STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. R. E. Adams, Administrative Officer DATE: April 16, 1952

FROM : Iron and Ferro-Alloy Division

SUBJECT: Removal from active files of Docket No. DMA 206 - Cobalt
Burt S. Hayes
Standard Mine
Grant County, Oregon

The above referenced docket has been withdrawn from the active files of this Division and is forwarded to you herewith. Data necessary to process the application ~~was~~ were not provided to us by April 1, 1952, the date beyond which our letter of December 29, 1951, to the applicant specified that the docket could not be held pending.

G. C. Selfridge

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

DEC 29 1951

Mr. Bert S. Hayes
Box 422
John Day, Oregon

Re: Standard Mine
Quartzburg District, Oregon
Cobalt - DMA Docket 206

Dear Mr. Hayes:

This is to acknowledge receipt of your letter of December 19, in reply to our letter of December 13, 1951.

We shall keep the application pending until April 1, 1952. If, by that time, you wish us to proceed with its processing, please advise us and we shall send you the form used to guarantee royalty payments when the Landlord's Subordination cannot be secured.

With regard to your application for a loan to enlarge your mill, please write to Defense Materials Procurement Agency, which is the one that handles that type of loan.

Sincerely yours,

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division
Defense Minerals Exploration
Administration

GCSelfridge/hmj
12-30-41
cc to: Adm. Reading File
Mails and Files
Mr. Mittendorf
Mr. Davis USBM
Mr. Thayer USGS
Mr. Selfridge
Region II (2)
Docket

Mr. R. E. Adams, Administrative Officer April 16, 1952

Iron and Ferro-Alloy Division

Removal from active files of Docket No. DMA 206 - Cobalt
Burt S. Hayes
Standard Mine
Grant County, Oregon

The above referenced docket has been withdrawn from the active files of this Division and is forwarded to you herewith. Data necessary to process the application was not provided to us by April 1, 1952, the date beyond which our letter of December 29, 1951, to the applicant specified that the docket could not be held pending.

George C. Selfridge

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

LSeott'lm
4/16/52

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

FILE COPY
SURNAME:

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

Mr. R. N. Adams, Administrative Officer

April 16, 1952

Selfridge

Iron and Ferro-Alloy Division

Removal from active files of Docket No. DMA 206 - Cobalt
Burt S. Hayes
Standard Mine
Grant County, Oregon

The above referenced docket has been withdrawn from the active files of this Division and is forwarded to you herewith. Data necessary to process the application was not provided to us by April 1, 1952, the date beyond which our letter of December 29, 1951, to the applicant specified that the docket could not be held pending.

George C. Selfridge

4/16

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

LScott'lm
4/16/52

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

400

FILE COPY
SURNAME:

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

Selfridge
Hayes

FEB 6 1952

Mr. Burt S. Hayes

John Day, Oregon

Dear Mr. Hayes:

This is to acknowledge receipt of your letter of January 31, 1952, requesting information regarding possible buyers of your cobalt concentrate.

Please contact Mr. Arthur R. Maupin, Emergency Procurement Service, Room 7029, 7th and D Streets, S. W., Washington 25, D. C., and furnish him with the following information:

1. A full chemical analysis of the concentrate.

2. The quantity of concentrate you can furnish monthly.

3. The number of months that you can furnish like concentrate.

4. The price you are asking for the concentrate.

If you have sold the same type of concentrate previously, please furnish Mr. Maupin with the amount sold and the price received. On receipt of the above information, Mr. Maupin should be able to inform you where you might dispose of your concentrate.

Sincerely yours,

SIGNED

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

GCSelfridge:ls
2/4/52

Copy to: Admn. Reading File
2-6-52 Mails and Files
J.D. G. C. Selfridge

John Day, Oregon
Jan 31, 1952
Box 422

Defense Minerals Exploration Administration
Iron & Ferro-alloy Division
C/o George C. Selfridge, Acting Chief.

Dear Sir:

I would like to know if the government will buy the Cobalt concentrates from the "Standard Mine & pay us for both the Cobalt and gold. If not or if you know of any place where we could sell these concentrates would you please let me know.

I remain

Yours very truly
Burt S. Hayes

Re Standard Mine
Quartzburg district, Oregon
Cobalt - D.M.A. docket 206

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 4 1952

Defense Minerals Administration
RECEIVED
FEB 4 1952

Application being held pending until 4-1-52 at Applicant's request.

400

FILE COPY
SURNAME:

Mittendorf

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

DEC 29 1951

Mr. Burt S. Hayes
Box 422
John Day, Oregon

Re: Standard Mine
Quartzburg District, Oregon
Cobalt - DMA Docket 206

Dear Mr. Hayes:

This is to acknowledge receipt of your letter of December 19, in reply to our letter of December 13, 1951.

We shall keep the application pending until April 1, 1952. If, by that time, you wish us to proceed with its processing, please advise us and we shall send you the form used to guarantee royalty payments when the Landlord's Subordination cannot be secured.

With regard to your application for a loan to enlarge your mill, please write to Defense Materials Procurement Agency, which is the one that handles that type of loan.

Sincerely yours,

SIGNED

G. C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division
Defense Minerals Exploration
Administration

GCSelfridge/hmj
12-30-51
cc to: Adm. Reading File 12-29
Mails and Files S.D.
Mr. Mittendorf
Mr. Davis USBM
Mr. Thayer USGS
Mr. Selfridge
Region II (2)
Docket

John Clay, Ore
Dec 19/41
Box 422

United States Dept of Interior
Defense Minerals Administration
Washington D. C.

To George C. Selfridge, acting chief
Iron & Ferro-Alloy Division
Dear Sir:

In regards to the Loan, re-Standard Mine (Cobalt - D M A, Docket 206) after we were unable to get the Subordination agreement from the Company (Lessors of Standard Mine) we were of the opinion, that we couldn't get the Loan, without the subordination agreement, so we have already Bonded the Mine to Mr Ray Summers of this Town, and he has until the first of March 1952, to make the payment on the property, but in case he doesn't meet the payments, we will be able to guarantee the royalty payments and would like to, keep the Loan pending until then.

I have also made a request for

a ten thousand dollar Loan to put in a larger mill than the one we have at the Standard Mine, for which to work Chrome from the Dry Camp Mine and other properties in this vicinity, so would like to know if the Loan for this will be granted, re, DMPA-2227 (docket number)

Trusting this will be satisfactory, and hoping to hear of you soon as the Climate in the Valley would permit me to build this winter.

I remain

Yours truly

Burt S. Hayes

FILE COPY
400 SURNAME:

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

Gordon
Selfridge.

DEC 13 1951

Mr. Burt S. Hayes
Box 422
John Day, Oregon

K. J. Murray

Re: Standard Mine
Quartzburg District, Oregon
Cobalt - DMA Docket 206

Dear Mr. Hayes:

We have been advised that you are unable to obtain a subordination agreement from the lessors of the Standard Mine.

Under certain conditions the Government may waive the requirement of a Landlord's Subordination Agreement, provided the lessees guarantee the payment of royalties to the Government upon any and all ores mined as a result of a discovery made under an exploration contract as outlined in form MO-5 as amended.

If your partner and you cannot obtain a subordination agreement and desire to execute personal guaranties, we suggest that you advise us accordingly. Unless we receive the subordination or your personal guaranties, which must be acceptable to the Government, we cannot make a loan and must consider the application withdrawn.

If a subordination or an acceptable guarantee is furnished us then please send us a copy of your lease, which must be considered while processing your application.

We would appreciate hearing from you at an early date.

Sincerely yours,

George C. Selfridge

12/13

George C. Selfridge, Acting Chief
Iron and Ferro-Alloy Division
Defense Minerals Exploration
Administration.

CGSelfridge:Gordon/hmj
12-11-51
cc to: Adm. Reading File
Mails and Files
Mr. Mittendorf
Mr. Selfridge
Mr. Davis
Mr. Thayer
Region II (2)
Docket

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

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 1 1 1951
Defense Minerals Administration,
Production Expansion Division.

December 6, 1951

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

In reply to your letter of November 27 with reference to the Standard mine in the Quartzburg district, Oregon, docket DMA-2206, cobalt, Mr. Hayes has apparently encountered insurmountable difficulties in obtaining subordination agreements, the main difficulty being that the property is controlled by an estate and that the lawyers are not willing to sign the agreements. It is our understanding also that Mr. Hayes is dickering with a group, headed by a Mr. Culp, to take over the mine. Mr. Culp and some of his associates were in to see me about the possibility of applying for a new and larger contract.

There is still the problem of subordination agreements if this new group should take over, but it is possible that the group may be composed of people of sufficient financial stability that some sort of a guarantee can be given in lieu of subordination agreements. However, as far as we know, the matter is not settled yet. I would suggest that you write to Mr. Hayes and find out definitely that he cannot obtain the necessary subordination agreements and if he cannot, that the docket be closed and reopened again if the new group makes formal application.

Sincerely yours,

A. E. Weissenborn

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 10 1951

cc: U.S.B.M.

330

FILE COPY
SURNAME:

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

TOM LYON, DIRECTOR, SUPPLY DIVISION

DEFENSE MINERALS ADMINISTRATION
1420137-Salaries and Expenses. Defense Production Activities
DEPARTMENT OF THE INTERIOR
1952

WASHINGTON, D. C., JULY 18, 1951

MR. A. E. WEIGSTROM, EXEC. OFFICER
DMA FIELD TEAM II
SOUTH 157 HOWARD STREET
SPOKANE, WASHINGTON

RE: STANDARD COBALT, OREGON, DMA 206X PLEASE OBTAIN AND REMIT FOUR COPIES OF LEASE AGREEMENTS COVERING AFFECTED GROUND TOGETHER WITH SIX COPIES SUBORDINATION AGREEMENTS. DO YOU REGARD TRUCK PURCHASE ADVISABLE?

Tom Lyon

TOM LYON, DIRECTOR
SUPPLY DIVISION

WBourret/bf

cc - Confirmation

cc: Adm. Reading File
Reports & Records
Lyon
Field Team II (2)
Bourret (2)
Files

Phoned Mr. Eisenbrom 7/17 re MF-103-#23 for this, & he related applicant agrees to our working up acceptable data sheet, & please do so.

Did a real field report come back, giving some notion of expected target? Data in U.S.G.S. files not very encouraging.

Dr. Ralston
3502

Conditional – Economics? Ore recovery?

Davis, Ralph: says will work along on Vikay Ores

Suggest use one contact from

DM Lemmon
7-9-51

need MF-103-23 for supporting detail

– What amount of ore might be found. Size of deposit

Work up satisfied MF-103-23 data

Dr. Ralston, X-3502, says

Harley A. Sill, 1011 S. FIGUEROA ST. LOS ANGELES

has worked out process for Co-Ag concentrates with As content, gets 97% recovery, (Arsenic as sodium arsenite, goes to arsenate & precipitated as calcium arsenate; As probably enough to pay for Na consumption?) – recovered Co, Ni, and precious metals from Ontario ores. –

So, can probably work out satisfactory recovery of cobalt from ores from Standard Mine, Quartzburg district, Oregon, DMA docket-206X, if found in sufficient quantity. Suggest refer to Sill if ores are found by proposed exploration project

To: [illegible]
Through: [illegible]
Subject: Strategic Metals
K. J. Murray & B. S. Hayes
John Day, Oregon
Cobalt - DMA-206X

Under date of June 25, 1954, K. J. Murray and B. S. Hayes submitted the subject exploration project, DMA 206X, for a total cost of $27,625, for a government participation of $24,862.50 (90%). Applicants are prepared to invest their portion, $2,762.50.

The following factors have been considered and weighed in reviewing this application.

1. Refer MO-5, Sec. 1 (Criteria)

(a) Additional sources of cobalt are desired.

(b) Mr. J. S. Vhay, U.S.G.S., recommends that the contract be approved, basing on the belief that shoots formed by stoped above the lowest level should continue downward. These are known to have contained cobalt.

(c, d, e & f) Manpower, equipment and supplies are available. Adequate roads lead to the property. Ample water for mining is available. Power will be from portable units.

(g) A competent lead miner, acceptable to the DMA field team, must be placed in charge of the operation, the owners being relatively inexperienced.

2 - The ground to be included in the project consists of the following patented claims: The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Geraty Mining Claim, Purdy Geraty Mining Claim, Juniper Geraty Mining Claim, Black Horse Mine, Sun Star Geraty Mining Claim, Sick Horse Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Geraty Mining Claim, Black Horse Mine, Sun Star Geraty Mining Claim, Sick Horse Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Geraty Mining Claim, Sun Star Geraty Mining Claim, Willie Bog Mine, Hard Geraty Mine, I. X. L. Mine, Standard Mine and Morning Glory Mine, all in Survey 838, Sections 1 and 12, T 12 S, R 34 E, Willamette Meridian and the Grover Cleveland Lode claim in tracing part of Section 12, T 12 S, R 33 E, W.M.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
So. 157 Howard Street
Spokane 4, Washington

June 25, 1951

Memorandum

To: R. H. Ridgway
Ferrous Metals Committee
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

From: Field Team, Region II

Subject: DMA Docket No. 206, Cobalt Exploration Project Contract with K. J. Murray and B. S. Hayes, John Day, Oregon.

We believe that the enclosed contract should be approved inasmuch as there is a good chance that considerable cobalt ore will be proved up.

Landlord's Subordination Agreement forms have been sent to the applicant, but have not been returned.

All docket material is returned herewith.

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, Wash.

FILE COPY
SURNAME:

Bourret

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

AIR MAIL

June 19, 1951

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

Re: MA docket - 206

Dear Mr. Weissenborn:

I have received your memorandum of May 31, concerning the cobalt application, DM-206, of Murray and Hayes, Standard Mine, Grant County, Oregon. I note that Mr. J. S. Vhay is now in the Quartzburg area and has been asked to contact these gentlemen and discuss certain changes in their application. I might suggest that in this connection you ask Mr. Vhay to present the applicants with a copy of contract form MF-200 at this time, in order that they can review and study the various contract provisions. Also, if you think well of this proposition, it would be advisable if the applicants could prepare exhibits A to E inclusive in sufficient detail to facilitate processing in this office. As I am sure you already know, the Production Expansion Division require six copies each of the various exhibits, including maps.

Thank you for your assistance in this matter.

Yours very truly,

Weston Bourret M. D.

Weston Bourret, Chief
Minor and Rare Metals

~~Enclosure~~

WBourret/mh
cc: Adm. Read. File
Lyon
Strobel
Mittendorf
Field Team II
Bourret
Files

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:

Attached herewith are four copies of a memo from the Field Team, Region II and from an examining team with respect to the application of K. J. Murray and B. S. Hayes of the Standard mine in the Quartzburg district, Oregon, docket DMA-206. The original application is being retained here as some additional negotiations with the applicants are required. Will you please forward this material to the Nonferrous Metals Committee.

Sincerely yours,

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

Enclosures

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

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

Dear Mr. Strebel:

Attached herewith are four copies of a memo from the Field Team, Region II and from an examining team with respect to the application of K. J. Murray and B. S. Hayes of the Standard mine in the Quartzburg district, Oregon, docket DMA-206. The original application is being retained here as some additional negotiations with the applicants are required. Will you please forward this material to the Nonferrous Metals Committee.

Sincerely yours,

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

Enclosures

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

Memorandum

To: Chairman, Ferrous Metals Committee, Field Team, Region II

From: Field Team, Region II

Subject: DMA-206 Cobalt Application of K. J. Murray and B. S. Hayes

In accordance with instructions from the Ferrous Metals Commodity Committee, the Standard mine in the Quartzburg district, Oregon, was examined by J. S. Vhay and John W. Hosterman of the U. S. Geological Survey. Four copies of their report are attached.

On the basis of this report the Field Team believes that the Standard mine is a likely prospect and an exploration agreement should be made with Messrs. Murray and Hayes. The Field Team believes, however, that the original proposal of the applicants is inadequate to properly explore the property. The shaft should be sunk to a depth of at least another 100 feet and perhaps some additional drifting should be done beyond the 150 feet contemplated. It would also be necessary for the applicants to properly detail their estimates of costs of equipment.

Mr. Vhay is now in the Quartzburg area and has been instructed to contact Messrs. Murray and Hayes and discuss these suggestions with them. If, upon review, the Field Team finds that the new proposal is satisfactory, it will recommend favorable action.

By Field Team, Region II

A. E. Weissenborn

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

Glenn A. Reed, for

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

Memorandum

To: Chairman, Ferrous Metals Committee, Field Team, Region II

From: Field Team, Region II

Subject: DMA-206 Cobalt Application of K. J. Murray and B. S. Hayes

In accordance with instructions from the Ferrous Metals Commodity Committee, the Standard mine in the Quartzburg district, Oregon, was examined by J. S. Vhay and John W. Hosterman of the U. S. Geological Survey. Four copies of their report are attached.

On the basis of this report the Field Team believes that the Standard mine is a likely prospect and an exploration agreement should be made with Messrs. Murray and Hayes. The Field Team believes, however, that the original proposal of the applicants is inadequate to properly explore the property. The shaft should be sunk to a depth of at least another 100 feet and perhaps some additional drifting should be done beyond the 150 feet contemplated. It would also be necessary for the applicants to properly detail their estimates of costs of equipment.

Mr. Vhay is now in the Quartzburg area and has been instructed to contact Messrs. Murray and Hayes and discuss these suggestions with them. If, upon review, the Field Team finds that the new proposal is satisfactory, it will recommend favorable action.

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.B.M., Volin
U.S.B.M., Shelton

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

DEFENSE MINERALS ADMINISTRATION

REPORT BY EXAMINATION TEAM
Region II

DMA-206, K. J. Murray and B. S. Hayes, Standard Mine

Grant County, Oregon

J. S. Vhay, Geologist
U. S. Geological Survey

May 29, 1951

May 29, 1951

EXAMINATION TEAM REPORT

DEFENSE MINERALS ADMINISTRATION

Docket #DMA-206 Property-Standard Mine

J. S. Vhay U.S. Geological Survey

RECOMMENDATIONS

It is recommended that the exploration contract with K. J. Murray and B. S. Hayes to explore the Standard mine be approved. Considerable ore carrying cobalt and gold has been stoped from above the lowest level. There is no reason to believe that the shoots which have been stoped up do not continue below the level.

APPLICANT

A partnership between K. J. Murray and B. S. Hayes of John Day, Oregon.

LOCATION OF PROPERTY

The group of claims around the Standard mine are in Secs. 1 and 12, T. 12 S., R. 33 E., and Secs. 6 and 7, T. 12 S., R. 34 E. in the Quartzburg mining district, Grant County, Oregon. The property is described and the claims listed in Exhibit B of the original application, from which the following is quoted:

"The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz, Willie Boy Mine, Hobo Quartz Mine, I.X.L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

"The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V. page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim."

OWNERSHIP

The ownership is believed to be covered in the quotation given above. The applicants state that they have a lease on the above-described property, and that they have no purchase or sales relations with others. Courthouse records were not checked.

HISTORY AND PAST PRODUCTION

The property, including its history, is described in U.S.G.S. Bull. 846-A, from which the following is abstracted: Development began in 1880; by 1900 the upper level and inclined shaft had been driven, active exploration took place until 1907. The mine has been idle since then except for a little work in 1915 and 1923.

The bulletin records a production of only "a few tons of chalcopyrite-gold ore" before 1900, 10 tons of ore in 1900, and shipments totalling 415 tons of concentrates through 1907, a few tons of ore in 1923, and "some cobalt ore was shipped to the Edison Laboratory." The size of the stopes suggests that considerably more ore has been produced. The stopes on the lowest level, some of which are open up to the next level, apparently produced an ore high in cobalt and gold and containing much less copper; local rumor reports that much of this ore was shipped to Germany, one of the few places where cobalt was refined in those days, but for some reason there is no official record of these shipments.

PROPOSAL

The applicants propose to clean out and retimber 1,000 feet of the lowest level (the retimbering is very essential as the old stopes are open above the drift), sink a shaft 50 feet on one of the shoots, and drift 75 feet, preparatory to starting mining. This is an excellent proposal but it is felt that the shaft should be deepened to at least 100 feet and more drifting would be advisable as several different shoots are visible above the level.

TECHNICAL FEASIBILITY

Geologic Setting

The Quartzburg mining district is briefly described in U.S.G.S. Bull. 846-A, from which the following information is extracted regarding the Standard and the Juniper mines, which have the principal workings on this property.

"The country rock of the Standard vein is chiefly porphyritic andesite...cut by dikes of granodiorite porphyry and a few of diabase. The vein itself is localized along a fault, and there are at least four distinct fault-breccia zones crossing the vein, (which) strikes persistently N. 70-75° E. and dips steeply south...There is one cross-cut to the south from the Standard vein for about 400 feet. This cuts five small...mineralized stringers that strike N. 45-80° E. and dip 60-80° S.

"The Standard vein ranges in width from a few inches to 4 feet. It is...a group of mineralized stringers with considerable replaced wall rock. The main gangue mineral is quartz (with) some ferriferous dolomite and calcite...The ore minerals are pyrite, chalcopyrite, arsenopyrite, cobaltite, glaucodot...galena and sphalerite."

"The Juniper vein is southeast of the Standard vein, (and) is opened along the strike by a tunnel 900 feet long...It ranges in width from 3 inches to about 3 feet. (Pyrite, chalcopyrite, and arsenopyrite occur in a quartz gangue.) Two spots of cobalt bloom were noticed...The wall rock is all meta-andesite, some so much altered as to resemble hornfels. Much tourmaline is present in it."

The Standard mine was opened and sampled by the U.S. Bureau of Mines in 1943. As most of the exposed ore above the lowest level had already been stoped out, the sampling records are not particularly impressive, but averaging all assays above 0.10 percent cobalt shows 9.4 inches carrying 0.72 percent cobalt, 1.58 percent copper, and 0.85 ounces of gold. This is considered a good indication in view of the fact that as the high cobalt ore carries good values in gold it was therefore mined out to a large extent in the past.

Mine Workings

The workings are considerably caved, but level 2 of the Standard mine can be entered part way. Level 1 (the lowest) has been reopened for about 900 feet in, but needs retimbering as the stopes

are standing open above the level. Plate 7, U.S.G.S. Bull. 846-A shows the mine workings, but according to recent mapping by the U.S. Bureau of Mines, level 2 on the section on Plate 7 is in error as the face should be shown at about 570 feet instead of much farther in as shown.

Reserves

No attempt has been made to calculate reserves or grade. Sampling by the Bureau of Mines suggests that the best values in cobalt occurred in the stope farthest in above the lowest level but some values are also found around other stopes.

Assay results on the few samples taken during this preliminary examination confirm the idea that cobalt occurs on the lowest level, and high copper values elsewhere are not accompanied by cobalt. The results are given below:

	WIDTH	LOCATION	GOLD oz.	COBALT %	COPPER %
51-VS-11	1.3'	2d level, pillar	0.04	N.F.*	12.05
12	2.0'	1st level; farthest point in.	0.86	0.78	0.76
13	2.0'	1st level. Cross vein 30' E. of long south crosscut.	0.035	N.F.	0.33
14	1.2'	1st level 20' E. of long S. crosscut	1.06	0.99	0.04
15	.7'	New copper discovery 140' S. of Standard extension on W. side of creek	0.04	N.F.	23.63

* N.F.--not found.

Mining Methods and Costs

No information was obtained as to mining methods or probable costs. The ground, at least on the lowest level, appears to stand well, as most of the stopes are still open. A few stulls are still visible in them. Plans are for a relatively small operation and some miners are available in the district.

Milling Methods

The original application contains a Mineral Dressing report from the U.S. Bureau of Mines at Albany, dated July 10, 1950, which indicates that a flotation concentrate was made which recovers over 94.9 percent of the cobalt and 93.4 percent of the gold, and carrying 14.6 percent cobalt and 5.84 oz. of gold. Table concentration was also successful, but less so than flotation.

Rate of Production

Application states that present mill equipment can handle 16 tons daily, and maximum capacity planned for is 50 tons daily.

Time Schedule to Attain Objectives

Retimbering of the lowest level will probably take a month and the recommended 100 feet of shaft sinking and 200 feet of drifting will probably take four or five months so that if the operators are successful in developing ore shoots, production could probably start about November 1951.

Marketing Facilities

The applicants have not decided where to sell their cobalt-gold concentrate, but with the present shortage of cobalt it should not be too difficult to find a market.

EQUIPMENT

The only equipment aside from a few mine cars, and rails in the mine, is a new small mill rated at 16 tons per day; it contains a small crusher, ball mill, and two flotation cells.

Part of the loan requested is for the purchase of a compressor, air hammers, and construction of a compressor house and miners' housing. The operators will, of course, also need a good pump in connection with the shaft sinking, as the mine is somewhat wet.

No investigation has been made as to the costs or weights (metal) of the equipment needed.

LABOR SUPPLY

No investigation of available labor and costs was made. There is presumably sufficient labor available locally for the small operation.

POWER

Power is available in the South Fork of the John Day River Valley a few miles south. However, gasoline or diesel engines will probably be used at least in the beginning at this operation.

TRANSPORTATION

A rough dirt road leads to the mine from Prairie City, where a paved highway is available. The road is the responsibility of the county and presumably could be improved at a slight cost.

No investigation was made of transportation costs to railhead and supply points.

ADEQUACY OF REQUESTED FUNDS

The funds requested in the original application, ($25,000) may be enough to carry out the stated proposal--to retimber lowest level and sink a shaft 50 feet and drift, but somewhat more would probably be necessary to carry out the recommended 100 feet of shaft sinking and 200 feet of drifting.

COMPETENCE OF APPLICANT

Mr. Burt Hayes has worked in the mine in the past but it is believed that he cannot be called an experienced miner. Mr. Murray is inexperienced in mining. A competent miner should therefore be put in charge of the operation, preferably someone with engineering training.

DISCUSSION OF PROPOSAL AND ALTERNATIVE

It is believed that the Standard mine has a good chance of developing one or more ore shoots carrying good values in cobalt, but it is felt that the originally proposed 50-foot shaft is of insufficient depth and the shaft should therefore go to at least 100 feet.

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

AIR MAIL

G. E. C.

June 19, 1951

Mr. [illegible] Blackburn, Executive Officer
Field Team, Region II
South 157 [illegible] Street
Spokane, Washington

Re: [illegible] Docket - 206

Dear Mr. Blackburn:

I have received your memorandum of May 31, concerning the combined application, [illegible]-206, of Murray and Hayes, Standard Mine, Grant County, Oregon. I note that Mr. J. [illegible] Wray is now in the Quartzburg area and has been asked to contact these gentlemen and discuss certain changes in their application. I might suggest that in this connection you ask Mr. Wray to present the applicants with a copy of contract form MF-2 0 at this time, in order that they can review and study the various contract provisions. Also, if you think well of this proposition, it would be advisable if the applicants could prepare exhibits A to [illegible] inclusive in sufficient detail to facilitate processing in this office. As I am sure you already know, the production expansion division requires [illegible] copies each of the various exhibits, including maps.

Thank you for your assistance in this matter.

Yours very truly,

Weston Bourret
M.H.

Weston Bourret, Chief
Minor and Rare Metals

~~Enclosure~~

WBourret/ah
cc: Chm. Head. File
Lyon
Strobel
Mittendorf
Field Team II
Bourret
Files

a. E. e

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

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

Dear Mr. Strebel:

Attached herewith are four copies of a memo from the Field Team, Region II and from an examining team with respect to the application of K. J. Murray and B. S. Hayes of the Standard mine in the Quartzburg district, Oregon, docket DMA-206. The original application is being retained here as some additional negotiations with the applicants are required. Will you please forward this material to the Nonferrous Metals Committee.

Sincerely yours,

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

Enclosures

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 31, 1951

Memorandum

To: Chairman, Ferrous Metals Committee, Field Team, Region II

From: Field Team, Region II

Subject: DMA-204 Cobalt Application of K. J. Murray and B. S. Hayes

In accordance with instructions from the Ferrous Metals Commodity Committee, the Standard mine in the Quartzburg district, Oregon, was examined by J. S. Vhay and John W. Hosterman of the U. S. Geological Survey. Four copies of their report are attached.

On the basis of this report the Field Team believes that the Standard mine is a likely prospect and an exploration agreement should be made with Messrs. Murray and Hayes. The Field Team believes, however, that the original proposal of the applicants is inadequate to properly explore the property. The shaft should be sunk to a depth of at least another 100 feet and perhaps some additional drifting should be done beyond the 150 feet contemplated. It would also be necessary for the applicants to properly detail their estimates of costs of equipment.

Mr. Vhay is now in the Quartzburg area and has been instructed to contact Messrs. Murray and Hayes and discuss these suggestions with them. If, upon review, the Field Team finds that the new proposal is satisfactory, it will recommend favorable action.

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.B.M., Volin
U.S.B.M., Shelton

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

DEFENSE MINERALS ADMINISTRATION

REPORT BY EXAMINATION TEAM
Region II

DMA-206, R. J. Murray and H. S. Hayes, Standard Mine

Grant County, Oregon

J. S. Vhay, Geologist
U. S. Geological Survey

May 29, 1951

May 29, 1951

EXAMINATION TEAM REPORT

DEFENSE MINERALS ADMINISTRATION

Docket #DMA-206 Property-Standard Mine

J. S. Vhay U.S. Geological Survey

RECOMMENDATIONS

It is recommended that the exploration contract with K. J. Murray and H. S. Hayes to explore the Standard mine be approved. Considerable ore carrying cobalt and gold has been stoped from above the lowest level. There is no reason to believe that the shoots which have been stoped up do not continue below the level.

APPLICANT

A partnership between K. J. Murray and H. S. Hayes of John Day, Oregon.

LOCATION OF PROPERTY

The group of claims around the Standard mine are in Secs. 1 and 12, T. 12 S., R. 33 E., and Secs. 6 and 7, T. 12 S., R. 34 E. in the Quartzburg mining district, Grant County, Oregon. The property is described and the claims listed in Exhibit B of the original application, from which the following is quoted:

"The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz, Willie Boy Mine, Hobo Quartz Mine, I.X.L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 533, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

"The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to E. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V. page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim."

OWNERSHIP

The ownership is believed to be covered in the quotation given above. The applicants state that they have a lease on the above-described property, and that they have no purchase or sales relations with others. Courthouse records were not checked.

HISTORY AND PAST PRODUCTION

The property, including its history, is described in U.S.G.S. Bull. 846-A, from which the following is abstracted: Development began in 1880; by 1900 the upper level and inclined shaft had been driven, active exploration took place until 1907. The mine has been idle since then except for a little work in 1915 and 1923.

The bulletin records a production of only "a few tons of chalcopyrite-gold ore" before 1900, 10 tons of ore in 1900, and shipments totalling 415 tons of concentrates through 1907, a few tons of ore in 1923, and "some cobalt ore was shipped to the Edison Laboratory." The size of the stopes suggests that considerably more ore has been produced. The stopes on the lowest level, some of which are open up to the next level, apparently produced an ore high in cobalt and gold and containing much less copper; local rumor reports that much of this ore was shipped to Germany, one of the few places where cobalt was refined in those days, but for some reason there is no official record of these shipments.

PROPOSAL

The applicants propose to clean out and retimber 1,000 feet of the lowest level (the retimbering is very essential as the old stopes are open above the drift), sink a shaft 50 feet on one of the shoots, and drift 75 feet, preparatory to starting mining. This is an excellent proposal but it is felt that the shaft should be deepened to at least 100 feet and more drifting would be advisable as several different shoots are visible above the level.

TECHNICAL FEASIBILITY

Geologic Setting

The Quartzburg mining district is briefly described in U.S.G.S. Bull. 846-A, from which the following information is extracted regarding the Standard and the Juniper mines, which have the principal workings on this property.

"The country rock of the Standard vein is chiefly porphyritic andesite...cut by dikes of granodiorite porphyry and a few of diabase. The vein itself is localized along a fault, and there are at least four distinct fault-breccia zones crossing the vein, (which) strikes persistently N. 70-75° E. and dips steeply south...There is one cross-cut to the south from the Standard vein for about 400 feet. This cuts five small...mineralized stringers that strike N. 45-80° E. and dip 60-80° S.

"The Standard vein ranges in width from a few inches to 4 feet. It is...a group of mineralized stringers with considerable replaced wall rock. The main gangue mineral is quartz (with) some ferriferous dolomite and calcite...The ore minerals are pyrite, chalcopyrite, arsenopyrite, cobaltite, glaucodot...galena and sphalerite."

"The Juniper vein is southeast of the Standard vein, (and) is opened along the strike by a tunnel 900 feet long...It ranges in width from 3 inches to about 3 feet. (Pyrite, chalcopyrite, and arsenopyrite occur in a quartz gangue.) Two spots of cobalt bloom were noticed...The wall rock is all meta-andesite, some so much altered as to resemble hornfels. Much tourmaline is present in it."

The Standard mine was opened and sampled by the U.S. Bureau of Mines in 1943. As most of the exposed ore above the lowest level had already been stoped out, the sampling records are not particularly impressive, but averaging all assays above 0.10 percent cobalt shows 9.4 inches carrying 0.72 percent cobalt, 1.53 percent copper, and 0.80 ounces of gold. This is considered a good indication in view of the fact that as the high cobalt ore carries good values in gold it was therefore mined out to a large extent in the past.

Mine Workings

The workings are considerably caved, but level 2 of the Standard mine can be entered part way. Level 1 (the lowest) has been reopened for about 900 feet in, but needs retimbering as the stopes

are standing open above the level. Plate 7, U.S.G.S. Bull. 846-A shows the mine workings, but according to recent mapping by the U.S. Bureau of Mines, level 2 on the section on Plate 7 is in error as the face should be shown at about 570 feet instead of much farther in as shown.

Reserves

No attempt has been made to calculate reserves or grade. Sampling by the Bureau of Mines suggests that the best values in cobalt occurred in the stope farthest in above the lowest level but some values are also found around other stopes.

Assay results on the few samples taken during this preliminary examination confirm the idea that cobalt occurs on the lowest level, and high copper values elsewhere are not accompanied by cobalt. The results are given below:

	WIDTH	LOCATION	GOLD oz.	COBALT %	COPPER %
81-VJ-11	1.3'	2d level, pillar	0.04	N.F.*	12.00
12	2.0'	1st level; farthest point in.	0.86	0.78	0.76
13	2.0'	1st level. Cross vein 30' S. of long south crosscut.	0.035	N.F.	0.53
14	1.[illegible]'	1st level 20' E. of long S. crosscut	1.06	0.99	0.04
15	.7'	New copper discovery 140' S. of Standard extension on S. side of creek	0.04	N.F.	23.63

* N.F.--not found.

Mining Methods and Costs

No information was obtained as to mining methods or probable costs. The ground, at least on the lowest level, appears to stand well, as most of the stopes are still open. A few stulls are still visible in them. Plans are for a relatively small operation and some miners are available in the district.

Milling Methods

The original application contains a Mineral Dressing report from the U.S. Bureau of Mines at Albany, dated July 10, 1950, which indicates that a flotation concentrate was made which recovers over 94.9 percent of the cobalt and 93.4 percent of the gold, and carrying 14.6 percent cobalt and 5.84 oz. of gold. Table concentration was also successful, but less so than flotation.

Rate of Production

Application states that present mill equipment can handle 16 tons daily, and maximum capacity planned for is 50 tons daily.

Time Schedule to Attain Objectives

Retimbering of the lowest level will probably take a month and the recommended 100 feet of shaft sinking and 300 feet of drifting will probably take four or five months so that if the operators are successful in developing ore shoots, production could probably start about November 1951.

Marketing Facilities

The applicants have not decided where to sell their cobalt-gold concentrate, but with the present shortage of cobalt it should not be too difficult to find a market.

EQUIPMENT

The only equipment aside from a few mine cars, and rails in the mine, is a new small mill rated at 16 tons per day; it contains a small crusher, ball mill, and two flotation cells.

Part of the loan requested is for the purchase of a compressor, air hammers, and construction of a compressor house and miners' housing. The operators will, of course, also need a good pump in connection with the shaft sinking, as the mine is somewhat wet.

No investigation has been made as to the costs or weights (metal) of the equipment needed.

LABOR SUPPLY

No investigation of available labor and costs was made. There is presumably sufficient labor available locally for the small operation.

POWER

Power is available in the South Fork of the John Day River Valley a few miles south. However, gasoline or diesel engines will probably be used at least in the beginning at this operation.

TRANSPORTATION

A rough dirt road leads to the mine from Prairie City, where a paved highway is available. The road is the responsibility of the county and presumably could be improved at a slight cost.

No investigation was made of transportation costs to railhead and supply points.

ADEQUACY OF REQUESTED FUNDS

The funds requested in the original application, ($25,000) may be enough to carry out the stated proposal--to retimber lowest level and sink a shaft 50 feet and drift, but somewhat more would probably be necessary to carry out the recommended 100 feet of shaft sinking and 200 feet of drifting.

COMPETENCE OF APPLICANT

Mr. Hart Hayes has worked in the mine in the past but it is believed that he cannot be called an experienced miner. Mr. Murray is inexperienced in mining. A competent miner should therefore be put in charge of the operation, preferably someone with engineering training.

RECOMMENDATION OF PROGRAM AND ALTERNATIVE

It is believed that the Standard mine has a good chance of developing one or more ore shoots carrying good values in cobalt, but it is felt that the originally proposed 50-foot shaft is of insufficient depth and the shaft should therefore go to at least 100 feet.

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

April 24, 1951

Memorandum

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

From: Commodity Committee

Subject: [illegible] 286, cobalt: Application of [illegible] Murray and [illegible] Hayes

In reply to your letter of April 13, copy of application from Messrs. Murray and Hayes is enclosed.

Robert H. Midgway
Acting Chairman
Ferrous Metals Committee

Attachment

HWDavis:cb

Copy to: R. H. Midgway
H. W. Davis
L. P. Strobel ✓
L. B. Moon
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

April 13, 1951

Air Mail

Mr. Robert H. Ridgeway
Acting Chairman
Ferrous Metals Committee
Defense Minerals Administration
Washington 25, D. C.

Dear Mr. Ridgeway:

This will acknowledge your letter of April 2 referring to Docket DMA 206, cobalt application of K. J. Murray and B. S. Hayes for an exploration loan of $25,000. You stated the application is being referred to the Bureau-Survey Field Team for further study. However, the docket material was not enclosed and we request that it be forwarded to us as soon as possible. Mr. J. S. Vhay of the Geological Survey plans a preliminary reconnaissance of the Quartzburg district about April 27, to be followed with more extensive work by the Survey in the area later in the summer. It would be very desirable to have the dockets here before Mr. Vhay leaves on his first trip to the Quartzburg area.

Incidentally, Docket DMA 206 did not originate in this office and was sent directly to Washington. We would, therefore, have no way of knowing where the property is or anything about it if it had not been that Mr. Vhay had seen the docket in Washington, D. C., and remembers that it refers to a property in the Quartzburg area. I would like to suggest that in letters concerning DMA applications that the name of the property, as well as the DMA docket name, be given.

Sincerely yours,

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

cc: L. F. Strobel
M. E. Volin

BUREAU OF MINES
WASHINGTON, D. C.

APR 17 12 27 PM '51

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

April 2, 1951

Mr. K. J. Murray

John Day, Oregon

Dear Mr. Murray:

The application of you and your partner, Mr. B. D. Hayes, for the exploration of your mining property has been considered by the Defense Minerals Administration, and it has been found that more information is needed before a decision can be made. The application, therefore, has been referred to Mr. A. E. Weissenborn, Executive Officer, Defense Minerals Administration Field Team, Region II, No. 157 Howard St., Spokane, Washington.

Sincerely yours,

Robert H. Ridgway
Acting Chairman
Ferrous Metals Committee

HWDavis:HRCornwall:gt

Copies to: Dr.Boyd's reading file
Mr.Strobel
Mr.Ridgway
Mr.Davis
Mr.Thayer
Files

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

April 2, 1951

Memorandum

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

From: Commodity Committee

Subject: Docket No. DMA-206, cobalt. Application of K. J. Murray and B. S. Hayes for an exploration loan of $25,000.

We do not have adequate information to appraise this application. The Geological Survey is planning to investigate the property during the summer of 1951. It is reported that the two partners, Murray and Hayes, disagree as to how the property should be explored and developed.

With the factors mentioned above in mind, it is recommended that the application be referred to the Bureau-Survey Field Team for further study.

Robert H. Ridgway
Acting Chairman
Ferrous Metals Committee

HWDavis:HRCornwall:gt

Copies to: Dr.Boyd's readingfile
Mr.Strobel
Mr.Ridgway
Mr.Davis
Mr.Thayer
Files
E.M.Volin,Albany, Ore.
S.M.Shelton,Albany,Ore.

FILE COPY
SURNAME:

Davis

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

April 24, 1951

Memorandum

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

From: Commodity Committee

Subject: DMA 206, cobalt: Application of K. J. Murray and H. S. Hayes

In reply to your letter of April 13, copy of application from Messrs. Murray and Hayes is enclosed.

Robert H. Ridgway
Acting Chairman
Ferrous Metals Committee

Attachment

HWDavis:cb

Copy to: R. H. Ridgway
H. W. Davis
L. F. Strobel
L. B. Moon
Files

~~LANDON F. STROBEL~~

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 8, Washington

April 13, 1951

Air Mail

Ans. 4-24-51

Mr. Robert H. Ridgeway
Acting Chairman
Ferrous Metals Committee
Defense Minerals Administration
Washington 25, D. C.

Dear Mr. Ridgeway:

This will acknowledge your letter of April 2 referring to Docket DMA 206, cobalt application of K. J. Murray and B. S. Hayes for an exploration loan of $25,000. You stated the application is being referred to the Bureau-Survey Field Team for further study. However, the docket material was not enclosed and we request that it be forwarded to us as soon as possible. Mr. J. S. Vhay of the Geological Survey plans a preliminary reconnaissance of the Quartzburg district about April 27, to be followed with more extensive work by the Survey in the area later in the summer. It would be very desirable to have the dockets here before Mr. Vhay leaves on his first trip to the Quartzburg area.

Incidentally, Docket DMA 206 did not originate in this office and was sent directly to Washington. We would, therefore, have no way of knowing where the property is or anything about it if it had not been that Mr. Vhay had seen the docket in Washington, D. C., and remembers that it refers to a property in the Quartzburg area. I would like to suggest that in letters concerning DMA applications that the name of the property, as well as the DMA docket name, be given.

Sincerely yours,

A. E. Weissenborn

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

cc: L. F. Strobel
M. E. Volin

APR 13 1951

BUREAU OF MINES
WASHINGTON, D. C.

APR 16 12 30 PM '51

FILE COPY
SURNAME:

Cornwell
Davis
Ridgway

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

April 2, 1951

Memorandum

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

From: Commodity Committee

Subject: Docket No. DMA-206, cobalt. Application of K. J. Murray and B. S. Hayes for an exploration loan of $25,000.

We do not have adequate information to appraise this application. The Geological Survey is planning to investigate the property during the summer of 1951. It is reported that the two partners, Murray and Hayes, disagree as to how the property should be explored and developed.

With the factors mentioned above in mind, it is recommended that the application be referred to the Bureau-Survey Field Team for further study.

Robert H. Ridgway
Acting Chairman
Ferrous Metals Committee

HWDavis:HRCornwall:gt

Copies to: Dr.Boyd's readingfile
Mr.Strobel
Mr.Ridgway
Mr.Davis
Mr.Thayer
Files
E.M.Volin,Albany, Ore.
S.M.Shelton,Albany,Ore.

FILE COPY
SURNAME:

Cornwall
Davis
Ridgway

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

April 2, 1951

Mr. K. J. Murray

John Day, Oregon

Dear Mr. Murray:

The application of you and your partner, Mr. B. S. Hayes, for the exploration of your mining property has been considered by the Defense Minerals Administration, and it has been found that more information is needed before a decision can be made. The application, therefore, has been referred to Mr. A. E. Weissemborn, Executive Officer, Defense Minerals Administration Field Team, Region II, So. 157 Howard St., Spokane, Washington.

Sincerely yours,

Robert H. Ridgway
Acting Chairman
Ferrous Metals Committee

HWDavis:HRCornwall:gt

Copies to: Dr.Boyd's reading file
Mr.Strobel
Mr.Ridgway
Mr.Davis
Mr.Thayer
Files

D.M.A.

Report on application DMA-206, by S. Hay

Docket # DMA-206
Commodity Cobalt

A Name: K.J. Murray & B.S. Hayes.
Address: Applicant. John Day, Oregon.

B Location. The Standard Mine is in the Canyon Creek district, north of Prairie City, Oregon.

C Conclusions as to:

1. Pertinence to commodity program.
   - Cobalt is very short. Cobalt occurs in this district.
2. Technical feasibility. If enough reserves can be proved up, the cobalt can be recovered, provided a refinery can be found to handle the concentrate.
3. Availability of requirement
   (Don't know what this means.
4. Financing. It will take a lot more money than the applicant asks for to get cobalt out of this district
5. Competence of applicant.
   Applicant probably not technically competent to develop a mine. Is definitely not competent to handle the milling job.

D Recommendations.

This application must be referred to the field. A careful study by the Geological Survey is first requirement, to be followed if necessary by work by the Bureau of Mines. At present there are no known reserves in the mine or other mines in the district. The whole district should be studied as a unit.

E F G H I J K. Don't believe these need to be answered at present.

See over, next page

Recommendations

Send to field for geologic Survey examination
- maybe followed by B of M Drilling & Building

- Application mentions no ore reserves

Says exist ing facilities good for 16 T/day. but lists only 16 T/a Ball mill listed under assets

wants to produce 50 T/day
nature of appropriations does not list mill to be built.

MF-200
(April 1951)

Docket No. DMA 206x
Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon, County of Grant described as follows: [3] See attached sheet with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] cobalt; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of prop* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 90 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $24,862, which is 90 percent of the agreed estimated total cost of this project, $27,625.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

K. J. Murray

B. S. Hayes
(Operator)

By

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

Docket No. DMA 206x

Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

EXPLORATION PROJECT CONTRACT

(Continued)

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (Continued)

The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz Mining Claim, Willie Boy Mine, Hobo Quartz Mine, I. X. L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (continued)

W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V, page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "A"

Exploration Project

Est. Time Schedule
Month

1st to 4th	1.	Retimber about 200 feet of No. 1 level, Standard mine.
	2.	Sink a winze at the point "A" (shown on the attached longitudinal section) to a depth of 100 feet below the No. 1 level.
5th to 8th	3.	Drift on the vein structure from the bottom of the winze 150 feet in each direction.

The work to be performed and the estimated cost thereof is as follows:

Retimbering 200 feet of drift at $5	$ 1,000.00
*Sinking winze 100 feet @ $95	9,500.00
*Drifting 300 feet @ $36	10,500.00
Fixtures and improvements	2,500.00
Equipment to be purchased	4,125.00
Total	$27,625.00

*Per foot cost includes labor, supervision, sampling, assaying, equipment rental, fuel and miscellaneous supplies.

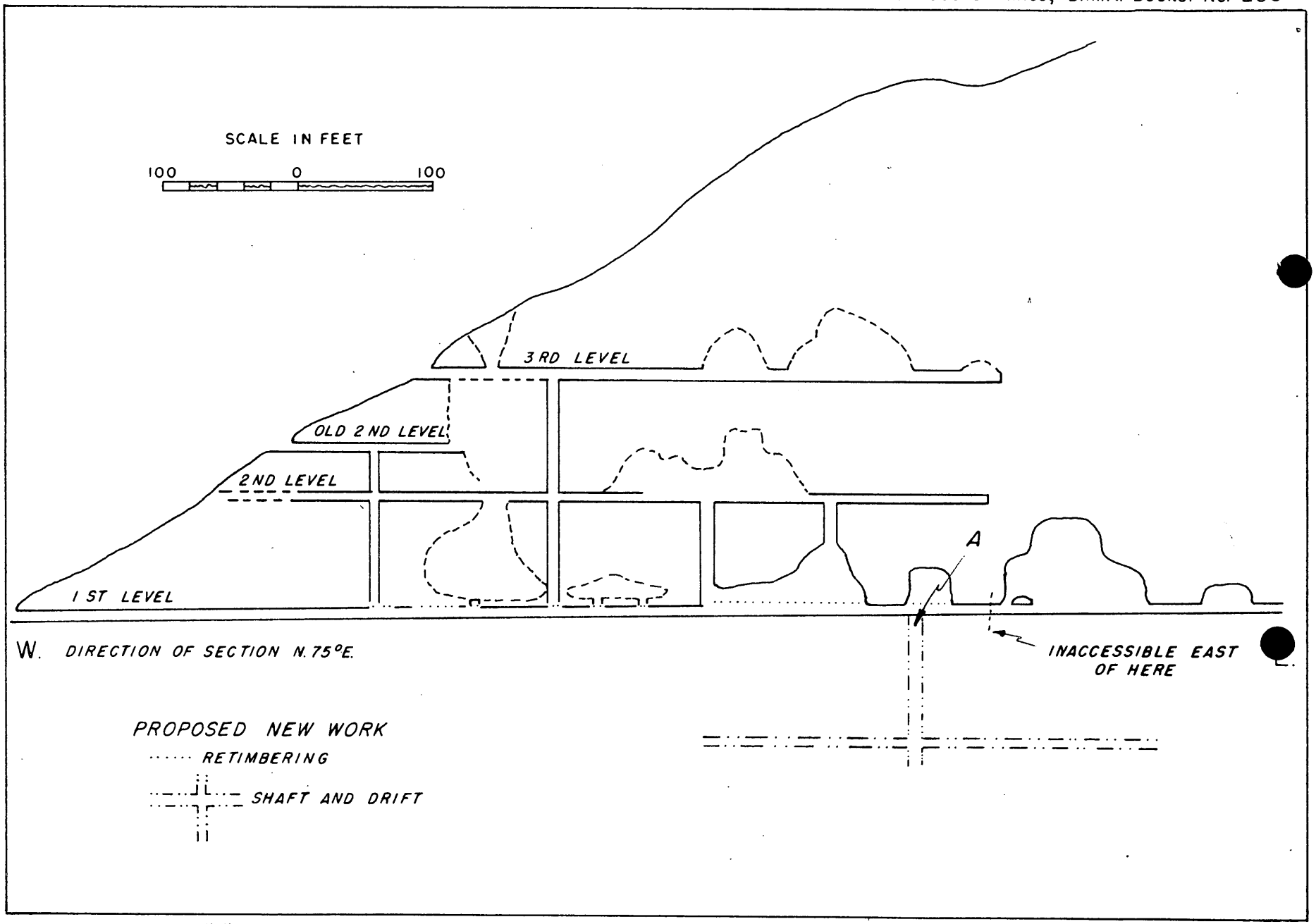

Exhibit "A" —Longitudinal section of the Standard Mine, Quartzburg District, Grant County, Oregon.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Bunk house and boarding house	$1,700.00
Compressor house and blacksmith shop	800.00
Total	$2,500.00

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard mine
Exploration Project Contract

EXHIBIT "C"

Operating Equipment

To be rented:

	Rental Period	Max. monthly rental allow.	Total
1 - 210 cfm compressor with gas engine	8	$290.00	$2,320.00
2 - Air hoists	8	73.00	584.00
2 - Rock drills (sinker)	4	81.00	324.00
1 - Drifter	4	75.00	300.00
Total		$519.00	$3,228.00

To be purchased:

1,100 feet - 1-1/2" pipe	$ 270.00
3 sets drill steel	50.00
1 Air driven sump pump	460.00
1 Pressure water tank	50.00
1 Set water and air hose	80.00
2 Mine cars	200.00
200 feet -- 1/2" wire rope	35.00
1 Truck	2,100.00
600 feet - 16# rail (includes ties, spikes, plates and bolts)	280.00
Miscellaneous supplies	600.00
	$4,125.00

To be furnished by Operator: None

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

	Rate per shift
Lead miner	$15.00
Miner	13.00
Surface man	13.00

The above rates are subject to lawful overtime increases and revision of pay scale under union contracts.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "E"

Rehabilitation and Repairs

1. Retimber approximately 200 feet of No. 1 level, Standard Mine @ $5.00 per foot $1,000.00

MF-200
(April 1951)

Docket No. DMA 206x
Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon County of Grant described as follows: [3] See attached sheet

with respect to which the Operator represents and undertakes: [4]

(*a*) ~~That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:~~ None

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] cobalt; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements:* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of prop*[illegible]. All facilities, buildings, fixtures, equipme[illegible]r other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Gove[illegible]ment, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 90 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $24,862, which is 90 percent of the agreed estimated total cost of this project, $27,625.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

K. J. Murray

B. S. Hayes
(Operator)

By

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

Docket No. DMA 206x

Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

EXPLORATION PROJECT CONTRACT

(Continued)

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (Continued)

The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz Mining Claim, Willie Boy Mine, Hobo Quartz Mine, I. X. L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to

Docket No. DMA 206x

Commodity: Cobalt

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (continued)

W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V, page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "A"

Exploration Project

Est. Time Schedule
Month

1st to 4th	1.	Retimber about 200 feet of No. 1 level, Standard mine.
	2.	Sink a winze at the point "A" (shown on the attached longitudinal section) to a depth of 100 feet below the No. 1 level.
5th to 8th	3.	Drift on the vein structure from the bottom of the winze 150 feet in each direction.

The work to be performed and the estimated cost thereof is as follows:

Retimbering 200 feet of drift at $5	$ 1,000.00
*Sinking winze 100 feet @ $95	9,500.00
*Drifting 300 feet @ $36	10,500.00
Fixtures and improvements	2,500.00
Equipment to be purchased	4,125.00
Total	$27,625.00

*Per foot cost includes labor, supervision, sampling, assaying, equipment rental, fuel and miscellaneous supplies.

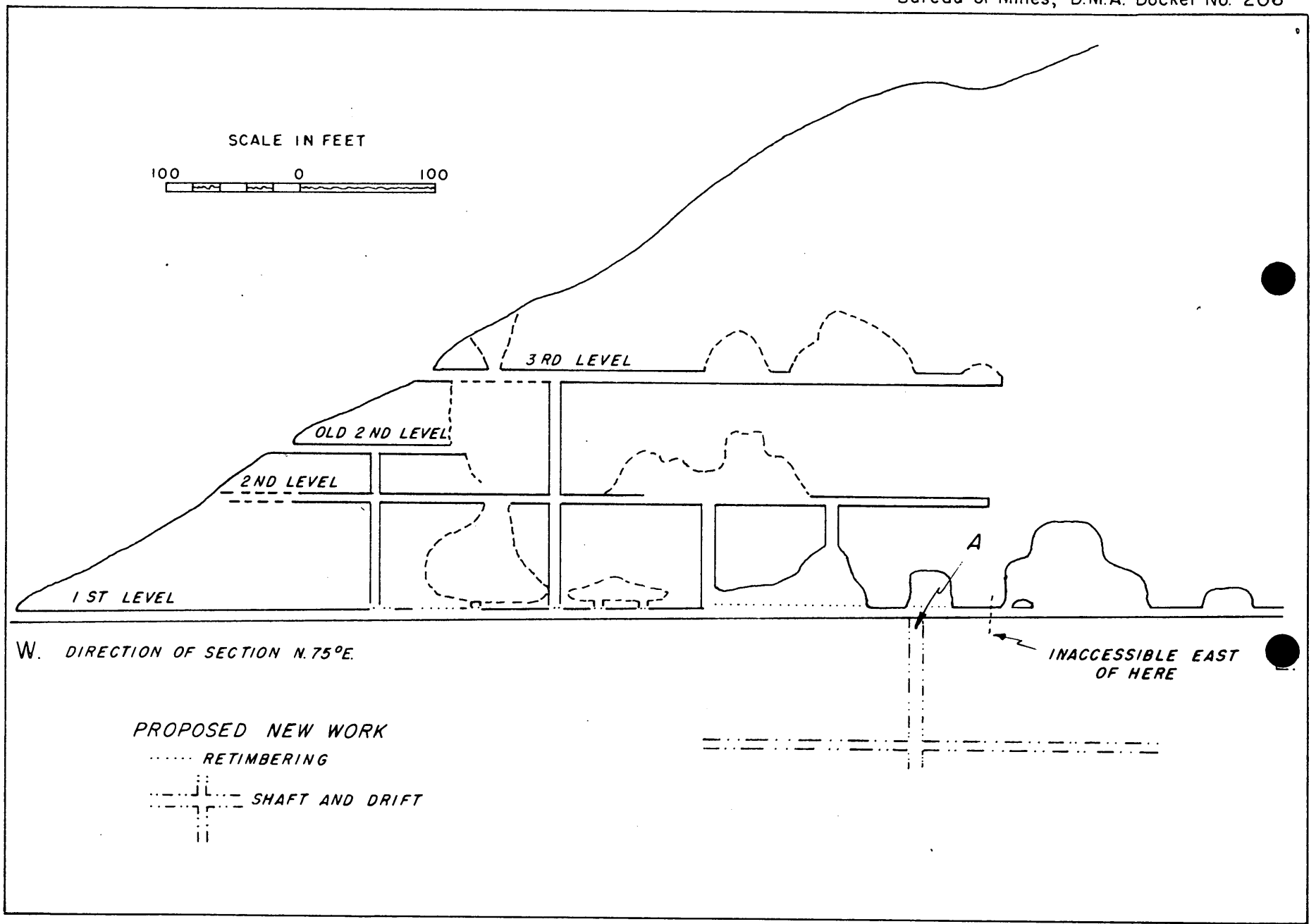

Exhibit "A" — Longitudinal section of the Standard Mine, Quartzburg District, Grant County, Oregon.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Bunk house and boarding house	$1,700.00
Compressor house and blacksmith shop	800.00
Total	$2,500.00

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard mine
Exploration Project Contract

EXHIBIT "C"

Operating Equipment

To be rented:

	Rental Period	Max. monthly rental allow.	Total
1 - 210 cfm compressor with gas engine	8	$290.00	$2,320.00
2 - Air hoists	8	73.00	584.00
2 - Rock drills (sinker)	4	81.00	324.00
1 - Drifter	4	75.00	300.00
Total		$519.00	$3,228.00

To be purchased:

1,100 feet - 1-1/2" pipe	$ 270.00
3 sets drill steel	50.00
1 Air driven sump pump	460.00
1 Pressure water tank	50.00
1 Set water and air hose	80.00
2 Mine cars	200.00
200 feet -- 1/2" wire rope	35.00
1 Truck	2,100.00
600 feet - 16# rail (includes ties, spikes, plates and bolts)	280.00
Miscellaneous supplies	600.00
	$4,125.00

To be furnished by Operator: None

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "D"

Labor and Supervision	Rate per shift
Lead miner	$15.00
Miner	13.00
Surface man	13.00

The above rates are subject to lawful overtime increases and revision of pay scale under union contracts.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "E"

Rehabilitation and Repairs

1. Retimber approximately 200 feet of No. 1 level, Standard Mine @ $5.00 per foot $1,000.00

MF-260
(April 1951)

Docket No. DMA 206x
Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195___, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon County of Grant described as follows: [3] See attached sheet

with respect to which the Operator represents and undertakes: [4]

(*a*) ~~That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:~~ None

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] cobalt; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of prop*[illegible] All facilities, buildings, fixtures, equipme[illegible]r other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Gove[illegible]ment, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 90 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $24,862, which is 90 percent of the agreed estimated total cost of this project, $27,625.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

K. J. Murray

B. S. Hayes
(Operator)

By

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

Docket No. DMA 206x

Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

EXPLORATION PROJECT CONTRACT

(Continued)

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (Continued)

The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz Mining Claim, Willie Boy Mine, Hobo Quartz Mine, I. X. L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (continued)

W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V, page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "A"

Exploration Project

Est. Time Schedule
Month

1st to 4th	1.	Retimber about 200 feet of No. 1 level, Standard mine.
	2.	Sink a winze at the point "A" (shown on the attached longitudinal section) to a depth of 100 feet below the No. 1 level.
5th to 8th	3.	Drift on the vein structure from the bottom of the winze 150 feet in each direction.

The work to be performed and the estimated cost thereof is as follows:

Retimbering 200 feet of drift at $5	$ 1,000.00
*Sinking winze 100 feet @ $95	9,500.00
*Drifting 300 feet @ $36	10,500.00
Fixtures and improvements	2,500.00
Equipment to be purchased	4,125.00
Total	$27,625.00

*Per foot cost includes labor, supervision, sampling, assaying, equipment rental, fuel and miscellaneous supplies.

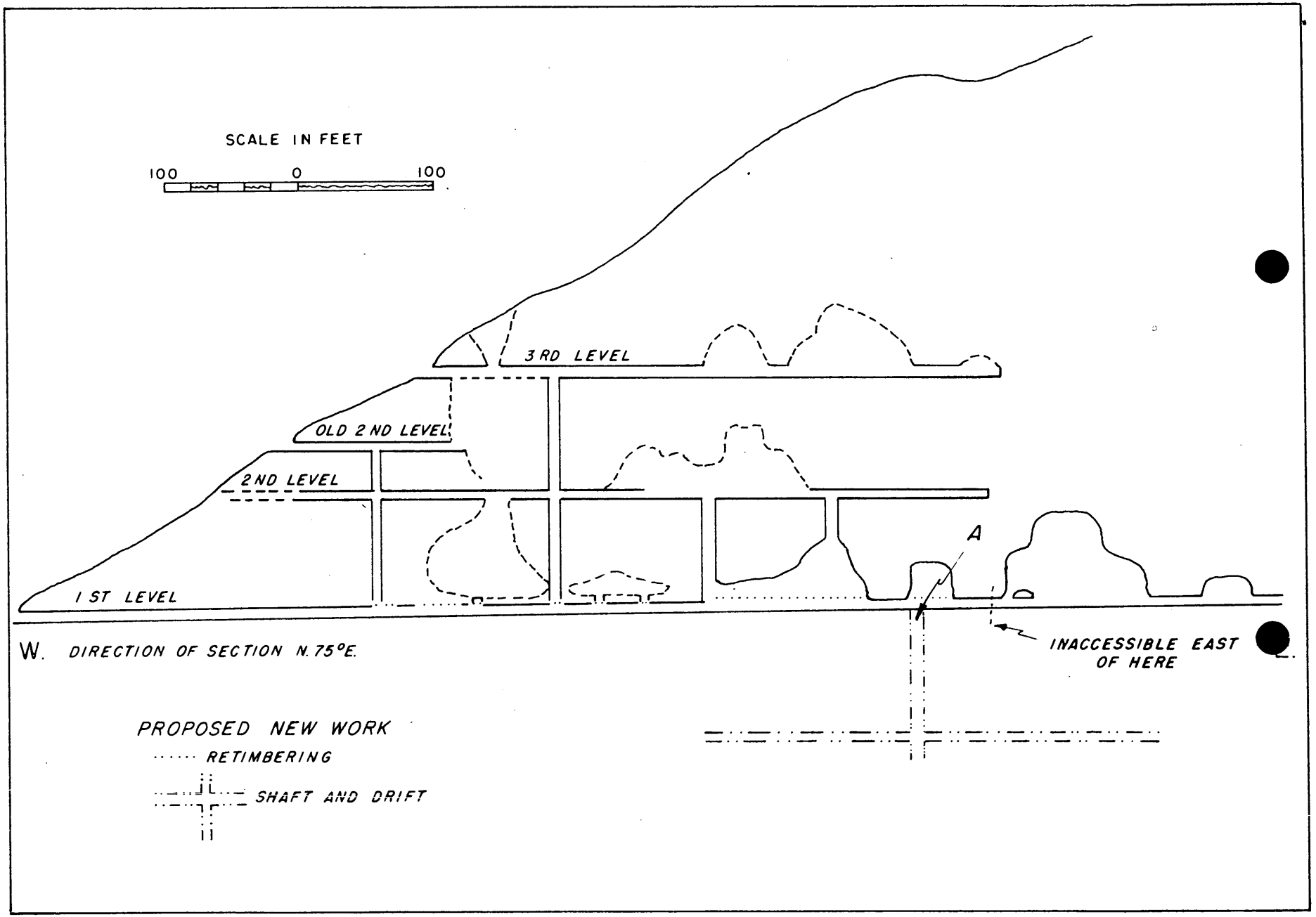

Exhibit "A" — Longitudinal section of the Standard Mine, Quartzburg District, Grant County, Oregon.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Bunk house and boarding house	$1,700.00
Compressor house and blacksmith shop	800.00
Total	$2,500.00

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard mine
Exploration Project Contract

EXHIBIT "C"

Operating Equipment

To be rented:

	Rental Period	Max. monthly rental allow.	Total
1 - 210 cfm compressor with gas engine	8	$290.00	$2,320.00
2 - Air hoists	8	73.00	584.00
2 - Rock drills (sinker)	4	81.00	324.00
1 - Drifter	4	75.00	300.00
Total		$519.00	$3,228.00

To be purchased:

1,100 feet - 1-1/2" pipe	$ 270.00
3 sets drill steel	50.00
1 Air driven sump pump	460.00
1 Pressure water tank	50.00
1 Set water and air hose	80.00
2 Mine cars	200.00
200 feet -- 1/2" wire rope	35.00
1 Truck	2,100.00
600 feet - 16# rail (includes ties, spikes, plates and bolts)	280.00
Miscellaneous supplies	600.00
	$4,125.00

To be furnished by Operator: None

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

	Rate per shift
Lead miner	$15.00
Miner	13.00
Surface man	13.00

The above rates are subject to lawful overtime increases and revision of pay scale under union contracts.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "E"

Rehabilitation and Repairs

1. Retimber approximately 200 feet of No. 1 level, Standard Mine @ $5.00 per foot $1,000.00

MF-200
(April 1951)

Docket No. DMA 206x
Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195___, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] R. J. Murray and B. S. Hayes of John Day, Oregon, a partnership

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon County of Grant described as follows: [3] See attached sheet

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] cobalt; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of prop* All facilities, buildings, fixtures, equipmen or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 90 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $24,862, which is 90 percent of the agreed estimated total cost of this project, $27,625.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

K. J. Murray

B. S. Hayes

(Operator)

By

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

Docket No. DMA 206x

Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

EXPLORATION PROJECT CONTRACT

(Continued)

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (Continued)

The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz Mining Claim, Willie Boy Mine, Hobo Quartz Mine, I. X. L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Delph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to

Docket No. DMA 206x

Commodity: Cobalt

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (continued)

W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V, page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine

Exploration Project Contract

EXHIBIT "A"

Exploration Project

Est. Time Schedule
Month

1st to 4th	1.	Retimber about 200 feet of No. 1 level, Standard mine.
	2.	Sink a winze at the point "A" (shown on the attached longitudinal section) to a depth of 100 feet below the No. 1 level.
5th to 8th	3.	Drift on the vein structure from the bottom of the winze 150 feet in each direction.

The work to be performed and the estimated cost thereof is as follows:

Retimbering 200 feet of drift at $5	$ 1,000.00
*Sinking winze 100 feet @ $95	9,500.00
*Drifting 300 feet @ $36	10,500.00
Fixtures and improvements	2,500.00
Equipment to be purchased	4,125.00
Total	$27,625.00

*Per foot cost includes labor, supervision, sampling, assaying, equipment rental, fuel and miscellaneous supplies.

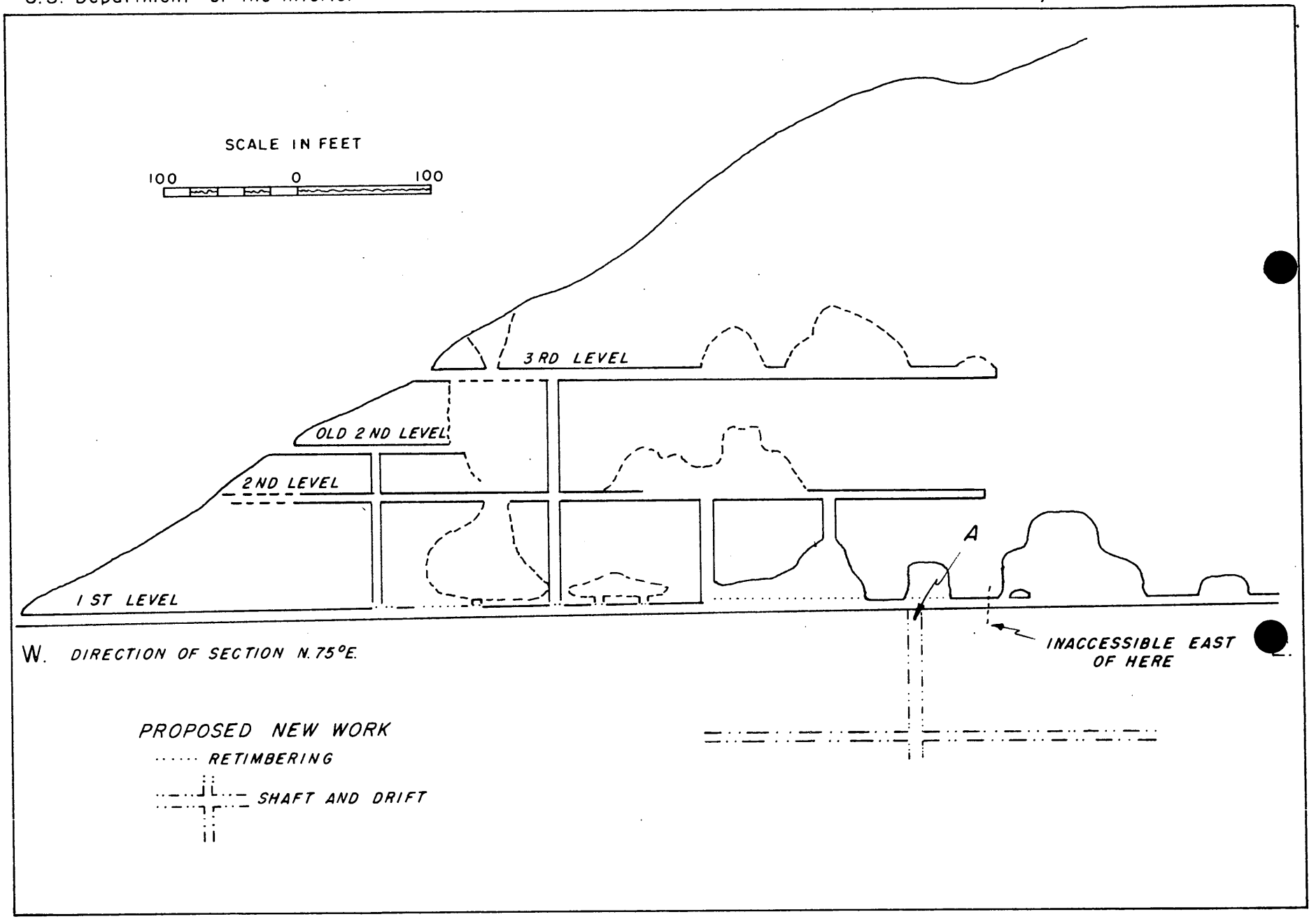

Exhibit "A" — Longitudinal section of the Standard Mine, Quartzburg District, Grant County, Oregon.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Bunk house and boarding house	$1,700.00
Compressor house and blacksmith shop	800.00
Total	$2,500.00

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard mine
Exploration Project Contract

EXHIBIT "C"

Operating Equipment

To be rented:

	Rental Period	Max. monthly rental allow.	Total
1 - 210 cfm compressor with gas engine	8	$290.00	$2,320.00
2 - Air hoists	8	73.00	584.00
2 - Rock drills (sinker)	4	81.00	324.00
1 - Drifter	4	75.00	300.00
Total		$519.00	$3,228.00

To be purchased:

1,100 feet - 1-1/2" pipe	$ 270.00
3 sets drill steel	50.00
1 Air driven sump pump	460.00
1 Pressure water tank	50.00
1 Set water and air hose	80.00
2 Mine cars	200.00
200 feet -- 1/2" wire rope	35.00
1 Truck	2,100.00
600 feet - 16# rail (includes ties, spikes, plates and bolts)	280.00
Miscellaneous supplies	600.00
	$4,125.00

To be furnished by Operator: None

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

	Rate per shift
Lead miner	$15.00
Miner	13.00
Surface man	13.00

The above rates are subject to lawful overtime increases and revision of pay scale under union contracts.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "E"

Rehabilitation and Repairs

1. Retimber approximately 200 feet of No. 1 level, Standard Mine @ $5.00 per foot $1,000.00

MF-200
(April 1951)

Docket No. DMA _____
Commodity 206x
Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195___, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon, County of Grant described as follows: [3] See attached sheet

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] cobalt; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 10 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Attached hereto, marked "Exhibit 'B'," is a detailed list of additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute its agreed pro-rata share of the cost. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of prope* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* Attached hereto, marked "Exhibit 'D'," is an itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project.

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

10. *Allowable costs of the project.* The allowable costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in the contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, or any other indirect costs not expressly allowed by these regulations, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 90 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $24,862, which is 90 percent of the agreed estimated total cost of this project, $27,625.

12. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

14. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent additional for each full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the property which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

15. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

16. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in triplicate the day and year first above written.

K. J. Murray

B. S. Hayes
(Operator)

By

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

Docket No. DMA 206x

Commodity Cobalt

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

EXPLORATION PROJECT CONTRACT

(Continued)

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (Continued)

The Mahogany Mine, Pinkerton Extension Mine, Pinkerton Quartz Mining Claim, Purdy Quartz Mining Claim, Juniper Quartz Mining Claim, Black Horse Mine, Lone Star Quartz Mining Claim, Side Issue Mine, Copper Ridge No. 2 Mine, Ruby Mine, Michigan Quartz Mining Claim, New Star Quartz Mining Claim, Willie Boy Mine, Hobo Quartz Mine, I. X. L. Mine, Standard Mine, and Morning Glory Mine lode mining claims; designated as Survey No. 838, embracing a portion of Sections 1 and 12, in Township 12 South of Range 33 East, and Sections 6 and 7, Township 12 South of Range 34 East, Willamette Meridian, as the same are more particularly described in the patent from the United States of America to the heirs or devisees of Clifford M. Dolph, which said patent is of record in Vol. 38, page 583, et seq, Deed Records of Grant County, Oregon, to which record reference is hereby made for a more complete description of said mining claims; and

The Grover Cleveland lode mining claim, embracing a portion of Section 12, Township 12 south, Range 33 East Willamette Meridian, said claim being designated by the Surveyor General as Lot No. 106, as the same is more particularly described in the patent from the United States of America to

K. J. Murray and B. S. Hayes of John Day, Oregon, a partnership.

2. (continued)

W. H. Johnson, Clarence Johnson and C. P. Johnson, which said patent is of record in Vol. V, page 65 of the Deed Records of Grant County, Oregon, to which record reference is hereby made for a more particular description of said mining claim.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine

Exploration Project Contract

EXHIBIT "A"

Exploration Project

Est. Time Schedule
Month

1st to 4th	1.	Retimber about 200 feet of No. 1 level, Standard mine.
	2.	Sink a winze at the point "A" (shown on the attached longitudinal section) to a depth of 100 feet below the No. 1 level.
5th to 8th	3.	Drift on the vein structure from the bottom of the winze 150 feet in each direction.

The work to be performed and the estimated cost thereof is as follows:

Retimbering 200 feet of drift at $5	$ 1,000.00
*Sinking winze 100 feet @ $95	9,500.00
*Drifting 300 feet @ $36	10,500.00
Fixtures and improvements	2,500.00
Equipment to be purchased	4,125.00
Total	$27,625.00

*Per foot cost includes labor, supervision, sampling, assaying, equipment rental, fuel and miscellaneous supplies.

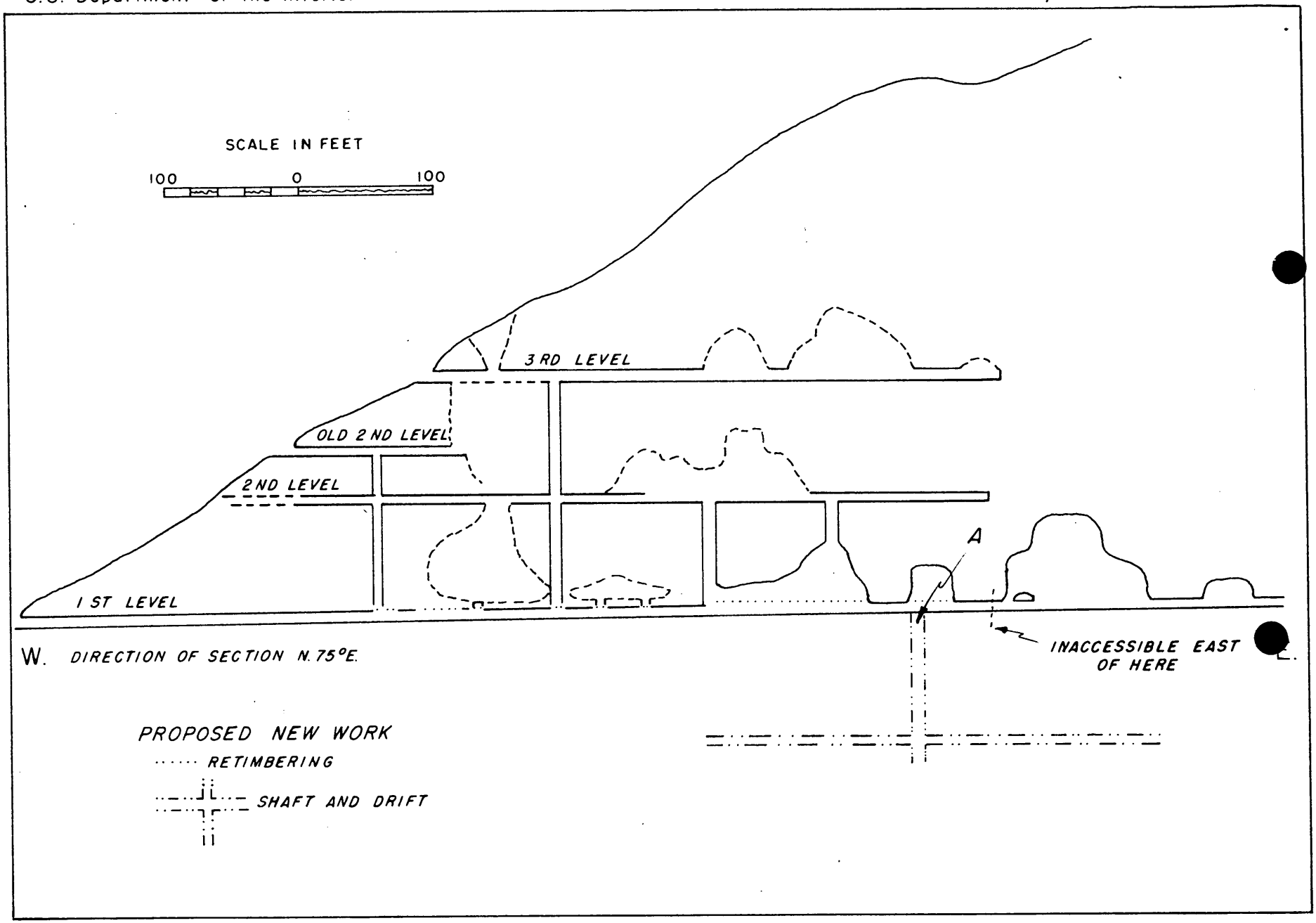

Exhibit "A" —Longitudinal section of the Standard Mine, Quartzburg District, Grant County, Oregon.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine

Exploration Project Contract

EXHIBIT "B"

Fixtures and improvements

Bunk house and boarding house	$1,700.00
Compressor house and blacksmith shop	800.00
Total	$2,500.00

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard mine
Exploration Project Contract

EXHIBIT "C"

Operating Equipment

To be rented:

	Rental Period	Max. monthly rental allow.	Total
1 - 210 cfm compressor with gas engine	8	$290.00	$2,320.00
2 - Air hoists	8	73.00	584.00
2 - Rock drills (sinker)	4	81.00	324.00
1 - Drifter	4	75.00	300.00
Total		$519.00	$3,228.00

To be purchased:

1,100 feet - 1-1/2" pipe	$ 270.00
3 sets drill steel	50.00
1 Air driven sump pump	460.00
1 Pressure water tank	50.00
1 Set water and air hose	80.00
2 Mine cars	200.00
200 feet -- 1/2" wire rope	35.00
1 Truck	2,100.00
600 feet - 16# rail (includes ties, spikes, plates and bolts)	280.00
Miscellaneous supplies	600.00
	$4,125.00

To be furnished by Operator: None

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "D"

Labor and Supervision

	Rate per shift
Lead miner	$15.00
Miner	13.00
Surface man	13.00

The above rates are subject to lawful overtime increases and revision of pay scale under union contracts.

K. J. Murray and B. S. Hayes, John Day, Oregon
Standard Mine
Exploration Project Contract

EXHIBIT "L"

Rehabilitation and Repairs

1. Retimber approximately 200 feet of No. 1 level, Standard Mine @ $5.00 per foot $1,000.00