DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip Nickel

CONTROLLED DOCUMENT

DMA Docket No. 1590 X

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FILE COPY
SURNAME:

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

Selfridge
Davis
Kelley
Thayer
Rogers
Johnson

MAR 27 1952

Mr. Virgil B. Taylor
Shamrock Silver-Lead Mine
Keller, Washington

Re: Docket No. DMA 1590X - Nickel
Shamrock Silver-Lead Mine
Ferry County, Washington

Dear Mr. Taylor:

Your application for aid for an exploration project and other data relating to your application available to us in Washington have been carefully reviewed.

The information suggests that under the proposed exploration program, it would be extremely unlikely that a significant mineral discovery would be made. We regret, therefore, to inform you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing this property to our attention.

Sincerely yours,

3/27

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge'lm
3/24/52

cc: Admn. Reading File
Docket
H. W. Davis, USBM
T. P. Thayer, USGS
Field Team Reg. II
G. C. Selfridge

IN REPLY REFER TO:

G-MD-TPT

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

March 10, 1952

Memorandum

To: George C. Selfridge

From: T. P. Thayer Thayer

Subject: DMA 1590 Nickel Shamrock mine.

Please refer to my previous memorandum (undated) commenting on the original proposal. I still believe the chance of developing an economic deposit of nickel is infinitesimal, and the only reason for any project would be for geologic information. I went along on the proposal for underground instead of surface work on the premise that information would be obtained on the primary mineralization.

I wonder how much surface information would be worth on this deposit. Migration of nickel may be important under certain circumstances, so absence or only traces in outcrop would not be very significant. If the project depends on finding high-grade ore shoots at the surface, rather than getting basic information with a minimum of underground work, I would recommend denying it.

Mr. Hundhausen indicates lack of technical ability on the part of the applicant, and does not answer the financial aspects of the query. I wonder if the applicant has been fully informed of the risk he would be taking, and whether he can afford it?

1 copy removed for file

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1201 North Division Street,
Spokane 2, Washington

February 28, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

MEMORANDUM

To: Chairman, Operating Committee
Defense Minerals Exploration Administration,
Department of the Interior,
Washington 25, D. C.

From: Field Team, Region II

Subject: Docket DMA-1590 - Shamrock Mine, Ferry County, Wash.
Commodity: Nickel

A review of the subject docket has been made by the Field Team and by the original examining engineer, R. J. Hundhausen, Bureau of Mines. Inasmuch as no additional supporting data has been presented in Mr. Hundhausen's memorandum (copy attached) of February 26, 1952 the Field Team recommends that the application be denied. The recommendation is based on the applicant's financial and technical incompetence.

Although some information of geologic interest possibly could be acquired, it appears unrealistic to indirectly urge a weakly financed and technically incompetent applicant to expend funds in exploration of a low-grade nickel deposit.

By Field Team, Region II

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

M. E. Volin
M. E. Volin, Acting Exec. Officer
DMEA Field Team, Region II

Encl.
vw

Copy of contract and map attached

400

FILE COPY
SURNAME:

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

Selfridge
Davis
Kyeler
Thayer
Sykes
Johnson

MAR 27 1952

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3/27

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge'lm
3/24/52

cc: Admn. Reading File
Docket
H. W. Davis, USBM
T. P. Thayer, USGS
Field Team Reg. II
G. C. Selfridge

IN REPLY REFER TO:

G-MD-TPT

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GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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1 copy removed for file

Applicant
incomplete

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1201 North Division Street,
Spokane 2, Washington

February 28, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

MEMORANDUM

To: Chairman, Operating Committee
Defense Minerals Exploration Administration,
Department of the Interior,
Washington 25, D. C.

From: Field Team, Region II

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By Field Team, Region II

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

M. E. Volin
M. E. Volin, Acting Exec. Officer
DMEA Field Team, Region II

Encl.
vw

Copy of contract and map attached

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1201 North Division Street
Spokane 2, Washington
February 26, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

MEMORANDUM

To: M. E. Volin, Member, Field Team, Region II

From: R. J. Hundhausen, Mining Engineer, Region II

Subject: Shamrock Mine, Ferry County, Wash.
Docket No. 1590
Commodity: Nickel

Reviewed by
DMEA OPERATING COMMITTEE
3-7-52
(date) (WB)

This is in reference to the subject property and the letter of referral from Mr. Mittendorf dated January 7, 1952, which was received at this office in the past few days.

As far as is known, only low-grade nickel minerals are present on the property. There is a possibility that higher grade nickel can be found on the surface by diligent prospecting. The project goal as originally conceived was to prospect for ore shoots along the breccia zone and the dolomitic nickel zone by power auger drilling and sampling. Alternative methods such as geophysical prospecting and bulldozer trenching were considered, but it is believed the method recommended is more efficient under the conditions of isolation, etc.

The fact that the Shamrock adit cuts a dolomitic nickel-bearing structure does not mean that it is in the near vicinity of an ore shoot. It will be cheaper to prospect for ore shoots on the surface than by underground drifting or drilling. If ore shoots or mineral concentrations cannot be found on the surface along these two large structures, I would be tempted to predict the same condition will prevail underground. If favorable mineral concentrations are found on the surface they would warrant investigation by diamond drilling; if not, the project could be terminated. If an ore shoot is indicated on the surface near the Shamrock adit, it will be advisable to rehabilitate this working to conduct further exploration on the downward extension of the ore shoot.

There is admittedly a question of doubt as to the competence of the operator to perform the proposed work, and also

a question as to the indicated low tenor of the mineralization, the sample taken in the breccia zone assaying only 0.05 percent nickel. The application could be denied on these grounds, but such denial would overlook the possibility that the deposits are large in size though low-grade, and also the possibility that the district may someday become a source of highly strategic nickel.

R. J. Hundhausen,
Mining Engineer.

cc: U.S.G.S., Spokane

1201 N. Division St.
Spokane 2, Wash.
February 26, 1952.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

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Docket No. 1590
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Reviewed by
DMEA OPERATING COMMITTEE

3-7-52
(JHG) (date)

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R. J. Hundhausen,
Mining Engineer.

cc: U.S.G.S., Spokane (with 4 copies to Washington)
Stephen M. Shelton
Files
DF

FILE COPY
SURNAME:

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

Selfridge

FEB 7 1952

JAN 7 1952

Mr. A. E. Weissenborn
Executive Officer, Region II
South 157 Howard Street
Spokane 8, Washington

Re: Docket No. DMA 1590 - Nickel
Shamrock Mine
Ferry County, Washington

Dear Mr. Weissenborn:

Please refer to the field team report on the subject property by Mr. R. J. Rundhausen, dated June 28, 1951, and the enclosed copy of the proposed exploration contract that was worked out by the applicant with Rundhausen's assistance.

The report states that supergene, low grade nickel mineralization occurs in two wide and long zones, the western one of which has been cut at depth. This underground exposure was sampled by W. R. Green in 1943. Two ten foot samples assayed 0.25 and 0.07 percent nickel and 0.10 and 0.02 percent cobalt respectively. Seemingly the general consensus of opinion is that the deposits would be low grade and that their only merit, based on present indications, is the strength of the strustures.

The applicant originally proposed trenching of the outcrop of the eastern zone at five places, reopening an adit crosscut and diamond drilling the zone from the face. The exploration contract proposes testing of the outcrop with a power auger in conjunction with tests for nickel by means of field methods and spot assays. Subsequent diamond drilling would be contingent on the results obtained from the surface work.

We note that the applicant has no personal funds to finance a project and there is serious doubt as to his competence as an operator to perform the proposed work, a factor which was mentioned in your letter of transmittal. The use of the power auger to secure samples is questionable. It would seem that little more than the badly weathered and leached near-surface rock would be secured which would indicate only more low grade mineralization, if anything. In Green's report, no description was given regarding the type of vein material sampled. In the lean application, the owners describe the

BH

mineralization of the west zone as secondary where traversed by the adit.

It would seem that an underground program would be more feasible, as a preliminary step, than a surface one under the conditions suggested. Since the adit was open in 1943, it would probably take a minimum of work to reopen it. If this were done, the west vein could be studied for criteria suggesting the possibility of ore shoots laterally or at depth rather than the concentration of minute quantities of nickel freed from the original dominant iron sulphides. Possibly some drifting would be warranted. With regard to the eastern zone, the map shows it just ahead of the face where a back of 500 feet is reported. At that depth there should be little, if any, oxidation. This zone could be tested and concrete information secured by continuing the drift but a short distance. Further information could be secured for both veins by fanning out diamond drill holes both to depth and laterally. This type of program should settle for all time any questions regarding ore possibilities in the sulphides in the near vicinity of the Shamrock mine and might suggest what could be expected along the zone as a whole. If surface work is suggested, preliminary trenching to give metal content and structural information might be preferable to drilling by auger.

Please give us your thoughts on the above. Regardless of the type of project, it appears that the owners must secure some financing if only to initiate a program.

On page 3 of the report, mention is made of a sample taken in the breccia, the analysis of which was not available. What did the sample assay?

Please return the copy of the proposed contract when it has served its purpose.

Sincerely yours,

1-7-52

C. O. Mittendorf (for)

Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

GCSelfridge'lm
1/5/52

cc: Admn. Reading File
Mails and Files Br.
C. O. Mittendorf
H. W. Davis, USBM
T. P. Thayer, USGS
Field Team Reg. II
Docket
G. C. Selfridge

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

October 12, 1951

Memorandum

To: Tom Lyon, Chairman
Coordinating Committee
Defense Minerals Administration

From: H. W. Davis, Commodity Specialist,
Bureau of Mines

Subject: DMA Docket No. 1590X - Shamrock Nickel Silver-Lead mine,
Ferry County, Washington

The Field Team has examined the subject property and recommended that the applicants be granted an exploration contract amounting to $15,000, of which $1500 is to be furnished by applicants.

The Field Team further recommended that diamond drilling be done only if the initial mapping, sampling and assaying program is successful enough to warrant further exploration. The mapping, sampling and assaying project will cost $5000.

The recommendation of the Field Team is concurred with.

H. W. Davis

H. W. Davis

wrote f.t. for opinion 1/4/52 [illegible]

NDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : P. H. Pesonen DATE: October 9, 1951

FROM : T. P. Thayer Thayer

SUBJECT: DMA 1590-X Shamrock Mine, Keller, Washington. Nickel

The prospects of finding an economic deposit of nickel are believed to be extremely small. Contrary to Mr. Hundhausen's implication, the geology of the deposit is completely different from the deposits at Riddle, Oregon. I know of no minable deposit of nickel or cobalt in a geologic setting similar to the deposit described in the field report.

If the exploration contract is approved, it should be for the smaller amount only, and primarily with the idea of getting geologic information, with only the faintest of hopes of developing an economic deposit of nickel.

On the above basis, I would reluctantly approve a $5,000 project.

I wonder how effective a power auger would be in sampling material of the type described, but I suppose Mr. Hundhausen gave it due consideration.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 4, Washington

July 6, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 - 1951
LANDON F. STROBEL
Executive Secretary

Memorandum

To: Tom Lyon, Chairman
Coordinating Committee
Defense Minerals Administration
Through: L. F. Strobel

From: Field Team, Region II

Subject: Shamrock Nickel Silver-Lead mine, Ferry County, Washington
DMA Docket No. 1590 x.

At the request of Franklin G. Pardee, Chief, Nickel Ores Branch, DMA, an examination was made of the Shamrock mine. A report in quadruplicate by R. J. Hundhouser, U.S.B.M., is enclosed. Also enclosed are 6 copies of a proposed exploration contract which was worked out by the applicant with Hundhouser's assistance.

It is possible that a large tonnage of nickel-bearing rock might be developed on the Shamrock property. The grade, however, would probably be very low. Two samples taken by W. R. Green, formerly with the Bureau of Mines, assayed 0.25 percent nickel and 0.10 percent cobalt and 0.07 percent nickel and 0.02 percent cobalt respectively. 8 samples taken by Green at the neighboring Congress mine, where conditions apparently are geologically somewhat similar, assayed 0.53 percent nickel and 0.02 percent cobalt. The Congress workings reach a depth of 300 feet and have penetrated into the sulphide zone. Some doubt exists as to whether the proposed exploration would turn up any particular concentrations of nickel along the structure to be tested. 1,500 feet of underground development do not indicate that in this property nickel is concentrated in any one place more than another. A picked specimen of pyrite taken many years ago by Bancroft 1/ assayed 5.71 percent Ni and 0.35 percent cobalt, which indicates that a sulphide concentrate would not itself run very high in nickel. A further serious question is the competence of the operator to perform the necessary sampling and chemical work.

1/ Bancroft, Howland, The Ore deposits of Northeastern Washington, U.S.G.S. Bull. 550, 1914.

In short, if a potentially large tonnage of very low-grade nickel ore is of interest, there is some justification for exploring the deposit. The proposal would be sounder if it were in the hands of an established mining company with facilities and technical assistance to perform the sampling and assaying. Under the direction of the present applicant, the exploration would have to be watched very carefully.

By Field Team, Region II

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

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

Enclosures

cc: U.S. Bur. Mines
Spokane, Wn.
Albany, Oregon

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 157 Howard Street
Spokane 4, Washington

July 6, 1951

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(U. S. Geological Survey)

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

Enclosures

cc: U.S. Bur. Mines
Spokane, Wn.
Albany, Oregon

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 - 1951
LAWSON F. SNIDEL
Executive Secretary

UNITED STATES
DEPARTMENT OF INTERIOR
OSCAR L. CHAPMAN--SECRETARY

DEFENSE MINERALS ADMINISTRATION

Report by Examination Team
Region II

DMA- --Shamrock Nickel Silver-Lead Mine

Ferry County, Wash.

R. J. Hundhausen, Mining Engineer
U. S. Bureau of Mines

June 28, 1951

DMA EXAMINATION REPORT

DMA Docket No. ____

Shamrock Nickel Silver-Lead Mine
Ferry County, Washington
June 28, 1951

R. J. Hundhausen, USBM

RECOMMENDATIONS

It is recommended that the applicants be granted an exploration contract amounting to $15,000; of this sum, the applicants, Messrs. V. D. Taylor and James J. Flynn, are to furnish 10 percent or $1,500.

It is further recommended that diamond drilling be done only if the initial mapping, sampling, and assaying program is successful enough to warrant further exploration. If no favorable nickel areas are found the project should be terminated without diamond drilling. If no diamond drilling is done, the project will cost $5,000 of which the Government's share will be 90 percent, or $4,500.

APPLICANT

The applicants are Messrs. V. D. Taylor of Keller, Wash., and James J. Flynn of Spokane, Wash.

LOCATION AND OWNERSHIP

The Shamrock mine is in Ferry County, Wash. It was examined by R. J. Hundhausen on June 19, 1951, accompanied by V. D. Taylor of Keller, Wash. The property consists of 33 claims; the claim locations are shown in figure 1. The property is owned jointly by V. D. Taylor and James J. Flynn.

A Bureau of Mines unpublished War Minerals Memorandum by W. R. Green, dated September 14, 1943, briefly describes this property. A copy of this report is attached.

HISTORY, PRODUCTION AND MINE WORKINGS

This mine was developed and worked for lead and silver. Several thousand feet of adits, drifts, shafts and winzes were driven in search of small, high-grade ore shoots. Figure 2 shows the principal workings in plan and section and also gives some data on the ore shipments made. No nickel ore was ever produced.

GEOLOGY AND ASSAY DATA

The nickel showing was found about 600 feet from the portal of the main crosscut. Green sampled this zone over a width of 20 feet. One 10-foot sample assayed 0.25 percent nickel and 0.10 percent cobalt. The other assayed 0.07 percent nickel and 0.02 percent cobalt. These assays are shown on figure 2. This crosscut now is caved at the portal, and the mineral thus cannot be re-sampled at this time.

ORE DEPOSITS

Two types of nickel ore evidently are present on the property. In the first type, the nickel occurs in a silicified, dolomitized limestone accompanying minor disseminations of pyrrhotite and pyrite. Both the hanging wall and footwall contacts of the bleached dolomite apparently are favorable zones. The dolomitic limestone is brecciated and contains apple green stains on the fractures, together with occasional pinkish stains. This is the type ore Green sampled and according to him the zone strikes N. 5° E. and is nearly vertical.

In the second type of ore, the nickel occurs as minute green disseminations in a vuggy quartz breccia. Oxidized manganese, nickel and iron are evident in this breccia. No assays of this material are available, but it no doubt contains low amounts of nickel. This material seems somewhat similar in character, but lower grade, than the quartz boxwork garnierite ores at Nickel Mountain near Riddle, Oreg. A spectrographic assay for comparative purposes has been requested.

The quartz breccia crops out about 500 feet vertically above the main crosscut but is not encountered underground. It forms a contact between hornblende granite on the east and dolomite on the west. This contact zone is from 200 to 600 feet wide and can be traced on the surface in a general north-south direction throughout the length of the property, a distance of approximately 9,000 feet. Undoubtedly, there is a tremendous quantity of this breccia present along the contact zone. One sample was taken of this breccia; the analysis is not yet available.

ORE RESERVES

Geologic and assay information is very meager, and there is no developed ore reserve. As far as is known, only low-grade nickel is present on the property. The interesting features, however, are the large persistent breccia zone and the nickel occurrences in dolomite. The breccia zone, if sampled and found to be mineralized continuously, would contain an important amount of nickel although in low percentages. Additional information on this potentially important structure as well as on the occurrences in dolomite seems worthwhile.

PROPOSAL

The applicants propose to diamond drill the nickel-bearing dolomite and breccia structures to obtain geologic and reserve information. Surface samples of the weathered quartz breccia will be procured by means of a portable power auger. These samples will be crushed and pulverized in the field and tested for nickel by methods developed by the U. S. Geological Survey. Every tenth sample will be sent for chemical assay.

The diamond drilling program will be based upon the surface sampling, but if no favorable areas are found the project can be terminated without such drilling.

COSTS

A copy of the exploration contract accompanies this report. The surveying, sampling and assay work should take two months and cost $5,000, including equipment. The diamond drilling may take from four to six months or less and cost $10,000, including supervision. The total cost of the project is $15,000. If no drilling is done the project will cost only $5,000, of which the Government's share will be 90 percent or $4500. Some equipment purchased with this money may have salvage value.

COMPETENCE OF APPLICANT

Mr. V. D. Taylor, one of the applicants, has prospected for minerals most of his life. He is equipped with a first-class geiger counter, a Fisher M-Scope, surveying instruments, and various chemicals and analytical equipment. He desires to make his own nickel determinations if he has the proper equipment. Because of the isolated location

of the property it may prove worthwhile to provide him with the necessary equipment and instruction to run satisfactory nickel determinations in the field. Check assays, of course, would be made from time to time in order to assure the accuracy of the analytical work. The applicant should be required to save duplicate pulps of all samples in case additional checking is necessary.

W.M.M.
September 1943

WAR MINERALS MEMORANDUM 1/

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Report of the Bureau of Mines to Hon. Harold L. Ickes,
Secretary of the Interior.

SHAMROCK MINE

Ferry County, Washington

-- Nickel - Cobalt --

Summary

The Shamrock mine is located 12 miles northeast of Keller, Ferry County, Washington. The property was brought to the attention of the Bureau of Mines as a possible source of nickel.

Considerable development work has been done on the lead-silver veins occurring on the property but there was only one exposure of the zone containing the nickel mineralization.

Samples taken in the nickel zone indicate that the grade is too low to be of further interest to the Bureau of Mines at this time.

1/ These memoranda present the facts reported by Bureau of Mines engineers regarding properties for which no further consideration is recommended. Therefore, they should be treated as confidential, for the sole use of Bureau employees. They should not be given out to the public or to the owners of the properties concerned.

Introduction

The Shamrock mine is located in Section 35, T. 31 N., R. 33 E., W.M., about 12 miles northeast of Keller, Ferry County, Washington.

The property consists of 10 mining claims. Six claims are owned by H. R. Taylor of Elberton, Washington and 4 claims by J. M. Walker of Keller, Washington.

An engineer of the Bureau of Mines visited the property in August 1943.

History

The original location was made by Charles Hill and Edward Hall in 1902. They did a small amount of development work in the succeeding years and sold the property to J. E. Angle in 1915. Mr. Angle accumulated 34 claims and organized the Iron Creek Mining Company. Considerable development work was done by the company and some ore was shipped. In 1928 the Iron Creek Mining Company was reorganized as the Shamrock Silver-Lead Mines, Inc. Under management of this company considerable development work was carried out and a mill was placed on the property. The Shamrock Company encountered financial difficulties and in 1942 the assets of the company were sold at a sheriff's sale. At this sale Taylor and Walker purchased the claims which they now own.

Physical Features and Communications

The claims are located along both sides of Iron Creek. The topography of the area is rugged. Steep slopes prevail with very little level land. The altitudes vary from 2,000 feet at the mine workings to as much as 5,000 feet at the mountain tops.

An abundance of timber and water for a mining operation exist on the property.

Transportation is furnished by 12 miles of poor dirt road which connects

with Washington State Highway No. 4 at Keller. The nearest railway connection is at Wilbur, 22 miles south of Keller.

Description of the Deposit

Schist and limestone, of the Covada group, surrounded by granodiorite constitute the rocks in the area. Exposures on the claims indicate that locally the rocks have been sheared and silicified. In several places on the property brecciated limestone has been silicified and sparsely mineralized with galena, sphalerite and pyrite. Approximately parallel to the granite-limestone contact is a wide brecciated and sheared zone in the limestone which shows some mineralization containing nickel. The limestone in this zone exhibits an apple green stain with occasional patches of pink.

Mine Workings

The mine has been developed by about 3,000 feet of crosscuts, drifts, shafts and raises. Most of this work has been done in search of lenses of high grade lead-silver ore.

The main 1,000 foot crosscut was the only adit accessible at the time of the examination. About 650 feet from the portal the adit cuts the zone reported to contain nickel. The adit crosses the zone at about right angles to the apparent strike. No drifting has been done to determine the extent of the nickel mineralization. Two samples were cut in the zone. The following table summarizes the sampling results:

Sample No.	Width in Feet	% Ni	% Co
WRG 228	10	0.25	0.10
WRG 229	10	0.07	0.02

Conclusions

The Bureau of Mines concludes that the ore does not contain a sufficient amount of essential minerals to be of further interest at this time.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

July 6, 1951

Memorandum

To: Tom Lyon, Chairman
Coordinating Committee
Defense Minerals Administration
Through: L. F. Strobel

From: Field Team, Region II

Subject: Shamrock Nickel Silver-Lead mine, Ferry County, Washington
DMA Docket No. 1590 x.

At the request of Franklin G. Pardee, Chief, Nickel Ores Branch, DMA, an examination was made of the Shamrock mine. A report in quadruplicate by R. J. Hundhausen, U.S.B.M., is enclosed. Also enclosed are 6 copies of a proposed exploration contract which was worked out by the applicant with Hundhausen's assistance.

It is possible that a large tonnage of nickel-bearing rock might be developed on the Shamrock property. The grade, however, would probably be very low. Two samples taken by W. R. Green, formerly with the Bureau of Mines, assayed 0.25 percent nickel and 0.10 percent cobalt and 0.07 percent nickel and 0.02 percent cobalt respectively. 8 samples taken by Green at the neighboring Congress mine, where conditions apparently are geologically somewhat similar, assayed 0.33 percent nickel and 0.02 percent cobalt. The Congress workings reach a depth of 300 feet and have penetrated into the sulphide zone. Some doubt exists as to whether the proposed exploration would turn up any particular concentrations of nickel along the structure to be tested. 1,500 feet of underground development do not indicate that in this property nickel is concentrated in any one place more than another. A picked specimen of pyrite taken many years ago by Bancroft 1/ assayed 5.71 percent Ni and 0.35 percent cobalt, which indicates that a sulphide concentrate would not itself run very high in nickel. A further serious question is the competence of the operator to perform the necessary sampling and chemical work.

1/ Bancroft, Howland, The ore deposits of Northeastern Washington, U.S.G.S. Bull. 550, 1914.

In short, if a potentially large tonnage of very low-grade nickel ore is of interest, there is some justification for exploring the deposit. The proposal would be sounder if it were in the hands of an established mining company with facilities and technical assistance to perform the sampling and assaying. Under the direction of the present applicant, the exploration would have to be watched very carefully.

By Field Team, Region II

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

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

Enclosures

cc: U.S. Bur. Mines
Spokane, Wn.
Albany, Oregon

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

No. 157 Howard Street
Spokane 4, Washington

July 6, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 - 1951
LAWSON F. STROBEL
Executive Secretary

Memorandum

To: Tom Lyon, Chairman
Coordinating Committee
Defense Minerals Administration
Through: L. F. Strobel

From: Field Team, Region II

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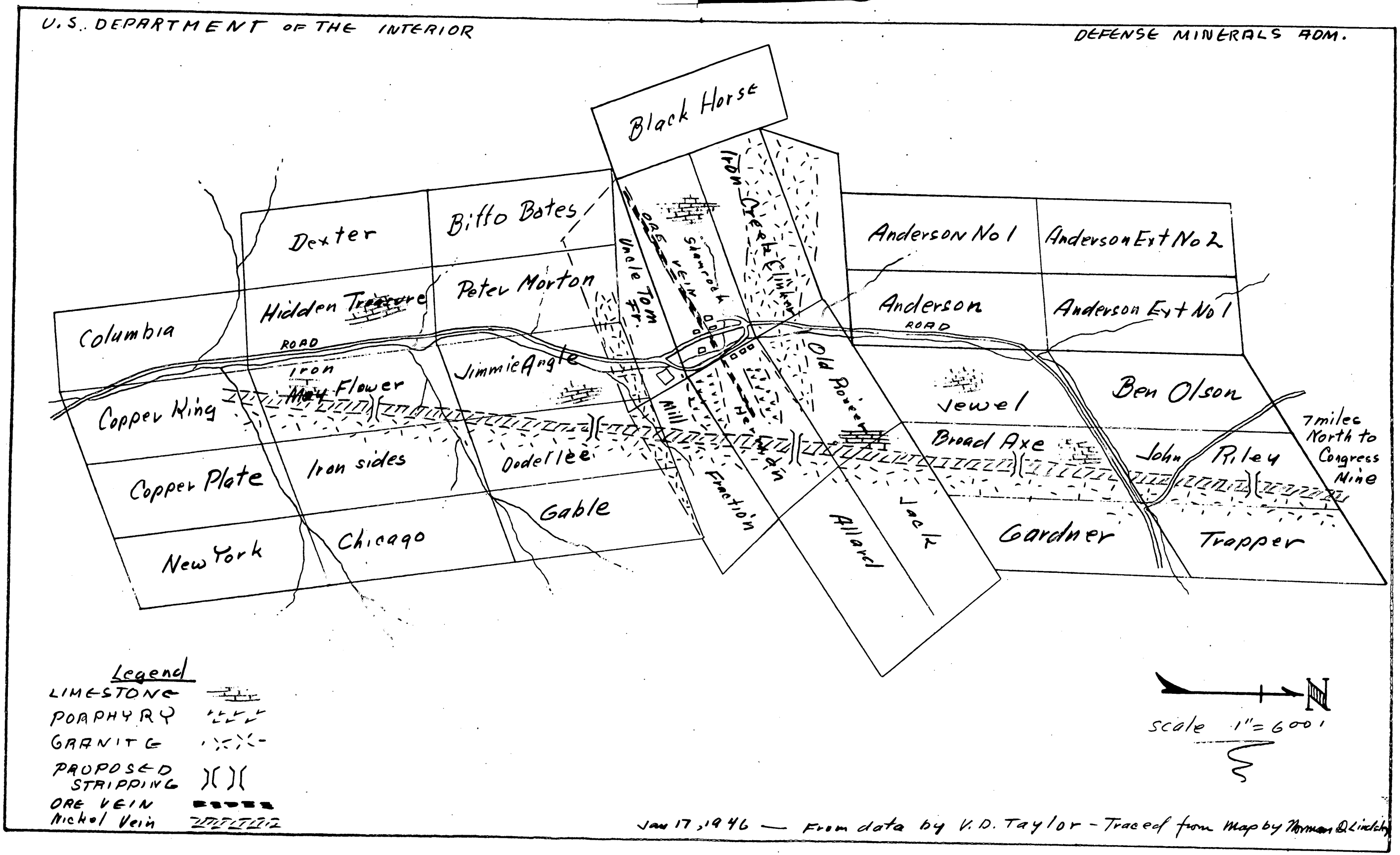
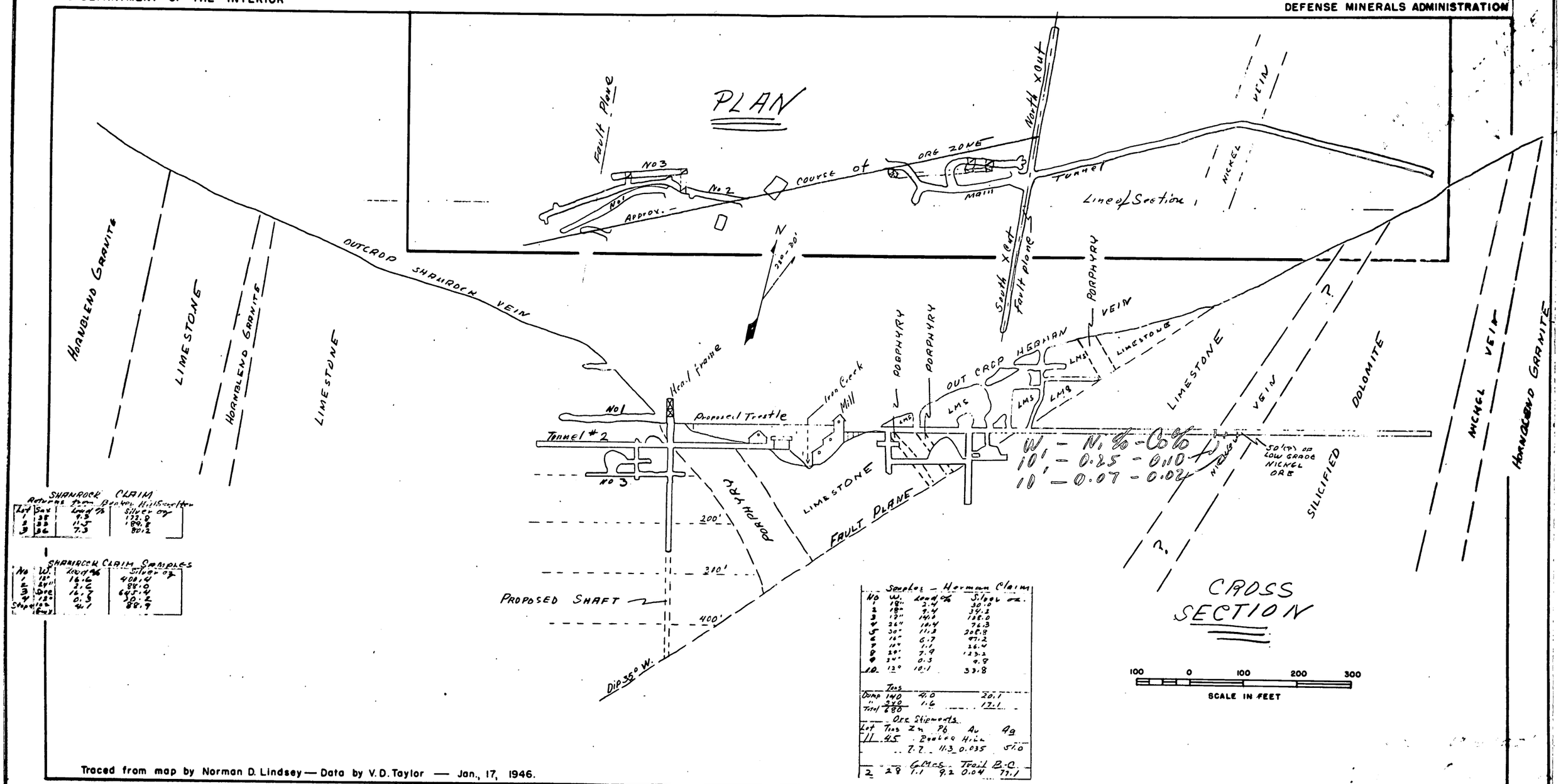


Shamrock silver-lead claim map, Iron Creek, Ferry County, Washington.- Figure 1.

U.S. DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION



SHAMROCK CLAIM
Returns from Bankes Hillscutter

Lot	Sax	Lead %	Silver oz
1	35	9.5	122.0
2	35	11.5	184.2
3	36	7.3	80.2

SHAMROCK CLAIM SAMPLES

No	W.	Lead %	Silver oz
1	12"	16.6	400.4
2	24"	2.6	85.0
3	Ore	16.7	645.4
4	12"	0.3	50.2
Stope (Ex)		4.1	88.9

Samples - Hermann Claim

No	W.	Lead %	Silver oz.
1	18"	2.4	30.0
2	18"	9.4	39.2
3	12"	14.0	188.0
4	24"	10.4	76.3
5	30"	11.3	208.8
6	18"	6.7	97.2
7	18"	1.1	26.4
8	20"	7.9	123.2
9	24"	0.3	9.8
10	12"	10.1	33.8

Tons			
Dump 140	4.0		20.1
" 540	1.6		17.1
Total 680			

Ore Shipments

Lot	Tons	Zn	Pb	Au	Ag
1	45	Bankes Hill			
		7.7	11.3	0.035	51.0
		Gilmes Trail B.C.			
2	28	1.1	9.2	0.04	77.1

Traced from map by Norman D. Lindsey — Data by V. D. Taylor — Jan., 17, 1946.

FIGURE 2. — SHAMROCK SILVER-LEAD PROPERTY, IRON CREEK, FERRY COUNTY, WASHINGTON.

UNITED STATES
DEPARTMENT OF INTERIOR
OSCAR L. CHAPMAN--SECRETARY

DEFENSE MINERALS ADMINISTRATION

Report by Examination Team
Region II

DMA-1590 --Shamrock Nickel Silver-Lead Mine

Ferry County, Wash.

R. J. Hundhausen, Mining Engineer
U. S. Bureau of Mines

June 28, 1951

DMA EXAMINATION REPORT

DMA Docket No. ____

Shamrock Nickel Silver-Lead Mine
Ferry County, Washington
June 28, 1951

R. J. Hundhausen, USBM

RECOMMENDATIONS

It is recommended that the applicants be granted an exploration contract amounting to $15,000; of this sum, the applicants, Messrs. V. D. Taylor and James J. Flynn, are to furnish 10 percent or $1,500.

It is further recommended that diamond drilling be done only if the initial mapping, sampling, and assaying program is successful enough to warrant further exploration. If no favorable nickel areas are found the project should be terminated without diamond drilling. If no diamond drilling is done, the project will cost $5,000 of which the Government's share will be 90 percent, or $4,500.

APPLICANT

The applicants are Messrs. V. D. Taylor of Keller, Wash., and James J. Flynn of Spokane, Wash.

LOCATION AND OWNERSHIP

The Shamrock mine is in Ferry County, Wash. It was examined by R. J. Hundhausen on June 19, 1951, accompanied by V. D. Taylor of Keller, Wash. The property consists of 33 claims; the claim locations are shown in figure 1. The property is owned jointly by V. D. Taylor and James J. Flynn.

A Bureau of Mines unpublished War Minerals Memorandum by W. R. Green, dated September 14, 1943, briefly describes this property. A copy of this report is attached.

HISTORY, PRODUCTION AND MINE WORKINGS

This mine was developed and worked for lead and silver. Several thousand feet of adits, drifts, shafts and winzes were driven in search of small, high-grade ore shoots. Figure 2 shows the principal workings in plan and section and also gives some data on the ore shipments made. No nickel ore was ever produced.

GEOLOGY AND ASSAY DATA

The nickel showing was found about 600 feet from the portal of the main crosscut. Green sampled this zone over a width of 20 feet. One 10-foot sample assayed 0.25 percent nickel and 0.10 percent cobalt. The other assayed 0.07 percent nickel and 0.02 percent cobalt. These assays are shown on figure 2. This crosscut now is caved at the portal, and the mineral thus cannot be re-sampled at this time.

ORE DEPOSITS

Two types of nickel ore evidently are present on the property. In the first type, the nickel occurs in a silicified, dolomitized limestone accompanying minor disseminations of pyrrhotite and pyrite. Both the hanging wall and footwall contacts of the bleached dolomite apparently are favorable zones. The dolomitic limestone is brecciated and contains apple green stains on the fractures, together with occasional pinkish stains. This is the type ore Green sampled and according to him the zone strikes N. 5° E. and is nearly vertical.

In the second type of ore, the nickel occurs as minute green disseminations in a vuggy quartz breccia. Oxidized manganese, nickel and iron are evident in this breccia. No assays of this material are available, but it no doubt contains low amounts of nickel. This material seems somewhat similar in character, but lower grade, than the quartz boxwork granierite ores at Nickel Mountain near Riddle, Oreg. A spectrographic assay for comparative purposes has been requested.

The quartz breccia crops out about 500 feet vertically above the main crosscut but is not encountered underground. It forms a contact between hornblende granite on the east and dolomite on the west. This contact zone is from 200 to 600 feet wide and can be traced on the surface in a general north-south direction throughout the length of the property, a distance of approximately 9,000 feet. Undoubtedly, there is a tremendous quantity of this breccia present along the contact zone. One sample was taken of this breccia; the analysis is not yet available.

ORE RESERVES

Geologic and assay information is very meager, and there is no developed ore reserve. As far as is known, only low-grade nickel is present on the property. The interesting features, however, are the large persistent breccia zone and the nickel occurrences in dolomite. The breccia zone, if sampled and found to be mineralized continuously, would contain an important amount of nickel although in low percentages. Additional information on this potentially important structure as well as on the occurrences in dolomite seems worthwhile.

PROPOSAL

The applicants propose to diamond drill the nickel-bearing dolomite and breccia structures to obtain geologic and reserve information. Surface samples of the weathered quartz breccia will be procured by means of a portable power auger. These samples will be crushed and pulverized in the field and tested for nickel by methods developed by the U. S. Geological Survey. Every tenth sample will be sent for chemical assay.

The diamond drilling program will be based upon the surface sampling, but if no favorable areas are found the project can be terminated without such drilling.

COSTS

A copy of the exploration contract accompanies this report. The surveying, sampling and assay work should take two months and cost $5,000, including equipment. The diamond drilling may take from four to six months or less and cost $10,000, including supervision. The total cost of the project is $15,000. If no drilling is done the project will cost only $5,000, of which the Government's share will be 90 percent or $4500. Some equipment purchased with this money may have salvage value.

COMPETENCE OF APPLICANT

Mr. V. D. Taylor, one of the applicants, has prospected for minerals most of his life. He is equipped with a first-class geiger counter, a Fisher M-Scope, surveying instruments, and various chemicals and analytical equipment. He desires to make his own nickel determinations if he has the proper equipment. Because of the isolated location

of the property it may prove worthwhile to provide him with the necessary equipment and instruction to run satisfactory nickel determinations in the field. Check assays, of course, would be made from time to time in order to assure the accuracy of the analytical work. The applicant should be required to save duplicate pulps of all samples in case additional checking is necessary.

W.M.M.
September 1943

WAR MINERALS MEMORANDUM 1/

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Report of the Bureau of Mines to Hon. Harold L. Ickes,
Secretary of the Interior.

SHAMROCK MINE

Ferry County, Washington

-- Nickel - Cobalt --

Summary

The Shamrock mine is located 12 miles northeast of Keller, Ferry County, Washington. The property was brought to the attention of the Bureau of Mines as a possible source of nickel.

Considerable development work has been done on the lead-silver veins occurring on the property but there was only one exposure of the zone containing the nickel mineralization.

Samples taken in the nickel zone indicate that the grade is too low to be of further interest to the Bureau of Mines at this time.

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The property consists of 10 mining claims. Six claims are owned by H. R. Taylor of Elberton, Washington and 4 claims by J. M. Walker of Keller, Washington.

An engineer of the Bureau of Mines visited the property in August 1943.

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with Washington State Highway No. 4 at Keller. The nearest railway connection is at Wilbur, 22 miles south of Keller.

Description of the Deposit

Schist and limestone, of the Covada group, surrounded by granodiorite constitute the rocks in the area. Exposures on the claims indicate that locally the rocks have been sheared and silicified. In several places on the property brecciated limestone has been silicified and sparsely mineralized with galena, sphalerite and pyrite. Approximately parallel to the granite-limestone contact is a wide brecciated and sheared zone in the limestone which shows some mineralization containing nickel. The limestone in this zone exhibits an apple green stain with occasional patches of pink.

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Conclusions

The Bureau of Mines concludes that the ore does not contain a sufficient amount of essential minerals to be of further interest at this time.

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. GMa 1590X

Commodity Nickel

Total Amount $4000

Govt. Participation 90 %

1. Name and Address of Applicant Shamrock Silver Lead Mine, Virgil D Taylor Owner, Keller, Wash'n

2. Location of Property Near head of Iron Creek, near Keller, Wash'n

3. Mineral or metal Nickel Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery -- based on data in application (question #16, 17, 18, 20 and 22). *

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know --- needs field examination yes

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Claims to own
(question 5, 6, 7) 36 Claims

6. If applicant is a lessee, is a copy of the lease attached? —

Does the lease have sufficient time to run to cover a future productive period? —

*Question numbers are those of MF-103

7. Are subordination agreements necessary? None indicated

a) MF-201?

b) MF-202

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower

b) Equipment and supplies ✓
(question 14 plus general knowledge of availability)

c) Accessibility (question 12) ✓

d) Water (question 13) ✓

e) Power (question 13) ✓

Is a field check needed on any of these points? yes

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4) appears experienced but should have a

Is a field check needed on this point? field check

10. Exhibit A. (questions 21 and 22)

a) Is the project adequately described? yes

If not, are there sufficient data given so that you can describe the project? If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work?

There is a map or sketch

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? yes

If not, what part of it is?

Is this part a worthwhile exploration project? _____

d) Are the cost estimates detailed? no

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? _____

f) Should more information be requested from applicant? _____

g) Is a field examination necessary to complete Exhibit A? yes

11. Exhibit B (question 23-d)

a) Is it applicable? no

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? _____

12. Exhibit C (question 23-e, f and g)

a) Is it applicable? He proposes to rent dozzers for 30 days @ $100 each

b) Sufficient data? _____ If so, attach a draft.

c) Are rents and charges reasonable? ✓

d) Is a field check needed? yes

13. Exhibit D (question 23-a,b)

a) Are there sufficient data? Not applicable

b) Is the schedule adequate for the work proposed? _____

c) Is the schedule excessive for the work proposed? _____

d) Are the proposed wages and salaries reasonable? _____

e) Is a field check needed? _____

14. Exhibit E (question 23-c)

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Think it will take longer than estimated 30 days

(All exploration must be completed within two years.)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing questions? Occurrence and distribution of ore vertically and horizontally. Geologic factors that may affect grade of ore. Milling problems to be met. Nearest smelter. What are applicants' plans in this respect. Is a commercial operation feasible from technical and organizational standpoint. Prospect for repayment of loan. Opinion as to competency of Taylor

Reviewed by:

Date

Franklin G. Pardee, Supply Division

FILE COPY
SURNAME:

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

Pesonen
Pardee

JUNE 15, 1951

A. E. WEISSENBORN
DMA FIELD TEAM, REGION II
SOUTH 157 HOWARD STREET
SPOKANE, WASHINGTON

ADVISE NICKEL POSSIBILITIES SHAMROCK SILVER LEAD MINE KELLER WASHINGTON

DMA 1590X STOP GREEN BUREAU OF MINES HAS REPORT ON PROPERTY.

FRANKLIN G. PARDEE, CHIEF
NICKEL ORES BRANCH
DEFENSE MINERALS ADMINISTRATION

PEPesonen:md

Copy to: Adm. reading file
Mr. Strobel
Mr. Lyon
Mr. Pardee
A. E. Weissenborn (confirmation)
Files

Mr Strobel

(13)

1201

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

1951 JUN 15 PM 6 28

PRA214

The time line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

PR SKA845 GOVT PD=SPOKANE WASH 15 300P=

=FRANKLIN G PARDEE CHIEF NICKEL ORES BRANCH DEFENSE MINERALS ADMINISTRATION=DEPARTMENT OF INTERIOR WASHDC=

RE SHAMROCK DEPOSIT DMA 1590X. HAVE GREEN REPORT. ADDITIONAL EXAMINATION SCHEDULED MONDAY. WILL ADVISE RESULTS=

:A E WEISSENBORN EXECUTIVE OFFICER DMA FIELD TEAM REGION II=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 18 1951
LANDON F. STROBEL
Executive Secretary

:DMA 1590X II=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

JUN 18 5 31 AM '51

15 PM 6 '47

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

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

Dear Mr. Strobel:

Enclosed herewith are three copies each of Form MF-100 and MF-103 submitted for an exploration contract in connection with the Shamrock Silver-Lead mine near Keller, Ferry County, Washington, which the applicant considers a likely nickel prospect. One copy each of the two forms is being retained here to facilitate early examination. Only one copy each of the two maps submitted are attached as this is all that the applicant had. However, it is quite likely that new maps will have to be prepared anyway in the course of the field examination.

Sincerely yours,

A. E. Weissenborn

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

Enclosures

cc: U.S.B.M., Volin

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 5 - 1951
LANDON F. STROBEL
Executive Secretary

UNITED STATES
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GEOLOGICAL SURVEY

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Field Team, Region II

Enclosures

cc: U.S.B.M., Velim

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 5 - 1951
LANDON F. STROBEL
Executive Secretary

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 1590 X

Date received 6-5-51

Participation

Name and address of applicant

Shamrock Silver Lead Mine
Virgil D. Taylor
Keller Wash

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

Date 5-31-51

FILL IN THIS BLOCK

Date of application 5-31-51

Estimated cost $4000.00

Mineral or metal Nickel

Percentage of Government participation 90%

Location of mine On Iron Creek near Keller Wash

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

Shamrock Silver Lead Mine — By Virgil D Taylor
(Name of company) — (Signature of authorized official)

5-31-51 — Owner
(Date) — (Title)

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

*Same as footnote on page 1.

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

(Form MF-103, April, 51)

Shamrock Silver-Lead Mine
Virgil D. Taylor, Owner

1. Applicant is sole owner at present.

2. None.

3. None.

4. Present owner and operator started mining at age of 13 and has mined and prospected most of the time for the past 30 years, plus road construction experience and has the knowledge and ability to develop this property.

5. Owner and manager.

6. None.

7. No lease.

8. Assests - Shamrock Silver-Lead mine; liabilities - none.

9. None, but will gladly work share in lieu of wages, which should more than meet my share of cost.

10. Property is named Shamrock Silver-Lead Mine, comprising 36 claims: Mill Fraction; Allard; Jack; Broad Axe; Gardner; Trapper; Dexter Horton; Columbia; Copper King; Copper Plate; New York; Jack Rabbit; May Flower; Iron Sides; Chicago; Black Horse; Peter Horton; Olmstead; Biffo Bates; Jimmie Angle; Wm. Dodelle; Gabie; Ben Olson; John Riley; Janet; Anderson #1; Anderson; Anderson #2; Anderson Ext. #1; Iron Creek Clinker; Uncle Tom Fraction; Hidden Treasure; Herman; Old Pioneer; Shamrock; Anderson Ext. #2.

The claims are all in one group and are in the Keller Mining District in Ferry County, State of Washington, Townships 30, 31; Sections 2, 3, 34, 35, 26; Range 33. Proposed exploration to start near northern end of Copper King claim, then May Flower, Iron Sides, Dodelle, Mill Fraction, Herman, Jack, Allard, Gardner, Trapper and possibly, the Broad Axe and John Riley Claims.

Propose bull dozer for stripping to expose vein on ridges and slopes sufficiently to examine and sample vein in at least five places, about two miles distance across property. This quartz vein appears to be about 100' to over 600' wide and shows nickel stain in most of the float examined by myself, but is covered with overburden most of the way over approximately two miles that it crosses this property.

10 continued

Also, plan to open caved section of portal of main tunnel on Herman claim so I can examine nickel showing about 700' inside tunnel and may wish to diamond drill at least one hole straight ahead or nearly due east in face of long tunnel which goes into hill about 1000' toward nickel vein, which shows on surface. This tunnel has over 400' depth at the face and a diamond drill hole at this point seems advisable.

11. Present name, Shamrock Silver-Lead Mine; former name, Iron Creek Mine.

12. Property lies approximately north, northeast about 11 miles by road from Keller, Washington, in Ferry County. Nearest shipping point is Wilbur, Washington, in Lincoln County, which lies about 26 miles south of Keller, Washington and is connected by State Highway #4 (oiled road). Free ferry across Lake Roosevelt. From Keller to the mine, use unimproved county road for about 7 miles to mouth of Iron Creek, then about 4 miles of private mine road. Three bridges washed out on mine road this spring, easily replaced. These were old and rotten bridges, unsafe for heavy loads. Nine new bridges were built in past two years and have only one old bridge which may be doubtful, but held a D-7 cat. this spring, so can't be dangerous.

13. Have full rights to all water in Iron Creek and have never seen it run less than 2 miner's inces in the driest season.

14. Nothing usable on property, except upstairs of one house. No equipment left, except one wheelbarrow. Plan to use my geophysical equipment to help determine location of ore shoots on vein. This equipment has a depth range of about 400'.

15. Ore could be shipped by truck to Wilbur, Washington, then by Northern Pacific Railroad to new plant at Salt Lake City, Utah. (am just getting information on plant at this time and, as yet, do not have details).

16. (a) All records and reports from former owners are lost or destroyed or withheld from present owner, but from my past knowledge of this property, can offer the following information which the writer believes to be correct in fact and detail.

The Shamrock Silver-Lead mining property now comprises 36 claims.

16 continued

The Iron Creek Mining Company was founded and development work started on a vein carrying free milling gold which proved quite good and a 50-ton stamp mill was purchased and installed and operated at a profit for a short time until, during mining operations on the vein, a fault was encountered which cut off the ore and the continuation of the gold vein was never found. But, in the course of prospecting, a galena vein was found running nearly parallel to the nearly worked-out gold vein and was soon producing and an attempt was made to mill the galena ore in the cyanide stamp mill, with very poor success. After putting the best of the galena ore through the mill and losing most of the values, an attempt was made to ship the remainder of the galena ore to the Bunker Hill Smelter at Kellogg, Idaho, and again some was shipped to the Tacoma Smelter. Possibly a small amount was sent to the Smelter at Trail, B. C., but most of the shipping proved too costly in past years and this galena ore body cut off on the same fault that cut the gold vein.

Many attempts were made to locate the ore bodies under the fault, such as crosscutting (north and south under the fault which was on the east side of the creek with a dip of about 35° to the west), then the main tunnel or adit was driven in an easterly direction for about 1000' until the company ran out of money and could not purchase sufficient tract and equipment to continue exploration. Soon the idea was tried of working on what is presumed to be the same galena vein on the west side of the creek. Some ore was found and additional finances were procured. A shaft was started and abandoned at about 200' depth after entering a very barren section in the vein. The best of the ore was shipped to Tacoma Smelter or the Bunker Hill at different periods of this operation until ore values would no longer support the cost of shipping. During this period of operation on the west side of the creek some drifting was done on lower levels and some stoping was also done on the best ore. Soon operation was discontinued and the company found it was so badly in debt that it seemed to die of labor liens, merchants' claims and mortgages. No attempt was made to explore a nickel deposit found in the main adit or tunnel on the east side of the creek, at a point about 700' in from the portal. This nickel is about 50' wide and about 400' below the surface; is in a dolomite lime type of rock. My recent prospecting leads me to believe this is a secondary ore and the main body is a short distance ahead in a large quartz vein or dyke, according to surface showings, which varies from about 100' wide to over 600' wide, running north through the property

16 continued

for about two miles and showing considerable nickel stain most any place the vein outcrops and again in the float wherever it is found along the course of the vein.

(b) There are no adjoining properties. Claims of all the original locators were absorbed by the company into the present property consisting of 36 claims.

(c) No known reports available, except U. S. Bureau of Mines report by a Mr. Green, in the Spokane office.. The most complete report ever written on this property was made by F. Cushing Moore, mining engineer (deceased) of Spokane, Washington, and seems to have been lost or destroyed.

17. No past production on nickel and insufficient data for estimate at this time. If found to be a commercial ore body, this vein has large production potential. No production for more than ten years. Old production reports not available or were destroyed. Never has been any production on this nickel; past production was in gold, silver, lead and zinc.

18. Cannot give estimate at this time and only approximatelestimate at completion of exploration program. Large quartz vein showing nickel stain in float and outcrops. Vein runs about two miles north and south across property and seems to be from 100' to 600' in width; has a strong granite dyke on east side most of the distance with some porphory intrusion at intervals. Granite appears to be the footwall of this vein. If this deposit is of commercial value it should have very large tonnage potential and will get into production as soon as humanly possible.

19. None.

20. Nickel ore with possibility of silicon as a by-product. Large quartz vein.

21. Plan to strip across nickel vein at five points indicated on plat enclosed.

22. See plats attached.

23 Subcontract. Stripping at 5 Points as shown on claim Plat at total estimated cost of $3000.00 for dozzer at $100.00 Per day for 30 days, Plus 1000 for assays & Sampling and misc. Operating overhead

24. 1 month

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 1590X

Date received 6-5-51

Participation

Shamrock Silver Lead Mine
Virgil D. Taylor
Keller Wash

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 5-1951
LANDON F. STROBEL
Executive Secretary

Name and address of applicant

Date 5-31-51

FILL IN THIS BLOCK

Date of application 5-31-51

Estimated cost $4000.00

Mineral or metal Nickel

Percentage of Government participation 90%

Location of mine On Iron Creek near Keller Wash

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

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*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
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THE PROPERTY

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State amount of power to be used, rate per hour or other cost, and source.

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

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
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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.

Shamrock Silver Lead Mine
(Name of company)

By Virgil D. Taylor
(Signature of authorized official)

5-31-51
(Date)

Owner
(Title)

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*Same as footnote on page 1.

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(Form LF-103, April, 51)

Shamrock Silver-Lead Mine
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1. Applicant is sole owner at present.

2. None.

3. None.

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24. 1 month

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 1590X

Date received 6-5-51

Participation

Shamrock Silver Lead Mine
Virgil D Taylor
Keller Wash

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 5 - 1951
LANDON F. STROBEL
Executive Secretary

Name and address of applicant

Date 5-31-51

FILL IN THIS BLOCK

Date of application 5-31-51

Estimated cost $4000.00

Mineral or metal Nickel

Percentage of Government participation 90%

Location of mine near head of Iron Creek near Keller Wash

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

Shamrock Silver Lead Mine By Virgil D. Taylor
(Name of company) (Signature of authorized official)

5-31-51 Owner
(Date) (Title)

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

*Same as footnote on page 1.

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

(Form MF-103, April, 51)

Shamrock Silver-Lead Mine
Virgil D. Taylor, Owner

1. Applicant is sole owner at present.

2. None.

3. None.

4. Present owner and operator started mining at age of 13 and has mined and prospected most of the time for the past 30 years, plus road construction experience and has the knowledge and ability to develop this property.

5. Owner and manager.

6. None.

7. No lease.

8. Assests - Shamrock Silver-Lead mine; liabilities - none.

9. None, but will glady work share in lieu of wages, which should more than meet my share of cost.

10. Property is named Shamrock Silver-Lead Mine, comprising 36 claims: Mill Fraction; Allard; Jack; Broad Axe; Gardner; Trapper; Dexter Horton; Columbia; Copper King; Copper Plate; New York; Jack Rabbit; May Flower; Iron Sides; Chicago; Black Horse; Peter Norton; Olmstead; Biffo Bates; Jimmie Angle; Wm. Dodelle; Gabie; Ben Olson; John Riley; Janet; Anderson #1; Anderson; Anderson #2; Anderson Ext. #1; Iron Creek Clinker; Uncle Tom Fraction; Hidden Treasure; Herman; Old Pioneer; Shamrock; Anderson Ext. #2.

The claims are all in one group and are in the Keller Mining District in Ferry County, State of Washington, Townships 30, 31; Sections 2, 3, 34, 35, 26; Range 33. Proposed exploration to start near northern end of Copper King claim, then May Flower, Iron Sides, Dodelle, Mill Fraction, Herman, Jack, Allard, Gardner, Trapper and possibly, the Broad Axe and John Riley Claims.

Propose bull dozer for stripping to expose vein on ridges and slopes sufficiently to examine and sample vein in at least five places, about two miles distance across property. This quartz vein appears to be about 100' to over 600' wide and shows nickel stain in most of the float examined by myself, but is covered with overburden most of the way over approximately two miles that it crosses this property.

10 continued

Also, plan to open caved section of portal of main tunnel on Herman claim so I can examine nickel showing about 700' inside tunnel and may wish to diamond drill at least one hole straight ahead or nearly due east in face of long tunnel which goes into hill about 1000' toward nickel vein, which shows on surface. This tunnel has over 400' depth at the face and a diamond drill hole at this point seems advisable.

11. Present name, Shamrock Silver-Lead Mine; former name, Iron Creek Mine.

12. Property lies approximately north, northeast about 11 miles by road from Keller, Washington, in Ferry County. Nearest shipping point is Wilbur, Washington, in Lincoln County, which lies about 26 miles south of Keller, Washington and is connected by State Highway #4 (oiled road). Free ferry across Lake Roosevelt. From Keller to the mine, use unimproved county road for about 7 miles to mouth of Iron Creek, then about 4 miles of private mine road. Three bridges washed out on mine road this spring, easily replaced. These were old and rotten bridges, unsafe for heavy loads. Nine new bridges were built in past two years and have only one old bridge which may be doubtful, but held a D-7 cat. this spring, so can't be dangerous.

13. Have full rights to all water in Iron Creek and have never seen it run less than 2 miner's inces in the driest season.

14. Nothing usable on property, except upstairs of one house. No equipment left, except one wheelbarrow. Plan to use my geophysical equipment to help determine location of ore shoots on vein. This equipment has a depth range of about 400'.

15. Ore could be shipped by truck to Wilbur, Washington, then by Northern Pacific Railroad to new plant at Salt Lake City, Utah. (am just getting information on plant at this time and, as yet, do not have details).

16. (a) All records and reports from former owners are lost or destroyed or withheld from present owner, but from my past knowledge of this property, can offer the following information which the writer believes to be correct in fact and detail.

The Shamrock Silver-Lead mining property now comprises 36 claims.

16 continued

The Iron Creek Mining Company was founded and development work started on a vein carrying free milling gold which proved quite good and a 50-ton stamp mill was purchased and installed and operated at a profit for a short time until, during mining operations on the vein, a fault was encountered which cut off the ore and the continuation of the gold vein was never found. But, in the course of prospecting, a galena vein was found running nearly parallel to the nearly worked-out gold vein and was soon producing and an attempt was made to mill the galena ore in the cyanide stamp mill, with very poor success. After putting the best of the galena ore through the mill and losing most of the values, an attempt was made to ship the remainder of the galena ore to the Bunker Hill Smelter at Kellogg, Idaho, and again some was shipped to the Tacoma Smelter. Possibly a small amount was sent to the Smelter at Trail, B. C., but most of the shipping proved too costly in past years and this galena ore body cut off on the same fault that cut the gold vein.

Many attempts were made to locate the ore bodies under the fault, such as crosscutting (north and south under the fault which was on the east side of the creek with a dip of about 35° to the west), then the main tunnel or adit was driven in an easterly direction for about 1000' until the company ran out of money and could not purchase sufficient tract and equipment to continue exploration. Soon the idea was tried of working on what is presumed to be the same galena vein on the west side of the creek. Some ore was found and additional finances were procured. A shaft was started and abandoned at about 200' depth after entering a very barren section in the vein. The best of the ore was shipped to Tacoma Smelter or the Bunker Hill at different periods of this operation until ore values would no longer support the cost of shipping. During this period of operation on the west side of the creek some drifting was done on lower levels and some stoping was also done on the best ore. Soon operation was discontinued and the company found it was so badly in debt that it seemed to die of labor liens, merchants' claims and mortgages. No attempt was made to explore a nickel deposit found in the main adit or tunnel on the east side of the creek, at a point about 700' in from the portal. This nickel is about 50# wide and about 400' below the surface; is in a dolomite lime type of rock. My recent prospecting leads me to believe this is a secondary ore and the main body is a short distance ahead in a large quartz vein or dyke, according to surface showings, which varies from about 100' wide to over 600' wide, running north through the property

16 continued

for about two miles and showing considerable nickel stain most any place the vein outcrops and again in the float wherever it is found along the course of the vein.

(b) There are no adjoining properties. Claims of all the original locators were absorbed by the company into the present property consisting of 36 claims.

(c) No known reports available, except U. S. Bureau of Mines report by a Mr. Green, in the Spokane office.. The most complete report ever written on this property was made by F. Cushing Moore, mining engineer (deceased) of Spokane, Washington, and seems to have been lost or destroyed.

17. No past production on nickel and insufficient data for estimate at this time. If found to be a commercial ore body, this vein has large production potential. No production for more than ten years. Odd production reports not available or were destroyed. Never has been any production on this nickel; past production was in gold, silver, lead and zinc.

18. Cannot give estimate at this time and only approximatelestimate at completion of exploration program. Large quartz vein showing nickel stain in float and outcrops. Vein runs about two miles north and south across property and seems to be from 100' to 600' in width; has a strong granite dyke on east side most of the distance with some porphery intrusion at intervals. Granite appears to be the footwall of this vein. If this deposit is of commercial value it should have very large tonnage potential and will get into production as soon as humanly possible.

19. None.

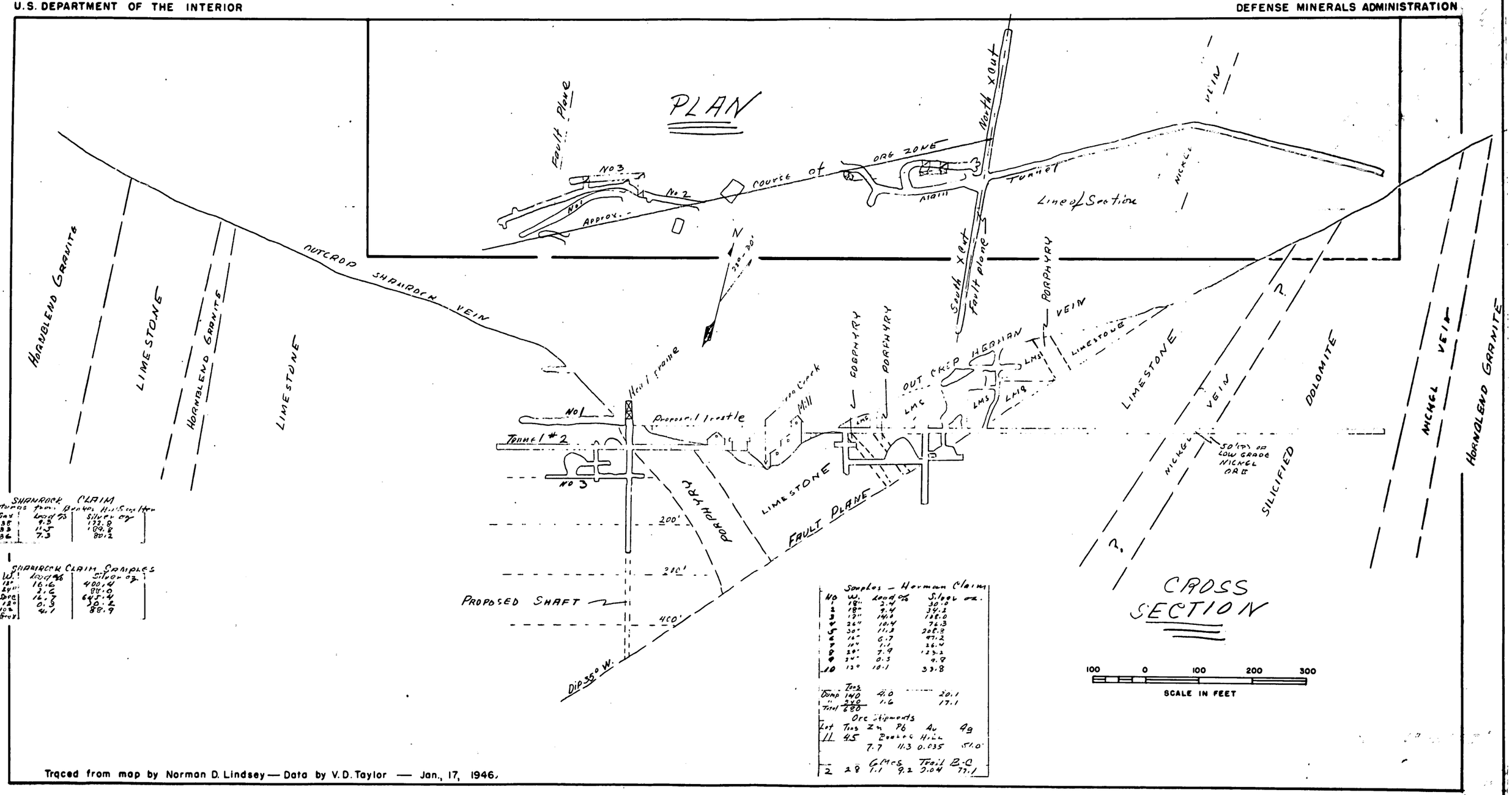
20. Nickel ore with possibility of silicon as a by-product. Large quartz vein.

21. Plan to strip across nickel vein at five points indicated on plat enclosed.

22. See plats attached.

23. Subcontract. Stripping at 5 points as shown on claim plat at total estimated cost of $3000.00 for dozzer, at $100.00 per day for 30 days plus $1000.00 for assays and sampling and misc. operating overhead.

24. 1 month



Traced from map by Norman D. Lindsey — Data by V. D. Taylor — Jan., 17, 1946.

FIGURE 2. — SHAMROCK SILVER-LEAD PROPERTY, IRON CREEK, FERRY COUNTY, WASHINGTON.

Black Horse
Dexter
Billy Bates
Hidden Treasure
Fitz Norton
Columbia
ROAD
Iron Cache
Copper King
NICKEL
Copper Plate
Iron Sides
Dodillie
New York
Chicago
Gabe
MAIN WORKINGS
AND
MINE CAMP
Anderson
Anderson Expt
#2
Anderson
Anderson Expt
#1
ROAD
Ben Olson
John Riley
Gardner
Trapper
Lake
Island
Shamrock
Silver Lead
Claim Map
Scale 1" = 100
LIME
PORPHERY
GRANITE
Proposed stripping indicated
by Dotted Lines
2 Claims not shown
on this map.

dma 1590

Shamrock Claim			
Returns from Bunker Hill Smelter			
Lot	Ton	Lead-%	Silver-oz
1	38	9.3	172.8
2	33	11.5	189.8
3	36	7.3	80.2

Shamrock Claim-Samples

No.	Width	Lead %	Silver-oz
1	12"	16.6	400.4
2	24"	2.6	88.0
3	Spec	16.7	645.4
4	12"	0.3	20.2
Shpe2	102 3w4	4.1	88.9

Samples - Herman Claim			
No	Width	Lead-%	Silver-oz.
1	18"	2.4	30.0
2	18"	9.4	34.2
3	18"	14.0	136.0
4	26"	10.4	76.3
5	30"	11.3	208.8
6	16"	6.7	97.2
7	10"	1.1	26.4
8	24"	7.9	123.2
9	24"	0.5	9.8
10	12"	10.1	33.8

	Tons		
Dump	140	4.0	20.1
"	540	1.6	17.1
Total	680		

Ore Shipments

Lot	Tons	Zn	Pb	Au	Ag
11	45	Bunker Hill			
		7.7	11.3	0.035	51.0
		C M & S	Trail-B.C.		
2	28	1.6	9.2	0.04	77.1

SHAMROCK SILVER-LEAD PROPERTY
IRON CREEK-FERRY CO.
WASHINGTON

Scale-1" = 100'

Norman D. Lindsley - from data by V.D. Taylor
Jan 17-1946