DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. ~~1265~~

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To: Supply Division Date 9/11/51

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SEP 12 1951

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AIR MAIL

Mr. Charles K. Shaw
The Flint Company
324 Pratt Building
Billings, Montana

In reply please refer to
DMA-1265 Tungsten

Dear Mr. Shaw:

We have received the report from our field engineers and regret that we must deny your application.

The spotty nature of the tungsten mineralization and the inaccessibility of the Forest district are not favorable for any sizeable commercial tungsten operation.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

TJBallard:ll 9/10/51
CC: Files
Adm. Reading File
Reports and Records Unit
Mr. Gedhan
Mr. Lemmon
Mr. Wolderer
Field Team, Region II

3624

SEP 12 1951

Memorandum

To: Reports and Records Unit

Through: Director Supply Division

From: Tungsten Branch

Subject: DMA-1265X Tungsten, The Flint Company, Chas. M. Shaw, 320 Pratt Building, Billings, Montana

Property: Sections 15 and 16, T. 3 S. R.3 W., Potosi mining district, Madison County, Montana

The subject applicant's property was examined on August 7, 1951 by the field team.

They recommend that the application for a $100,000 loan be denied. The spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

This branch concurs with the field team and recommends denial of the application.

The docket has not been returned from the field.

George B. Holderer

George B. Holderer
Chief, Tungsten Branch

Approved:

Tom Lyon

Director, Supply Division

TJBallard:ll 9/10/ 51
CC: Files
Adm. Reading File
Reports and Records Unit
Mr. Lemmon
Mr. Geehan
Mr. Holderer
Field Team, Region II

340
FILE COPY
SURNAME:

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

SEP 12 1951

Holderer
Ballard/14

AIR MAIL

G. E. C.

Mr. Charles M. Shaw
The Flint Company
328 Pratt Building
Billings, Montana

In reply please refer to
DMA-1265 Tungsten

Dear Mr. Shaw:

We have received the report from our field engineers and regret that we must deny your application.

The spotty nature of the tungsten mineralization and the inaccessibility of the Potosi district are not favorable for any sizeable commercial tungsten operation.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

JF-9-12

TJBallard:ll 9/10/51
CC: Files
Adm. Reading File
Reports and Records Unit
Mr. Geehan
Mr. Lemmon
Mr. Holderer
Field Team, Region II

SEP 12 1951

AIR MAIL

Mr. Charles M. Shaw
The Flint Company
328 Pratt Building
Billings, Montana

In reply please refer to
DMA-1265 Tungsten

Dear Mr. Shaw:

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Very truly yours,

Tom Lyon
Tom Lyon, Director
Supply Division

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Reports and Records Unit
Mr. Gedhan
Mr. Lemmon
Mr. Holderer
Field Team, Region II

FILE COPY
SURNAME:

Holderer
Ballard/H

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

SEP 12 1951

A.E.C.

Memorandum

To: Reports and Records Unit

Through: Director Supply Division

From: Tungsten Branch

Subject: DMA-1265X Tungsten, The Flint Company, Chas. M. Shaw, 328 Pratt Building, Billings, Montana

Property: Sections 15 and 16, T. 3 S. R.3 W., Potosi mining district, Madison County, Montana

The subject applicant's property was examined on August 7, 1951 by the field team.

They recommend that the application for a $100,000 loan be denied. The spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

This branch concurs with the field team and recommends denial of the application.

The docket has not been returned from the field.

George B. Holderer

George B. Holderer
Chief, Tungsten Branch

Approved:

Tom Lyon

Director, Supply Division

TJBallard:ll 9/10/ 51
CC: Files
Adm. Reading File
Reports and Records Unit
Mr. Lemmon
Mr. Geehan
Mr. Holderer
Field Team, Region II

SEP 12 1951

Memorandum

To: Reports and Records Unit

Through: Director Supply Division

From: Tungsten Branch

Subject: DMA-12651 Tungsten, The Flint Company, Chas. M. Shaw, 328 Pratt Building, Billings, Montana

Property: Sections 15 and 16, T. 3 S. R. 3 W., Potosi mining district, Madison County, Montana

The subject applicant's property was examined on August 7, 1951 by the field team.

They recommend that the application for a $100,000 loan be denied. The spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

This branch concurs with the field team and recommends denial of the application.

The docket has not been returned from the field.

George B. Holderer

George B. Holderer
Chief, Tungsten Branch

Approved:

Tom Lyon

Director, Supply Division

TJBallard:ll 9/10/ 51
CC: Files
Adm. Reading File
Reports and Records Unit
Mr. Lemmon
Mr. Geehan
Mr. Holderer
Field Team, Region II

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

SEP 12 1951

Memorandum

To: Reports and Records Unit

Through: Director Supply Division

From: Tungsten Branch

Subject: DMA-1265X Tungsten, The Flint Company, Chas. M. Shaw, 328 Pratt Building, Billings, Montana

Property: Sections 15 and 16, T. 3 S. R.3 W., Potosi mining district, Madison County, Montana

The subject applicant's property was examined on August 7, 1951 by the field team.

They recommend that the application for a $100,000 loan be denied. The spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

This branch concurs with the field team and recommends denial of the application.

The docket has not been returned from the field.

George B. Holderer
Chief, Tungsten Branch

Approved:

Director, Supply Division

List of File to Reports and Records Unit
DMA-1265X Tungsten

1- copy letter Lyon to Weissenborn 7/24/51
1- copy letter Lyon to Shaw 7/19/51
1- copy letter Weissenborn to Shaw 6/5/51
1- copy memorandum Weissenborn to Holderer 8/27/51
1- copy memorandum Field Report 8/24/51
1- Original memo Weissenborn to Holderer 8/27/51
1- original memo Field Report 8/24/51

9/10/51

List of File to Reports and Records Unit
DMA-1265X Tungsten

1- copy letter Lyon to Weissenborn 7/24/51
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1- original memo Field Report 8/24/51

9/10/51

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 107 Howard Street
Spokane 8, Washington

August 27, 1951

Memorandum

To: Mr. George Soldierer, Chairman, Tungsten Commodity Committee
Through: Landon K. Strobel

From: Field Team, Region II

Subject: Application 12054, Pilot Company Tungsten, Madison County, Montana

Enclosed is a report by J. J. Quinlan on the subject property, together with the docket material.

The examining geologist recommends that the applicant's request for aid be denied as the spotty nature of the tungsten mineralization and inaccessibility of the Jolbel district precludes any sizeable commercial tungsten operation in the district.

The Field Team concurs with this recommendation.

by Field Team, Region II

E. J. Weissenborn, Exec. Officer
(U. S. Geological Survey)

E. J. Volin, Engineer
(U. S. Bureau of Mines)

Enclosures

cc: L. K. Strobel
Region, Spokane
Region, Albany

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Rm. 107 Howard Street
Spokane 4, Washington

August 24, 1951

Memorandum

To: A. L. Weissenborn, Executive Officer,
RFC Field Team, Region II

From: J. J. Quinlan, Geologist, [illegible]

Subject: Flint Company Tungsten, Madison County, Montana
RFC Docket 1265A

RECOMMENDATIONS

The RFC field examiner recommends that the application of the Flint Company for an exploration loan of $100,000 on their tungsten property in the Potosi Mining District, Madison County, Montana be denied.

The spotty nature of the tungsten mineralization and the inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

APPLICANT

The applicant is the Flint Company, a corporation, Box 314, Billings, Montana, [illegible] Hadley, General Manager. No other information was supplied by the applicant regarding the corporation. The Flint Company is not registered in the latest Directory of Montana Mining Properties, 1949, published by the State of Montana Bureau of Mines and Geology.

STATUS OF APPLICATION

The applicant's request for an exploration loan in the amount of $100,000 to explore a series of tungsten-bearing veins in the Potosi district, Madison County, Montana, was denied by telegram. Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary of the Interior. The RFC Field Team, Region II, was requested to make a reconnaissance examination of the property and make recommendations whether the property would merit a loan, especially of the size requested.

In a recent telephone conversation between Mr. Shaw of the Flint Company and Tom Brown's office, Mr. Shaw stated that they have 100 tons of ore blocked out, and he thought the company might be eligible for a production loan.

On August 7, 1961, Mr. James Flint, Pony, Montana, showed me the claims and some of the better tungsten showings on the adjacent properties. The only tungsten vein examined on the applicant's property was on the Idaho claim.

LOCATION AND ACCESSIBILITY

The Flint Company's Potosi tungsten deposit is on the north side of Willow Creek in the Tobacco Root Mountains, about 13 miles by road southwest of the town of Pony, Montana. The property is comprised of nine unpatented quartz lode mining claims and three mill site claims in sections 15 and 16, T. 3 S., R. 3 W., Potosi mining district, Madison County, Montana. The Flint Company's claims are contiguous on the east with the area explored and sampled by the Montana Mineral Resources Survey in 1940.

Mining operations could be carried out only during the summer months because of the heavy snowfall and inaccessibility of the district.

HISTORY AND PAST PRODUCTION

Tungsten deposits of the Potosi district have been known since 1910. Considerable exploration work has been done and several attempts made to exploit the deposits; however, very little if any tungsten has been produced.

The Montana Mineral Resources Survey carried out a preliminary exploration and sampling program on the tungsten deposits in the Potosi district in 1940. S. Warren Hobbs, U.S.G.S., examined the district in 1944.

APPLICANT'S PROPOSAL

No definite exploration program is delineated in the application. At the time of the U.S. field examination, the applicant's representative, Mr. Flint, was very vague as to any definite exploration program. He stated that the exploration was to start by drifting northeast and southwest on the vein exposed in the Idaho Claim discovery pit.

GEOLOGY

The Potosi tungsten deposits are in quartz monzonite, probably related to the Cretaceous intrusive rocks of the Boulder batholith. The quartz monzonite intrudes pre-Cambrian gneiss and so lies together with some lower Paleozoic sediments. Within the

igneous rock body are zones or dikes of light-colored igneous rocks, rich in quartz, having a texture which varies from granitic to aplitic. This zone of light-colored granitic and aplitic rocks has been intricately sheared along planes which strike N. 50° to 80° E. and dip steeply northwest. Most of the tungsten mineralization in the area is associated with quartz veins in the sheared, light-colored portions of the igneous rock mass.

Hubnerite occurs as stringers a fraction of an inch to 18 inches wide in massive, milky-white quartz veins and is associated with minor amounts of pyrite, sphalerite, and fluorite. The hubnerite-bearing zone tends to fade out along the strike of the veins, thus forming extremely erratic pockets of ore. The massive, milky-white quartz veins vary in width from a fraction of an inch to a maximum of 13 feet, but the average is more nearly two feet. A number of better exposed veins are seen to pinch out in relatively short distance, and the exposed segments of most veins are irregular and variable in thickness. These facts suggest that most of the veins are rather short and discontinuous. The longest distance a vein can definitely be traced is a little over 100 feet.1/

(IDAHO CLAIM)

A 2 to 4 foot quartz vein in the sheared aplitic phase of the light-colored igneous rock mass is exposed in the Idaho claim discovery pit. The vein strikes N. 75° E. and dips 58° NW. Hubnerite occurs as small lens and stringers in the quartz vein. The hubnerite mineralization appears to be very erratic. A sample 3.8 feet across the southwest face of the pit assayed 1.6 percent WO_3.

75 to 100 feet northeast of the Idaho discovery pit is another small pit on the same vein; the tungsten mineralization in this pit is not as high-grade as in the Idaho discovery pit.

CONCLUSIONS

The vein exposed on the Idaho claim is similar to the veins explored and sampled by the Montana Mineral Resources Survey in 1940, and the veins described in Webb's report on the Potosi district. As the tungsten mineralization is known to be erratic and the veins pinch out in very short distances along the strike and dip, no exploration work by the MMA is warranted.

1/ Abstracted from Webb, [illegible], Report on the Potosi Tungsten Prospect, Madison County, Montana, 1943, Confidential Report, [illegible] Geological Survey

The 160 tons of blocked out ore referred to by Mr. Shaw in his conversation with Tom Lyon's office does not exist.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

August 27, 1951

Memorandum

To: Mr. George Holderer, Chairman, Tungsten Commodity Committee
Through: Landon F. Strobel

From: Field Team, Region II

Subject: DuA Docket 1265X, Flint Company Tungsten, Madison County, Montana

Enclosed is a report by J. J. Quinlan on the subject property, together with the docket material.

The examining geologist recommends that the applicant's request for aid be denied as the spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

The field team concurs with this recommendation.

By Field Team, Region II

A. M. Weissenborn, Exec. Officer
(U. S. Geological Survey)

M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures

cc: L. F. Strobel
U.S.B.M., Spokane
U.S.B.M., Albany

No. 157 Howard Street
Spokane 4, Washington

August 24, 1961

Memorandum

To: A. W. Weissenborn, Executive Officer,
RFC Field Team, Region II

From: J. J. Quinlan, Geologist, [illegible]

Subject: Flint Company Tungsten, Madison County, Montana
RFC Docket 12651

RECOMMENDATIONS

The RFC field examiner recommends that the application of the Flint Company for an exploration loan of $100,000 on their tungsten property in the Potosi Mining District, Madison County, Montana be denied.

The spotty nature of the tungsten mineralization and the inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

APPLICANT

The applicant is the Flint Company, a corporation, Box 318, Billings, Montana, W. G. Rudy, General Manager. No other information was supplied by the applicant regarding the corporation. The Flint Company is not registered in the latest Directory of Montana Mining Properties, 1960, published by the State of Montana Bureau of Mines and Geology.

STATUS OF APPLICATION

The applicant's request for an exploration loan in the amount of $100,000 to explore a series of tungsten-bearing veins in the Potosi district, Madison County, Montana, was denied by telegram. Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary of the Interior. The RFC Field Team, Region II, was requested to make a reconnaissance examination of the property and make recommendations whether the property would merit a loan, especially of the size requested.

In a recent telephone conversation between Mr. Shaw of the Flint Company and Tom Lyon's office, Mr. Shaw stated that they had 150 tons of ore blocked out, and he thought the company might be eligible for a promotion loan.

On August 7, 1951, Mr. James Flint, Ennis, Montana, showed me the claims and some of the better tungsten showings on the adjacent properties. The only tungsten vein exposed on the applicant's property was on the Idaho claim.

LOCATION AND ACCESSIBILITY

The Flint Company's Potosi tungsten deposit is on the north side of Willow Creek in the Tobacco Root Mountains, about 13 miles by road southwest of the town of Ennis, Montana. The property is comprised of nine unpatented quartz lode mining claims and three mill site claims in sections 15 and 16, T. 3 S., R. 3 W., Potosi mining district, Madison County, Montana. The Flint Company's claims are contiguous on the east with the area explored and sampled by the Montana Mineral Resources Survey in 1940.

Mining operations could be carried out only during the summer months because of the heavy snowfall and inaccessibility of the district.

HISTORY AND PAST PRODUCTION

Tungsten deposits of the Potosi district have been known since 1914. Considerable exploration work has been done and several attempts made to exploit the deposits; however, very little if any tungsten has been produced.

The Montana Mineral Resources Survey carried out a preliminary exploration and sampling program on the tungsten deposits in the Potosi district in 1940. Dr. Warren Hobbs, U.S.G.S., examined the district in 1944.

APPLICANT PROPOSAL

No definite exploration program is delineated in the application. At the time of the BMA field examination, the applicant's representative, Mr. Flint, was very vague as to any definite exploration program. He stated that the exploration was to start by drifting northeast and southwest on the vein exposed in the Idaho claim discovery pit.

GEOLOGY

The Potosi tungsten deposits are in quartz monzonite, probably related to the Cretaceous igneous rocks of the Boulder batholith. The quartz monzonite intrudes pre-Cambrian gneiss and schist together with some lower Paleozoic sediments. Within the

igneous rock body are zones or dikes of light-colored igneous rocks, rich in quartz, having a texture which varies from granitic to aplitic. This zone of light-colored granitic and aplitic rocks has been intricately sheared along planes which strike S. 50° to 80° E. and dip steeply northwest. Most of the tungsten mineralization in the area is associated with quartz veins in the sheared, light-colored portions of the igneous rock mass.

Hubnerite occurs as stringers a fraction of an inch to 18 inches wide in massive, milky-white quartz veins and is associated with minor amounts of pyrite, sphalerite, and fluorite. The hubnerite-bearing zone tends to fade out along the strike of the veins, thus forming extremely erratic pockets of ore. The massive, milky-white quartz veins vary in width from a fraction of an inch to a maximum of 15 feet, but the average is more nearly two feet. A number of better exposed veins are seen to pinch out in relatively short distances, and the exposed segments of most veins are irregular and variable in thickness. These facts suggest that most of the veins are rather short and discontinuous. The longest distance a vein can definitely be traced is a little over 100 feet.1/

(IDAHO CLAIM)

A 2 to 4 foot quartz vein in the sheared aplitic phase of the light-colored igneous rock mass is exposed in the Idaho claim discovery pit. The vein strikes N. 75° E. and dips 88° NW. Hubnerite occurs as small lens and stringers in the quartz vein. The hubnerite mineralization appears to be very erratic. A sample 3.6 feet across the southwest face of the pit assayed 1.6 percent WO_3.

75 to 100 feet northeast of the Idaho discovery pit is another small pit on the same vein; the tungsten mineralization in this pit is not as high-grade as in the Idaho discovery pit.

CONCLUSIONS

The vein exposed on the Idaho claim is similar to the veins explored and sampled by the Montana Mineral Resources Survey in 1940, and the veins described in Sobo's report on the Potosi district. As the tungsten mineralization is known to be erratic and the veins pinch out in very short distances along the strike and dip, no exploration work by the DMA is warranted.

1/ Abstracted from Sobo, [illegible], Report on the Potosi Tungsten Deposit, Madison County, Montana, 1943, Confidential Report, [illegible] Geological Survey

The 100 lines at blocked out are referred to by Mr. Shaw in his conversation with Tom Lyon's office does not exist.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

August 27, 1951

Memorandum

To: Mr. George Holderer, Chairman, Tungsten Commodity Committee
Through: Landon F. Strobel

From: Field Team, Region II

Subject: DMA Docket 1265X, Flint Company Tungsten, Madison County, Montana

Enclosed is a report by J. J. Quinlan on the subject property, together with the docket material.

The examining geologist recommends that the applicant's request for aid be denied as the spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

The field team concurs with this recommendation.

By Field Team, Region II

Thor H. Kiilsgaard
1-OIP: A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

M. E. Volin
M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures

cc: L. F. Strobel
U.S.B.M., Spokane
U.S.B.M., Albany

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

August 24, 1951

Memorandum

To: A. E. Weissenborn, Executive Officer, DMA Field Team, Region II

From: J. J. Quinlan, Geologist, U.S.G.S.

Subject: Flint Company Tungsten, Madison County, Montana
DMA Docket 1265X

RECOMMENDATIONS

The DMA field examiner recommends that the application of the Flint Company for an exploration loan of $100,000 on their tungsten property in the Potosi Mining District, Madison County, Montana be denied.

The spotty nature of the tungsten mineralization and the inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

APPLICANT

The applicant is the Flint Company, a corporation, Box 319, Billings, Montana, F. C. Ruddy, General Manager. No other information was supplied by the applicant regarding the corporation. The Flint Company is not registered in the latest Directory of Montana Mining Properties, 1949, published by the State of Montana Bureau of Mines and Geology.

STATUS OF APPLICATION

The applicant's request for an exploration loan in the amount of $100,000 to explore a series of tungsten-bearing veins in the Potosi district, Madison County, Montana, was denied by telegram. Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary of the Interior. The DMA Field Team, Region II, was requested to make a reconnaissance examination of the property, and make recommendations whether the property would merit a loan, especially of the size requested.

In a recent telephone conversation between Mr. Shaw of the Flint Company and Tom Lyon's office, Mr. Shaw stated that they had 150 tons of ore blocked out, and he thought the company might be eligible for a production loan.

On August 7, 1951, Mr. James Flint, Pony, Montana, showed me the claims and some of the better tungsten showings on the adjacent properties. The only tungsten vein examined on the applicant's property was on the Idaho claim.

LOCATION AND ACCESSIBILITY

The Flint Company's Potosi tungsten deposit is on the north side of Willow Creek in the Tobacco Root Mountains, about 13 miles by road southwest of the town of Pony, Montana. The property is comprised of nine unpatented quartz lode mining claims and three mill site claims in sections 15 and 16, T. 3 S., R. 3 W., Potosi mining district, Madison County, Montana. The Flint Company's claims are contiguous on the east with the area explored and sampled by the Montana Mineral Resources Survey in 1940.

Mining operations could be carried out only during the summer months because of the heavy snowfall and inaccessibility of the district.

HISTORY AND PAST PRODUCTION

Tungsten deposits of the Potosi district have been known since 1910. Considerable exploration work has been done and several attempts made to exploit the deposits; however, very little if any tungsten has been produced.

The Montana Mineral Resources Survey carried out a preliminary exploration and sampling program on the tungsten deposits in the Potosi district in 1940. S. Warren Hobbs, U.S.G.S., examined the district in 1944.

APPLICANT PROPOSAL

No definite exploration program is delineated in the application. At the time of the DMA field examination, the applicant's representative, Mr. Flint, was very vague as to any definite exploration program. He stated that the exploration was to start by drifting northeast and southwest on the vein exposed in the Idaho Claim discovery pit.

GEOLOGY

The Potosi tungsten deposits are in quartz monzonite, probably related to the Cretaceous intrusive rocks of the Boulder batholith. The quartz monzonite intrudes pre-Cambrian gneiss and schist together with some lower Paleozoic sediments. Within the

igneous rock body are zones or dikes of light-colored igneous rocks, rich in quartz, having a texture which varies from granitic to aplitic. This zone of light-colored granitic and aplitic rocks has been intricately sheared along planes which strike N. 50° to 80° E. and dip steeply northwest. Most of the tungsten mineralization in the area is associated with quartz veins in the sheared, light-colored portions of the igneous rock mass.

Hubnerite occurs as stringers a fraction of an inch to 18 inches wide in massive, milky-white quartz veins and is associated with minor amounts of pyrite, sphalerite, and fluorite. The hubnerite-bearing zone tends to fade out along the strike of the veins, thus forming extremely erratic pockets of ore. The massive, milky-white quartz veins vary in width from a fraction of an inch to a maximum of 13 feet, but the average is more nearly two feet. A number of better exposed veins are seen to pinch out in relatively short distance, and the exposed segments of most veins are irregular and variable in thickness. These facts suggest that most of the veins are rather short and discontinuous. The longest distance a vein can definitely be traced is a little over 100 feet.1/

(IDAHO CLAIM)

A 2 to 4 foot quartz vein in the sheared aplitic phase of the light-colored igneous rock mass is exposed in the Idaho claim discovery pit. The vein strikes N. 73° E. and dips 58° NW. Hubnerite occurs as small lens and stringers in the quartz vein. The hubnerite mineralization appears to be very erratic. A sample 3.6 feet across the southwest face of the pit assayed 1.6 percent WO_3.

75 to 100 feet northeast of the Idaho discovery pit is another small pit on the same vein; the tungsten mineralization in this pit is not as high-grade as in the Idaho discovery pit.

CONCLUSIONS

The vein exposed on the Idaho claim is similar to the veins explored and sampled by the Montana Mineral Resources Survey in 1940, and the veins described in Hobb's report on the Potosi district. As the tungsten mineralization is known to be erratic and the veins pinch out in very short distances along the strike and dip, no exploration work by the DMA is warranted.

1/ Abstracted from Hobbs, S. W., Report on the Potosi Tungsten Deposit, Madison County, Montana, 1943, Confidential Report, U. S. Geological Survey

The 150 tons of blocked out ore referred to by Mr. Shaw in his conversation with Tom Lyon's office does not exist.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

August 27, 1951

Memorandum

To: Mr. George Holderer, Chairman, Tungsten Commodity Committee

Through: Landon F. Strobel

From: Field Team, Region II

Subject: Docket 1265X, Flint Company Tungsten, Madison County, Montana

Enclosed is a report by J. J. Quinlan on the subject property, together with the docket material.

The examining geologist recommends that the applicant's request for aid be denied as the spotty nature of the tungsten mineralization and inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

The field team concurs with this recommendation.

By Field Team, Region II

F. A. Weissenborn, Exec. Officer
(U. S. Geological Survey)

W. A. Volin, Member
(U. S. Bureau of Mines)

Enclosures

cc: L. F. Strobel
J. J. Q., Spokane
J. J. Q., Albany

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Sec. 157 Howard Street
Spokane 4, Washington

August 24, 1951

Memorandum

To: [illegible] Weissenborn, Executive Officer,
[illegible] A Field Team, Region II

From: [illegible] Quinlan, Geologist, [illegible]

Subject: Flint Company Tungsten, Madison County, Montana
L A Docket 12054

RECOMMENDATIONS

The [illegible] A field examiner recommends that the application of the Flint Company for an exploration loan of $100,000 on their tungsten property in the Potosi Mining District, Madison County, Montana be denied.

The spotty nature of the tungsten mineralization and the inaccessibility of the Potosi district precludes any sizeable commercial tungsten operation in the district.

APPLICANT

The applicant is the Flint Company, a corporation, Box 216, Billings, Montana, [illegible] County, General Manager. No other information was supplied by the applicant regarding the corporation. The Flint Company is not registered in the latest directory of Montana Mining Properties, 1949, published by the State of Montana Bureau of Mines and Geology.

DISCUSSION

The applicant's request for an exploration loan in the amount of $100,000 to explore a series of tungsten-bearing veins in the Potosi District, Madison County, Montana, was denied by telegram. Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary of the Interior. The [illegible] Field Team, Region II, was requested to make a reconnaissance examination of the property and make recommendations whether the property would merit a loan, especially of the size requested.

In a recent telephone conversation between Mr. [illegible] of the Flint Company and Washington's offices, Mr. Shaw stated that they [illegible] were aware of the [illegible], and he thought the company might be eligible for a preconstruction loan.

On August 7, 1951, Mr. James Flint, Ennis, Montana, showed me the claims and some of the better tungsten showings on the adjacent properties. The only tungsten vein examined on the applicant's property was on the Idaho claim.

LOCATION AND ACCESSIBILITY

The Flint Company's Potosi tungsten deposit is on the north side of Willow Creek in the Tobacco Root Mountains, about 13 miles by road southwest of the town of Ennis, Montana. The property is comprised of nine unpatented quartz lode mining claims and three mill site claims in sections 15 and 16, T. 5 S., R. 3 E., Potosi mining district, Madison County, Montana. The Flint Company's claims are contiguous on the east with the area explored and sampled by the Montana Mineral Resources Survey in 1940.

Mining operations could be carried out only during the summer months because of the heavy snowfall and inaccessibility of the district.

HISTORY AND PAST PRODUCTION

Tungsten deposits of the Potosi district have been known since 1910. Considerable exploration work has been done and several attempts made to exploit the deposits; however, very little if any tungsten has been produced.

The Montana Mineral Resources Survey carried out a preliminary exploration and sampling program on the tungsten deposits in the Potosi district in 1940. J. Warren Hobbs, C.E.G.S., examined the district in 1944.

APPLICANT PROPOSAL

No definite exploration program is delineated in the application. At the time of the BLA field examination, the applicant's representative, Mr. Flint, was very vague as to any definite exploration program. He stated that the exploration was to start by drifting northeast and southwest on the vein exposed in the Idaho Claim discovery pit.

GEOLOGY

The Potosi tungsten deposits are in quartz monzonite, probably related to the Cretaceous intrusive rocks of the Boulder batholith. The quartz monzonite intrudes pre-Cambrian gneiss and schist together with some lower Paleozoic sediments. Within the

igneous rock body are zones or dikes of light-colored igneous rocks, rich in quartz, having a texture which varies from granitic to aplitic. This zone of light-colored granitic and aplitic rocks has been intrinsately sheared along planes which strike N. 50° to 90° E. and dip steeply northwest. Most of the tungsten mineralization in the area is associated with quartz veins in the sheared, light-colored portions of the igneous rock mass.

Hubnerite occurs as stringers a fraction of an inch to 18 inches wide in massive, milky-white quartz veins and is associated with minor amounts of pyrite, sphalerite, and fluorite. The hubnerite-bearing zone tends to fade out along the strike of the veins, thus forming extremely erratic pockets of ore. The massive, milky-white quartz veins vary in width from a fraction of an inch to a maximum of 15 feet, but the average is more nearly two feet. A number of better exposed veins are seen to pinch out in relatively short distance, and the exposed segments of most veins are irregular and variable in thickness. These facts suggest that most of the veins are rather short and discontinuous. The longest distance a vein can definitely be traced is a little over 100 feet.1/

(IDAHO CLAIM)

A 2 to 4 foot quartz vein in the sheared aplitic phase of the light-colored igneous rock mass is exposed in the Idaho claim discovery pit. The vein strikes N. 72° E. and dips 58° NW. Hubnerite occurs as small lens and stringers in the quartz vein. The hubnerite mineralization appears to be very erratic. A sample 3.6 feet across the southwest face of the pit assayed 1.6 percent WO3.

75 to 100 feet northeast of the Idaho discovery pit is another small pit on the same vein; the tungsten mineralization in this pit is not as high-grade as in the Idaho discovery pit.

CONCLUSIONS

The vein exposed on the Idaho claim is similar to the veins explored and sampled by the Montana Mineral Resources Survey in 1940, and the veins described in Webb's report on the Potosi district. As the tungsten mineralization is known to be erratic and the veins pinch out in very short distances along the strike and dip, no exploration work by the WPA is warranted.

1/ Abstracted from Webb, R. W., Report on the Potosi Tungsten Deposit, Madison County, Montana, 1943, Confidential Report, U. S. Geological Survey

The 100 lots of blocked out are referred to by Mr. Shaw in his conversation with Tom Lyon's office does not exist.

3624

340

JUL 24 1951

Mr. A. R. Weissenborn, Executive Officer
DMA Field Team, Region II
South 157 Howard Street
Spokane, Washington

In reply please refer to:
DMA-1 65-. — Tungsten

Dear Mr. Weissenborn:

It is requested that a field examination be made at your earliest convenience of the tungsten property of the Flint Company in the Potosi district, Madison County, Montana.

The applicant requested a loan for a project costing $100,00 to explore a series of tungsten-bearing veins on claims adjoining the older workings of the district. Practically no information was submitted on the property. In lieu of the information the applicant submitted an old report on the well known part of the district.

Recently the application was denied by telegram. The denial was based on a report of an examination of the older part of the district by the Montana Mineral Resources Survey in 1940 and a slightly later report by the U. S. Geological Survey. Both reports indicated little or no past production of tungsten concentrates and little possibility of any sizeable commercial operation. In a recent telephone conversation with Mr. Bow of the Company he stated that they had 150 tons of ore blocked out and that he thought the Company might now be eligible for a production loan.

Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary. Please make a recent inspect examination of the property and make recommendations whether or not the property merits a loan, especially of the size requested.

Mr. Charles H. Bow can be reached at 208 Pratt Building, Helena, Montana.

Enclosed herewith are two copies of form NF 107, one copy of a report by James T. Norton dated November 20, 1937 and one letter from Mr. Shaw dated May 31, 1951.

Very truly yours,

Tom Lyon
Tom Lyon
Chairman, Coordinating Committee

Enclosure

Approved:

Lowell B. Moon

For the Bureau of Mines

Olaf N. Rove

For the U. S. Geological Survey

GCMalfridge:avl

cc:File
Adm. Reading File
Reports & Records Unit
Coordinating Committee
Mr. H. Isserer

JUL 24 1951

July 19, 1951

Mr. Charles M. Shaw
P. O. Box 919
Billings, Montana

In reply please refer to:
DMA 1265-I -- Tungsten

Dear Mr. Shaw:

A field examination has been requested for your tungsten property in the Potosi Mining District, Madison County, Montana. The request has been sent to Mr. A. H. Weissenberg, Executive Officer, DMA Field Team, Region II, South 157 Howard Street, Spokane, Washington. Any aid that you can give the field team during the examination will be appreciated.

Very truly yours,

Tom Yon
Director, Mining Division

GCSelfridge:swj

cc: File
Adm. Reading File
Reports & Records Unit
Field Team II
Coordinating Committee
Mr. Holderer

dmd 1265X

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

June 5, 1951

Mr. Charles M. Shaw
328 Pratt Building
Billings, Montana

Dear Mr. Shaw:

Your application for a loan on your tungsten property near Pony, Montana, has been forwarded to Washington for further consideration.

We agree with you that the May 31 deadline made it necessary for you to hurry the submittal of this application; however, we note that the application is rather incompletely prepared and lacking in much needed information. For this reason, we would appreciate if you would submit to us a discussion of the twenty-four questions asked in exploration form MS-103. Of particular importance are questions 21, 22, and 23. We need to know exactly what type of exploration work you intend to do and how extensive the exploration program will be. Moreover, we need to know the itemized cost of this program and the time needed to complete the exploration contract.

We cannot promise that a man will be available to visit your property in the near future. We are overloaded with present commitments and unfortunately, cannot give exact dates for field examinations. However, if we have a party in that part of Montana in the near future we will attempt to contact you.

Your immediate attention to the desired information regarding your exploration application will be appreciated.

Yours very truly,

Thor W. Hillsgaard
For: A. W. Weissenborn
Executive Officer, DMA
Field Team, Region II

cc: L. M. Strobel

:ko

AUG 28 1951

Recd by Mr. Holderer

WILLARD E. FRASER
BILLINGS, MONTANA

24 August 1951

Bureau of Mines
Interior Bldg.
Washington D.C.

DMA 1265-X

ATTENTION: Mr. Holderer

My dear Mr. Holderer:

During my recent trip to Washington, you will recall I spoke to you about the pending loan application identified as DMA 1265-X.

At that time, you told me a Mr. Wisenborn was in the process of inspecting the property, which is located at Pony, Montana. As of this writing, no word has been had here regarding this report.

I do not have to tell you that this property is located in a latitude and at an altitude that makes it almost impossible to work during the colder months; so if anything is going to be done, it would certainly be helpful if the report, and loan could be expedited.

To further assist you in you appraisal, I am enclosing two assay reports on the property.

Please advise me if there is anything that we can do from this end to expedite matters.

Sincerely yours

Willard E. Fraser

Copy

Office of
W. L. PIERS
ASSAYER and CHEMIST
1925 Arapahoe St.
KEystone 7827

Denver 2, Colo. August 14th 1951.

Mr. Jeff Tingle,

Billings, Montana

I have analyzed your samples with the following results:

Marked; No. 1, LARGE.

Silica (Fused)	72.00%
Alumina, Al_2O_s	5.20
Iron Oxde, Fe_{20s}	3.20
Calcium Oxide, Cao	2.40
Magnesia, MgO	2.30
Manganese Oxide, MnO	2.60
Tungsten TriOxide, WO_s	8.20
Titanium, Ti	Trace
Potash, K_2O	1.44
Soda, Na_2O	2.02
Water	0.48
Total	99.84%

Gold Trace Oz. per ton
Silver Trace " " "

Respectfully submitted,

W. L. Piers

this is certified to be a true copy

Copy

TRUE COPY

Office of
W. L. PIERS
ASSAYER and CHEMIST
1925 Arapahoe St.
KEystone 7827

Denver 2, Colo. August 14th 1951.

Mr. Jeff Tingle,
Billings, Montana

I have analyzed your samples with the following results:

Marked; No. 2, SMALL.

Silica (Fused)	58.50%
Alumina, Al_2O_3	3.10
Iron Oxide, Fe_2O_3	4.10
Calcium Oxide, CaO	3.20
Magnesia, MgO	2.10
Tungsten TriOxde, WO_3	22.10
Phosphorus Pentoxide, P_2O_5	0.14
Sulphur, S	0.08
Manganese Oxide, MnO	5.10
Molybdenum, Mo	Trace
Titanium Oxide, TiO_2	0.08
Potash, K2O	0.30
Soda, Na_2O	0.65
Water	0.41
Total	99.86%

Gold 0.005 Oz. per ton
Silver Trace " " "

Respectfully submitted,

W. L. Piers

FILE COPY
SURNAME:

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

Holderer
Mon
Schneider

AUG 1 7 1951

Hon. Mike Mansfield
House of Representatives
Washington 25, D. C.

In reply please refer to
DMA 1265X

My dear Mr. Mansfield:

This is in reply to your letter of August 9, 1951, in regard to the application for an exploration loan of The Flint Corporation, Billings, Montana, DMA 1265X.

The field engineers have examined the property and we should have their report soon. We will promptly notify the applicant as to what decision has been made since we know how short the working season is.

Sincerely yours,

M. G. Schneider J.F. 8/20

Acting Administrator

GEHolderer:dgs
August 16, 1951

CC: Adm. Reading File
Reports & Records Unit
Dep. Admin., Rm 4617
Mr. Holderer
Files

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

DMA 1265-X

August 9, 1951

Mr. James Boyd, Administrator
Defense Minerals Administration

Dear Jim:

I would appreciate your advising me if your field office has sent in its report on the a pplication of Floyd C. Ruddy, Vice Pres The Flint Corp. 306 Stapleton Building, Billings, Montana, relative to their tungsten properties in western Montana.

I understand that your field man was to have been out to inspect the properties and due to the location of these, it is necessary that work get going before winter.

Thanking you and with best personal wishes, I am

Sincerely yours,

/s/ Mike Mansfield

C O P Y

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE AUG 13 1951

REFERRED TO:

AUG 14 1951
Rec'd by
Mr. Hoeferer

1. 340 3624
2.
3.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of Actg. Adm
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: .....

Check (X) before the items needing attention.

ROBERT E. ADAMS REB
Initials of sender.

GPO 16—63815-1

MIKE MANSFIELD
1ST DISTRICT, MONTANA

340

COMMITTEE:
FOREIGN AFFAIRS

Ans by
Mr. Holderer
Aug 16, 1951

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

DMA 1265-X

August 9, 1951.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 1 4 1951

Mr. James Boyd, Administrator,
Defense Minerals Administration.

Dear Jim:

I would appreciate your advising me if your field office has sent in its report on the application of Floyd C. Ruddy, Vice Pres. The Flint Corp. 306 Stapleton Building, Billings, Montana, relative to their tungsten properties in western Montana.

I understand that your field man was to have been out to inspect the properties and due to the location of these, it is necessary that work get going before winter.

Thanking you and with best personal wishes, I am

Sincerely yours,

Mike Mansfield

AUG 13 1 43 PM '51
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

AUG 17 1951

Hon. Mike Mansfield
House of Representatives
Washington 25, D. C.

In reply please refer to
DMA 1265X

My dear Mr. Mansfield:

This is in reply to your letter of August 9, 1951, in regard to the application for an exploration loan of The Flint Corporation, Billings, Montana, DMA 1265X.

The field engineers have examined the property and we should have their report soon. We will promptly notify the applicant as to what decision has been made since we know how short the working season is.

Sincerely yours,

[illegible]

Acting Administrator

GBHolderer:dgs
August 16, 1951

CC: Adm. Reading File
Reports & Records Unit
Dep. Admin., Rm 4617
Mr. Holderer
Files

AUG 17

MIKE MANSFIELD
1ST DISTRICT, MONTANA

COMMITTEE:
FOREIGN AFFAIRS

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

DMA 1265-X

August 9, 1951.

AUG 13 195
340 - reply for Actg. Adm
X

Mr. James Boyd, Administrator,
Defense Minerals Administration.

Dear Jim:

I would appreciate your advising me if your field office has sent in a report on the application of Floyd C. Ruddy, Vice Pres. The Flint Corp. 306 Stapleton Building, Billings, Montana, relative to their tungsten properties in western Montana.

I understand that your field man was to have been out to inspect the properties and due to the location of these, it is necessary that work get going before winter.

Thanking you and with best personal wishes, I am

Sincerely yours,

Mike Mansfield

Hon. Mike Mansfield
House of Representatives
Washington 25, D. C.

In reply please refer to
BMA 12651

My dear Mr. Mansfield:

This is in reply to your letter of August 9, 1951, in regard to the application for an exploration lease of The Flint Corporation, Billings, Montana, BMA 12651.

The field engineers have examined the property and we should have their report soon. We will promptly notify the applicant as to what decision has been made since we know how short the working season is.

Sincerely yours,

W. C. SCHROEDER

Acting Administrator

GBHolderer:dgs
August 16, 1951

CC: Adm. Reading File
Reports & Records Unit
Dep. Admin., Rm 4617
Mr. Holderer
Files

Hon. Mike Mansfield
House of Representatives
Washington 25, D. C.

In reply please refer to
DMA 1265X

My dear Mr. Mansfield:

This is in reply to your letter of August 9, 1951, in regard to the application for an exploration lease of The Flint Corporation, Billings, Montana, DMA 265X.

The field engineers have examined the property and we should have their report soon. We will promptly notify the applicant as to what decision has been made since we know how short the working season is.

Sincerely yours,

Acting Administrator

GBHolderer:dgs
August 16, 1951

CC: Adm. Reading File
Reports & Records Unit
Dep. Admin., Rm 4617
Mr. Holderer
Files

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

DMA 1265-X

August 9, 1951

Mr. James Boyd, Administrator
Defense Minerals Administration

Dear Jim:

I would appreciate your advising me if your field office has sent in its report on the a pplication of Floyd C. Ruddy, Vice Pres The Flint Corp. 306 Stapleton Building, Billings, Montana, relative to their tungsten properties in western Montana.

I understand that your field man was to have been out to inspect the properties and due to the location of these, it is necessary that work get going before winter.

Thanking you and with best personal wishes, I am

Sincerely yours,

/s/ Mike Mansfield

C O P Y

July 26, 1951

AIR MAIL

Mr. Charles M. Shaw
Box 319
Billings, Montana

In reply please refer to:
DMA-1[illegible]5-[illegible] — Tungsten

Dear Mr. Shaw:

This will acknowledge your letter dated July 20, 1951, regarding the denial of your loan.

We are reconsidering your application to the extent that we have requested our field engineers to examine the property. You were so notified in our letter of July 19.

Very truly yours,

George B. Holderer

jam

George B. Holderer
Chief, Tungsten Branch

TJBallard:awj

cc:File
Adm. Reading File
Reports & Records Unit
Mr. Holderer

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 7/25/51

REFERRED TO:
1. Mr. Holderer
2.
3.
4.

Rm-3624

FOR:

X Action	Recommendation
Approval	Record of
Comment	Referring to
Conference	Reply for signature of
Consideration	Rewriting
Filing	Signature
Instructions	Suggestions
Investigation	Your information
Initials	
Mailing	
Previous correspondence	

REMARKS:

Check (X) before the items needing attention.

LANDON F. STROBEL

Initials of sender.

GPO 16—63815-1

Charles M. Shaw Company
SURETY BONDS — INSURANCE
328 FRATT BUILDING
PHONE 6426 P. O. BOX 319
BILLINGS, MONTANA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 51951
LANDON F. STROBEL
Executive Secretary

July 20, 1951.

Mr. George B. Holderer,
Chief, Tungsten Branch,
Defense Minerals Administration,
Department of the Interior,
Washington, D. C.

DMA-126X

Dear Mr. Holderer:

We received your telegram dated July 13th, in which you denied the application of the Flint Company for consideration for a loan in connection with the development of tungsten.

We are at a loss to understand how you can arrive at such a conclusion on a property that never before has been investigated for tungsten. We have just opened up some of the veins on this property this year, which is the first time any investigation has been made. On the materials available, it appears that this property does have a very strong possibility of having sizeable deposits of tungsten.

If what we read in the newspapers is at all correct, it appears that the United States is very short of this metal and it would seem rather logical to suppose that the Defense Minerals Administration could hardly ignore any reasonable possibility of getting some of this. Your telegram, which was to be followed up by a letter that, up to this date, July 20th, we have not received, seems to indicate that you are not too much concerned whether we develop tungsten or not.

Our property is located at 9,000 feet elevation, which of course results in a very short season for looking this over. As you may know, we have snow at that elevation quite early in the year. We have put in a road this year up to the mine at considerable expense so that if anyone should be interested in looking at this, they can drive directly to the property in a Jeep which we have available. We firmly believe that these claims deserve more consideration than you have given them. It seems to me with the taxpayers' money that you have available, the least you could do is send some competent engineers to check this property.

Up to the present time we have only gone through the prescribed channels to bring this to your attention. We are asking by this letter reconsideration, and a date for an inspection by some competent authority, and we would appreciate that date being made before July 28th.

Cordially yours,

THE FLINT COMPANY

By Charles M. Shaw
Charles M. Shaw.

CMS/mb

FILE COPY
SURNAME:

340

Holderer
Ballard

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

July 26, 1951

AIR MAIL

Mr. Charles M. Shaw
Box 319
Billings, Montana

In reply please refer to:
DMA-1265-X — Tungsten

Dear Mr. Shaw:

This will acknowledge your letter dated July 20, 1951, regarding the denial of your loan.

We are reconsidering your application to the extent that we have requested our field engineers to examine the property. You were so notified in our letter of July 19.

Very truly yours,

George B. Holderer

George B. Holderer
Chief, Tungsten Branch

TJBallard:awj

cc:File
Adm. Reading File
Reports & Records Unit
Mr. Holderer

DMA 1265

856

FILE COPY
SURNAME:

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

340
Selfridge
Holden

JUL 24 1951

Mr. A. E. Weissenborn, Executive Officer
DMA Field Team, Region II
South 157 Howard Street
Spokane, Washington

In reply please refer to:
DMA-1265-X -- Tungsten

Dear Mr. Weissenborn:

It is requested that a field examination be made at your earliest convenience of the tungsten property of the Flint Company in the Potosi district, Madison County, Montana.

The applicant requested a loan for a project costing $100,000 to explore a series of tungsten-bearing veins on claims adjoining the older workings of the district. Practically no information was submitted on the property. In lieu of the information the applicant submitted an old report on the well known part of the district.

Recently the application was denied by telegram. The denial was based on a report of an examination of the older part of the district by the Montana Mineral Resources Survey in 1940 and a slightly later report by the U. S. Geological Survey. Both reports indicated little or no past production of tungsten concentrates and little possibility of any sizeable commercial operation. In a recent telephone conversation with Mr. Shaw of the Company he stated that they had 150 tons of ore blocked out and that he thought the Company might now be eligible for a production loan.

Before the letter of denial was sent a request for a field examination was made through the office of The Under Secretary. Please make a reconnaissance examination of the property and make recommendations whether or not the property merits a loan, especially of the size requested.

Mr. Charles M. Shaw can be reached at 328 Pratt Building, or P. O. Box 319, Billings, Montana.

Enclosed herewith are two copies of form NF 100, one copy of a report by James T. Norton dated November [illegible], 1947 and one letter from Mr. [illegible] dated [illegible] 1, 1951.

Very truly yours,

Tom Lyon

Tom Lyon
Chairman, Coordinating Committee

Enclosure

Concurred:

Lowell B. Moore

For the Bureau of Mines

Olaf N. Rove

For the U. S. Geological Survey

FILE COPY
SURNAME:

Moon
Lyon

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

July 23, 1951

Memorandum

To: The Under Secretary of the Interior

From: Administrator, Defense Minerals Administration

Subject: 1.) Mining properties of John J. Overbilling;
2.) DMA-1265X, Charles M. Shaw, The Flint Co.;
Your memorandum of July 18.

In accordance with your two memoranda, we have asked our Spokane office to get in touch with Mr. Overbilling and to expedite examination of Mr. Shaw's property.

I should like to point out, however, that the field teams, composed of Geological Survey and Bureau of Mines personnel, are all overloaded.

In order to make the most efficient use of the available manpower, it is necessary for the field headquarters to schedule their engineers and geologists on itineraries. When the itineraries are interrupted by requests for special treatment of a case or two, it can mean that several other equally important cases are deferred for a week or more.

Therefore, we are reluctant to ask for special treatment by the field people unless there is extreme urgency about cases of unusual importance to the supply of especially critical minerals.

JAMES BOYD

James Boyd
Administrator

LBMoon:jh
7/23/51
cc: Rove
Moon
Lyon
Files
Admin.
Deputy Adm.
Reports & Records

Owner 1265

856

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

July 19, 1951

Mr. John J. Oberbillig
Box 1271
Boise, Idaho

Dear Mr. Oberbillig:

In accordance with our telephone conversation this morning, I am enclosing the following:

1. Five copies of Form MF-103
2. A copy of the Question and Answer sheet explaining the DMA exploration program
3. A copy of Mineral Order 5
4. A copy of the Landlord Subordination Agreement and of a press release on this subject
5. I am also including for your information a copy of Form MF-200, the Exploration Project Contract

We would be very pleased to have from you a proposal for exploration of your tungsten properties. You should make such proposals as specific as possible and should show a detailed breakdown of the estimated costs, and the time required as indicated in section 23 and 24 of the application blank. It will also assist in speeding consideration of your application if you will take the time to prepare very carefully the answers to questions 21 and 22.

We will be glad to assist you in any way we can.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosures

cc: U.S.B.M., Spokane
O.N. Rove

FILE COPY
SURNAME:

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

340 Selfridge
Holderer
Ron
Moon

July 19, 1951

[redacted] 24 1951

Mr. Charles H. Shaw
P. O. Box 319
Billings, Montana

In reply please refer to:
DMA 1265-X — Tungsten

Dear Mr. Shaw:

A field examination has been requested for your tungsten property in the Potosi Mining District, Madison County, Montana. The request has been sent to Mr. A. E. Weissenborn, Executive Officer, DMA Field Team, Region II, South 157 Howard Street, Spokane, Washington. Any aid that you can give the field team during the examination will be appreciated.

Very truly yours,

Tom Lyon
Director, Supply Division

GCSelfridge:awj

cc:File
Adm. Reading File
Reports & Records Unit
Field Team II
Coordinating Committee
Mr. Holderer

DMA 1265

856

OFFICE OF
UNDER SECRETARY

UNITED STATES
DEPARTMENT OF THE INTERIOR
WASHINGTON

July 24, 1951

Memorandum

To: Administrator, Defense Minerals Administration

From: The Under Secretary

Subject: 1.) Mining properties of John J. Overbilling;
2.) DMA-1265Y, Charles M. Shaw, The Flint Co.

I have your memorandum of July 25 regarding the above captions.

In the future when answering two different inquiries by one memorandum, I would appreciate your sending an extra copy of your reply so that we may have a copy of the information for both files.

There was no request for special treatment in either of the two cases which I referred to you. Both requests being for consideration under DMA's responsibilities under the Defense Production Act, I would consider that you would be interested in their receiving prompt consideration. I am especially surprised at your criticism of Senator Langer's desiring that we contact Mr. Overbilling.

In the case of Charles M. Shaw of The Flint Company, I informed you that they were concerned that early snows might soon preclude inspection this year. I hope that your operations are flexible enough to take care of cases of limited access, at least so as to expedite consideration of them.

(sgd) R. D. Searles

R. D. Searles
Under Secretary

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 27 1951
LANDON F. GROSSEL
Executive Secretary

OFFICE OF THE
UNDER SECRETARY

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

July 24, 1951

no reply necessary

a. e. e.

Memorandum

To: Administrator, Defense Minerals Administration

From: The Under Secretary

Subject: 1.) Mining properties of John J. Overbilling;
2.) DMA-1265X, Charles M. Shaw, The Flint Co.

I have your memorandum of July 23 regarding the above captions.

In the future when answering two different inquiries by one memorandum, I would appreciate your sending an extra copy of your reply so that we may have a copy of the information for both files.

There was no request for special treatment in either of the two cases which I referred to you. Both requests being for consideration under DMA's responsibilities under the Defense Production Act, I would consider that you would be interested in their receiving prompt consideration. I am especially surprised at your criticism of Senator Langer's desiring that we contact Mr. Overbilling.

In the case of Charles M. Shaw of The Flint Company, I informed you that they were concerned that early snows might soon preclude inspection this year. I hope that your operations are flexible enough to take care of cases of limited access, at least so as to expedite consideration of them.

R. D. Searles

R. D. Searles
Under Secretary

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 27 1951
LANDON F. STROBEL
Executive Secretary

DMA Form 2

DEFENSE MINERALS ADMINISTRATION
Status Change Notice

DMA Docket No. ~~1265 X~~

To: Reports and Records Branch

From: Tungsten Branch--DMA

Date: July 23, 1951

The following action has been taken this date on the above Controlled Document.

Forwarded to Field Team, Region II (A. E. Weissenborn) thru Coordinating Committee

Type of request changed to:

Denied ☐ Withdrawn ☐

Approved in amount of $

Other action, specify:

~~Field Referral~~

July 19, 1951

Index of File

DMA-1265-X — Tungsten

Mr. Charles M. Shaw
P. O. Box 319
Billings, Montana

1. Two copies of form MF 103

2. One copy of a report by James T. Norton , dated November 20, 1937

3. One letter from Charles M. Shaw to Government dated May 31, 1951

July 19, 1951

Mr. A. S. Weissenborn, Executive Officer
DMA Field Team, Region II
South 157 Howard Street
Spokane, Washington

In reply please refer to:
DMA-1 [illegible] — Tungsten

Dear Mr. Weissenborn:

It is requested that a field examination be made at your earliest convenience of the tungsten property of the Flint Company in the Yotcel district, Madison County, Montana.

The applicant requested a loan for a project costing $100,000 to explore a series of tungsten-bearing veins on claims adjoining the older workings of the district. Practically no information was submitted on the property. In lieu of the information the applicant submitted an old report on the well known part of the district.

Recently the application was denied by telegram. The denial was based on a report of an examination of the older part of the district by the Montana Mineral Resources Survey in 1940 and a slightly later report by the U. S. Geological Survey. Both reports indicated little or no past production of tungsten concentrates and little possibility of any sizable commercial operation. In a recent telephone conversation with Mr. [illegible] of the Company he stated that they had 150 tons of ore blocked out and that he thought the Company might now be eligible for a production loan.

Before the letter of denial was sent a request for a field examination was made through the office of The Under Secretary. Please make a reconnaissance examination of the property and make recommendations whether or not the property merits a loan, especially of the size requested.

Mr. Charles H. [illegible] can be reached at [illegible] Pratt Building, or P. O. Box 712, Ennis, Montana.

Enclosed herewith are two copies of form MF 103, one copy of a report by James T. Norton dated November 20, 1937 and one letter from Mr. [illegible] dated May 21, 1951.

Very truly yours,

Tom Lyon
Chairman, Coordinating Committee

Enclosure

Approved:

For the Bureau of Mines

For the U. S. Geological Survey

GCSalbridge:avj

cc:File
Adm. Reading File
Reports & Records Unit
Coordinating Committee
Mr. H. Meyer

July 17, 1951

Mr. Charles [illegible]
[illegible], Box [illegible]
[illegible], [illegible]

In your [illegible] refer to:
[illegible] — Toweton

Dear Mr. [illegible]:

[illegible] in [illegible] has been [illegible] for your [illegible] property in the [illegible] Field District, [illegible] County, Montana. The contract has been sent to Mr. [illegible] A. [illegible], Executive Officer, [illegible] Field Team, Region II, [illegible] Royal Trust, [illegible], [illegible]. Any aid that you can give the field team [illegible] in the [illegible].

[illegible]

[illegible]

[illegible]

cc:File
Adm. Reading File
Reports & Records Unit
Field Team II
Coordinating Committee
Mr. Holderer

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

July 17, 1951

Memorandum

To: Under Secretary [illegible] Charles
Department of the Interior

From: James Boyd, Administrator

Subject: [illegible]A-12351, Mr. Charles [illegible] Shaw, The Flint Company, 300 Pratt Building, Billings, Montana.

Reference is made to your memorandum of July 17.

Mr. A. [illegible] Weissenborn, Executive Officer of [illegible] Field Team, Section II, has been requested to make an examination of the Flint Tungsten property near [illegible], Montana, at his earliest convenience.

It is doubtful that the company is eligible for a production loan as seemingly little exploration work has been done on the property. During a recent telephone conversation with Mr. Shaw he stated that they had 150 tons of ore blocked out and that he thought this was sufficient to make them eligible for a [illegible] loan. Possibly the property merits an exploration loan.

Instructions on this field will be mailed tomorrow.

JAMES BOYD

Administrator

GCSelfridge:typed in Administrator's office

cc:File
Reports & Records Unit
Deputy Administrator
Mr. Holderer

OFFICE OF THE
UNDER SECRETARY

Lyon

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

July 17, 1951

RECEIVED
JUL 17 1951
DEFENSE MINERALS ADMINISTRATION
OFFICE OF ADMINISTRATOR

Memorandum

To: Mr. James Boyd, Administrator
Defense Minerals Administration

From: The Under Secretary

Subject: DMA-1265X, Mr. Charles M. Shaw, The Flint Company, 328 Pratt Building, Billings, Montana, Telephone 6426

This applicant made an application for a loan on a tungsten property near Pony, Montana. Because of later development work on the mining property and, in their opinion, proof of a substantial amount of tungsten, they decided to request an application for a loan for development of the property.

Mr. Shaw called Friday and asked whether, because of the early snows that will come to the mountain, we could not dispatch a man to Billings this week to take a preliminary look at the property.

This is a matter which I discussed with you on Friday and on which you thought you would be able to send someone from Spokane this week to visit the property with Mr. Shaw. Please let me know if this can be arranged.

R. D. Searles
Under Secretary

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

340

July 19, 1951

JUL 24 1951

A.E.C.

Mr. Carlos V. [illegible]
P. O. Box 219
Philipsburg, Montana

In reply please refer to:
DMA 1265-K — Tungsten

Dear Mr. [illegible]:

A field examination has been requested for your tungsten property in the Potosi Mining District, Madison County, Montana. The request has been sent to Mr. A. [illegible], Executive Officer, DMA Field Team, Region II, South Bay Ward Street, [illegible], Washington. May we that you can give the Field Team during the examination will be appreciated.

Very truly yours,

[illegible]
Director, [illegible] Division

GCSelfridge:awj

cc:File
Adm. Reading File
Reports & Records Unit
Field Team II
Coordinating Committee
Mr. Holderer

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

a, f, e -

July 23, 1951

Memorandum

To: The Under Secretary of the Interior

From: Administrator, Defense Minerals Administration

Subject: 1.) Mining properties of John J. Overbilling;
2.) BMA-1265X, Charles M. Shaw, The Flint Co.;
Your memorandum of July 18.

In accordance with your two memoranda, we have asked our Spokane office to get in touch with Mr. Overbilling and to expedite examination of Mr. Shaw's property.

I should like to point out, however, that the field teams, composed of Geological Survey and Bureau of Mines personnel, are all overloaded.

In order to make the most efficient use of the available manpower, it is necessary for the field headquarters to schedule their engineers and geologists on itineraries. When the itineraries are interrupted by requests for special treatment of a case or two, it can mean that several other equally important cases are deferred for a week or more.

Therefore, we are reluctant to ask for special treatment by the field people unless there is extreme urgency about cases of unusual importance to the supply of especially critical minerals.

JAMES BOYD

James Boyd
Administrator

LBMoon:jh
7/23/51
cc: Rove
Moon
Lyon
Files
Admin.
Deputy Adm.
✓ Reports & Records

Fwd
340

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

July 19, 1951

Flint Co JUL 24 1951

A. E. C.

Mr. Charles W. Shaw
P. O. Box 919
Billings, Montana

In reply please refer to:
DMA 1205-[illegible] — Tungsten

Dear Mr. Shaw:

A field examination has been requested for your tungsten property in the Potosi Mining District, Madison County, Montana. The request has been sent to Mr. A. E. Weisenborn, Executive Officer, DMA Field Team, Region II, South 157 Howard Street, Spokane, Washington. Any aid that you can give the field team during the examination will be appreciated.

Very truly yours,

Van Ryan
Director, Supply Division

GCSelfridge:awj

cc:File
~~Adm. Reading File~~
Reports & Records Unit
Field Team II
Coordinating Committee
Mr. Holderer

RECEIVED
JUL 24 1951
DEFENSE MINERALS ADMINISTRATION
OFFICE OF ADMINISTRATOR

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

a E C - 340

JUL 24 1951

Mr. A. E. Weissenborn, Executive Officer
DMA Field Team, Region II
South 157 Howard Street
Spokane, Washington

In reply please refer to:
DMA-1765-I -- Tungsten

Dear Mr. Weissenborn:

It is requested that a field examination be made at your earliest convenience of the tungsten property of the Flint Company in the Cobalt district, Madison County, Montana.

The applicant requested a loan for a project costing $100,000 to explore a series of tungsten-bearing veins on claims adjoining the older workings of the district. Practically no information was submitted on the property. In lieu of the information the applicant submitted an old report on the well known part of the district.

Recently the application was denied by telegram. The denial was based on a report of an examination of the older part of the district by the Montana Mineral Resources Survey in 1944 and a slightly later report by the U. S. Geological Survey. Both reports indicated little or no past production of tungsten concentrates and little possibility of any significant commercial operation. In a recent telephone conversation with Mr. [illegible] of the Company he stated that they had 150 tons of ore blocked out and that he thought the Company might now be eligible for a production loan.

Before the letter of denial was sent a request for a field examination was made through the office of the Under Secretary. Please make a recent inspection of the property and make recommendations whether or not the property merits a loan, especially of the size requested.

Mr. Charles [illegible] can be reached at [illegible] Pratt Building, or P. O. Box [illegible], Billings, Montana.

Enclosed herewith are two copies of form MF 103, one copy of a report by James T. Norton dated November 20, 1937 and one letter from Mr. Shaw dated May 21, 1951.

Very truly yours,

Tom Lyon

Tom Lyon
Chairman, Coordinating Committee

Enclosure

Approved:

Lowell B. Moon

For the Bureau of Mines

Olaf N. Rove

For the U. S. Geological Survey

GCSeltridge:awj

cc: File
Adm. Hearing File
Reports & Records Unit
Coordinating Committee
Mr. Holderer

Files

FILE COPY
SURNAME:

Lyon

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

July 18, 1951

O. & C.

Memorandum

To: Under Secretary R. D. Searles
Department of the Interior

From: James Boyd, Administrator

Subject: DMA-1265X, Mr. Charles M. Shaw, The Flint Company, 328 Pratt Building, Billings, Montana.

Reference is made to your memorandum of July 17.

Mr. A. E. Weissenborn, Executive Officer of DMA Field Team, Region II, has been requested to make an examination of the Flint tungsten property near Pony, Montana, at his earliest convenience.

It is doubtful that the Company is eligible for a production loan as seemingly little exploration work has been done on the property. During a recent telephone conversation with Mr. Shaw he stated that they had 150 tons of ore blocked out and that he thought this was sufficient to make them eligible for such a loan. Possibly the property merits an exploration loan.

Instructions to the field will be mailed tomorrow.

JAMES BOYD

Administrator

5774

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

July 18, 1951

Memorandum

To: Under Secretary R. D. Searles
Department of the Interior

From: James Boyd, Administrator

Subject: DMA-1265X, Mr. Charles M. Shaw, The Flint Company, 328 Pratt Building, Billings, Montana.

Reference is made to your memorandum of July 17.

Mr. A. E. Weissenborn, Executive Officer of DMA Field Team, Region II, has been requested to make an examination of the Flint tungsten property near Pony, Montana, at his earliest convenience.

It is doubtful that the Company is eligible for a production loan a seemingly little exploration work has been done on the property. During a recent telephone conversation with Mr. Shaw he stated that they had 150 tons of ore blocked out and that he thought this was sufficient to make them eligible for such a loan.. Possibly the property merits an exploration loan.

Instructions to the field will be amiled tomorrow.

/s/ James Boyd
Administrator

GCSelfridge:typed in Administrator's office

cc:File
Reports & Records Unit
Deputy Administrator
Mr. Holderer
Adm. Reading File

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

a. f. e-

July 18, 1951

Memorandum

To: Under Secretary A. L. Charles
Department of the Interior

From: James Boyd, Administrator

Subject: DMA-1265X, Mr. Charles . Shaw, The Flint Company, 328 Pratt Building, Billings, Ontario.

Reference is made to your memorandum of July 17.

Mr. A. L. Weissenborn, Executive Officer of DMA Field Team, Region II, has been requested to write in consideration of the Flint tungsten property near Cody, Ontario, at his earliest convenience.

It is doubtful that the Company is eligible for a production loan as seemingly little exploration work has been done on the property. During a recent telephone conversation with Mr. Shaw he stated that they had 150 tons of ore blocked out and that he thought this was sufficient to make them eligible for such a loan. Possibly the property merits an exploration loan.

Instructions to the field will be mailed tomorrow.

JAMES BOYD

Administrator

GCSelfridge:typed in Administrator's office

cc:File
Reports & Records Unit
Deputy Administrator
Mr. Holderer
Adm. Reading File

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

July 17, 1951

Memorandum

To: Under Secretary H. L. Earles
Department of the Interior

From: James Boyd, Administrator

Subject: DMA-1265X, Mr. Charles [illegible] Shaw, The Flint Company, 328 Pratt Building, Billings, Montana.

Reference is made to your memorandum of July 17.

Mr. A. W. Weissenborn, Executive Officer of DMA Field Team, Region II, has been requested to make an examination of the Flint tungsten property near Ony, Montana, at his earliest convenience.

It is doubtful that the Company is eligible for a production loan as seemingly little exploration work has been done on the property. During a recent telephone conversation with Mr. Shaw he stated that they had 150 tons of ore blocked out and that he thought this was sufficient to make them eligible for such a loan. Possibly the property merits an exploration loan.

Instructions to the field will be mailed tomorrow.

JAMES BOYD

Administrator

GCSelfridge:typed in Administrator's office

cc:File
Reports & Records Unit
Deputy Administrator
Mr. Holderer
Adm. Reading File

OFFICE OF THE
UNDER SECRETARY

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

July 18, 1951

URGENT MEMORANDUM

3

To: Mr. James Boyd, Administrator
Defense Minerals Administration

From: The Under Secretary

Subject: Mining properties of John J. Overbillig

Senator Langer has requested us to send someone from Spokane to see Mr. John J. Overbillig at Boise, Idaho. The Senator would like to have our people investigate the mining properties of Mr. Overbillig as to the possibilities of production of tungsten.

From my search of the records through Mr. Strobel, I have been unable to locate any information regarding Mr. Overbillig's operations but possibly the Spokane office will have some familiarity with his properties. He operates, I am told, the Idaho Minerals Company, the United Mercury Company, the Antimony Gold Ores Company, and the Salmon River Development Company.

The Senator has talked with the Secretary about this and would like to have our men make this contact not later than Monday of next week if it is at all possible. Mr. Overbillig should be contacted at telephone number 303 in Boise, Idaho.

Please advise Miss Bond or Mrs. Hawkins when arrangements have been made so they may advise Senator Langer.

R. D. Searles
Under Secretary

Copy to Miss Bond

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 1 91951
LANDON F. STROBEL
Executive Secretary

OFFICE OF THE
UNDER SECRETARY

UNITED STATES
DEPARTMENT OF THE INTERIOR
WASHINGTON

July 18, 1951

RECEIVED
JUL 19 1951
DEFENSE MINERALS ADMINISTRATION
THE ADMINISTRATOR

Memorandum

To: Administrator, Defense Minerals Administration

From: The Under Secretary

Subject: DMA-1265X, Mr. Charles M. Shaw, The Flint Company, 328 Pratt Building, Billings, Montana

Thank you for your memorandum of this date advising that Mr. A. E. Weissenborn, Executive Officer of DMA Field Team, Region II, has been requested to make an examination of the Flint tungsten property near Pony, Montana. Would it be possible for Mr. Weissenborn to make this examination next week? I would appreciate your advising me of the definite date when this examination will take place.

Under Secretary

June 18, 1951

Mr. Charles M. Shaw
The Flint Co.
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration loan
Independent, Rockefeller,
Rogers, Margie and
Lucky Joe

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 29, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. George B. Holderer, Chief, Tungsten Branch on June 13, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

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

June 1, 1951

Mr. Charles M. Shaw
The Flint Company
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration Loan

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. F. R. Bradley, Chief, Tungsten Branch on May 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:jhs
cc: Strobel-2
Files
Bradley
Lyon

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 1246 5 X

Date received 6-8-51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 8 - 1951
LANDON F. STROBEL
Executive Secretary

The Flint Company,
P. O. Box 319,
Billings, Montana

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 29, 1951

Estimated cost $100,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Near Pony, Montana

Date of filing MF-100

DMA Docket Number, if available

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.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? 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. See letter.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. Mining Engineer.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See letter

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)? Whatever is necessary.

*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. See attached page.

(*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. See report.

*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. See report.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None.

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

*16. History: See report.

(*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: None yet.

(*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? Tungsten & lyanite

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. 4 mos.

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. See report.

THE REQUIREMENTS AND COSTS Supplementary report to follow.

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.

The Flint Company
(Name of company)

By F. C. Lindly
(Signature of authorized official)

May 29, 1951.
(Date)

Dealer Ed Gen Mgr.
(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

#10. Arizona Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 567.

Arkansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 565.

Wyoming Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 563.

Texas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 561.

California Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 559.

Kansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 557.

Montana Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 555.

Idaho Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 553.

The Idaho Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24 of Lode Location, Page 256.

The California Mill Site, Potosi Area, Madison County, Montana, recorded in Book 24, Page 257.

The Montana Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24, Page 255.

Oregon Claim, Potosi Area, Madison County, Montana, recorded in Book 35, page 613.

George B. Holderer

FILE COPY
SURNAME:

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

Defense Minerals Administration
14-1110037 Expense of Defense Production Executive Office of the President (allotment to Interior) 1951

Holder

Washington 25, D. C. July 13, 1951

CHARLES M. SHAW
325 PRATT BLDG.
BILLINGS, MONTANA

APPLICATION DENIED. FORMER SURVEYS OF AREA SHOW THAT ORE IS POCKETY, EXTREMELY ERRATIC, LOW GRADE IN MILLING QUANTITY, AND INSUFFICIENT TO SUPPORT REASONABLE SIZE OPERATION. LETTER FOLLOWS.

George B. Holderer
George B. Holderer fam
Chief, Tungsten Branch

Confirmation

GBHolderer:bl

CC: Adm. Reading File
Records & Reports Unit
Mr. Holderer
Files

Dunn 1265

858

FILE COPY
SURNAME:

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

June 18, 1951

Mr. Charles M. Shaw
The Flint Co.
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration loan
Independent, Rockefeller,
Rogers, Margie and
Lucky Joe

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 29, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. George B. Holderer, Chief, Tungsten Branch on June 13, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

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

DMA-1265

258

FILE COPY
SURNAME:

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

June 1, 1951

Mr. Charles M. Shaw
The Flint Company
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration Loan

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. P. R. Bradley, Chief, Tungsten Branch on May 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL jhs

Landon F. Strobel
Executive Secretary

LFSTROBEL:jhs
cc: Strobel-2
✓Files
Bradley
Lyon

DMA 1265

858

George B. Holderer
Defense Minerals Administration
14-1110037 Expense of Defense
Production Executive Office of the President
(allotment to Interior) 1951

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

Washington 25, D. C. July 13, 1951

The Fluet Company DMA 1265 X
a.e.c.

CHARLES M. SHAW
328 PRATT BLDG.
BILLINGS, MONTANA

APPLICATION DENIED. FORMER SURVEYS OF AREA SHOW THAT ORE IS POCKETY, EXTREMELY ERRATIC, LOW GRADE IN MILLING QUANTITY, AND INSUFFICIENT TO SUPPORT REASONABLE SIZE OPERATION. LETTER FOLLOWS.

George B. Holderer
George B. Holderer
Chief, Tungsten Branch

Confirmation

GBHolderer:bl

CC: Adm. Reading File
Records & Reports Unit
Mr. Holderer
Files

July 13, 1951

To: Administrative Management Division:
Through: Director, Supply
From: Tungsten Branch
Subject: DMA 1265X
Flint Company
Billings, Montana

The Flint Company requested a loan for an exploration project estimated to cost $100,000. The property is comprised of a number of more recent claims that adjoin the older, main part of the district.

The application was denied for the following reasons:

1. The applicant furnished practically no information on the property. Only a report, dated November 20, 1937, on the adjacent, older, well known part of the district was submitted as evidence that the Company held potential mining ground.

2. In 1940 the Montana Mineral Resources Survey, sponsored by the W.P.A, carried out a preliminary program of exploration and sampling of the main portion of the properties. Later this was supplemented by a U.S. Geological Survey examination. Reports of both surveys were pessimistic. The area is underlain by a mass of quartz monzonite. Within the mass there are zones of higher colored rock. Locally these zones

and within the sheared zones are found the white quartz veins or dikes of pegmatite character that contain the tungsten mineralization. The veins pinch out in relatively short distances and the exposed segments of most are quite irregular and variable in thickness. The longest distance a vein can be definitely traced is a little over 100 feet. The veins vary in width from a fraction of an inch to a maximum of 13 feet, but the average is more nearly 2 feet.

The tungsten values occur as the mineral huebnerite. This is found for the most part in massive, milky white quartz veins, either along or associated with a little pyrite, sphalerite and some fluorite. The huebnerite occurs in small zones or pockets that are extremely erratic in distribution. While some of the larger pockets might be mined economically on a small scale basis it is extremely doubtful that any tonnage of suitable grade milling ore could be obtained because of the spottiness of the tungsten value.

Although the district has been known since 1910 production of tungsten has been negligible. Since the claims of the Flint Company adjoin the well known part of the district it is extremely doubtful that they offer

better possibilities than the older claims.

Attached hereto is a letter informing the applicant of this action.

Very truly yours

G. B. H.

July 13, 1951

In reply —
DMA 1265X-Tungsten,
Madison Co, Mont.

Mr. Charles M. Shaw
The Flint Company
P.O. Box 319
Billings, Montana

Dear Mr. Shaw:

Your application for a loan on a project costing $100,000 to develop certain tungsten-bearing veins in the Potosi area is denied for the following reasons:

1. This office has not received the full information asked for in form MF 103. Although the report on the adjoining Potosi Tungsten Mining Company is quite lengthy its data cannot be used to answer specific questions on your application nor can we send a field team to collect such information because of the stress of field work. Specific items in which information is lacking are as follows:

Nos. 3, 8, 12, 13, 15, 16, 18, 21, 22, 23 and 24.

Items 18 through 24 should have been answered in detail.

2. Former State and National Survey reports on the Potosi area that were based largely on the examination of the claims described in the Potosi Mining Company report state that the tungsten ore occurs in extremely erratic pockets,

in veins that are quite irregular and variable in thickness. Most of the veins are rather short and discontinuous. Although the tungsten deposits at Potosi have been known since 1910 and considerable exploration work has been done and several attempts have been made to exploit the tungsten, very little concentrate has been shipped from the area. Although a few pockets of ore might be reasonably mined the overall average grade of the ore is low and it would be extremely difficult to maintain a milling grade even for a small mill. Based on the date of the surveys it is inferred that the property of the Flint Company, assumed to be in the same geological setting, offers no better possibilities than the claims known and explored since 1910.

Very truly yours

~~C. B. H.~~

Shall we send form? Tom Fryer

Form MF-103
(April 1951)

U[redacted] DEPARTMENT OF THE INTER[redacted]
DEFENSE MINERALS ADMINISTRATION

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

DEFENSE MINERALS ADMINISTRATION WASHINGTON D. C.

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

OCT 10 8 55 AM '51

DO NOT FILL IN THIS BLOCK

Docket No. dma 1265X

Date received 6-8-51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 8 - 1951
LANDON F. STROBEL
Executive Secretary

The Flint Company,
P. O. Box 319,
Billings, Montana

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application May 29, 1951

Estimated cost $100,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Near Pony, Montana

Date of filing MF-100

DMA Docket Number, if available

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.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? 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. See letter.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. Mining Engineer.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See letter

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)? Whatever is necessary.

*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. See attached page.

(*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. See report.

*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. See report.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None.

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

*16. History: See report.

(*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: None yet.

(*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? Tungsten & kyanite

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. 4 mos.

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. See report.

THE REQUIREMENTS AND COSTS

Supplementary report to follow.

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.

The Flint Company
(Name of company)

By [signature]
(Signature of authorized official)

May 29, 1951.
(Date)

Locator and Gen Mgr
(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

#10. Arizona Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 567.

Arkansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 565.

Wyoming Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 563.

Texas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 561.

California Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 559.

Kansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 557.

Montana Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 555.

Idaho Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 553.

The Idaho Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24 of Lode Location, Page 256.

The California Mill Site, Potosi Area, Madison County, Montana, recorded in Book 24, Page 257.

The Montana Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24, Page 255.

Oregon Claim, Potosi Area, Madison County, Montana, recorded in Book 35, page 613.

Form MF-103
(April 1951)

U. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Telephone 8426 Billings, Mont.

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. .....

Date received .....

Participation .....

The Flint Company,
P. O. Box 319,
Billings, Montana

Name and address of applicant

Date .....

FILL IN THIS BLOCK

Date of application May 29, 1951

Estimated cost $100,000.00

Mineral or metal Tungsten

Percentage of Government participation 75%

Location of mine Near Pony, Montana

Date of filing MF-100 .....

DMA Docket Number, if available .....

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.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? 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. See letter.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. Mining Engineer.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See letter

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)? Whatever is necessary.

*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. See attached page.

(*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. See report.

*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. See report.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None.

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

*16. History: See report.

(*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: None yet.

(*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? Tungsten & kyanite

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. 4 mos.

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. See report.

THE REQUIREMENTS AND COSTS Supplementary report to follow.

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.

The Flint Company
(Name of company)

By T. C. Hurley
(Signature of authorized official)

May 29, 1951.
(Date)

Locator and Sec. Mgr.
(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

10. Arizona Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 567.

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California Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 559.

Kansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 557.

Montana Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 555.

Idaho Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 553.

The Idaho Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24 of Lode Location, Page 256.

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The Montana Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24, Page 255.

Oregon Claim, Potosi Area, Madison County, Montana, recorded in Book 35, page 613.

dmd 12465X

Charles M. Shaw Company

SURETY BONDS — INSURANCE

328 FRATT BUILDING

PHONE 6426 P. O. BOX 319

BILLINGS, MONTANA

May 31, 1951.

Executive Director,
Defense Minerals Administration,
South 157 Howard St.,
Spokane, Washington.

Dear Sir:

Confirming our telephone conversation with you this morning from Billings during which time Mr. Ruddy and I talked to you, you will find attached in rather sketchy form application for aid for an exploration project, pursuant to Mineral Order 5 under the Defense Production Act of 1950.

We are also attaching for your information a report which has been obtained on the property immediately adjacent to our claim at the top of this mountain. This gives a great deal of data which is pertinent to our project, but is in no way represented as being on our project. I trust with this preliminary information you can give us immediate consideration, at least to the extent of sending one of your men over to meet with us and go over the project.

These claims all lie in the Potosi Mining District in the E½ of Section 16, T. 3 S., R. 3 W., and the W½ of Section 15, T. 3 S., R. 3 W., and are on the slope of a mountain at about 9,000 feet elevation above sea level. Apelite (Alaskite) segregations in the granite are extensive and in these occur the veins containing hubnerite. The tung sten mineral hubnerite occurs as seams in wide massive white quartz veins or dikes of pegmatitic character. The hubnerite occurrences, although of great extent, vary greatly in intensity and lens-like zones constitute possible ore resources.

As Mr. Ruddy explained, the working season in this area is extremely short. We hope to be able to get into the property within the next two weeks and if you could have a man here at that time, it would be greatly appreciated.

Cordially yours,

Charles M. Shaw

Charles M. Shaw.

CMS/mb
Encls.

dma 1265X

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

June 5, 1951

Mr. Landon F. Strobel
Executive Secretary
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Dear Mr. Strobel:

Enclosed herewith is an application submitted by Mr. Charles M. Shaw on a tungsten property in Madison County, Montana. The application is postmarked May 31, Billings, Montana, and thus within the May 31 deadline.

This application is very poorly prepared and lacking in information. For this reason, we are retaining one copy and will contact the applicant to obtain more detailed information.

We will forward any additional information as soon as possible.

Yours very truly,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosures

cc: U.S.B.M.

Potosi W Mg Co.
Letter production.

In reply please refer to
D.M.A. # 1265x

Mr Charles M. Shaw
Flint Company
P.O. Box 319
Billings, Montana

It is necessary for you to submit the following additional information before we can act upon your application for a loan:

Dear ~~Sir~~ Mr. Shaw:

~~In reply to your application of May 27, 1951 we wish to advise you that due to the insufficient information on the following questions no action is possible on your requested loan.~~

(3) The letter referred to in your application ~~this~~ in answer to question 3 concerning the officers, directors, and five largest stockholders has not been received by this office. (4) The requested description of the mining and business experience of the applicant and management (item 4) is lacking.

(8) ~~In answer to item 8~~ You refer to a letter which has not been received by this office. We need complete information on the current financial condition of the company.

(12) Your answer to item 12 refers to an attached report concerning an adjoining property but ~~it has~~ this report does not give the kind

or condition of roads on the claims in question.

(13) The answer given to question 13 also refers to this attached report of the adjacent property but fails to give adequate information on the amount of water available for milling and mining, power to be used, rate per hour and source. (15) The answer for question 15 There is no mention of how the ore is to be milled or the details pertaining to the mill which is evidently proposed.

(16) Your answer on the history of the property referred to the adjoining property and not the claims you itemized in question 10. (18) You have no answer to; description of deposit, maps or assay data, and an estimate of tonnage and grade of ore in reserve. (21) A description of the proposed work as asked for in item #21 has not been ~~given~~ submitted. (22) The report on the adjoining property might lead an operator to expect the possible occurrence of commercial ore bodies but no maps, assays or other pertinent data pertaining to the claims in question has been submitted thereby leaving question 22 unanswered.

(23) The answer to ~~Question~~ 23 requiring an itemization of cost of labor, number of men, supervisors and salaries, cost of additional facilities and equipment, cost of supplies, power, and other details ~~has~~ has not yet been received by this office as promised in ~~the~~ your answer to this question,

"Supplementary report to follow".

(24) There was no answer to question 24 concerning the time schedule of the project, progress expected or how the money is expected to be spent, has been received.

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 5/28/51

REFERRED TO:

1. Bradley
2.
3.
4.

FOR:

---------- Action	---------- Recommendation
---------- Approval	---------- Record of ----------
---------- Comment	---------- Referring to ----------
---------- Conference	✓ Reply for signature of ----------
---------- Consideration	---------- Rewriting
---------- Filing	---------- Signature
---------- Instructions	---------- Suggestions
---------- Investigation	---------- Your information
---------- Initials	
---------- Mailing	
---------- Previous correspondence	

REMARKS:

Recd by MRB MAY 30 1951

Check (X) before the items needing attention.

JWB

LANDON F. STROBEL

Initials of sender.

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WESTERN UNION

W. P. MARSHALL, PRESIDENT

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129 Bradley

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PRA 128

5/28/51 DMA-1265 X

PR BIA469 NL PD=BILLINGS MONT 26=

DEFENSE MINERAL ADMN, ATTN DR JAMES BOYD ADMINISTRATOR=

DEPT INTERIOR WASHDC= 25 PM 7 4z

BY THIS TEEGRAM THE FLINT CO MAKES APPLICATION FOR AID FOR EXPLORATION PROJECT PURSUANT TO MINERAL ORDER FIVE UNDER DEFENSE PRODUCTION ACT 1950 FOR TUNGSTEN DEVELOPMENT COMPLETE DATA WILL BE PRESENTED AS SOON AS FORMS RECEIVED FROM YOU YOUR ACKNOWLEDGEMENT OF THIS FILING WILL BE APPRECIATED=

THE FLINT CO ATTN CHARLES M SHAW PO BOX 319 BILLINGS=

Note:- Forms sent as requested 5/28/51

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

BUREAU OF MINES
WASHINGTON, D. C.

1951 MAY 28 AM 7 49

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 28 1951
8:00 AM
LANDON F. STROBEL
Executive Secretary

June 18, 1951

Mr. Charles M. Shaw
The Flint Co.
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration loan
Independent, Rockefeller,
Rogers, Bargie and
Lucky Joe

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 29, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. George B. Holderer, Chief, Tungsten Branch on June 13, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

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

June 1, 1951

Mr. Charles M. Shaw
The Flint Company
P. O. Box 319
Billings, Montana

Subject: DMA-1265X
Re: Exploration Loan

My dear Mr. Shaw:

Receipt is acknowledged of your application and attachments of May 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1265X and was referred to Mr. P. R. Bradley, Chief, Tungsten Branch on May 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1265X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:jhs
cc: Strobel-2
Files
✓Bradley
Lyon

6-1-51

C O P Y

C O P Y

Dmd 12265 X

Mr. Mark J. Doepker, General Counsel & President,
Potosi Tungsten Mining Company,
51 Owsley Building,
Butte, Montana

Dear Sir:

I have examined the group of patented and unpatented mining claims of the Potosi Tungsten Mining Company, located in the Potosi Mining District, Madison County, Montana, as per your request, and herewith submit a report of my examination together with a map of the claim on a scale of 100 ft. to the inch, indicating where the samples were taken, tunnels, discovery shafts and other geological data.

There is also inclosed several snapshots, taken with a kodak, showing the general terrain and wooded area.

Fourteen days were spent on the property, most of this being taken up in surveying and locating the claim corners, or rock monuments, established by the U. S. Mineral Surveyor during 1911, together with locating Roger tunnel and intersecting lines with Green Jacket claim. About four days were spent in sampling and geologizing the numerous veins.

Location

The property consisting of the Independent, Rockefeller, Rogers, Margie and Lucky Joe patented mining claims (United States Survey Number 9292) together with an unpatented mining claim, the Invincible, all adjoining, containing 101.981 acres, are located near the head of the South Fork of Willow Creek Township 3 S., Range 3 W., Montana Principal Meridian, Madison County, Montana, in an unsurveyed township.

The property is sixteen miles by road from Pony, a station on a branch line of the Northern Pacific R. R.

Pony is a small town with a population of about 200. Elevation 5,443 feet above sea level. From here is obtained supplies for the mines, located in the mountains to the west, and for the farmers and cattle ranchers in the near vicinity, on Willow Creek to the south and east. This was a very active mining town from 1897 to 1905, due to the production of gold ore from the Boss Tweed, Clipper, and Strawberry group of claims, located about three miles a little north of west of the town.

Roads

From Highway 91, about 18 miles east of Whitehall, Montana, a well-paved branch road continues to the Yellowstone National Park, passing through Harrison. From Harrison a well-traveled dirt auto-

mobile road leads to Pony.

From Pony a well-traveled automobile road leads to the R. Station and Potosi Hot Springs for about ten miles, at a modern along South Willow Creek to an elevation 6,500 feet; from here to the mine, about six miles, the road is much steeper, with numerous curves at the upper end, to an elevation of 8,472 feet at the main tunnel entrance on the Independent claim.

This six miles of road at present is passable with 10-ton truck or automobile, but in the future with extra haulage, it would be advantageous to straighten curves and align grades.

Timber

The property lies within the Madison National Forest where medium-sized pine, fir, spruce, and poplar trees cover the slopes. A sufficient quantity of timber of the proper size for mining purposes for years to come, is readily available on the property as can be noted in the pictures accompanying this report.

Water

Sufficient water for all culinary purposes can be obtained from a spring on the Lucky Joe claim. It rises there and flows past the cabin, located on the Invincible claim, which is shown in the picture.

Water for all milling purposes, even for some power, can be brought in along the old flume right-of-way. It taps Willow Creek one mile west and various small streams on its course to a point just a little below the entrance of the Independent tunnel.

Another small stream rising in springs on and below the Margie claim, flows within a few hundred feet west of the Independent tunnel and crosses the old flume right-of-way.

During August of this year, about 0.6 of a cubic foot per second of water was flowing from the entrance of the Independent tunnel, ample water for a small mill if it is not found to be coming from water dammed back behind a cave in the tunnel.

History

Mining for silver began in the Potosi mining districts in the year 1875. None of the veins of the district are open by extensive workings, and although originally mined and explored for silver, which was in most cases of too low grade to be of commercial importance, these veins are now of interest chiefly because they contain tungsten, although this was known as early as 1906.

The Independent, Rockefeller, and Roger lodes were located by F. G. Smith; the Margie lode by Joseph Ferrell, and the Lucky Joe lode by William H. Brennan; all during September 1906.

Early in October 1906, Mr. J. C. Pyle, a mining engineer

employed by the Senator Clark interest of Butte, examined the property and wrote a brief report for Mr. J. K. Heslet of Butte, Montana. He found that very little development had been done on the property, that there were at least five well-defined outcropping veins, four parallel and one at right angles to the others, on the property then under option to Mr. William Young, Jr.

He recommended an adit be driven north on the Independent vein which would develop the other veins at a depth of 500 feet, as he had taken characteristic specimens of the ore-bearing veins and materials from various points on the surface, which assayed:

	Silver ozs.	Copper %
Margie dump	92.0	Trace
Independent dump	80.2	1.8

On November 2, 1906, Mr. William Young, Jr. submitted his option on the five claims and a mill site to Mr. John Templeman of Butte, a prominent lawyer and mining man, associated with the W. A. Clark interests.

In December 1906, John Templeman, Charles Schatzlein, J. K. Heslet, Wm. H. Young and Joe Ferrell organized the Butte Potosi Mining Company for one million dollars, par value $1.00 per share, with offices at 112 Silver Bow Block, Butte, Montana. Eighteen men and two women, all very prominent people of Butte, at once invested $1,000.00 each in the company's stock.

Messrs. Smith, Ferrell and Brennan, the locators, duly conveyed their interest in the claims to this company on the third day of January 1907.

The company later built several log cabins, a stable and blacksmith shop, and brought water in a flume from the head of South Willow Creek to operate a Pelton wheel which compressed air for two rock drills.

Later a 940-foot crosscut tunnel with drifts, was run through the Independent claim and into the Rockefeller ground, cutting the veins that it crossed, but very little development work was done in these veins.

Some further surface work in short tunnels were driven on the other claims. High-grade samples of silver, copper and tungsten were found on all the claims, and is recorded in the company's application for patent before the Registrar and Receiver of the United States Land Office at Helena, Montana.

They also stated that the company had spent nearly nineteen thousand dollars ($19,000.00) in development work on the claims, and that the property is more valuable for its tungsten product than for any other product.

Ore was not shipped from any of the workings of the property.

As no great demand for tungsten was apparent at that time, the property lay idle for many years, buildings going into decay and tunnels caving.

During 1930 the Potosi Tungsten Mining Company, with offices at Room 315, Owsley Building, Butte, Montana, was organized by Mr. William Demos and associates, for one hundred thousand shares, par value of one dollar per share. By paying the back taxes on the property for many years, conducting litigation to obtain title, and a reasonable amount in cash, the title to the property was conveyed to their company by Mr. John Templeman, who had acquired the Butte Potosi Mining Company's interest in the property.

The Potosi Tungsten Mining Company built a road for automobile travel for about four miles, starting about two miles above Potosi Hot Springs to the dump of the Independent tunnel, and a quarter of a mile beyond to an ore bin on the Invincible claim; this road is very steep with numerous curves.

Further work was also done on a wagon road near the entrance to the Roger tunnel.

The Roger tunnel was driven forward, and open-cut mining was carried on above the tunnel on the outcrop and to the west at about the level of the tunnel.

During 1933, about sixteen tons of high-grade tungsten ore were hauled to and milled at the old Strawberry stamp mill, two miles west of Pony, and only 935 pounds of high-grade tungsten concentrate were recovered due to the poor milling facilities. Several hundred pounds of mildling product was also recovered which assayed 12% WO_3, and the tail race was lined with hubnerite crystals and yellow tungstite, indicating the poor recovery.

The concentrates assayed 65% WO_3, and when shipped to Denver, Colorado, netted the company $356.00.

Geology

A brief account of the genesis of the ores of this area during the reckoning of the geologic history is as follows:-

A long period of sedimentation began in pre-Cambrian time and extended through the Mesozoic era.

When the Rocky Mountain building began in the late Cretaceous or early Eocene with flooding and elevation of the older sedimentary rocks, followed by overthrust faulting and the intrusion of the great mineral-bearing Boulder batholith and its various contemporaneous outliers, such as the Tobacco Root batholith, or locally, the Revenue-Potosi batholith, it covered the area whose surface is now exposed for approximately sixteen miles in length and four to five miles in width.

Next there ensued a period of crustal stability, during which

erosion reduced the region to a surface of low relief and cut away at least many thousand feet of strata.

During Oligocene, Miocene, and early Pliocene time (middle and late Tertiary), sediments composed of land, water and volcanic ash were deposited, and this event was followed by warping and faulting that elevated the present mountains.

During the Pliocene and the Pleistocene epochs (late Tertiary and Early Quaternary), the mountains were dissected so that slopes predominated over flats, and in the middle or late Pleistocene time, local glaciers formed from the higher mountains, protruding tongues moving downward and melting back with fluctuation in temperature. The Recent followed close on the heels of glaciation. The great ice masses have only recently left these mountains; vigorous stream erosion had only begun the task of removing morainal evidence of glaciation, which brings in view our present topography. A large terminal morain may be seen just above the Potosi Hot Springs on South Willow Creek, and farther at the head of the creek, small lakes have been dammed by morainal drifts. The property lies on the south slope of the northeast spur of the Tobacco Root Range east of the Continental Divide, at an elevation of 8,000 to 9,400 feet. The terrain is very steep, the average gradient being from 30 to 46 degrees, steepest on the north boundaries of the Margie and Lucky Joe claims.

Genesis of ore deposits

The property lies entirely within the Revenue-Potosi (quartz-monzonite porphyry) batholith, about four miles from its west contact and three miles from its south contact, with the overlying sedimentary rocks.

The ore veins or dikes, or irregular masses as exposed in the workings examined, and also outcropping on the surface, consists mostly of a hard massive glossy variety of milk white quartz, such as is found in veins of great depth, and not of the opal or chalcodohic variety of quartz with open crystal-lined vugs or cavities, such as are common in veins formed near the surface.

The ore veins are highly quartzose and vary from a fraction of an inch to twelve feet or more in width, and from a foot to several hundred feet in length.

The general attitude of the veins are between 60 and 80 degrees northeast-southwest and dipping steeply to the northwest, although a vein exposed in the upper tunnel on the Independent claim strikes N. 13° E. and dips steeply southeast.

The tungsten mineral hubnerite ($MnWO_4$) occurs as irregular streaks and masses throughout the milky white quartz, in minute size crystals to crystals of several inches in diameter and length, together with its oxidization product, tungstite ($WO_3 \cdot H_2O$) which forms a greenish to canary yellow coating on the surface or along fracture planes in the white quartz.

Tungsten minerals are slightly attacked by dilute sulphuric acid formed from oxidization of pyrite. The solutions are easily hydrolized to insoluable oxides, which also are precipitated by ferric salts, acids, etc. Tungstite usually results and forms a canary yellow coating.

The tungstite may be a source of secondary enrichment of tungsten as in places on the surface croppings where it has become very much concentrated. See sample No. 21.

Very little pyrite or other minerals were found associated with the hubnerite, except on a vein on the Margie claim and one on the Independent claim. There it was found associated with pyrite, galena pyrargyrite, chalcopyrite and sphalerite, but these minerals probably represent a later period of mineralization than the tungsten veins. They are classed with the silver-bearing veins.

Fluorite was noted as a filling in several places on the foot-wall of a massive white quartz vein on the Roger claim; it varied in color from purple, green, blue to white, but the presence of this mineral does not give any indication of the genesis of the tungsten mineral as it is generally found in economic quantities associated with lead minerals and at various phases of deposition.

The white quartz veins of ore-bearing dikes were probably formed under the following conditions:

When the batholith was intruded subsequent to the folding of the sedimentary rocks, it produced only slight metamorphic effects, as a whole either by heat or by contributed material on the intruded rocks.

Structure shows that the sedimentary rocks formerly occupying the area now held by the granite have been removed in mass by truncation of the beds, and this in part, was caused by magmatic stoping as the agent involved.

Contact phenomena and the internal succession of rock type, such as monzonite, aplite, pegmatite and quartz, point to increase acidity in the magmatic reservoirs. (By acidity is meant an increasing percentage of quartz in the rock).

As the batholith slowly cooled under the great depth of sedimentary rocks, the monzonite upper portion solidified and shrunk, causing endokinetic fissures.

These, relieving the pressure and lowering the temperature, were filled by a more acid material from the magnetic reservoir, forming the aplite and pegmatite dikes which traverse the property from west to east.

Later cooling of the magma from a plastic state, caused further endokinetic fissures. Hence, with lowering of temperatures and increase in pressure due to vapor tension, these fissures then filled with the more acid portion of the magma or with the hard massive

glossy variety of milky white quartz. Contemporaneous with this filling or late in its formation, the gases of tungsten and manganese were condensed forming the mineral hubnerite, the primary mineral found in these veins.

Much later, after the upper portion of the batholith had cooled and solidified, exokinetic fissures formed along the quartz dikes, forming an opening in which the mesotherminal solutions circulated, depositing fluorite, pyrite, galena, pyrargyrite, chalcopyrite, sphalerite, gold, and other minerals. These veins in the early history of the camp were exploited for their silver and gold contents and are referred to by others as the silver-bearing veins in this district.

The typical quartz monzonite porphyry on the property, is a light-colored greyish porphyritic rock, highly silicious, and resembles granite. It contains much quartz and feldspar, about equal amounts of orthoclase and plagioclase, very little muscovite, titanite, magnetite or chlorite.

The aplite is also a light-colored greyish, fine-grained rock, consisting mostly of quartz and orthoclase, with a little plagioclase largely converted to sericite (mica), also a little original muscovite and fluorite with fluorite and pyrite of later origin.

The pegmatite appears to be just another phase of the aplite that is more coarsely crystalline feldspar and quartz with very little other minerals.

The tungsten mineral hubnerite was formed wholly within the more acid quartz phase of the cooling magma, and is not found associated with the monzonite, aplite or pegmatite phase of the magma.

There is no clear-cut dividing line or walls between either monzonite, aplite, pegmatite, or the quartz, as they gradually blend one into the other.

The deposit of tungsten covers a very extensive area, practically anywhere on the property, where the massive, hard white quartz is found outcropping, on close inspection, crystals of hubnerite with greenish to canary yellow colored coating of tungstite ($WO_3.H_2O$) will generally be found, even if only in minute size and quantity.

The hubnerite occurrences, although of great extent, vary greatly in magnitude, and only lens-like areas or chimneys in the quartz veins will be possible ore zones that will prove of economic importance.

Sampling

In order to ascertain if a milling grade of ore could be obtained and the probable tonnage, samples were taken from the most important outcropping veins and those in accessible workings on the property.

A general average sample was taken across the vein where possible, at right angle to the dip.

An effort was made to obtain a sample that would be fairly representative of the vein at the point taken, as it would be broken in mining and sent to the mill.

A moil and single-jack were used in breaking the pieces of rock from the vein. The sample being caught on a large piece of canvas, then placed in small sacks and labeled with the sample number and name of mining claim, from which it was taken. The weight of the samples averaged eight to twelve pounds.

In several places, due to the hardness of the white quartz, a moil could not be used and the sample was taken by pounding off pieces of the rock with the single-jack and sample pick.

Messrs. William Hanna and Bill Demos, of Butte, Montana, took most of the samples under my directions and also assisted in locating claim corners, etc. To them I wish to express my thanks for their kindly assistance and good fellowship.

The length of the sample taken, generally the width of the vein, was measured and its position located with regards to some reference point, both of which were recorded, together with a probable tonnage of a similar grade of ore as represented by the sample. This tonnage is only an estimate in the general opinion of the writer, due to his experience in mining and not to actual measurements or close sampling, as the property is not at this time sufficiently developed to accurately ascertain positive or probable ore tonnage.

The entire lot of samples were assayed by Lewis and Walker, assayers and chemists at Butte, Montana.

The tungsten content was rechecked and determined in fourteen of the samples by Richard McCarthy, assayer and chemist at Butte, Montana.

Eight of the samples and pulp were sent to the John Herman Laboratory at Los Angeles, California, for rechecking the tungsten content and a more accurate determination.

In all cases, in rechecking the tungsten content of the samples, the assays were found to be much higher than the Lewis and Walker assays, therefore it is reasonable to assume that the Lewis and Walker assays are low in all the samples not checked.

Over $200.00 was spent on the assaying of the 34 samples, therefore, they were not all rechecked.

Where the samples were assayed will be designated thus: L & W, McC or J. H.

The following is a list and description of the samples; the

point where taken is indicated on the inclosed map thusly (34) etc.

Lucky Joe Claim

Sample No. 1. From discovery shaft 6 ft. by 6 ft., and 10 ft. deep; west side, across veins 2.9 ft. wide; hard white quartz with crystals of hubnerite 1/8 in. to 1 in. size. Streak in center 0.1 ft. wide, green to canary yellow tungstite coating in cracks and cleavage planes.

Assay WO_3 = 1.0% by McC.
Assay WO_3 = 0.08% by L & W
Vein strikes S. 85° E. - Dip 55° NE.

Sample No. 2. Taken from cliff 104 ft. east of Sample No. 1 and at an elevation 55 ft. higher. Across vein 4 ft. wide, outcropping for 20 ft. Hard white quartz spotted and streaked with large and small crystals of hubnerite and stains of tungstite.

Vein strikes S. 85° E. - Dip 55° NE.
Assay WO_3 = 1.45% : Fe = 1.1% : Mn = 0.35% : by J. H.
Assay WO_3 = 0.46% by L & W

Sample No. 3. From open cut 6 ft. wide by 15 ft. long; 10 ft. below Sample No. 1 and 14 ft. west; across 6 ft. of pegmatite dike, tungstite in shrinkage cracks.

Cut had not been driven far enough north to cut white quartz vein exposed in samples 1 and 2.

Assay WO_3 = 0.17% by L & W

In the area covered by samples 1, 2 and 3, a large tonnage of ore could be developed; very little development has been done on the vein as the elevation is approximately about 9,200 ft., slope of terrain 36 degrees, slide rock several feet deep. There is exposed here at least 300 tons of tungsten ore of the grade indicated in Sample No. 2 or better.

Sample No. 4. Across vein outcropping 1.5 ft. wide and 18 ft. long, hard, glossy, white quartz with streaks of find hubnerite crystals inclosed.

N. 84° W. - 37 ft., to Margie Corner No. 3
Stroke of vein S. 70° W. - Dip 60° NW.
Surface slope 36° SE. - Elevation approximately 9,300 ft.

Can see Lake Ennis about 14 miles southeast from this point.

Margie Claim

Sample No. 1. From face of open cut 5 ft. by 10 ft. long - No. 71° W. - 260 ft. from Margie Corner No. 3

Lenses of white quartz enclosed in pegmatite. Two ft. wide across white quartz vein inclosing crystals of hubnerite and stained with green to yellow tungstite.

Strike of vein S. 75° W. - Dip 77° NW.
Assay WO_3 = 1.25% by McC.
Assay WO_3 = 0.04% by L & W

One ton high grade milling ore on dump.

Elevation about 9,500 ft.

Sample No. 2. Taken from face discovery open-cut, white, quartz vein 1.5 ft. wide with streak of very fine hubnerite crystals on hanging wall side, canary yellow tungstite coating on surface or in vugs, inclosed in the quartz. Strike of vein N. 65° NW.; vein outcrops in places up to Sample No. 1.

Assay WO_3 = 0.02% by L & W
Assay WO_3 = 0.30% by McC.
½ ton of rich tungsten ore on dump.

Sample No. 22. From dump at old shaft, about 300 ft. east of west end line, near center of claim. Shaft slightly inclined, 5 ft. by 5 ft., caved near surface and on mountain side touching east end of shaft. White quartz veins, 4 ft. to 4½ ft. wide, exposed in cave for 10 ft. above shaft collar.

About 5 tons of rich tungsten ore is lying on the dump near the shaft, consisting of hard white quartz with some secondary quartz crystals, and inclosing galena, pyrite, chalcopyrite, phrargyrite and fluorite minerals together with large and small crystals of hubnerite and incrustation of yellow tungstite. An average representative grab sample was taken from this dump, about 15 pounds, as the vein was inaccessable.

The vein strikes N. 80° E. - Dip 80° NW. and is 4 ft. - 4.5 ft. wide.

Assay Ag-5.20 oz; Au-0.01 oz; Cu=0.40%; Pb=0.10%
WO_3=0.36% by L. & W.
Assay WO_3=2.10% Fe=1.1% Mn=0.7% by J. H.

Below the collar of the shaft, vertically about 50 ft., is a caved tunnel approximately 100 ft. long which apparently connects with the shaft. Therd is, also, about 5 tons of rich tungsten ore similar to that near the shaft, lying on the dump at the mouth of the tunnel. During earlier times, this vein was no doubt developed for its silver and gold values.

About 200 ft. northwest of this shaft, there are two other inclined shafts, sunk on seperate veins, with similar showings of rich tungsten ore on the dumps, about 1 ton at each shaft. Samples were not taken due to lateness of day.

Terrain dips at angle of 46 degrees to SE. Stroke of veins are about N. 80 degrees E. and dip 45 degrees NW. Elevation of Corner No. 2 Margie near these shafts is about 9,500 ft.

A crosscut tunnel, if driven several hundred feet below these shafts, would cut the veins at several hundred feet in depth.

Rogers Claim

Sample No. 8. From 225 ft. crosscut tunnel, bearing N. 3 degrees E., right side-cross 6 ft. of hard white quartz 123.5 ft. to 129.5 ft. from entrance.

Vein strikes N. 82° E. - Dip 77° NW.

Assay WO_3 = 0.04% by L. & W.

Small crystals of hubnerite were seen inclosed in the quartz.

Sample No. 9. Across 0.3 ft. black manganese stained fault gouge, left side of crosscut tunnel; 129.5 ft. from entrance.

Strike N. 82 degrees E. - Dip 77 degrees NW. Hanging wall of sample No. 8.

Assay WO_3 = 0.08% by L. & W.

Assay indicates some leached tungsten and manganese from oxidization of hubnerite on the surface had followed down the fault opening.

Sample No. 10. Across face of drift 4 ft. wide. Drift 6 ft. long on right side of crosscut tunnel 129.5 ft. from entrance to 135 ft. Fault gouge of Sample No. 9 is on right side of this drift. Hard grey quartz with feldspars (pegmatite).

Strike and dip same as Sample No. 9.

Assay WO_3 = trace by L & W.

Sample No. 11. Taken in lower left-hand corner at face of above drift. Stringers of white quartz with small crystals of hubnerite in the pegmatite.

Assay WO_3 = 0.03% by L & W.

Sample No. 12. From back of crosscut tunnel, 189 to 195 ft. from entrance, 6 ft. of hard white quartz, with 2 seams of white quartz, 2 in. wide at 193 ft. and 195 ft. from entrance, containing small interlocking crystals of hubnerite.

Vein strikes N. 63°E. - Dip footwall 87° NW.
Dip, hanging wall 65°NW. ½ in. fault gouge on footwall.
3 ft. of crushed pegmatite on hanging wall.

Assay WO_3 = 0.16% by L & W.

Sample No. 13 A 35-oz. sample of ore taken along the 2 seams of white quartz, showing hubnerite crystals in Sample No. 12.

Assay WO_3 = 0.72% by L & W.
Assay WO_3 = 0.75% Fe = 1.6% Mn = 0.25% by J. H.

The six samples taken from the crosscut tunnel, indicates rather lean ore. The tunnel should have been driven more to the right to have cut the ore channel.

The L & W assays were always very low when checked with other assayers, except on this sample, which was marked to be weighed.

Sample No. 14 (See enclosed map.)

Taken about 95 ft. above tunnel level and N. 16°E., 152.0 ft. from tunnel entrance, west face of open cut or pit, 5 ft. high. Sample across face 7.5 ft. wide (near drill holes not blasted). Hard glossy white quartz, containing small to large coarse crystals of hubnerite with good coating of yellow and green tungstite.

Assay WO_3 = 0.21% by L & W.
Assay WO_3 = 0.70% Fe = 1.2% Mn = 0.20% by J. H.

N. B. The L & W assays are three times lower than the J. H. assays on this same pulp sample.

Sample No. 15. On footwall of open pit, across outcrop for 4.8 ft., not including fluorite or granite horse, hard white quartz with crystals of hubnerite and coating of tungstite, southeast of Sample No. 14.

Assay WO_3 = 0.08% by L & W.
Assay WO_3 = 0.20 by McC.

Sample No. 16. Across outcrop for 6 ft., hard white quartz with crystals of hubnerite and coating of tungstite, south of Sample No. 15.

Assay WO_3 = 0.12% by L & W.

Sample No. 17. Northeast of No. 16 across top of outcrop for 4 ft., white quartz with crystals of hubnerite and coating of tungstite. Vein exposed for 10 ft. high on footwall side of outcrop.

Assay WO_3 = 0.04% by L & W
Assay WO_3 = 0.45% by McC.

SampleNo. 18. Northeast of No. 17 across 9.5 ft. of the outcrop, hard white glossy quartz with stains of tungstite and some crystals of hubnerite. Outcrop is 15 ft. wide at this point and

exposed on footwall for 15 ft. in height.

Assay WO_3 = 0.31% by L. & W.
Assay WO_3 = 1.00% by McC.

Sample No. 19. Northeast of No. 18 across 6 ft. of outcrop, hard white quartz with stains of tungstite and some crystals of hubnerite. Vein pinches to east and is not exposed due to overburden.

Assay WO_3 = 1.28% by L & W.

Sample No. 20. Taken from large boulder of ore 2.5 ft. by 2.5 ft. by 1 ft. in size, in northeast corner of face of open cut and tunnel, 99 ft. west of long crosscut tunnel on Roger Mining claim. Vein hard white quartz broken and shattered into large blocks and finer material due to faulting and slipping. Back of tunnel only 5 ft. from surface.

Quartz contains very large crystals of hubnerite together with smaller crystals, in streaks and bunches, also much yellow to green coating of tungstite ($WO_3.H_2O$). Could not measure exact width of vein due to cave, but it appears to be 5 ft. to 8 ft. wide at this point.

Stroke S. 60° W. - Dip 30° NW.
Assay WO_3 = .04% by L & W.

N. B. With correct assay this sample will contain 2.5 - 3.5% WO_3. One hundred tons of this class of ore is in view. Ten tons broken and on dump at entrance to open cut. Some of this ore was milled at the Strawberry Mill west of Pony.

Sample No. 21. Taken 25 ft. from entrance of open cut, (see Sample No. 20), west side, 2.5 ft. vertical and 1.5 ft. long. Crushed sandy white quartz with some hard glassy white quartz. Same vein as Sample No. 20. Could only see stains of green and canary yellow tungstite in this sample.

A large tonnage of this class of ore may be developed near where this sample was taken.

Assay WO_3 = .12% by L & W.
Assay WO_3 = 1.40% by McC.

From the above samples on the Roger claim and the surface indication of the outcrop, it is self-evident that an enormous tonnage of tungsten ore can be developed alone from this lens or shoot of ore.

Of course, it is only assuming or generalizing until the block and ground is more thoroughly developed, but it would seem from the tunnel level up, or a distance of say 90 ft., and 250 ft. in length and taking an average width of 10 ft., that 18,000 tons of 1% WO_3 or better could be developed. Also, keeping in mind that this tunnel

is approximately 1,000 ft. or more above the Independent Tunnel level.

The L & W assays are very, very low, just from the general appearances of the ore and crystals of hubnerite.

Rockefeller Claim

Sample No. 23. Taken from about 50 ft. west of discovery shaft and near Green Jacket end line. Open cut follows veins for 7 ft. into cliff. Vein grey colored to white, hard, glossy quartz with very fine crystals of hubnerite showing a streak of high-grade ore. Vein 2.8 ft. wide, strike No. 84° E., dip 35° NW. Also contained some other secondary minerals of pyrite, pyrargyrite, and tetrahedrite.

Assay AU = 0.06 oz; Ag = 12.50 oz; Cu = 0.05%; Pb = Trace
WO3 = 0.04% by L & W
Assay Au = 0.01 oz; Ag = 10.0 oz; Fe = 2.1%; Mn = 0.25
WO3 = 0.85% by J. H.

A large tonnage of tungsten ore should be developed on this vein. Also, the silver minerals could be saved in milling. The vein has a rather flat dip at surface and if steeper at depth, should have been crosscut by the Independent tunnel.

Sample No. 24. Taken approximately No. 45° E., 150 ft. from Corner No. 2 of Independent claim on Rockefeller ground. Vein 1.2 ft. wide, hard white quartz with fine crystals of hubnerite and stains of tungstite. Strike S. 48° W. and dips 83° NW.

Assay WO3 = 0.78% by L & W
Assay WO3 = 3.40% by J. H.

Sample No. 25. Taken from north side of cliff, about N. 35° E., 75 ft. from Corner No. 2 of Independent. Vein is exposed for 10 ft. up the cliff on hanging wall side, 0.3 ft. wide, contains fine crystals of hubnerite and stains of tungstite. A boulder of quartz resting on this vein 2 ft. by 3 ft., about one ton, is shot full of small and large crystals of hubnerite. Vein strikes N. 85° E. - Dips 46° NW.

Assay WO3 = 0.06% by L & W
Assay WO3 = 1.20% by McC.

Independent Claim

Sample No. 26. Taken from west side of cliff. Hard white glossy quartz 1.2 ft. wide with 0.5 ft. stringer of rich hubnerite ore on hanging wall side. This vein can be seen outcropping for 40 ft. up the side of the cliff. Strike N. 87° E. - Dip 62° NW.

Assay WO3 = 3.22% by L & W.

This vein should have been crosscut in the Independent tunnel.

Sample No. 27. Taken from west side of cliff, S. 64° E., 92 ft. from Corner No. 2 of Independent claim. Sample No. 26 was taken N. 34° W., 14.5 ft. from this sample on a parallel vein.

Vein hard white quartz 1.7 ft. wide containing fine crystals of hubnerite and stains of tungstite. Also, some pyrite, galena and tetrahedrite crystals. Strike N. 85° E. - Dip 69° NW. Vein can be seen outcropping on side of cliff for from 30 ft. to 40 ft. There is a crack or fault opening 0.2 ft. wide on the hanging wall side of the vein.

Assay Au = 0.01 oz; Ag = 4.80 oz; Cu = Trace.
Lead = Trace; WO3 = 0.11% by L & W
Assay WO3 = 0.50% by McC.

This vein should also have been cut in the Independent tunnel at a depth of near 500 ft.

Sample No. 40. Taken from a 2 ft. wide hard white quartz vein approximately 125 ft. down slope of cliff southeast from Sample 27. Also, approximately same strike - Dip 72° NW. Contained medium size to small crystals of hubnerite and stains of tungstite.

Assay WO3 = 3.40% by McC.

This vein should also have been cut in the Independent tunnel.

Sample No. 28. Taken 6 ft. in from post at entrance to Independent discovery tunnel and shaft, which is at an elevation of 50 ft. higher than the Independent long crosscut tunnel, 4 ft. wide, across back. Hard greyish white quartz, some fine crystals of hubnerite, stain of tungstite with a little galena, pyrite and tetrahedrite crystals in vugs.

Vein strikes N. 13°, 45 ft. E. - Dip nearly vertical or a few degrees to northwest. Left side of tunnel, hanging wall of vein, quartz, monzonite, porphyry. Right side of tunnel hard white quartz. Footwall of vein not reached, but approximately 3 ft. farther east of right side of tunnel.

Assay Au = 0.04 oz; Ag = 4.60 oz; Cu = trace; Pb = trace;
WO3 = 0.02% by L & W

Sample No. 29. Taken 11.5 ft. from post or 5.5 ft. from Sample No. 28, 2.5 ft. wide from hanging wall side in back, down right side to 3.5 ft. from floor. Similar to material of Sample No. 28.

Assay Au = 0.03 oz; Ag = 3.20 oz; Cu = trace; Pb = 0.1%
WO3 = 0.12% by L & W

Assay WO3 = 0.60% by McC.

Sample No. 30. Taken 18 ft. from post or 6.5 ft. from Sample No. 29. On right side down vein 4.5 ft., a little monzonite rock

from back of drift included in sample. Similar to material of Sample No. 28.

Assay Au = 0.01 oz; Ag = 2.00 oz; Cu = trace; Pb = 0.15%
WO3 = 1.14% by L & W

Assay WO3 = 2.15% Fe = 1.3% Mn = 0.4% by J. H.

Sample No. 31. Taken 26 ft. from post or 8 ft. from Sample No. 30, 4 ft. down vein on right side of drift. Pole lagging in back of drift. Hard greyish to whitish quartz with some hubnerite crystals and little pyrite, galena and tetrahedrite in vugs.

Assay Au = 0.005 oz; Ag = 1.40 oz; Pb = trace; Cu = trace
WO3 = Trace by L & W

Sample No. 32. Taken 34 ft. from post or 8 ft. from Sample No. 31, 4 ft. down right side of drift. Pole lagging in back of drift. Massive hard white quartz. Some fine crystals of hubnerite and stains of tungstite. Very little copper, lead or iron minerals.

Assay Au = 0.01 oz; Ag = 2.40 oz; Cu = trace; Pb = trace;
WO3 = 0.06% by L & W

Assay WO3 = 0.60% by McC.

40 ft. from post to old caved discovery shaft, length of this tunnel.

Sample No. 33. Taken 186 ft. from entrance of Independent's long cross cut tunnel. Right side of tunnel. Vein 2 ft. wide, crushed hard white quartz, containing two seams of very fine hubnerite crystals about 0.015 ft. and 0.10 ft. wide. Large sample cut across vein and 5 ft. along vein; then quartered down to 10-pound sample.

Assay Au = trace; Ag = 0.02 oz; Cu = trace; Pb = trace;
WO3 = 0.06% Fe = 3.20% by L & W

Assay WO3 = 0.60% by McC.

Sample No. 34. Taken 200 ft. from entrance or 14 ft. from Sample No. 33 in back of drift, 1.8 ft. wide, not including fault gouge seam. Crushed hard white quartz with very fine crystals of hubnerite.

Assay Au = trace; Ag = 1.20 oz; Cu = trace; Pb = trace;
WO3 = 0.04% by L & W

Assay WO3 = 0.70% by McC

From 167 to 210 ft., or for 43 ft. from entrance, pegmatite and quartz, rock crushed and full of fault gouge and seams.

From the results of the above sampling, it is evident that a

good grade of tungsten ore for milling can be developed in many places on the property, containing from ½% to 1% tungsten trioxide (WO_3).

Most of these places are inaccessable to mining at the present time, and the most economic plan would be to explore these veins at depth from the Independent's long crosscut tunnel.

Mining

Although tungsten was known to be contained in the veins on the Potosi Tungsten Mining Company's property as early as 1906, most of the development work in mining was carried on with the object in view of opening up the rich silver, gold and copper veins.

Lucky Joe Claim

A discovery shaft ten feet deep and a short tunnel were driven on a vein out-cropping on the east-central part of the claim. This work opened up a rich tungsten vein but the value in silver and gold were too low grade to continue to work at this altitude, about 9,300 feet, and inaccessability, due to the steepness of terrain.

Margie Claim

Three small inclined shafts, now caved and not over 25 feet deep, judging from amount of material on dump at collar of shafts, were sunk on three separate veins near the west-center part of the claim. Although some fair values were indicated by the assays for silver, gold and copper, the ore on the dump now indicates that the veins can be developed more for their tungsten content, and the other minerals of silver, gold and copper can be saved as a byproduct.

The easiest method of access to these shafts is up, what I will call Margie Creek, a steep canyon on the west side of the property. An aerial tramway from this creek would be the easiest method of getting ore to a mill located below the Independent tunnel.

There are several open pits located on other veins, on the eastern part of the claim; these veins indicate where a milling grade of tungsten ore could be developed.

Roger Claim

On the west-central part of the claim a discovery shaft was sunk, perhaps 50 feet in depth, but it is now caved, also some open-cut work was done connecting with the shaft. A very find ledge of tungsten ore was opened up as indicated by ore on the dump, also containing some grey copper, pyrite and argentite.

Near the southeastern part of the claim a 225-foot crosscut tunnel was driven to intersect the vein outcropping at an elevation of 95 feet above the tunnel level. This vein was crosscut at 190 feet from the entrance. High-grade ore was not encountered. A drift driven to the east on this vein will most likely encounter the

high-grade tungsten ore shoot, exposed in the open cut, driven along the outcrop above the tunnel.

From this open cut ore was mined, and about 16 tons hauled to the Strawberry stamp mill located west of Pony.

About one hundred feet west of the entrance of the above tunnel, and at about the same level, an open cut and short drift tunnel has been driven on a large tungsten vein, showing streaks and bunches of very rich hubnerite and tungstite in a white quartz gangue.

This vein is very much broken and shattered, due most likely to faulting and slippage, having been displaced 50 feet or more horizontally and vertically from the vein outcropping above and to the right.

Rockefeller Claim

Numerous pits, trenches, and shallow shaft, were made on outcropping veins which showed the presence of tungsten, silver and copper minerals.

A discovery shaft, now caved, was sunk 10 to 25 feet in the center of the claim, and about 300 feet east of the west end line, on a flat-dipping vein which is nicely exposed in an open cut 50 feet to the west on the side of the cliff, about on the end line of the Green Jacket claim. This vein contains several strings of hubnerite together with grey copper and pyrite in seams and along cleavage plains. (See Sample No. 23). Very little real development work has been done on this claim. Therefore, there is much tungsten ore that can be developed under present conditions of price, and adequate milling facilities for saving also the silver, gold and copper minerals.

Independent Claim

A discovery tunnel about 75 feet long nearly in the center of the claim, was driven on a north and south vein, and later connected with a 50-foot shaft now caved. This vein is from 3 to 6 feet wide, contains streaks and stringers of hubnerite and tungstite, pyrite and grey copper, and other minerals in a white quartz gangue. It is evident as the gold and silver values were of low grade, it was not further developed; now under changed conditions and the present price of tungsten, this vein can be developed for a large tonnage of milling ore, with the object of saving all valuable minerals in the mill.

About 50 feet vertically below and a little west of the discovery tunnel, a long 940-foot crosscut tunnel has been driven. This was to be the main working tunnel, its object was to open up and develop all the veins on the property at depth, and will cut most of them at depth of from 500 to 1,500 feet, if driven further north. As this tunnel was driven during 1907 - 1911, it is now partly caved except within about 200 feet of the entrance, where it has been reopened and retimbered during the early part of this year by the present company. A little development work on the right side of the tunnel, 186 feet

from entrance, should expose vein drifted on in upper tunnel.

Invincible Claim (Unpatented)

A discovery shaft has been sunk about the middle of the claim and 300 feet from the north end line, exposing a vein containing streaks and bunches of hubnerite in a white quartz gangue. The vein has not at present been sufficiently developed to determine adequately its attitude; further work may prove it to be a source of large tonnage of tungsten ore. The cabin shown in the accompanying pictures is located on this claim. This claim has been located and annual assessment work done by the present company.

Tungsten

The principal ores of tungsten are wolframite ($Fe,Mn\ WO_4$), an isomorphous mixture of iron and manganese tungstates varying from ferberite ($Fe\ WO_4$) to hubnerite ($Mn\ WO_4$); (WO_3=76.4%) Sp. G. 7.4 harness to 5 to 5½.

Hubnerite ($Mn\ WO_4$), a manganese tungstate, (sometimes impure, containing some iron, Colorado hubnerite - FeO-1.6% MnO=21.8% WO=76.6%) and scheelite, calcium tungstate, $Ca\ WO_4$ (WO_3=80.6%) Sp. G. 6.0 H = 4½ to 5, the two former being the more important sources.

This is a heavy mineral, which may be readily separated from its gangue by wet concentration. A first-class concentrate should not contain 0.25% phosphorus, 0.10% sulphur, and contain 60% tungstic acid. The large part of the tungsten produced is consumed by the steel manufacturers as an alloy, either alone or in conjunction with molybdenum and chromium; a small percentage of these, alloyed with steel, imports great toughness and is especially desirable in the manufacture of friction steels, armor plate, projectiles, etc. Considerable quantity is also used as a filament in the manufacturing of electric light globes.

The following is some very interesting data regarding tungsten ore reserves in the United States and the World production, as taken from "The Mineral Reserves of the United States," National Resources Committee, Washington, D. C., 1936.

The total known tungsten reserves available at or near the present range of prices are 25,650,000 pounds of metallic tungsten, a supply of about eight years at the rate of use of 1926.

SUMMARY OF KNOWN TUNGSTEN RESERVES

Company	Location	Reserves Pounds Tungsten
Nevada-Massachusetts	Nevada	16,000,000
Stauk Mine Humbolt	Nevada	9,000,000
Atolia Mining Company	California	540,000
Boris Mine	Arizona	1,115,600
		26,655,600

The United States produces but a small part of its tungsten requirements, importing the great bulk of its ore from China. However, in 1933 the exports of tool steel, ferro-tungsten, and tungsten wire, exceeded in metal content, the tungsten imported.

During the last four years the domestic production of tungsten has been greatly stimulated by a tariff equivalent to 192% ad volorem, amount to $0.50 per pound of contained tungsten, or $7.93 per unit of 20 pounds - the greater part of the selling price.

The production of tungsten by states is not published. The Nevada-Massachusetts Company operating at Mill City and Mina, Nevada, reports about 1,000,000 tons of ore developed in their Stauk mine, mining 1% WO_3 or 16 million pounds of metallic tungsten. In the same company's Humbolt shaft they report 9,000,000 pounds of tungsten in ore running 1% WO_3.

No tonnage estimates of this company's Sutton or Silver Dyke mines are available, although they are well equipped and have been reported as potential producers.

The Atolia Mining Company at Atolia, California, one of the important past producers, reports that at the end of 1932 it had ore reserves of 34,000 units of 540,000 pounds metallic tungsten.

The Colorado ferberite ($FeWO_4$) producers are unable to economically produce tungsten at or near present prices. Some production is reported each year, but it comes mainly from leasers who, as a rule, do not earn as much as day wages.

The "Mineral Industry," 1932, reports that "many thousand tons of positive and probable ore of high-grade quality have been blocked out" at the Borianna mine in Arizona. The Mineral Year Book, 1932-1933 gives the reserves as:

Positive Ore	15,549 tons	- 2.383% WO_3
Probable Ore.	16,146 tons	- 2.07% WO_3
Possible Ore	31,685 tons	- 2.00 % WO_3

Adding the positive and probable ore, this shows 31,695 of 2.2% ore or 1,115,600 pounds tungsten.

Other deposits of scheelite, wolframite and hubnerite are known in Arizona, California and Nevada, but they are small and patchy, and while they could in the aggregate produce a considerable tonnage for a short time under stimulus of advanced prices, the life of any would be extremely short.

Low-grade tungsten deposits, which by advances in beneficiation technology could produce tungsten, have been reported in southern Arizona and elsewhere. So far, upon investigation, these have been found to be entirely submarginal, and it is not believed that any ores of this kind will be likely to become marginal.

New finds of importance are rather unlikely. The tungsten minerals have been known to prospectors for many years, and while it is possible that in some of the heavily-timbered areas of the Northwest prospects have been overlooked, the probabilities of new tungsten districts of real importance lying undiscovered are hardly great.

Plant Capacity

There is existing domestic electric furance capacity to take care of vastly more ferro-tungsten than is likely to be required. Theoretically, the capacity of the mines and concentrating mills of the United States have a capacity of 5,000 tons of concentrate per annum. These mines are in Arizona, Colorado, Montana, Nevada and Washington.

Conclusions

From the general average assays of the samples taken from the various veins, the physical appearance of the veins as examined in the field and the gneiss of the tungsten deposit, it is reasonable to assume that by careful and selective mining, a very large tonnage, say 50,000 tons or more of tungsten ore assaying at least from ~~½%~~ to 1% tungsten trioxide (WO3) in its mineral content per ton, can be readily and easily developed on this property, comparatively speaking, without any great expense.

Ghe general conditions in many ways are ideal for mining: all veins can be developed from tunnel levels and in most cases a depth on the vein equal to the length of the crosscut tunnel can be obtained.

It will be unnecessary at any time to pump water from the mind as the tunnels will act as drainage outlets.

There is sufficient water and timber close at hand for all mining purposes. Good roads can be obtained by careful planning. The distance to town or railroad is not excessive for obtaining food or mine supplies.

If the large lensof tungsten ore now exposed on the outcropping vein above the Roger's tunnel is found at depth from the Independent tunnel and is approximately of the same area and grade of ore as at the surface, then it is most probable that 200,000 tons of a good grade of milling ore containing 1% WO 3 can be developed alone from this lens or chimney of ore above the Independent tunnel level.

This tonnage would be sufficient to supply a 25-ton mill with ore for 25 years or a 100-ton mill for about 6 years. The cost of mining should not be more than $3.50 to $4.50 per ton and milling from $1.00 to $2.50 per ton. This cost will greatly depend upon the wage scale, cost of supplies, development work and tons milled per day. This is not difficult to compute when these factors are known. (It is evident that the larger the tonnage milled or mined, the cost will be relatively much lower).

UNITED STATES PRODUCTION OF TUNGSTEN ORES

(Reduced to equivalent of 60% WO_3)

	1928	1929	1930	1931	1932	1933	1934
Tons of ore	1,208	830	702	1,404	396	895	2,049
Average price per unit	$10.40	$13.13	$12.09	$11.02	$9.20	$9.58	$14.57
Equivalent of metallb.	1,150,000	790,000	668,000	1,336,215	376,881	851,789	1,950,07

IMPORTS OF TUNGSTEN (pounds of metal contained)

Ores & concentrates W content	2,855,990	5,793,818	3,694,894	167,352	92,284	310,540	846,559
Metals & Alloys	(a)	(a)	(a)	20,126	12,472	68,016	106,502
Other Materials	112,849	652,279	303,256	1,798	1,446	779	705
	2,968,839	6,446,096	3,998,150	189,276	106,202	379,335	953,766

(a) Not separately reported

PRODUCTION OF WORLD (Metric Tons)

North American	1,096	764	665	1,274	359	812	1,939
South America	53	1,693	986	430	692	240	(b)
Europe	513	718	980	552	317	416	(b)
Asia	9,726	12,321	13,721	11,003	5,400	10,211	(b)
Africa	15	28	38	26	14	36	135
Oceania	244	287	262	100	59	169	(b)
	11,647	15,811	16,652	13,385	6,841	11,884	

(b) Not available

At the present price of tungsten, which is quoted in the Engineering and Mining Journal of October 1937 as $35.00 per unit of contained tungsten trioxide (WO3), one unit being equal to 20 pounds or one percent (1.0%) of 2,000 pounds, one pound of tungsten trioxide would be worth $1.75.

If the ore sentto the mill contains one-half (½) of one per - cent of tungsten trioxide (WO3) or ten (10) to the ton, it would be worth $17.50 per ton.

With an adequately equipped and well-constructed mill, there will be no difficulty in recovering from 90% to 98% of the tungsten content of the ore. Then, 90% of $17.50 or $15.75 would be the value of the tungsten saved from each ton of ore milled containing ½% of WO3.

If the cost of mining and milling should not be greater than $7.00 per ton, then a very nice economic profit should be derived from each ton of ore.

According to the tonnage of tungsten concentrates imported into the United States (and this importation coming mostly from China, and the present unsettled conditions in that country) it is most likely that the price of tungsten trioxide (WO3) will no be below 75 cents per pound for many years to come. Even at that price on an ore containing ½% WO3 per ton, a small profit could be made.

With a good road built to the Roger's tunnel and mining equipment installed there, sufficient tungsten ore could be developed within a short time to supply a 25-ton mill or one of larger capacity.

Recommendations

There are several ways in which this property can be developed.

First, by building a road along the mountain side from the Independent tunnel to the Roger tunnel adequate for gasoline truck travel. There is not now even a good footpath between these points at the present time.

If the grade is made equal to 15%, it would require at least 1½ miles of road between these tunnels. The cost can only be determined by an accurate survey with elevations and cross section of the area to be traversed. From this data determine the yardage to be excavated and the approximate cost per yard. As a rough estimate this work would cost at least from $5,000 to $10,000 or more. After the road is completed, install a compressor, Diesel engine and mine equipment at the Roger tunnel, with necessary housing. Develop and mine the ore above the tunnel level. Transport the ore by truck to a mill located below the Independent tunnel.

When the ore above the Roger tunnel is nearly worked out, start another crosscut tunnel at least 200 feet vertically below the Roger tunnel and continue this same method of developing and mining the ore

as previously. Follow this system until the Independent tunnel is reached.

Second, the method that I would recommend is to first retimber and open up the Independent long crosscut tunnel for its entire length of 940 feet. This tunnel must have crosscut at least 5 veins in its course (see map), but no record has been kept of these veins or their mineral content.

Samples of rock picked up off the dump at the mouth of the tunnel indicates at least some of the veins contain tungsten, as large crystals of hubnerite were found associated with the hard white quartz, together with some galena and sphalerite. The rock apparently was mined from veins crossed within the tunnel.

As the tunnel is reopened, all veins should be geologized, sampled and assayed, and a record kept for future reference. Then later, if warranted, after the proper equipment has been installed for mining, the most promising veins should be drifted on and developed for ore shoots, and as these are found, mining can be commenced by raising and stoping.

Mining should not be carried on within 25 feet or more on either side of the tunnel level as one must keep in mind that this will be the main haulage tunnel for many years to come and should not be weakened by too close excavations.

When mining has been well developed on several veins so as to supply the mill with ore, the tunnel can be driven north to intersect the veins on the Rockefeller and Roger claims.

The large vein outcropping on the Rockefeller, if it continues at its present dip of 35°, would not be crosscut in the tunnel until it had been driven at least 750 feet further north from its present face, but several other more steeper-dipping veins would be crosscut before this vein is intersected.

The tunnel has been opened up and retimbered for about 180 feet from the entrance. Several of the sets will have to be replaced as they are not of standard size and are low for headroom.

Standard size sets and new timber should be used in all this work.

The reopening of the tunnel can be done entirely without drilling or blasting. The work will consist mostly of mucking, picking and retimbering. In some places spilling may be necessary to drive through some large caved areas.

The cost of reopening this tunnel should not be more than $20.00 per set or $4.00 per lineal foot. This would include the logging and framing of timber sets, ties for track and lagging, mucking, laying track, cutting water ditch, blocking timber sets in place and lagging. As there is approximately 760 feet of tunnel to be reopened at $4.00 per foot, this would cost 760 x $4.00 or $3,040.00.

This work should be started in the spring of 1938, as early as it is possible to get to the property.

To expediate this work, it would seem to be more convenient to use two men on a shift in the tunnel and perhaps three shifts per day.

I would suggest that a bunk-house be erected and it be conveniently divided into rooms large enough to accommodate two beds. Good sanitary latrines should also be built over deep excavations. Good health is the price of sanitation. The present cabin can be used for a cook house and dining room. Water can be easily piped to all cabins, cook house, change house, assay office, etc.

As the work progresses in the tunnel, a mill site should be laid out and excavation started on it below the tunnel level on the Independent claim. A tailing pond should be located near South Willow Creek.

Surveys should also be made for a road to the Roger tunnel and work on this road should be started. Thisroad can be used for many purposes, such as hauling of timber and transportation of a portable compressor, to drive tunnels at 200-foot vertical intervals, to connect with a raise from the Independent tunnel for air, and mining of ore above the Roger tunnel, etc.

It would be convenient to have a power saw for cutting logs, stove wood, shaping timber, etc. This could be driven from a caterpillar tractor which could also be used for hauling logs and grading roads, etc.

Mining

When the Independent tunnel has been opened for its entire length, the necessary mining equipment should have been installed to proceed with development work.

As the altitude of the tunnel is nearly 9,000 ft., a larger size air compressor will have to be used than would be necessary near sea level, and the pressure should be 100 to 110 pounds per square inch.

The size of the compressor will depend upon the number of drills that will be operated and the distance from the point of operation. If a compressor's capacity is equal to 100% at sea level, it will also be equal to 100% at 10,000 feet altitude, but will require less horsepower. An air drill will consume 40% more air at 10,000 feet altitude than it will at sea level.

Assuming that three (3) 3 inch diameter of cylinder, rock drills are used, they would consume at sea level, 405 cubic feet of free air per minute, and at 10,000 feet altitude, 40% more or 567 feet of free air per minute.

A stationary compressor, using two stage compression, large enough to supply 567 cubic feet of free air at 10,000 feet altitude, will cost approximately $4,500.00 and will require 105 hp. to run it. A diesel engine to drive the compressor at that altitude will cost about $6,000.00 to $7,000.00.

Three rock drills, three sets of steel, three air hose, 1,000 feet of 3½ in. diameter pipe for compressed air line, two 200-cubic feet air receivers, ventilation fan and ventilation pipe with engine for driving same, together with rails, mine cars, powder, fuse, caps, a fully equipped blacksmith shop, and housing for compressor, etc., will cost from $3,00 to $5,000 more, depending upon the quantity and quality purchased.

The mine equipment therefore necessary for development work and to produce 25 tons of ore per day, will cost from $13,000 to $20,000; that is assuming that all mining and development work will be conducted from the Independent tunnel level.

Mill

As previously stated in this report, if certain ore deposits are developed on the property and found to contain the values in tungsten that are expected, then an adequately constructed mill is warranted for treating these ores.

The mill treatment of the tungsten ore should not be difficult, and if the proper machinery is installed together with competent supervision, a very high recovery of tungsten should be made.

There, also, should be provided the necessary machinery for the recovery of all silver, gold, copper, and lead minerals that may be developed with the tungsten veins.

The question will arise as to the size of a mill to be first erected. This, of course, will depend upon two factors: (1) the amount of capital that can be raised to build the mill; (2) the amount of money that can be used to develop the mine sufficiently to supply the mill daily with the tonnage of ore required.

I would recommend a mill large enough to treat at least 50 to 100 tons of ore per day of 24 hours, as the cost of treating a ton of ore will be at least one-half that of treating a smaller tonnage, say 25 tons per day.

There has been no preliminary tests made on the concentration of the tungsten ore, but I am sure that using a wet table concentrating mill nearly all the hubnerite can be recovered in a high-grade concentrate. Then by passing the tailing from the tables through the flotation process, most of the tungstite ($WO_3.H_2O$) and other minerals that may be in the ore can be recovered.

Some years ago, during the course of some testing work I was conducting, I found that I had very good success in recovering the

hubnerite and tungstite minerals in a rougher concentrate, together with considerable fine silica or quartz, by using pine and kerosene oils together with oleic acid in the rougher cells of the flotation machine.

If the testing work had been carried to completion, I am sure a high recovery of the tungsten minerals could have been made in a high-grade concentrate.

If the ore feed to the mill contains ½% of tungsten trioxide (WO_3), this would equal 0.654% hubnerite ($MnWO_4$). Then there would be 13.0 pounds of hubnerite crystals contained in each ton of ore. As 90% or better of this should be recovered in an adequately constructed mill, there would be recovered 11.70 pounds of hubnerite from each ton of ore treated. With a mill treating 25 tons of ore per day, or 360 x 292.50, which equals 105,300 pounds per year; that would be from 9,000 tons of ore.

As hubnerite ($MnWO_4$) contains 76.6% of tungsten trioxide (WO_3), there would be contained 80,659.80 pounds of tungsten trioxide in the 105,300 pounds of hubnerite and this at $1.75 per pound would be worth $141,166.65.

If the mining and milling cost should be around $7.00 for each ton of ore treated at the mill, then the total cost for the year would be 9,000 tons x $7.00 = $63,000.00 and this from $141,166.65 - $63,000.00 = $78,166.65, the balance or net earnings for the year, without taxes or depreciation being deducted.

This amount roughly indicates the earnings that may be made in one year; also, indicates the sum that could be invested in building a mill, mining camp, mine machinery, powerhouse, roads, etc., and the capital expended upon this enterprise returned within one year.

This, of course, is assuming that the mill operated 360 days during the year and mills 25 tons per day, there is also silver, gold and copper minerals that may be recovered and whose values are not computed. This may amount to considerable within the course of a year.

Flow sheet

The following is a preliminary outline of a flow sheet of a 25-ton mill to recover the tungsten and other minerals that may be found on the property, and to be erected below the level of the Independent tunnel, together with the approximate cost of each machine f.o.b. factory.

	Approximate Cost
Water tank 16 ft. x 12 ft. = 16,000 gal. . . . . $	400.00
Ore from tunnel	
Grizzly of rails spaced 8 in.	50.00
Coarse ore bin = Holding 750 c. ft. of 1½ days' supply of ore, 37½ tons . . .	300.00
Ore bin gate 18 in. x 24 in.	90.00
4 ft. x 2 ft. Denver Grizzly	75.00
Shaking ore feeder	360.00
8 in. x 10 in. Blake type-jaw crusher	1,000.00
2 ft. x 3 ft. vibrating screen	350.00
Crushing rolls 20 in. x 12 in.	1,800.00
Fine ore bin = 950 cu. ft. or 1½ days' supply of ore, or 37½ tons	300.00
Ore bin gate 18 in. x 24 in.	90.00
Adjustable stroke, belt ore feeder 12 in. x 10 in..	350.00
Ball mill 4 ft. x 3 ft.	1,625.00
Door rake type classifier 2 ft., 3 in. x 14 ft., 8 in.	1,440.00
Simplex Denver mineral jig	600.00
Denver 2-spigot hydraulic classifier	150.00
Deister sand concentrating table	450.00
Deister slime concentrating table	450.00
2 in Wilfley sand pump - sands returned to ball mill	300.00
4 ft. x 6 in., wood tank - for slime conditioning to flotation cells. . . .	100.00
M. S. Regeant feeders . . . . . 1 . .	125.00
2 - Denver Sub A - unit flotation cells	780.00
6 ft. x 8 ft. Callow thickner cone	125.00
2 6-ft. disks, vacuum filter, disk type	2,100.00
Compressor and vacuum pump for filter	450.00
Concentrate ore bin - 2 compartment	200.00
2 Concentrate ore bin gates	100.00
Total	$14,160.00

It would require about 60 hp. to operate this plant and as Diesel engines, in small units, will cost from $60 to $125 per hp., a 60-hp. engine would cost $3,600.00.

There are also many other items to be taken into account such as complete mill transmission equipment (shafts, pulleys, clutches, etc.), which will cost from 16 to 30 cents per pound.

Then there is belting, steel balls, fuel and lubricating oils, boiler for heating plant, concrete for foundations, flotation oils and reagents, etc.

Another very important item would be a complete equipped assay office, well-housed, with crusher, rolls and pulverizer for grinding samples, and would cost $3,500.00. With this equipment the price of tungsten determinations would only cost from 75 cents to $1.00 per assay instead of $3.00 by commercial assayers.

A final estimate could only be based on complete plans and specifications which is outside the scope of this report.

Cost of erecting the building and installing the equipment will range under average conditions from $1.00 to $1.25 per dollar cost of machinery f.o.b. factory.

This would make the cost of the 25-ton mill, which I have outlined in the above flow sheet, equipped with the best grade of machinery and construction ready to operate for approximately $35,000.00.

This might be reduced considerably under competitive bidding after plans and specifications were submitted to the various manufacturers of milling machinery.

Final Conclusions

There is no doubt that this property can be made a successful mine venture if the necessary capital is invested under the hands of competent supervision.

As indicated under my recommendations, it will require that at least from $50,000.00 to $60,000.00 be invested before the property is a steady producer of tungsten concentrate.

This would appear to be a very safe investment as the net returns from one year's operation of the mill should be close to $75,000.00 or $100,000.00 at the present price of tungsten trioxide of $1.75 per pound.

Respectfully submitted,

James T. Norton
Metallurgical and Mining Engineer
Butte, Montana
November 20, 1937

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

Files

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.
OCT 16 9 00 AM '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 12465X

Date received 6-8-51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 8 - 1951
LANDON F. STROBEL
Executive Secretary

The Flint Company,
P. O. Box 319,
Billings, Montana

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application: May 29, 1951

Estimated cost: $100,000.00

Mineral or metal: Tungsten

Percentage of Government participation: 75%

Location of mine: Near Pony, Montana

Date of filing MF-100

DMA Docket Number, if available

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.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? 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. See letter.

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. Mining Engineer.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. None.

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. See letter

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)? Whatever is necessary.

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

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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. See attached page.

(*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. See report.

*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. See report.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None.

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

*16. History: See report.

(*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: None yet.

(*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? Tungsten & lyanite

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. 4 mos.

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. See report.

THE REQUIREMENTS AND COSTS Supplementary report to follow.

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.

The Flint Company
(Name of company)

By T. B. Grady
(Signature of authorized official)

May 29, 1951.
(Date)

Locator & General Mgr
(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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#10. Arizona Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 567.

Arkansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 565.

Wyoming Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 563.

Texas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 561.

California Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 559.

Kansas Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 557.

Montana Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 555.

Idaho Claim, Potosi Area, Madison County, Montana, recorded in Book 35 of Lode Location, Page 553.

The Idaho Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24 of Lode Location, Page 256.

The California Mill Site, Potosi Area, Madison County, Montana, recorded in Book 24, Page 257.

The Montana Mill Site Claim, Potosi Area, Madison County, Montana, recorded in Book 24, Page 255.

Oregon Claim, Potosi Area, Madison County, Montana, recorded in Book 35, page 613.