DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip Nickel-

CONTROLLED DOCUMENT

DMA Docket No. ~~DMA~~ DMEA 1320X

DO NOT DETACH THIS SLIP

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This document has been recorded as

Exploration loan

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

To: Nickel Ores Branch Date 5/29/51

To: Mr. Lyon Date 8-28-51

To: Reports & Records Date

To: Iron + Ferro Alloy 11-17-51

To: Date

To: Date

To: Date

To: Date

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To: Date

DO NOT DETACH

CONTROLLED DOCUMENT

FILE COPY
SURNAME:

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

Selfridge
Thayer
Davis
Merrill

JAN 4 1952

Hon. Walter S. Baring
Room 1509
New House Office Building
Washington 25, D. C.

Re: Docket No. DMA 1320X - Nickel
The Nickel Mine
Churchill County, Nevada

My dear Mr. Baring:

Enclosed herewith is a copy of a self-explanatory letter to Mr. Charles A. McKay which is in answer to his letter of December 11 to you, a copy of which was forwarded to us.

We regret that there has been some delay in the final processing of the application because of the time lost in picking up loose ends left by the transition from Defense Minerals Administration to Defense Minerals Exploration Administration.

Sincerely yours,

C. O. Mittendorf (fw) 1-4-52

Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

GCSelfridge'lm
12/28/51

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

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Y

December 11, 1951
Eureka, Nevada

Congressman Walter S. Baring
House of Representatives
Washington, D. C.

Dear Congressman Baring:

Apparently the DMPA has not approved our application, number 1320X, for an exploration loan on our nickel-cobalt property. Quite some time has elapsed since we have heard from them.

With nickel-cobalt properties as scarce as they are in the world, the DMPA can well afford a thorough program to explore below surface showings on properties with good showings of these critical metals. On this property of ours, the surface showings of low-grade ore cover an area 1500 feet in length and 100 feet in width. Certain places in the area naturally assay higher than others. This property should have more than a cursory examination before it is disqualified. The DMPA twice sent a young geologist in to do the field work. This man had no experience with this type of ore, and since these are comparatively rare metals, it would seem that they should send in an experienced geologist who knows nickel-cobalt ore and its formations.

Stockpiling nickel and cobalt ore would be a great incentive in developing nickel-cobalt properties. At the present time we still cannot market our ore, and a development program by our own efforts is stymied. The DMPA is apparently sitting on the lid in refusing to stockpile the ore, and also in not granting the exploration funds needed. With several hundred tons of ore averaging 14% nickel and .5% cobalt oxides the DMPA would not be gambling, and we could proceed to develop our own property.

The diamond drilling program proposed in our application for the loan would barely cover the costs of such a program. You can check with any diamond drilling company and find that there is no possibility of us making any money out of the requested loan. In fact we would be giving our time, and our only hope is to develop a nickel mine.

Please bring this matter to the attention of the DMPA Administrator. Thank you for your many kindnesses,

Charles A. McKay

400

FILE COPY
SURNAME:

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

GCH

Selfridge
Thayer
Davis
Merrill

JAN 4 1952

Mr. Charles A. McKay
P.O. Box 1044
Eureka, Nevada

Re: Docket No. DMA 1320X - Nickel
The Nickel Mine
Churchill County, Nevada

Dear Mr. McKay:

We now have reviewed your application for an exploration loan in conjunction with additional information available to us.

The data show that the nickel concentration was confined to a small area of limited width, which has been mined, and samples of the large, green-stained area assayed little more than traces of nickel or cobalt. The green stain is due to very low grade, secondary copper mineralization instead of nickel. Nowhere did the geologic data suggest a possibility of making a significant ore discovery.

We regret, therefore, to inform you that your application is denied.

We thank you for your interest in the Defense Minerals Program and for your patience with respect to the application.

Sincerely yours,

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

GCSelfridge'lm
12/28/51

cc: Admn. Reading File
Mail and Files Br.
C. O. Mittendorf
H. W. Davis
T. P. Thayer
Field Team Reg. III
Docket
G. C. Selfridge

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

December 28, 1951

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

From: Ferro-Alloy Division, Defense Minerals Exploration Administration

Subject: Denial of application for exploration loan.
Docket No. DMA 1320X
The Nickel Mine
Churchill County, Nevada

The subject application was denied for the following reasons:

1. The nickel mineralization occurs in discontinuous fissures in the upper level in and near two 4-inch veins 60 and 100 feet in length respectively.

2. Nickel mineralization is completely absent on the lower level 110 feet below.

3. No geologic evidence was noted that suggested the presence of ore at depth.

4. Samples of a large green-stained area assayed less than 0.01 percent Ni and Co and only a few hundredths of 1.0 percent Cu with one exception.

G. C. Selfridge

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division

FILE COPY
SURNAME:

Selfridge
Davis

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

December 28, 1951

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

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Docket No. DMA 1320X
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Churchill County, Nevada

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cc 1-4-52

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division

GCSelfridge/lm/hmj
12-29-51
cc to: Admn. Reading File
Mails and Files Br.
Docket
Mr. Selfridge

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : George C. Selfridge DATE: December 19, 1951

FROM : T. P. Thayer Thayer

SUBJECT: DMA 1320-X Nickel mine. Churchill Co., Nevada

The assay values listed by Rinehart indicate that hopes for significant production of copper, nickel, or cobalt from these occurrences are futile, and the dismal affair should be wound up. There is no reason to expect significant concentrations of secondary minerals, as the mine workings show none. Work in the Idaho cobalt deposits has indicated that cobalt does not form significant secondary deposits. If significant amounts of cobalt had been present, pink erythrite should be present on the outcrop.

The application should be denied.

ICE OF THE ADMINISTRATOR

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

Office of
Executive Officer
DMA Field Team
Region III

October 31, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: Docket DMA-1320X, Nickel Mine, Churchill County, Nevada

Reference is made to your letter dated September 19, requesting me to have the Nickel Mine, Churchill County, Nevada, reexamined and the mineralized area sketched in, with several samples taken to indicate the possible grade of the mineralization. Also determine whether or not the occurrence is on the property of the applicant.

This has been done and four copies of a supplemental report entitled, "Supplement to Report of Examination by Field Team, Region III, DMA-1320X, Nickel Mine, Churchill County, Nevada", by C. D. Rinehart, Geologist, U. S. Geological Survey, dated October 25, 1951, are attached. The report gives further information on the nickel content of an area of green stained rocks described in the original report as a possible block of low grade nickel ore. Assays prove the green coloration is due to small amounts of copper rather than nickel and therefore the area merits no further consideration.

~~The docket is being returned herewith.~~

H. C. Miller
Executive Officer
DMA Field Team, Region III

Attachments

Copy to: E. H. Bailey, USGS

OFFICIAL FILE COPY

To	Date	Date
2nd		

RECEIVED
NOV 1951

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : P. E. Pesonen DATE: October 15, 1951

FROM : T. P. Thayer Thayer

SUBJECT: DMA 1320-X Nickel Mine, Churchill Co., Nevada

I agree with the field team that the present proposal of the applicant should be rejected, on the grounds of extremely small probability of a significant geologic target.

The unsampled nickel showings present a somewhat sticky problem. The field teams are swamped now, and the situation is getting worse. The nearby deposit should have been sampled in a preliminary way, we all agree, but I wonder if the deposit would make any real difference to the war effort? The answer to our nickel problems does not lie in Nevada, and why try to kid ourselves?

I would recommend that the deposit be put on the docket of the field team for attention when opportunity affords. The applicant might also be advised of the desirability of some sampling, if he was not told at the time of the field inspection.

1713
GLB

Mr. Thayer:-

Re DMA-1320 B-
Nickel Mine,
Churchill Co. Nev.-

Herewith is the file on the above nickel mine, upon which you once reported (Oct 15) o/r. (Herein is the original field team report (received Aug 20) and a supplementary report thereto (Received Nov 15), which notes 5 samples containing positive but extremely small amounts of nickel and cobalt.

We would like your further comments at this time, in view of the supplementary data, and also as to the possible occurrence of secondary ore of nickel & cobalt at shallow depth -

GLB

300

FILE COPY
SURNAME:

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

SEP 9 1951

Mr. H. C. Miller, Executive Officer
DMA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Dear Mr. Miller:

I have just examined a report on the Nickel Mine, Churchhill County, Nevada, DMA-1320X. This report was made by Charles D. Rinehart of the Geological Survey, dated August 13. It possibly is the fault of the Washington Office that Mr. Rinehart is not familiar with the extreme shortage of nickel and the desirability of exploring every indication that might produce nickel ore in the United States.

After reading the report, I do not feel that Mr. Rinehart gave the proper attention to this property. He mentions that he "recommends a geological examination and sampling of an area about 500 feet north of the upper portal, where rather uniformly distributed minerals consisting of malachite and annabergite covered an area at least 18,000 square feet." It seems to me that while a geologist was visiting a property with the view of making recommendations on exploration he should exhaust all of the possibilities of the property before turning the exploration application down; and if he felt after examining this large area of mineralization that it should be drilled rather than the suggested exploration made by the applicant, he should so state and we would then attempt to have the applicant make the proper application to drill the recommended area. He certainly should have made a pacing and compass survey of the area and taken enough samples to indicate whether or not it presented an opportunity to discover a copper, nickel, cobalt ore body. His reasons for turning the property down, particularly Nos. 2 and 3 are, I feel, the result of rather immature thinking. When an ore body is discovered, if there is a sufficient quantity, the hoisting will take care of itself; also the necessary road construction will follow along.

Will you please have this property reexamined and the mineralized area sketched in, with several samples taken to indicate the possible grade of the mineralization; also determine whether or not the occurrence is on the property of the applicant.

Very truly yours,

Tom Lyon

Chairman, Coordinating Committee

Carroll C. Moon

Member, Bureau of Mines

Thayer

Member, Geological Survey

8f9/19

TLyon:eh
9/17/51

cc: Admin. Reading File
Mr. Thayer, GS
Mr. Moon
Mr. Pesonen
DMA Docket File

UNITED STATES
DEPARTMENT OF THE INTERIOR

~~BUREAU OF MINES~~
~~REGION III~~
DEFENSE MINERALS ADMINISTRATION

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

~~2415 APPRAISERS BLDG.~~
~~630 SANSOME STREET~~
~~SAN FRANCISCO 11, CALIF.~~

OFFICE OF
~~REGIONAL DIRECTOR~~
Executive Officer
DMA Field Team
Region III

August 15, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: Docket DMA-1320X - Nickel Mine, Churchill County, Nevada
Charles A. McKay, P. O. Box 1044, Eureka, Nevada

Reference is made to subject "Review of Application for Exploration Assistance", dated June 15, 1951.

Attached are four copies of a report, "DMA-1320X, Nickel Mine, Churchill County, Nevada", by Charles D. Rinehart, Geologist, U. S. Geological Survey, dated August 13, 1951.

The examining geologist recommends that the applicant's request for $62,000 for exploration be turned down as there is no geologic evidence from which ore reserves may be inferred in the area of proposed exploration. Also, the necessity of hoisting ore and waste from this area, and the construction of a four-mile access road would result in a high-cost operation.

Mr. Rinehart suggests, however, that due to widespread showings of copper and nickel in outcrops several hundred feet north of the workings, that detailed mapping and sampling might reveal several thousand tons of low-grade copper and nickel ore at the surface. He suggests, however, that this more extensive investigation would be contingent upon the urgency of the need for nickel.

The docket is being returned herewith.

H. C. Miller
Executive Officer
DMA Field Team, Region III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 20 1951

Attachment

Copy to: E. H. Bailey, USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 20 1951

DMA-1320-X, Nickel Mine

Churchill County, Nevada

Charles D. Rinehart, Geologist
U. S. Geological Survey

August 13, 1951

Mrs Pendleton, owner

Nickel Mine, Churchill County, Nevada (DMA 1320X)

Summary

The Nickel Mine was examined at the request of the Coordinating Committee, Defense Minerals Administration to "ascertain whether the area between the lower level and the fault has any possibility of mineralization at depth." The writer spent two days, July 12 and 13, 1951, studying and sampling the deposit.

Discontinuity of metallized fissures in the upper level and complete absence of nickel in the lower workings preclude the inference of reserves in the area of proposed exploration. However, widespread showings of copper and nickel in outcrops several hundred feet north of the workings suggest that detailed mapping and sampling might reveal several thousand tons of low-grade copper and nickel ore at the surface. This more extensive investigation would be dependent upon the urgency of the need for nickel.

General

The Nickel Mine is in the NW$\frac{1}{4}$ sec. 35, T. 25 N., R. 36 E., M. D. B. M., near the northern boundary of Churchill County, Nevada. It consists of two patented claims, London and Liverpool, owned by Charles A. McKay of Eureka, Nevada, who purchased them from Churchill County about six years ago. Access to the property is as follows: Turn east off U. S. Route 40, 6.5 miles north of Lovelock, and go 14 miles along a gravelled road to a prominent fork; turn left and go 14 miles to a windmill tower; turn right and go 11.4 miles along a one-lane ungraded dirt road which crosses a low pass in the Stillwater Range; turn left and go 2 miles through Cottonwood Canyon along a trail impassable to vehicles without 4-wheel drive, and thence one mile by footpath to the property.

The geology and mineral occurrence in the Nickel Mine is discussed by Ferguson[1] who visited the area in 1938. His maps appear to be accurate within the limits of the scale used, and his descriptions complete.

1/ Ferguson, H. G., Nickel deposits in Cottonwood Canyon, Churchill County, Nevada: Nevada Univ. Bull., Geol. and min. ser. 32, 1939.

The workings consist of two levels at altitudes of approximately 4465 feet and 4575 feet, and of several small adits and prospect pits above the upper level. The upper level consists of 600 feet of accessible workings as well as a considerable footage of inaccessible raises, winzes, and stopes. The lower level consists of 1200 feet of accessible workings, and an unknown extent of caved or otherwise inaccessible drifts, shafts, and winzes. The only equipment on the property is about 1000 feet of rail in the lower level.

Geology and Ore Occurrence

The rocks explored by the mine include limestone, chert, and quartzite intruded by a large mass of diorite and smaller bodies of aplite. Although most of the workings are in sediments, the upper level is in altered aplite which is cut by the principal nickeliferous veins (See Plates I and II). There is a small exposure of aplite in the north end of the lower workings, and one of diorite near the raise, but no veins are exposed in the level. No nickel minerals have been found in the diorite.

The principal geologic structure is a prominent low-angle fault explored for 200 feet by the lower tunnel. It strikes about N. 49° E. and dips 33° SW. The fault separates a large body of diorite on the east from brecciated sediments on the west and is apparently not mineralized. Well-defined mullion structure indicates dip-slip movement. Ferguson/ states that the

/ Ferguson, H. G., op. cit., p. 16.

fault is probably ~~on~~ a post-ore normal fault.

The ore occurs on the upper level in two west-dipping veins averaging about 4 inches in thickness, and in a stockwork-like system of veinlets ranging from about 2 inches to 2 feet in length. These veinlets appear to be subsidiary to the large veins and generally occur within 15 feet of them. The two large veins have lateral lengths of 60 and 100 feet, and pinch out abruptly. The veins consist of the hydrous nickel arsenate annabergite (?) quartz, limonite, and a small amount of gouge.

Stopes on the veins are not accessible but apparently extend for at least 25 feet above and below the level. The number of winzes and stopes below the level suggest that both veins have been thoroughly exploited and possibly exhausted between the two levels.

The evidence indicates that mineralization has been a function of permeability during the period when the mineralizing solutions were available. There is no evidence of post-ore movement along the veins and their discontinuity is probably due to local conditions prevailing at the time of mineralization. This suggests that open spaces did not exist in the ground now explored by the lower tunnel and that a search for new ore bodies should be conducted in areas of more intensely fractured ground. A detailed structural study of the area might reveal trends in the fracture pattern which could be used as a guide to such a search, but at present the evidence is insufficient to permit prediction of other ore bodies. Although it is quite conceivable that such bodies may exist on the property there is no evidence from which reserves may be inferred in the area of proposed exploration. The ore-bearing veins in the upper level have been stoped for about 50 feet below the level and in view of their lateral lengths, probably extend little farther in depth.

Conclusions

The applicant proposes to explore the ground below the lower level west of the fault. As the lower level is only 15 feet above the canyon floor the necessity of hoisting all ore and waste would result in high mining costs. Another unavoidable expense would be incurred in the construction of a four-mile access road from the mine southeast through Cottonwood Canyon to Dixie Valley. In Dixie Valley it would connect with a good gravel road that leads to U. S. Route 50, 40 miles to the south. The construction would be expensive as the canyon is rugged and steep-walled; Dixie Valley is about 900 feet lower than the Nickel Mine. The road to Lovelock crosses nearly the entire width of the Stillwater Range and would be unsatisfactory as a haulage road.

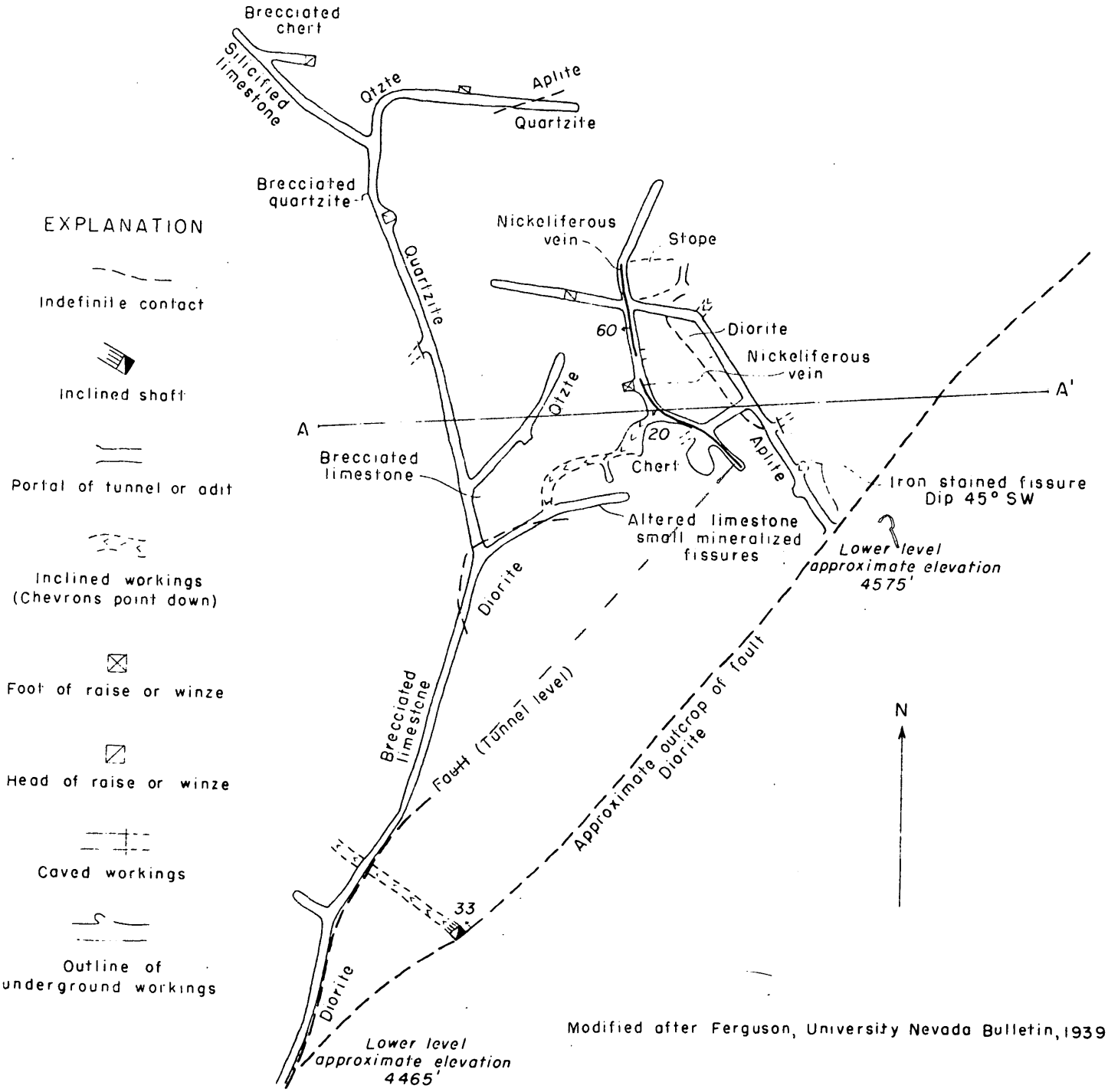
The writer does not recommend the proposed exploration program for the following reasons: (1) the improbability of ore discovery in the ground to be explored, (2) high mining costs resulting from the necessity of hoisting ore and waste, and (3) the large expenditure necessary for road construction.

The writer does recommend geologic examination and sampling of an area about 500 feet north of the upper portal. There, malachite and annabergite (?) are rather uniformly distributed over an area of at least 18,000 square feet. No attempt was made to delimit the metallized area, nor were samples collected, but the owner reports that a random sample taken in this area contained 1.42 percent nickel, 1.44 percent copper, and 0.11 percent cobalt.

Discussions with the owner gave the impression that he is probably a competent small mine operator with average ability although no factual evidence was available to the writer.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE I
DMA 1320X
(NICKEL)



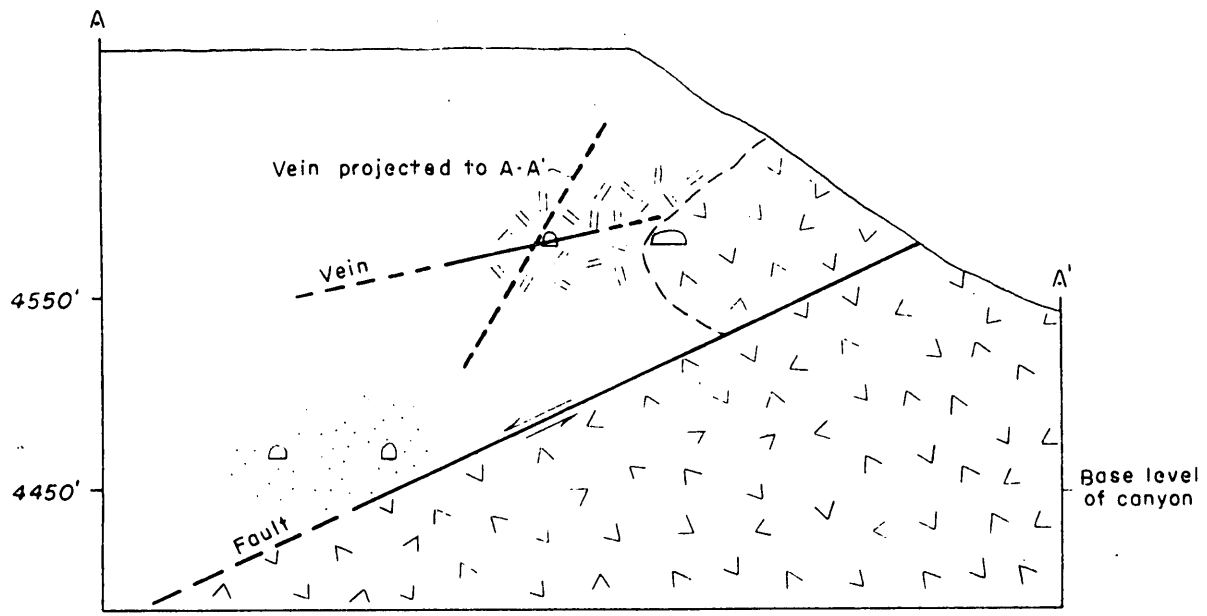
Modified after Ferguson, University Nevada Bulletin, 1939

NICKEL MINE, CHURCHILL COUNTY, NEVADA

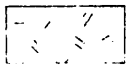
0 100 200 Feet

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PLATE II
DMA 1320X
(NICKEL)



EXPLANATION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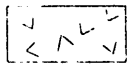
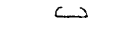

Diorite

Sediments


Tunnel

IDEALIZED SECTION ALONG LINE A-A'
NICKEL MINE, CHURCHILL COUNTY, NEVADA

0 100 200 Feet

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

Supplement to

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMA-1320x, Nickel Mine

Churchill County, Nevada

C. D. Ellehart, Geologist
U. S. Geological
Survey

October 25, 1951

Introduction and Summary

The Nickel Mine was examined at the request of the Defense Minerals Administration subsequent to the request of the applicant, Mr. C. A. McKay, for government participation in a $62,000 exploration loan. A report of the examination, by C. D. Rinehart of the Geological Survey, was submitted on August 13, 1951. The loan was not recommended because of the improbability of ore discovery in the area of proposed exploration. It was recommended, however, that further examination of a metallized area several hundred feet north of the workings might be warranted, should the need for nickel be sufficiently urgent. At the request of Mr. Tom Lyon, Chairman, Coordinating Committee, Defense Minerals Administration this area was examined and is the subject of the present report.

Two days, October 2 and 3, 1951, were spent by C. D. Rinehart of the Geological Survey in examining and sampling the area. The metallized zone is approximately 400 feet in diameter, the center of which is 1900 feet N 2° W of the collar of the inclined shaft in the main workings. Five chip samples were collected from the zone and were assayed for copper, nickel and cobalt by the Hydrometallurgical and Ore-Testing Branch of the Bureau of Mines at Reno, Nevada.

Assays indicate that the low metal content of the rock precludes its being mined at a profit. No geologic evidence was observed that would indicate the presence of ore at depth.

Geology

The area is underlain by altered pyroclastics and sediments which have been intruded by diorite and aplite. The sediments consist principally of quartzites and highly silicified limestones of undetermined thickness. The pyroclastics consist of several hundred feet of coarse volcanic breccia and interbedded tuffs which have been highly altered and locally silicified. The intrusives weather readily and are poorly exposed.

No bedding was observed in the sediments and at only one place was it observed in the pyroclastics. There, a 3 foot bed of tuff was traced for 20 feet along its strike. In nearly every outcrop one or more faults was exposed but with no apparent system of orientation.

The rocks in the metallized area are stained a shade of green almost identical to that of the nickel arsenate, annabergite (?), which occurs in veins in the upper level of the main workings (see previous report). From the assays, however, it becomes obvious that the green coloration is due to a copper mineral, probably malachite, rather than to a nickel mineral. The general appearance of the stained rocks gives the impression of a high mineral content, but the assays tabulated below indicate that they cannot be considered as ore.

Sample No.	Width	%Cu	%Ni	%Co
1.	1'	0.58	*0.01	*0.01
2	4'	0.03	*0.01	*0.01
3	4'	0.05	*0.01	*0.01
4	2'	0.03	*0.01	*0.01
5	3'	0.01	*0.01	*0.01

* Less Than

Conclusions

At present cost and price levels the metal content at the surface of the area examined is too low to be mined at a profit, and no geologic evidence was observed that would indicate the presence of ore at depth. Therefore, further exploration in the area does not seem warranted at this time.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

Supplement to

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMA-1320x, Nickel Mine

Churchill County, Nevada

C. D. Rinehart, Geologist
U. S. Geological
Survey

October 25, 1951

Introduction and Summary

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Assays indicate that the low metal content of the rock precludes its being mined at a profit. No geologic evidence was observed that would indicate the presence of ore at depth.

Geology

The area is underlain by altered pyroclastics and sediments which have been intruded by diorite and aplite. The sediments consist principally of quartzites and highly silicified limestones of undetermined thickness. The pyroclastics consist of several hundred feet of coarse volcanic breccia and interbedded tuffs which have been highly altered and locally silicified. The intrusives weather readily and are poorly exposed.

No bedding was observed in the sediments and at only one place was it observed in the pyroclastics. There, a 3 foot bed of tuff was traced for 20 feet along its strike. In nearly every outcrop one or more faults was exposed but with no apparent system of orientation.

The rocks in the metallized area are stained a shade of green almost identical to that of the nickel arsenate, annabergite (?), which occurs in veins in the upper level of the main workings (see previous report). From the assays, however, it becomes obvious that the green coloration is due to a copper mineral, probably malachite, rather than to a nickel mineral. The general appearance of the stained rocks gives the impression of a high mineral content, but the assays tabulated below indicate that they cannot be considered as ore.

Sample No.	Width	%,Cu	%,Ni	%,Co
1.	1'	0.58	*0.01	*0.01
2	4'	0.03	*0.01	*0.01
3	4'	0.05	*0.01	*0.01
4	2'	0.03	*0.01	*0.01
5	3'	0.01	*0.01	*0.01

* Less Than

Conclusions

At present cost and price levels the metal content at the surface of the area examined is too low to be mined at a profit, and no geologic evidence was observed that would indicate the presence of ore at depth. Therefore, further exploration in the area does not seem warranted at this time.

14. Exhibit E (question 23-c)

a) Is it applicable? yes

b) Sufficient data? no

c) Reasonable?

d) Field check needed? yes

15. In your judgment, can the proposed work be done in the proposed time? yes 19 months

(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? 1 Check Items 8-9-10-11-12-13 herein

2 Check occurrence & distribution of ore

3 Geologic factors affecting ore grade

4 Nearest smelter to handle ore

5 Is Commercial operation feasible

6 Prospect for repayment of loan

7 Competency of applicant

Reviewed by: Paul E. Pesonen

Date June 15, 1951

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA 1320 X

Commodity Nickel - ~~Cobalt~~

Total Amount $62,000

Govt. Participation 90%

1. Name and Address of Applicant Charles A McKay
P.O. Box 1044 - Eureka Nevada

2. Location of Property Sec 34 & 35 T 25N R 37 E
N.E Churchill Co. Nevada

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

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 ✓

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? yes Owner
(question 5, 6, 7)

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? no

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 Not shown

b) Equipment and supplies 1600 ft - 8# Rail in hand works & 12 frame Bldgs
(question 14 plus general knowledge of availability)

c) Accessibility (question 12) 55 miles over dirt road

d) Water (question 13) yes

e) Power (question 13) Not stated

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) yes - 12 years as owner and operator of mining properties

Is a field check needed on this point? yes

10. Exhibit A. (questions 21 and 22).

a) Is the project adequately described? yes as to location only

If not, are there sufficient data given so that you can describe the project? no If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? no

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? ✓

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? no If so, attach a draft.

e) Are the cost estimates reasonable? ✓

f) Should more information be requested from applicant? yes

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

11. Exhibit B (question 23-d)

a) Is it applicable? yes

b) If so, are sufficient data furnished? no — only an estimate If so, attach a draft.

c) Is a field check needed? yes

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

a) Is it applicable? yes

b) Sufficient data? no — only an estimate 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? no

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? yes

FILE COPY
SURNAME:

PESONEN
Pardee
McKnight
Lyon

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

June 20, 1951

Mr. Charles A. McKay
P. O. Box 1044
Eureka, Nevada

Subject: DMA-1320X - Application for exploration lean, Nickel Mine, Cottonwood Canyon, Nevada.

Dear Sir:

The subject application has been referred to Mr. H. C. Miller, Executive Officer, DMA Field Team, Region III, 1415 Appraisers Building, San Francisco, California, for field investigation.

It is probable that the field team may contact you while making their investigation for additional information. When this information is received from the field team, it will be possible for us to make a decision as to the merit of your application.

Very truly yours,

Director, Supply Division

PEPesonen:md

Copy to: Adm. reading file
Mr. Thayer, U.S.G.S.
DMA Field Team, Region III
Mr. Lyon
Mr. Strobel
Mr. Pardee
Files

Office of the Administrator

June 19, 1951

Hon. George W. Malone
United States Senate
Washington, D. C.

My dear Senator Malone:

In answer to your letter of June 14, regarding a market for nickel oxide ore owned by Mr. Charles A. McKay of Eureka, Nevada, I am enclosing copy of a letter written to Mr. McKay on the same date.

In addition, Mr. McKay has requested a loan of $62,000 to assist him in the exploration of his property. These loan applications are examined both here in the office and in the field. A letter was sent to the field examiners on June 18, requesting a report from them on the proposed loan. The field engineers will visit the property and discuss the exploration program with Mr. McKay, and will give technical advice, if necessary, to assist him in the exploration of his property.

The decision on the granting of the loan will be made after the report has been received from the field examiners.

Sincerely yours,

JAMES BOYD

Administrator

Enclosure

FGPardee:md

Copy to: Hon.George W. Malone
Adm. reading file
Mr. Lyon
Mr. Strobel
Mr. Pardee
Files

LAN[illegible] P. STROBEL

DENNIS CHAVEZ, N. MEX., CHAIRMAN
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GEORGE W. MALONE, NEV.
JAMES P. KEM, MO.

FRANK BURNETT, CHIEF CLERK

United States Senate

COMMITTEE ON PUBLIC WORKS

June 14, 1951

Dr. James Boyd
Administrator of Defense Minerals
Department of Interior
Washington, D. C.

Dear Dr. Boyd:

Mr. Charles A. McKay of Eureka, Nevada, has indicated that he has a stockpile of nickel oxide ore for which he has no market.

Will you kindly furnish me with any information you may have concerning possible outlets for his stockpile of nickel oxide together with any information you may have concerning the possibility of the Government undertaking the stockpiling of this type of ore.

Sincerely,

George W. Malone

George W. Malone

~~LANDON A. STROBEL~~
Parker - reply to Boyd - 6/15

JUN 12 15 25 PM '51
WASHINGTON, D.C.
MAIL ROOM
BUREAU OF MINES

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 5 1951
LANDON F. STROBEL
Executive Secretary

FILE COPY
~~SURNAME~~

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

Pesonen
Pardee

Macell 6/30/51

June 18, 1951

Memorandum

To: Coordinating Committee

From: Nickel Ores Commodity Committee

Subject: DMA-1320X - Application for exploration loan - nickel and cobalt, $62,000. Charles A. McKay, Eureka, Nevada, Nickel Mine, Cottonwood Canyon, Nevada.

The subject application has been reviewed and, based on the past production and the apparent tenor of the ore, it is recommended for a field investigation.

The deposit was operated for 8 years, but has been idle since 1907. A shipment of 26 percent nickel ore was made to Camden, New Jersey. The workings are on a contact between diorite and andesite or andesite breccia. The ore which is in the andesitic rock has been exploited by cuts, tunnels and an inclined shaft about 200 feet deep. The ore is found in discontinuous fissures, joints and microscopic cracks as much as 100 feet from the contact. The ore minerals are combinations of nickel, arsenic, iron and sulphur.

The applicant proposes to explore the area below and east of the lower level and west of the fault by means of diamond drilling. Providing sufficient ore reserves of commercial grade can be developed, they propose to construct a concentrating plant on the property.

The information available on the deposit is insufficient to determine the merits of this exploration project.

It is recommended that the field team be instructed to make a reconnaissance of the potentialities of developing commercial ore reserves and, providing the project looks favorable, to have the exploration contract signed by the owner and to furnish complete technical data to complete processing the application.

PEPesonen:md

Copy to: Adm. reading file
Mr. Rove, U.S.G.S.
Mr. Moon
DMA Field Team, Region III
Mr. Lyon Mr. Strobel

Franklin G. Pardee, Chairman
Nickel Ores Commodity Committee

Mr. Pardee Files

FILE COPY
SURNAME:

PESONEN
Pardee

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

June 18, 1951

Via Air Mail

Mr. H. C. Miller
Executive Officer
DMA Field Team, Region III
1415 Appraisers Building
San Francisco, California

Subject: DMA-1320X - Application for exploration loan - nickel and cobalt, $62,000. Charles A. McKay, Eureka, Nevada, Nickel Mine, Cottonwood Canyon, Nevada.

Dear Mr. Miller:

The attached Form MF-103, concerning the subject application for exploration assistance, is being referred to you for field investigation. The information contained therein does not permit judgment to be made as to the merits of the proposal.

It is requested that you make a field examination of the deposit to ascertain whether the area between the lower level and the fault has any possibility of mineralization at depth. The description of the past operations and of the mode of the mineralization does not look encouraging, but the field examination will clarify this. It will be necessary to determine the amenability of the ore to beneficiation by a visual examination for the present. The attached "Review of Application for Exploration Assistance" should be answered in detail only if the project is recommended for exploration. Investigate amount and cost of road work.

Very truly yours,

Tom Lyon
Chairman, Coordinating Committee

PEPesonen:md

Lowell A. Moon

Member, Bureau of Mines

Olaf N. Rove

Member, Geological Survey

Enclosures

Copy to: Adm. reading File
Mr. Rove, U.S.G.S.
Mr. Moon
Mr. Lyon
Mr. Strobel
Mr. Pardee
Files

FILE COPY
SURNAME:

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

June 19, 1951

Mr. Charles A. McKay
Post Office Box 1044
Eureka, Nevada

Subject: DMA-1320X
Re: Exploration Loan -
London and the Liverpool

My dear Mr. McKay:

Receipt is acknowledged of your application and attachments of May 22, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1320X and referred to Mr. Franklin Pardee, Chief, Nickel Branch on May 29, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1320X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel jc
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Pardee
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-1320X

Date received 5/28/51

Participation

Charles A. McKay
P. O. Box 1044
Eureka, Nevada

Name and address of applicant

Date May 22, 1951

FILL IN THIS BLOCK

Date of application May 22, 1951

Estimated cost $62,000

Mineral or metal Nickel and Cobalt

Percentage of Government participation 90%

Location of mine Sec. 34 & 35
T 25 N., R 37 E.
MDB & M
~~N. & Churchill Co., Nev.~~

Date of filing MF-100 Not filed

DMA Docket Number, if available DMA-1320X

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.

(Name of company)	By C. A. McKay (Signature of authorized official)
(Date)	Owner (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

By Charles A. McKay, Eureka, Nevada

1. Applicant is an individual.

2. ____

3. ____

4. 12 Years owner and operator of metallic and nonmetalic mining properties.
25 years general business experience and corporation executive.

5. Owner

6. None

7. _____

8. _____

9. $6,200-which is sufficient to pay individual participation requirement.

10. (a) Two patented mining claims, the London and the Liverpool.

(b) Same area

11. London and Liverpool claims, also known as the "Nickel Mine".

12. 65 mi. SW of BattleMountain over gravel road (50 mi.) and unimproved dirt road.
55 mi. N from Highway 50 over dirt road.
Road used by owner- 55 mi. E of Lovelock over dirt road.

13. Cottonwood Creek nearby supplies adequate water for drilling.

14. 1,000 ft. 8 lb rail in lower workings
2 frame buildings

15. Concentrating plant on property if warranted.

16. (a) see "Ferguson- Nickel Deposits in Cottonwood Canyon, Nevada, Univ. of Nev. Bulletin 32, 1939."
Production 1882-1890 one or more cars 26% Ni. shipped to New Jersey.
Mine reopened in 1904; attempts made to leach ore; production about 50 tons matte.
Mine idle 1907 due to litigation, and high costs of transportation.

(b) Lovelock mine 1 mile NW produced 500 tons of high grade Ni-Co ore 1883 to 1898, 200 tons shipped to England said to contain 12% Ni, 14% Co.

(c) See Ferguson, Ransome (USGS Bulletin 414 pp 64-66 & 71- 1909)

By Charles A. McKay, Eureka, Nevada

17. Not in production

18. (a) Deposits in altered limestone and quartz, etc. intruded by diorite. Flat fissue vein dipping 20 degrees SW, and steep veins (60 degrees west dip) were both stoped. Minerals present in veins:- annabergite, garnierite, niccolite, millerite.
Highgrade ore assays reported shipped and present 29.67% NiO.

(b) See Ferguson Fig. 4 for map
" " page 13 for assay data.

(c) 150 tons of stockpiled ore assays 18.7% NiO:- Cobalt trace
No blocked out reserves, but several hundred tons of lower grade ore is exposed in the mine.

19. _____

20. Primary nickel and cobalt sulphides in veins below old stopes.

21. Seven diamond drill holes are proposed to cut the veins at depth in area east of lower tunnel as far as fault.
The ore follows both flat and steep fissures according to Ferguson. Seven drill holes could be located so that they would adequately cover promising area.

22. No maps available.

23. Labor by contract
(b) Supervisors- 1 supervisor $500. per month
(c) Cost of repairs to existing facilities- $210
(d) Cost of necessary installation or construction, etc. $1975.

(e) Cost of items of equipment which must be purchased over $50 or more each. Water pump, tanks, pipe, etc. $1495
(f) Cost of Rental for equipment which the operator proposes to rent. Road building equipment, transportation equipment, etc. $8,050.
(g) Rental value of items of equipment owned by operator will be competitive with market prices.

(h) Cost of materials and supplies, under $50.- $750
(i) Cost of power, water, utilities, etc. $1500

24. Work expected to start within 60 days of project approval, and continue about 18 months. Project completed as fast as possible, and time required would depend on rock encountered.

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-1320X

Date received 5/28/51

Participation

Charles A. McKay
P. O. Box 1044
Eureka, Nevada

Name and address of applicant

Date May 22, 1951

FILL IN THIS BLOCK

Date of application May 22, 1951

Estimated cost $62,000

Mineral or metal Nickel and Cobalt

Percentage of Government participation 90%

Location of mine Sec. 34 & 35
T 25 N., R 37 E.
MDB & M
N. E. Churchill Co., Nev.

Date of filing MF-100 Not filed

DMA Docket Number, if available Dma-1320X

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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.

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*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.

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    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
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    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

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

CERTIFICATION

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

(Name of company)	By C A McRae (Signature of authorized official)
(Date)	Owner (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

By Charles A. McKay, Eureka, Nevada

1. Applicant is an individual.

2. _____

3. _____

4. 12 years owner and operator of metallic and nonmetalic mining properties.
25 years general business experience and corporation executive.

5. Owner

6. None

7. _____

8. _____

9. $6,200

10. (a) Two patented mining claims, the London and the Liverpool.

(b) Same area

11. London and Liverpool claims, also known as the "Nickel Mine".

12. 65 mi SW of Battle Mountain over gravel road (50 mi.) and (15 mi.) of unimproved dirt road.
55 mi. N from Highway 50 over dirt road.
55 mi. E of Lovelock over dirt road, and present road used by owner.

13. Cottonwood Creek nearby supplies adequate water for drilling.

14. 1,000 ft. 8 lb rail in lower workings
2 frame buildings

15. Concentrating plant on property if warranted.

16. (a) see Ferguson- Nickel Deposits in Cottonwood Canyon, Nevada Univ. of Nevada Bulletin 32, 1939."
Production 1882-1890 one or more cars of 26% nickel shipped to New Jersey.
Mine reopened in 1904; attempts made to leach ore; production about 50 tons matte.
Mine idle 1907 due to litigation, and high costs of transportation.
(b) Lovelock mine 1 mile NW produced 500 tons of high grade Ni-Co ore 1883 to 1898, 200 tons shipped to England said to contain 12% Ni, 14% Co.
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$8,500

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By Charles A. McKay, Eureka, Nevada

17. Not in production

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Highgrade ore assays reported shipped and present 29.67% NiO.

(b) See Ferguson Fig. 4 for map
" " Page 13 for assay data

(c) 150 tons of stockpiled ore assays 18.7% niO:- Cobalt trace No blocked out reserves, but several hundred tons of lower grade ore is exposed in the mine.

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20. Primary nickel and cobalt sulphides in veins below old stopes.

21. Seven diamond drill holes are proposed to cut the veins at depth in area east of lower tunnel as far as fault. The ore follows both flat and steep fissures according to Ferguson. Seven drill holes could be located so that they would adequately cover promising area.

22. No maps available.

23. All labor by contract
(b) Supervisors- 1 supervisor $500 per month
(c) Cost of repairs to existing facilities- $210
(d) Cost of necessary installation or construction, etc. $1975
(e) Cost of items of equipment which must be purchased costing $50 or more each, such as water pump, tanks, pipe, etc. $1495
(f) Cost of rental for equipment which the operator proposes to rent; road building equipment, transportation equipment, etc. $8,050
(g) Rental value of items of equipment owned by operator will be competitive with market prices.
(h) Cost of materials and supplied, under $50 each- $750
(i) Cost of power, water, utilities, etc. $1500

24. Work expected to start within 60 days of project approval, and to continue about 19 months. Project completed as fast as possible, and time required would depend on rock encountered.

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-1320X

Date received 5/28/51

Participation

Charles A. McKay
P. O. Box 1044
Eureka, Nevada

Name and address of applicant

Date May 21, 1951

FILL IN THIS BLOCK

Date of application May 21, 1951

Estimated cost $62,000

Mineral or metal Nickel and Cobalt

Percentage of Government participation 90%

Location of mine Sec. 34 & 35
T 25N., R 37 E.
MDB & M
Mt. Churchill Co., Nev.

Date of filing MF-100 Not filed

DMA Docket Number, if available DMA-1320X None

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.
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(Date)	Owner (Title)

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