothern end of Shoshone Mesa.

In conclusion, it is believed that the indications of the stronger lodes, taken in connection with their geology, are such as to justify furthern exploration; that the rhyolite area, of which the known tin belt forms but a small part, deserves further prospecting; and that the placers should be carefully examined to determine their economic possibilities.

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Re: Docket No. DMA 1774X
(Tin) North of Battle Mt.

Lovelock, Nevada.
June 4th, 1952,

Mr. Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division, DMEA
Washington, D. C.

Re: Docket No. DMA-1774X (Tin)
North of Battle Mt.Nev.

Dear Mr. Ellis:

I want to thank you for your letter of May 29, with enclosures, relative to a letter you sent me Dec. 26, 51, and I could not answer at that time.

I have just now received the approval of my partner, Harry Magee, to my proposed application to the DMEA, he finally agreed to sign with me. Up to now my hands have been tied. I am very grateful to you for allowing me more time to proceed with the application.. I shall follow instructions as closely as I can and get all the data you ask for.

I shall ask Mr. Roy Hardy of the Getchel Mine in Nevada to assume the responsibility of getting me a report, at one time he did try to get me a loan from the R F C, and I feel he will help me get the data necessary.

Yours sincerely,

Box 223 Lovelock, Nevada.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 9 1952

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

MAY 29 1952

Mrs. [illegible]
[illegible]
Lovelock, Nevada

Re: [illegible]

Dear Mrs. [illegible]:

Reference is made to our letter to you of December 26, 1951, in response to your communication of December [illegible], 1951, at which time we wrote you the additional information which is required by us in order to prepare further action on the above-[illegible] your application dated June [illegible], 1951.

Nothing further has been received from you to indicate that you no longer desire to proceed with the application. We wish to correspond with you in the matter of allowing a reasonable time, but if the necessary data has not been received by July [illegible], 1952, we will then reconsider the docket status.

Inasmuch as the [illegible] copy of [illegible] returned to you with our letter of [illegible], 1951, or [illegible], we have [illegible] revised [illegible] to give further consideration to the application, we have enclosed [illegible] copies of [illegible] if you wish to pursue this matter. One copy is to be completed and returned to us for use, the copy being retained for your file. A copy of [illegible] for your information.

Sincerely yours,

5/29

Ernest [illegible] Ellis, Chief
Area and Disc. [illegible] Division
Defense Minerals Exploration
Administration

Enclosures

Ellis/jem
5/28/52
cc to: Adm. Reading File
Docket
Messrs. A. Renick-3061
L.T. McKnight-4204 GSA
Ellis
Field Team, Region III (2)

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-1774X

Date received 7-3-51

Participation

S. Magee Gamble
Box 223 - Lovelock,
Nevada

Name and address of applicant

Date June 20th 1951

FILL IN THIS BLOCK

Date of application June 20th, 1951

Estimated cost $100,000.00

Mineral or metal Tin

Percentage of Government participation 90%

Location of mine Battle Mountain area
25 miles - North of Battle Mt. in
Twp 35 N. R45 E M.D.B.&M. Twp 36 N, R45 E, M.D.B.&M.

Date of filing MF-100

DMA Docket Number, if available 1774X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the [illegible]l property that will be in any way involved in [illegible] exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

---------- By ----------
(Name of company) (Signature of authorized official)

---------- ----------
(Date) (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

S. Magee Gamble , Box 223
Harry Magee Lovelock, Nev.

DATA ON FILE
U. S. BUREAU OF MINES
Washington, D. C.

" Tin in Northern Lander County"
State of Nevada.

U. S. G.S. Bulletin No. 640 "G", by Dr. Adolph Knopf.

Dr. Knopf states to quote " Veins carrying wood tin have been found along the south side of the range in an area that forms roughly, an eastward trending belt 10,000 ft. in length and 2, 000 ft. in width."

U.S.G.S. , Geologist W. G. Davis spent 4 months testing the placers following Knopf's recommendation that the placers be looked into. His notes are on file with the Bureau of Mines in Washington, D. C. This was in the winter of 1916 - 1917.

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W. O. Vanderberg, Bureau of Mines for the State of Nevada, made an investigation of the lode and mentions in his report I. C. 7043, Reconnaissance of Mining Districts in Lander County, Nevada, as having sampled the dumps and got a tin content of 7.58 per cent.

This property requires a drilling program both lode and placer and a necessary amount of research work done.
The Federal Government and the State of Nevada Highway Department built a Mine to Market road from this property to Battle Mountain a distance of 25 miles, at a cost of Five Hundred Thousand ($500,000.00) Dollars, and this road is in good repair today. An additional piece of road three miles in length is needed to haul machinery and meterials to top of mountain, where an intensive exploration of this stringer lode system should be made with a complete drilling program.

Mr. Roy Hardy of the Getchell Mine across the valley tried to get a loan on this property from the R.F.C. , and he recommends this property, more from the syandpoint that it has been overlooked and more research should be done.

FILE COPY
SURNAME:

Gordon
Mitt

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

AIR MAIL

DEC 26 1951

Miss S. M. Gamble
P. O. Box 223
Lovelock, Nevada

Re: Tin Prospect
North of Battle Mt. Nevada
Docket DMA-1774X

Dear Miss Gamble:

We have your letter of December 14, 1951, and note that some time will elapse before you remit the data required in connection with your application for an exploration project. When this information is received we shall be glad to give it our further consideration, under the conditions that may then prevail.

As you failed to sign the original application forms, we herewith return one to you and suggest that you and Mr. Magee sign and return it to us promptly. No attention may properly be given to unsigned applications.

Sincerely yours,

EOG

for Ernest Wm. Ellis, Acting Chief
Rare and Misc. Metals Division

Enclosure-1

EGordon/jem
12-19-51
cc to: Adm. Reading File
Mails and Files Br.
Docket
Mr. Mittendorf
Mr. Gordon

12-26
J. D

Made to Tilson Br.

DMA docket #1774X

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 18 1951
Defense Minerals Administration,
Production Expansion Division.

Lovelock, Nevada
December 14th, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 18 1951

Mr. C. O. Mittendorf,
Administrator DMEA
Washington, D. C.

Dear Mr. Mittendorf:

I want to acknowledge receipt of your letter of November 27, and to thank you for it.

We are still very interested in trying to get the Government to make a reconnaissance determination of the Tin in Lander County, Nevada, with the intention of asking them to approve a loan for an intensive exploration of this property.

Mr. Roy Hardy of the Getchel Mine in Nevada, put in an application for me to the RFC during the World War II, but nothing was done about it. He thinks it worthy of further development and will in the spring make a trip to the new work that has been done since W. O. Vanderberg made his report to the Bureau of Mines, titled I. C.7043, in 1939.
I will send you a copy of this report by Vanderberg, also I would like you to have a copy of U.S.G.S. Bulletin # 640 "G", by Dr. Adolph Knoph. These two reports tell more than anything else the conditions as they are.
Dr. Knoph states to quote, " Veins carry wood tin have been found along the south side of the range in an area that forms, roughly, and eastward-trending belt 10,000 feet long and 2,000 feet wide."
Since these reports were made the shafts were deepened and some very high grade ore was opened up. It is this new ore body that I am asking Mr. Hardy to report on for it changes the picture from the stringer lode system, to large ore bodies of an altered rhyolite with the wood tin nodules imbedded in the matrix. This should be looked into and not just given a quick going over. It will be spring before this can be done, as no one wants to go there this kind of freezing weather.
I am asking you for further time in which to get this property in line for a thorough investigation, but the fact remains that I do need help and advice from someone like Mr. Hardy, and at present my hands are tied.

Yours very truly,

Sue Mayer Gamble
Box 223 -

400

FILE COPY
SURNAME:

Gordon
Mittendorf

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

NOV 27 1951

Mr. S. Magee Gamble
Mr. Harry Magee
P.O. Box 223
Lovelock, Nevada

Re: Tin Prospect
25 Miles North of Battle Mt., Nev.
DMA docket 1774X

Gentlemen:

Under date of July 10, 1951, DMA requested that you remit sufficient information to enable processing of your application, DMA 1774X, for an exploration project. No reply has yet been received.

In view of the time elapsed, we assume that you are no longer interested in the project. Unless you advise us to the contrary within thirty (30) days, we shall accordingly close the docket.

Sincerely yours,

C. O. Mittendorf (for)
ce 11/27

Administrator
Defense Minerals Exploration
Administration

ERGordon:lm
11/23/51

cc: Admn. Reading File
Reports and Records
Mr. Rennick (USBM)
Mr. McKnight (USGS)
Field Team Reg. III
Docket

BS

FILE COPY
SURNAME:

Arden Bourret

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

July 10, 1951

Mr. L. Magee Gamble
Mr. Harry Magee
Box 223
Lovelock, Nevada

Re: Min Prospect
25 Miles North of Battle Mt. Nev.
DMA Docket 1774x

Gentlemen:

Your application for an exploration loan in the sum of $100,000, DMA docket no. 1774x, has been received by the Minor and Rare Metals Branch of the Supply Division.

Before we can consider your program further, it is necessary that you provide us with complete replies to all the questions on form MF-103, in the greatest detail possible, on separate typewritten sheets, together with maps. For your guidance we enclose copies of General Order 5 and press release of May 14, 1951. If you require further advice, you may contact Mr. H. C. Miller, Executive Officer, Field Team Region III, 1415 Appraisers Building, San Francisco, California, for assistance in replying to questions and in working out your exploration proposal.

Yours very truly,

Weston Bourret MH

Weston Bourret, Chief
Minor and Rare Metals

Enclosure

E Gordon/mh
cc: Adm. Read. File
Reports and Records
Norton, USGS
Field Team III
Bourret
Files

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

July 5, 1951

Subject: DMA-1774X
Re: Exploration Loan

Mr. Harry Magee
Box 223
Lovelock, Nevada

My dear Mr. Magee:

Receipt is acknowledged of your application and attachments from yourself and S. Magee Gamble for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1774X and was referred to Mr. Weston G. Bourret, Chief, Minor and Rare Metals Branch on July 3, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1774X.

Sincerely yours,

LANDON F. STROBEL
js

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
>Files
Bourret
Lyon

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

May 29, 1951

Mrs. Sue Magee Gamble
~~Fr. Box 223~~
Lovelock, Nebraska

Dear Mrs. Gamble:

In response to your letter of May 19, regarding the recently announced exploration program of the Defense Minerals Administration;

I am sending you MO-5, which describes the program and how to apply for assistance, and Form 103, in triplicate, for making formal application. Enclosed, also, is a press release based on a talk made by the Administrator regarding the program which I think you may find helpful.

If I can be of further service to you please do not hesitate to call on me.

Very truly yours,

CHARLES W. MERRILL, Chief
Base Metals Branch

Enclosures 3

CWMerrill/erp

Copy to - Minerals Division
Supply Div. - DMA
L. F. Strobel
Base Metals
F i l e s

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

March 23, 1951

Mrs. Sue Lyon Gamble
P.O. Box 223
Lovelock, Nevada

Dear Mrs. Gamble:

Your letter of March 10, addressed to James Boyd, regarding assistance under the Defense Production Act of 1950 in the development of your tin property in Lander County, Nevada, has been referred to me for reply.

I am enclosing a press release based on a speech made by the Administrator of the Defense Minerals Administration, the last paragraph of which outlines steps to be taken in applying for such assistance. If you believe that your property is eligible for Government assistance, I suggest that you furnish the information as outlined in the enclosed press release and file it here with the Defense Minerals Administration.

Yours very truly,

CHARLES W. MERRILL, Chief
Base Metals Branch

Enclosure

CWMerrill/erp

Copy to - Lowell B. Moon
Tom Lyon
L. F. Strobel
Base Metals
Field Team
Files

LANDON F. STROBEL

1445 Central Ave.,
Lovelock, Nevada.
March 10th, 1951.

Dr. James Boyd,
Defense Minerals Administrator,
Washington, D. C.

Dear Dr. Boyd:

I want to bring to your attention the mining property known as "Tin in Northern Lander County, Nevada.

I am asking for information as to the procedure I should take in making application to the Government for a loan on this property. There is no mention of tin as a strategic or a critical mineral in the forms now available for making application for a loan.

My assumption is that as data regarding this property has long been in the files of the U.S.G.S., it would have been considered for exploitation by the Defense Minerals Administration. With tin at its present attractive price, it would bring to the fore the possibilities we have long looked for, an intensified exploration with the greatest practicable development of this property and a campaign for drilling it to depth for greater ore bodies.

Dr. Adolph Knopf's report titled U.S.G.S. Bulletin "640- G", is the most comprehensive report made in 1916. He spent 4 months with his investigation. He states to quote " Veins carrying wood tin have been found along the south side of the range in an area that forms, roughly, an eastward trending belt 10,000 ft. in length and 2,000 ft. in width. At some places enough veinlets traverse the rhyolites to constitute stringer lodes, whose greatest thickness is 8 ft. " He also states the wood tin to have a 67 per cent tin content.
W. O. Davis, U.S.G.S., spent 4 months testing the placers following Knopf's recommendation that the placers be looked into. His notes too are on file, but he personally told of a rich concentration he found, and we followed up his work.

3/16/51
Overall
Reply

G

In 1923 an Englishman named Fredericks from the Malaya tin mines, was sent to investigate the diggings by the Bureau of Mines, and his report is very favorable.

W. O. Vanderberg, with the Bureau of Mines of Nevada, made a quick trip over this entire area and mentions in his report I. C. 7043, Reconnaissance of Mining Districts in Lander County, Nevada, a grab sample off one of the dumps went 7.58 per cent tin content.

We, the Magee family and myself are the owners of this property and have spent large sums of money in furthering all this work.
A road to Market road was built with Federal government and State of Nevada monies in 1944. They spent five hundred thousand on this road that crosses the tin property and extends to Battle Mt. Nevada, a distance of 25 miles. This road is in fine repair but an additional piece of road needs to be built to the top of the mountain to haul machinery and material for development work, a distance of 3 miles.

I feel the time has come where something can be done to produce domestic tin in this country, and I therefor ask for your personal help in directing me just what to do about it.

Very truly yours,

Sue Magee Gaskill
P.O. Box 2[illegible]
Lovelock, Nev.

LANDON F. STROBEL

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1774X

Date received 7-2-51

Participation

S. Magee Gamble
Harry Magee

Box 223 - Lovelock,
Nevada

Name and address of applicant

Date June 20th 1951

FILL IN THIS BLOCK

Date of application June 20th 1951

Estimated cost $100,000.00

Mineral or metal Tin

Percentage of Government participation 90%

Location of mine 25 miles N. of Battle Mt. Nev.
Twp. 35 N, R. 45 E - Twp. 36 N. R. 45 E
M.D.B & M.

Date of filing MF-100

DMA Docket Number, if available 1774X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signat

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the pe persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
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CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

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16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

S. Magee Gamble, Box 223 Lovelock, Nev.
Harry Magee

DATA ON FILE
U.S. Bureau of Mines,
Washington, D. C.

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This property requires a drilling program both lode and placer and a necessary amount of research work.
The Federal Government and the State of Nevada Highway Dept. built a Mine to Market road from this property to Battle Mountain, a distanceof 25 miles, at a cost of Five Hundred Thousand ($500,000.00) Dollars, and this road is in good repair today. An additional piece of road three miles in length, is needed to haul machinery and materials to top of Mountain, where an intensive exploration of this stringer lode system should be made with a complete drilling program.

Mr. Roy Hardy, of the Getchell Mine across the valley tried to get a loan on this from the R.F.C., and he recommends this property , more from the standpoint that it has been overlooked , and more research should be done.

S. Magee Gamble Box 223 :ovelock
Harry Magee Nev.

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Washington, D. C.

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Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1774X

Date received 7-3-51

Participation

S. Magee Gamble -
Harry Magee -
Box 223 - Lovelock,
Nevada

Name and address of applicant

Date June 20th 1951

FILL IN THIS BLOCK

Date of application June 20th 1951

Estimated cost $100,000.00

Mineral or metal Tin

Percentage of Government participation 90%

Location of mine 25 miles N. of Battle Mt. Nev.
Twp. 35N, R45E, - Twp 36 N. R. 45 E
M.D.B&M.

ate of filing MF-100

DMA Docket Number, if available 1774X

INSTRUCTIONS

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1951
LANDON F. STROBEL
Executive Secretary

THE APPLICANT

applicant an individual, partnership, or corporation?
a partnership, state names and addresses of partners.
corporation, state names and addresses of officers, directors, and five largest stockholders.
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16—64067-1

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    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

---------- (Name of company)	By ---------- (Signature of authorized official)
---------- (Date)	---------- (Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

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DATA ON FILE
U.S. Bureau of Mines,
Washington, D. C.

"Tin in Northern Lander County"
State of Nevada.

U. S. G. S. Bulletin, No. 640 "G", by Dr. Adolph Knopf.

Dr. Knopf states to quote " Veins carrying wood tin have been found along the south side of the range in an area that forms roughly, an eastward trending belt, 10,000.ft. in length and 2,000 ft. in width.

U.S.G.S. Geologist, Mr. W.G. Davis spent 4 months testing the placers following Knopf's recommendation that the placers be looked into. His notes are on file with the Bureau of Mines in Washington, D.C. This was in the winter of 1916-17

Mr. Fredericks, an englishman from the Malaya Tin Mines was sent to test the placers following up Davis report. His notes too are on file in pamphlet form.

W. O. Vanderberg, Bureau of Mines for State of Nevada, made an investigation of the lode and mentions in his report I. C. 7043, Reconnaissance of Mining Districts in Lander County, Nevada, as having sampled the dumps and tin content of 7.58 per cent.

This property requires a drilling program both lode and placer and a necessary amount of research work.
The Federal Government and the State of Nevada Highway Dept. built a Mine to Market road from this property to Battle Mountain, a distanceof 25 miles, at a cost of Five Hundred Thousand ($500,000.00) Dollars, and this road is in good repair today. An additional piece of road three miles in length, is needed to haul machinery and materials to top of Mountain, where an intensive exploration of this stringer lode system should be made with a complete drilling program.

Mr. Roy Hardy, of the Getchell Mine across the valley tried to get a loan on this from the R.F.C., and he recommends this property , more from the standpoint that it has been overlooked , and more research should be done.