DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip Tin.

CONTROLLED DOCUMENT

DMEA ~~DMA~~ Docket No. 2263

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

EXPLORATION PROJECT

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

Routing Slip ~~MR. SELLEDGE~~

To:	Rare & Light Metals	Date	
To:	J. J. Morton	Date	12-14-57
To:	Abbot Renick	Date	12-14-57
To:	Ellis	Date	12-17-57
To:	Abbot Renick	Date	12-28-57
To:		Date	
To:		Date	
To:		Date	
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To:		Date	
To:		Date	
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To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

after we are requested by our Washington office to do so. Please note especially questions 12, 22, and 23 of the questions-and-answers pamphlet.

Very truly yours,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RAL/mc
Enclosures 3
cc - Operating Committee (2)
Mr. V. J. Lynch
Files

Denial — 2263
Tim —
Cost $7000.00
Not too well documented
Murphy

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

August 9, 1955

2263

RECEIVED
AUG 11 1955

Mr. Bates Whatley
Dian Apartment C-1
1300 South 30th Street
Birmingham, Alabama

Dear Mr. Whatley:

In order to reopen your application for aid in exploration for tin in Clay County, Alabama (originally filed as DMEA-2263, in November 1951, by Alabama Development Corporation), it will be necessary for you to file a new application, supported by any additional geologic evidence you may have gained since the original application was denied. Therefore, I enclose five copies of the application form, MF-103, as well as one copy of DMEA Order-1 Amended, and the question-and-answer pamphlet. Four copies of Form 103, accompanied by all supporting data, should be sent to this office.

Please note that the Government can now contribute only 75% of the cost of approved tin exploration projects, instead of 90% as it was in 1951.

The data supplied with your letter of August 8 would hardly justify reconsidering the application. The 1882 report was available and was consulted when the earlier report was considered. The analysis of a single specimen, as reported by A. W. Williams Inspection Company on December 23, 1952 is interesting, but it is not significant, as there is no indication as to what the specimen represents or where it was taken. Apparently it was a specimen rather than a sample.

Your application also should include a map of the property, with all significant geologic information and showing the location and extent of all proposed exploratory work as well as the estimated costs.

Upon receipt of your application, three copies will be forwarded to our Washington office, in accordance with established procedure. We can undertake a field examination of a property only

FILE COPY
SURNAME:

Gordon
Renick
Norton
Hayes
Hedges

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

AIR MAIL

JAN 7 1952

ON

Mr. Walter Hartley, President
Alabama Development Corporation, Inc.
P. O. Box 317
Birmingham, Alabama

Re: Docket [illegible]-2203
(Min) Cordland, Alabama

Dear Mr. Hartley:

Your application dated November 6, 1951, for an exploration project, [illegible]-2203, has been carefully reviewed.

We regret to advise that it has been decided to deny your application at this time, during the decision on the lack of geologic evidence of the probability of making a significant discovery.

Should you later obtain additional evidence that might alter this opinion, we should be glad to consider a new application.

Sincerely yours,

C. O. Mittendorf (fw)

S.W. 1-7-52

Acting Administrator
Defense Minerals Exploration
Administration

EGordon/jem 12-28-51
cc to: Adm. Reading File
Mails & Files Br.
Docket
Messrs. Mittendorf
Renick, Abbot
Norton, Ded. Am G-228
Gordon
Field Team, Region VII (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
Room 13 Post Office Building
Knoxville 2, Tennessee

January 7, 1952

2263

T19

Mr. Bates Whatley, President
Alabama Development Corp., Inc.
P. O. Box 1738, M. S.
Birmingham, Alabama

Dear Mr. Whatley:

In reply to your telegram:

Your application was forwarded to Washington immediately upon receipt. It is being processed there. We have received no request for field examination.

For further information, I suggest you contact Mr. C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration, Washington 25, D. C.

Very truly yours,

Robert A. Laurence
Executive Officer, Field Team
Region VII

RAL/mg
cc: Beck
Lynch
Mittendorf
Files

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 9 1952

December 26, 1951

Nonmetallics Mineral Div.

Donald H. Kupfer

Alabama Development Corporations
2263

Broad Arrow

Near Ashaland, Clay County, Alabama

is said to have

other

Min. Res. for 1886, (p. 214) states that the presumed casseterite near Ashland, Clay County, Alabama was actually iron, and that no true cassiterite has been found at this locality.

December 26, 1951

Nonmetallics Mineral Div.

Donald H. Kupfer

Alabama Development Corporations
2263

Broad Arrow

Near Ashland, Clay County, Alabama

xxxxxxxxx _____ xxxxxxxxxxxxx is said to have xxxxx xxxxxxxx

other

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OFFICE OF THE ADMINISTRATOR

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.

DEC 3 10 40 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Room 13, Post Office Building
Knoxville, Tennessee

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 3 1951
Defense Minerals Administration,
Production Expansion Division.

November 30, 1951

DMEA-2263
RARE & LIGHT METALS

Mr. Frank E. Johnson
Chairman, Coordinating Committee
Defense Minerals Exploration Adm.
Department of the Interior
Washington 25, D.C.

Dear Mr. Johnson:

Enclosed is a letter received from Mr. Bates Whatley, president, Alabama Development Corporation, Inc., which should be attached to the Form MF-103 submitted by that Company and recently sent to you from this office.

Very truly yours,

Robert A. Laurence

Robert A. Laurence
Executive Officer, DMEA Field Team
Region VII

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON

December 17, 1951

Dear Mr. Ellis:

Tin in Alabama is well known, and has received a great deal of consideration since its discovery in 1880.

On the basis of the meager information contained in the application, it is my opinion that DMEA 2263 should be denied.

Abbott Renick

Abbott Renick

COWIN & COMPANY
INC.

MINING ENGINEERS AND CONTRACTORS

PHONES 3-4271-2 & 56-5566

1 SOUTH WEST 18TH STREET

BIRMINGHAM, ALABAMA

CONSULTING
REPORTS
PROSPECTING
APPRAISALS

MINE DEVELOPMENT
ROCK DRILLING & BLASTING
GUNITING & WATERPROOFING
SHAFT & SLOPE SINKING

November 28, 1951

Mr. Robert A. Laurence
Executive Officer, DEMA Field Team
Region VII
Knoxville, Tennessee

Dear sir:

We are in receipt of your letter dated November 26, 1951, acknowledging receipt of Form MF-103 applying for assistance in exploration for tin near Ashland, Alabama.

We are now in position to contribute 10 per cent of the estimated cost of this project. Will you please change our application on question 10a?

Very truly yours,

Alabama Development Corporation, Inc.
Box 3738 West End
Birmingham, Alabama

By Bates Watley
Bates Watley, Pres.

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. D.M.E.A. 2263
Metal or Mineral Lin
Date Received 11-28-51
Amount $ $7,000
Participation (Government %)

Name and address of applicant

ALABAMA DEVELOPMENT CORPORATION, INC.
P. O. Box 3738 W.E.
BIRMINGHAM, ALABAMA

Date November 8, 1951

If you have already filed MF-100, give date filed not filed, type of assistance requested _____,

DMA Docket Number (if available) _____

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list 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.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

CERTIFICATION

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

ALABAMA DEVELOPMENT CORPORATION, INC.
(Name of company)

By Bates W Lailey
(Signature of authorized official)
Pres.

November 8, 1951
(Date)

PRESIDENT
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Alabama Development Corporation
Birmingham, Alabama

1. (a) This property is located one and one-half miles north of Ashland, Alabama. It is a farm on which the president of this corporation was reared. The farm is on hilly land, with the house, road, and creek being in a valley, with the woods raising sharply.

(b) The Alabama Development Corporation, Inc. owns this farm on which the exploration is to be carried out.

(c) It is the W 1/2 of the North West Quarter of Section 27, Township 20, Range 8 East. It is 80 acres.

2. (a) We expect to find tin.

(b) We made no geological examination of this property. The dykes show in the creek, along the road, and up the hill beyond. The minerals and rocks of the dykes are much stronger than the country rocks which are schist or gneiss. In the road you see a good cross section of a dyke. The country rock is weathered but is in place with narrow stringers of limonite and manganese following the dip. We are basing our expectation of finding tin on the old report of "Minerals Resources of the United States for 1882" published in 1893, page 434. Also, on stories heard as a boy about the tin bullion produced here.

Alabama Development Corporation
Birmingham, Alabama

3. (a) We propose to put down a series of Diamond drill holes to cut the dykes or veins, at depths of from 30 to 60 feet.

D.D. Holes

We would split the cores produced from the dykes and vicinity and have these analyzed.

We will need approximately 10 holes of plus or minus 150 feet depth drilled on an angle of 45 degrees. These holes we would plan on drilling parallel to the ~~xxxx~~ creek, and in a west direction.

We have a cost of this drilling made by the Joy Manufacturing Co. This was $4.00 per foot. In additional to this we would have the expense of an Engineer ot Geologist and the cost of analyzing the typical cores.

Our estimate of this work is:

Drilling 1500 ft at $4.00 per ft	6000.00
Geologist	500.00
Laboratory Analysis	500.00
Total	7000.00

(b) This can be started in one week and should be completed in a month and a half.

We need to know the grade of the ore (if any) and can make arrangements for mining it, providing we prove it is there in economical grades. We will comply with your Sec. 13 in the operation of a mine if we find we have ore.

Alabama Development Corporation
Birmingham, Alabama

5. There is one 5 room house with electricity and with an added bathroom, which is empty now. The barn might be used for storage of equipment only.

I do not think we will ~~have~~ need to spend anything on these as the town of Ashland is only 1-1/2 miles away.

Alabama Development Corporation
Birmingham, Alabama

6. We will need no additional facilities.

Alabama Development Corporation
Birmingham, Alabama

7. We will need no operating equipment.

Alabama Development Corporation
Birmingham, Alabama

8. We will have one Geological consultant for studying the cores and correlating them.

3 days a week --------- $ 500.00

Alabama Development Corporation
Birmingham, Alabama

9.	Diamond drilling contract @ 4.00 per foot	6000.00
	Engineering and/or Geologist	500.00
	Analyses	500.00
		7000.00

Alabama Development Corporation
Birmingham, Alabama

10. (a) We are not able to raise any money but do supply the land on which the work will be done, and the necessary facilities for this exploration project.

(b) We believe this complies with Sec. 9 of MO 5.

Dec. 14-'51
Applic. can not raise the money PO:
Letter 11-28-51
OK.

Alabama Development Corporation
Birmingham, Alabama

11. I think you have a picture of what we want to do, and why we are asking you for help.

Extract from Mineral Resources of the United States for 1882, Published in 1893, page 434.

The Broad Arrow mines:--The most important occurrence of tin in the United States recently noted is that at the Broad Arrow mines, two miles from Ashland, Clay County, Alabama. Mr. G. W. Gesner, the owner, reports that these mines consists of four open quarries in the hillside, 35, 40, 45 and 55 feet in depth. The ore occurs in lodes and as stream tin. The Country rock is micaceous and talcose schist. The ore itself is disseminated in gneiss, which forms seams from ten to twenty feet thick in the country rock, and having a northeast and southwest strike. A horizontal section given by Mr. Gesner from west to east across the strike of the seam is as follows:

Granite, highly feldspathic.
Tin-bearing gneiss.
Micaceous and Talcose schists.
Tin-bearing gneiss.
Country rock, containing molybdenite.
Tin-bearing gneiss
Country rock.
Tin-bearing gneiss.
Country rock.
Tin-bearing gneiss.
Country rock.
Main vein of gneiss containing the largest contents and best ore.
Massive white quartz with limonite, etc.

The section shows in a space of 800 feet six parallel, nearly vertical, belts of stanniferous gneiss. The tin stuff ranges from a trace up to 2 per cent, averaging 1 1/2 per cent; and is said to be readily concentrated. Certain masive ores in pebblelike pieces have been found on and in the richest gneiss. They have rather more than one-half the specific gravity of Durango tinstones; and yields an alloy of tin and iron very readily in the test crucible. This alloy is easily fused, and is said to reach 45 per cent of the contents of the ore and to resemble the general character of the impure pigs from tin ores charged with iron. The ore is reported to exist in very considerable quantity, and to be free from all traces of arsenic and sulphur. It worked very kindly in the assay and test furnace. Cassiterite is also found in the stream which crosses the lodes, but associated with

titanic and iron compounds, which renders its production troublesome.

No hoisting or pumping machinery is at present required. Reduction works have been erected near the quarries, the distance from the latter to the works being only from 100 to 400 feet. They consist of one light 40-stamp mill, one 5-stamp mill for crushing slag, one rock-breaker, one 15-horse power engine, one table, two jigs, four schlich vats, four settlers, and one tin blast furnace of the Altenberg pattern. The present plan was designed to produce from gneiss ore of 1 1/2 per cent. Tin oxide some 500 pounds of crude pig tin per day. The ore is so easily handled that the cost of stamping is light. The concentrated ore is to smelted in lots of 1,000 pounds.

Regular work began at the Broad Arrow mines March, 1883. The reduction works were built during the winter and spring, and were first tried March 20th. The force employed has averaged four men at the quarries and seven at the works. It cannot be said that the results obtained up to July 1st, were commercially successful. Mr. Gesner attributes this to two leading causes, one of which is the difficulty of sorting from so large a formation of ores rich enough to repay working, and the other is the frequent appearance of titanium in the tin oxide, seriously interfering with reduction. It is expected that when the employers become more familiar with the appearance of the ores and are able to make a proper selection, and when the concentrated apparatus is perfected, operations will proceed more successfully. In the meantime the works have been utilized in milling the low-grade gold ores from the quartz reef next to the tin-bearing gneiss.

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. D.M.E.A.-2263
Metal or Mineral Tin
Date Received 11-28-51
Amount $ 7,000
Participation (Government %)

Name and address of applicant

ALABAMA DEVELOPMENT CORPORATION, INC.
P. O. Box 3738 W.E.
BIRMINGHAM, ALABAMA

Date November 8, 1951

If you have already filed MF-100, give date filed not filed, type of assistance requested _____,

DMA Docket Number (if available) _____

INSTRUCTIONS

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   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

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ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

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4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list 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.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

CERTIFICATION

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

ALABAMA DEVELOPMENT CORPORATION, INC.
(Name of company)

By Bates Wheatley
(Signature of authorized official)
Pres.

November 8, 1951
(Date)

PRESIDENT
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Alabama Development Corporation
Birmingham, Alabama

1. (a) This property is located one and one-half miles north of Ashland, Alabama. It is a farm on which the president of this corporation was reared. The farm is on hilly land, with the house, road, and creek being in a valley, with the woods raising sharply.

   (b) The Alabama Development Corporation, Inc. owns this farm on which the exploration is to be carried out.

   (c) It is the W 1/2 of the North West Quarter of Section 27, Township 20, Range 8 East. It is 80 acres.

2. (a) We expect to find tin.

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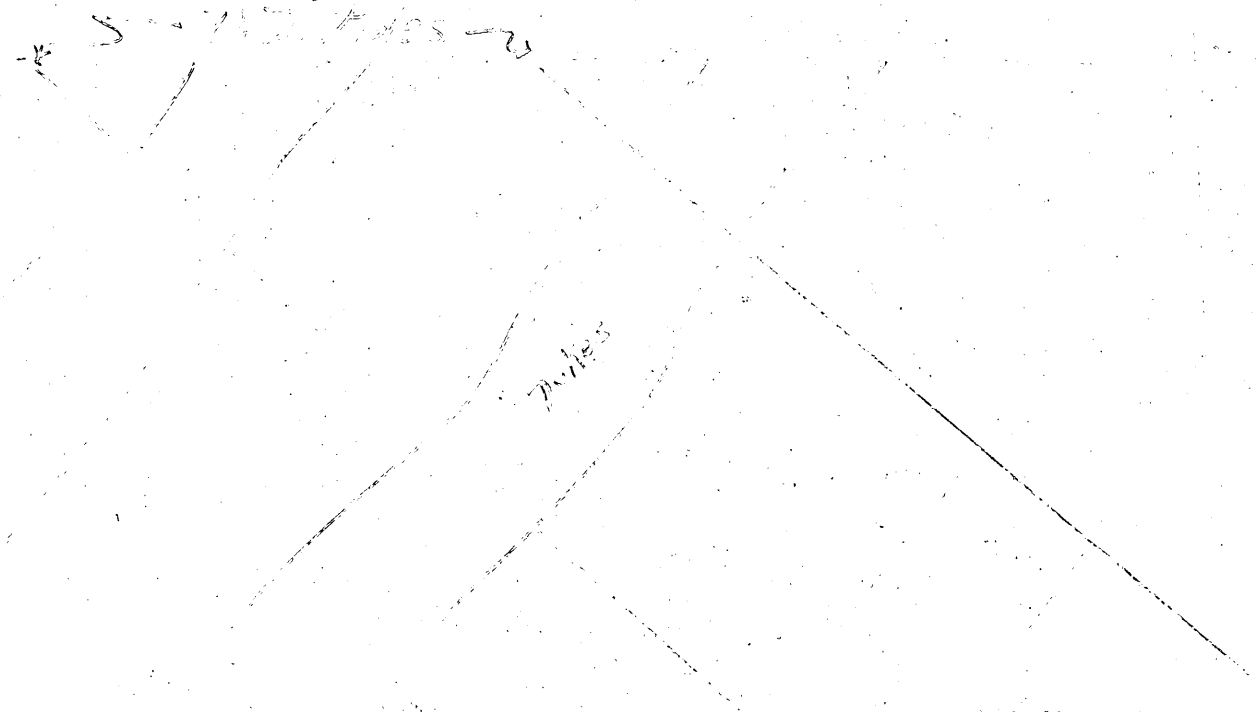
Alabama Development Corporation
Birmingham, Alabama

3. (a) We propose to put down a series of Diamond drill holes to cut the dykes or veins, at depths of from 30 to 60 feet.



We would split the cores produced from the dykes and vicinity and have these analyzed.

We will need approximately 10 holes of plus or minus 150 feet depth drilled on an angle of 45 degrees. These holes we would plan on drilling parallel to the ~~xxxx~~ creek, and in a west direction.

We have a cost of this drilling made by the Joy Manufacturing Co. This was $4.00 per foot. In additional to this we would have the expense of an Engineer or Geologist and the cost of analyzing the typical cores.

Our estimate of this work is:

Drilling 1500 ft at $4.00 per ft	6000.00
Geologist	500.00
Laboratory Analysis	500.00
Total ----------	7000.00

(b) This can be started in one week and should be completed in a month and a half.

We need to know the grade of the ore (if any) and can make arrangements for mining it, providing we prove it is there in economical grades. We will comply with your Sec. 13 in the operation of a mine if we find we have ore.

Alabama Development Corporation
Birmingham, Alabama

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Alabama Development Corporation
Birmingham, Alabama

6. We will need no additional facilities.

Alabama Development Corporation
Birmingham, Alabama

7. We will need no Operating equipment.

Alabama Development Corporation
Birmingham, Alabama

8. We will have one Geological consultant for studying the cores and correlating them.

3 days a week --------- $ 500.00

Alabama Development Corporation
Birmingham, Alabama

9.	Diamond drilling contract $ 4.00 per foot	6000.00
	Engineering and/or Geologist	500.00
	Analyses	500.00
		$7000.00

Alabama Development Corporation
Birmingham, Alabama

10. (a) We are not able to raise any money but do supply the land on which the work will be done, and the necessary facilities for this exploration project.

Applic. can now raise its share per 1st Hor of 11-28-51

(b) We believe this complies with Sec. 9 of MO 5.

Alabama Development Corporation
Birmingham, Alabama

11. I think you have a picture of what we want to do, and why we are asking you for help.

Extract from Mineral Resources of the United States for 1882, Published in 1893, page 434.

The Broad Arrow mines:--The most important occurrence of tin in the United States recently noted is that at the Broad Arrow mines, two miles from Ashland, Clay County, Alabama. Mr. G. W. Gesner, the owner, reports that these mines consists of four open quarries in the hillside, 35, 40,45 and 55 feet in depth. The ore occures both in loades and as stream tin. The Country rock is micaceous and talcose schist. The ore itself is disseminated in gneiss, which forms seams from ten to twenty feet thick in the country rock, and having a northeast and southwest strike. A horizontal section given by Mr. Gesner from west to east across the strike of the seam is as follows:

Granite, highly feldspathic.
Tin-bearing gneiss.
Micaceous and Talcose schists.
Tin-bearing gneiss
Country rock, containing molybdenite.
Tin-bearing gneiss
Country rock.
Tin-bearing gneiss.
Country rock.
Tin-bearing gneiss.
Country rock.
Main vein of gneiss containing the largest contents and best ore.
Massive white quartz with limonite, etc.

The section shows in a space of 800 feet six parallel, nearly vertical, belts of stanniferous gneiss. The tin stuff ranges from a trace up to 2 per cent, averaging 1 1/2 per cent; and is said to be readily concentrated. Certain masive ores in pebblelike pieces have been found on and in the richest gneiss. They have rather more than one-half the specific gravity of Durango tinstones; and yields an alloy of tin and iron very readily in the test crucible. This alloy is easily fused, and is said to reach 45 per cent of the contents of the ore and to resemble the general character of the impure pigs from tin ores charged with iron. The ore is reported to exist in very considerable quantity, and to be free from all traces of arsenic and sulphur. It worked very kindly in the assay and test furnace. Cassiterite is also found in the stream which crosses the lodes, but associated with

titanic and iron compounds, which renders its production troublesome.

No hoisting or pumping machinery is at present required. Reduction works have been erected near the quarries, the distance from the latter to the works being only from 100 to 400 feet. They consist of one light 40-stamp mill, one 5-stamp mill for crushing slag, one rock-breaker, one 15-horse power engine, one table, two jigs, four schlich vats, four settlers, and one tin blast furnace of the Altenberg pattern. The present plan was designed to produce from gneiss ore of 1 1/2 per cent. Tin oxide some 500 pounds of crude pig tin per day. The ore is so easily handled that the cost of stamping is light. The concentrated ore is to smelted in lots of 1,000 pounds.

Regular work began at the Broad Arrow mines March, 1883. The reduction works were built during the winter and spring, and were first tried March 20th. The force employed has averaged four men at the quarries and seven at the works. It cannot be said that the results obtained up to July 1st, were commercially successful. Mr. Gesner attributes this to two leading causes, one of which is the difficulty of sorting from so large a formation of ores rich enough to repay working, and the other is the frequent appearance of titanium in the tin oxide, seriously interfering with reduction. It is expected that when the employers become more familiar with the appearance of the ores and are able to make a proper selection, and when the concentrated apparatus is perfected, operations will proceed more successfully. In the meantime the works have been utilized in milling the low-grade gold ores from the quartz reef next to the tin-bearing gneiss.

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. D.M.E.A. 2263
Metal or Mineral Tin
Date Received 11-28-51
Amount $ 7,000
Participation (Government %)

Name and address of applicant

ALABAMA DEVELOPMENT CORPORATION, INC.
P.O. Box 3738 W.E.
BIRMINGHAM, ALABAMA

Date November 8, 1951

If you have already filed MF-100, give date filed not filed, type of assistance requested _____,

DMA Docket Number (if available) _____

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list 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.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

CERTIFICATION

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

ALABAMA DEVELOPMENT CORPORATION, INC.
(Name of company)

By Dates Whatley
(Signature of authorized official)
Pres.

November 8, 1951
(Date)

PRESIDENT
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Alabama Development Corporation
Birmingham, Alabama

1. (a) This property is located one and one-half miles north of ~~the~~ Ashland, Alabama. It is a farm on which the president of this corporation was reared The farm is on hilly land, with the house, road, and creek being in a valley, with the woods raising sharply.

   (b) The Alabama Development Corporation, Inc. owns this farm on which the exploration is to be carried out.

   (c) It is the W 1/2 of the North West Quarter of Section 27, Township 20, Range 8 East. It is 80 acres.

2. (a) We expect to find tin.

   (b) We made no geological examination of this property. The dykes show in the creek, along the road, and up the hill beyond. The minerals and rocks of the dykes are much stronger than the country rocks which are schist or gneiss. In the road you see a good cross section of a dyke. The country rock is weathered but is in place with narrow stringers of limonite and manganese following the dip. We are basing our expectation of finding tin on the old report of "Minerals Resources of the United States for 1882" published in 1893, page 434. Also, on stories heard as a boy about tin bullion produced here.

Alabama Development Corporation
Birmingham, Alabama

3. (a) We propose to put down a series of Diamond drill holes to cut the dykes or veins, at depths of from 30 to 60 feet.

Dykes

We would split the cores produced from the dykes and vicinity and have these analyzed.

We will need approximately 10 holes of plus or minus 150 foot depth drilled on an angle of 45 degrees. These holes we would plan on drilling parallel to the ~~xxxx~~ creek, and in a west direction.

We have a cost of this drilling made by the Joy Manufacturing Co. This was $4.00 per foot. In additional to this we would have the expense of an Engineer ot Geologist and the cost of analyzing the typical cores.

Our estimate of this work is:

Drilling 1500 ft at $4.00 per ft	6000.00
Geologist	500.00
Laboratory Analysis	500.00
Total	7000.00

(b) This ~~can~~ be started in one week and should be completed in a month and a half.

We need to know the grade of the ore (if any) and can make arrangements for mining it, providing we prove it is there in economical grades. We will comply with your Sec. 13 in the operation of a mine if we find we have ore.

Alabama Development Corporation
Birmingham, Alabama

5. There is one 5 room house with electricity and with an added bathroom, which is empty now. The barn might be used for storage of equipment only.

I do not think we will ~~xxxx~~ need to spend anything on these as the town of Ashland is only 1-1/2 miles away.

Alabama Development Corporation
Birmingham, Alabama

6. We will need no additional facilities.

Alabama Development Corporation
Birmingham, Alabama

7. We will need no Operating equipment.

Alabama Development Corporation
Birmingham, Alabama

8. We will have one Geological consultant for studying the cores and correlating them.

3 days a week ----- $ 500.00

Alabama Development Corporation
Birmingham, Alabama

9.	Diamond drilling contract $4.00 per foot	6000.00
	Engineering and/or Geologist	500.00
	Analyses	500.00
		$7000.00

Alabama Development Corporation
Birmingham, Alabama

10. (a) We are not able to raise any money but do supply the land on which the work will be done, and the necessary facilities for this exploration project.

Applic. can now raise its share per letter Nov. 28-'67

(b) We believe this complies with Sec. 9 of MO 5

Alabama Development Corporation
Birmingham, Alabama

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Tin-bearing gneiss.
Country rock.
Tin-bearing gneiss.
Country rock.
Main vein of gneiss containing the largest contents and best ore.
Massive white quartz with limonite, etc.

The section shows in a space of 800 feet six parallel, nearly vertical, belts of stanniferous gneiss. The tin stuff ranges from a trace up to 2 per cent, averaging 1 1/2 per cent; and is said to be readily concentrated. Certain masive ores in pebblelike pieces have been found on and in the richest gneiss. They have rather more than one-half the specific gravity of Durango tinstones; and yields an alloy of tin and iron very readily in the test crucible. This alloy is easily fused, and is said to reach 45 per cent of the contents of the ore and to resemble the general character of the impure pigs from tin ores charged with iron. The ore is reported to exist in very considerable quantity, and to be free from all traces of arsenic and sulphur. It worked very kindly in the assay and test furnace. Cassiterite is also found in the stream which crosses the lodes, but associated with

titanic and iron compounds, which renders its production troublesome.

No hoisting or pumping machinery is at present required. Reduction works have been erected near the quarries, the distance from the latter to the works being only from 100 to 400 feet. They consist of one light 40-stamp mill, one 5-stamp mill for crushing slag, one rock-breaker, one 15-horse power engine, one table, two jigs, four schlich vats, four settlers, and one tin blast furnace of the Altenberg pattern. The present plan was designed to produce from gneiss ore of 1 1/2 per cent. Tin oxide some 500 pounds of crude pig tin per day. The ore is so easily handled that the cost of stamping is light. The concentrated ore is to smelted in lots of 1,000 pounds.

Regular work began at the Broad Arrow mines March, 1883. The reduction works were built during the winter and spring, and were first tried March 20th. The force employed has averaged four men at the quarries and seven at the works. It cannot be said that the results obtained up to July 1st, were commercially successful. Mr. Gesner attributes this to two leading causes, one of which is the difficulty of sorting from so large a formation of ores rich enough to repay working, and the other is the frequent appearance of titanium in the tin oxide, seriously interfering with reduction. It is expected that when the employers become more familiar with the appearance of the ores and are able to make a proper selection, and when the concentrated apparatus is perfected, operations will proceed more successfully. In the meantime the works have been utilized in milling the low-grade gold ores from the quartz reef next to the tin-bearing gneiss.

OFFICE OF THE ADMINISTRATOR

DMEA-2263

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Room 13, Post Office Building
Knoxville, Tenn.

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 28 1951
Defense Minerals Administration,
Production Expansion Division.

November 26, 1951

Memorandum

To: Frank Johnson, Acting Chairman, Coordinating Committee

From: Executive Officer, DMEA, Region VII

Subject: Exploration Application -Alabama Development Corp.

Enclosed herewith are 4 copies of MF-103 received from Alabama Development Corporation, Birmingham, Ala., applying for aid in exploration for tin. These are being forwarded to you for docketing, and further consideration if the Washington commodity files of the Survey and Bureau contain anything later than the 1882 report cited by the applicant.

Please note, under question 10, the applicant has no money to put into the project. Also the geological basis of the project is poorly presented. Unless information in Washington contains a high degree of favorability for this, it would hardly seem to justify a field examination.

Applic. now has the money per letter 11-28-51 [illegible]

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
Nov 28 8 48 AM '51

Robert A. Laurence

Robert A. Laurence
Executive Officer, DMEA Field Team
Region VII

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

Room 13, Post Office Building
Knoxville, Tennessee

November 26, 1951

Mr. Bates Whatley, President
Alabama Development Corp. Inc.,
P.O. Box 3738, W.E.
Birmingham, Alabama

Dear Mr. Whatley:

This will acknowledge receipt of Form MF-103, applying for assistance in exploration for tin near Ashland, Alabama. The report is being forwarded to the Washington office in accordance with established procedure.

Under question 10a, you state that you cannot contribute to the cost of the project. Unless you are prepared to provide 10 per cent of the estimated cost, either in cash, personal services, or rental of equipment, it will not be possible to approve a contract for this work.

OK, now

Very truly yours,

Robert A. Laurence
Executive Officer, DMEA Field Team
Region VII

RAL/xx

Enc.
cc:
Beck
Lynch
Files

Subject: DMEA-2263
Re: Exploration Loan
Broad Arrow Mines

Mr. Bates Whatley, President
Alabama Development Corporation, Inc.
P. O. Box 3778 W. E.
Birmingham, Alabama

My dear Mr. Whatley:

This will acknowledge receipt of your application dated November 8, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2263 and referred to the Rare & Light Metals Branch.

Kindly refer to DMEA-2263 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams, Chief
Reports & Records Unit

7862

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. D.M.E.A. 2263
Metal or Mineral Tin
Date Received 11-28-51
Amount $ 7000
Participation (Government %)

Name and address of applicant

ALABAMA DEVELOPMENT CORPORATION, INC.
P.O. Box 3738 W.E.
BIRMINGHAM, ALABAMA

Date November 8, 1951

If you have already filed MF-100, give date filed not filed, type of assistance requested ____,

DMA Docket Number (if available) ____

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list 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.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

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   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

CERTIFICATION

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

ALABAMA DEVELOPMENT CORPORATION, INC.
(Name of company)

By Rees Whatley
(Signature of authorized official)
Pres.

November 8, 1951
(Date)

PRESIDENT
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Alabama Development Corporation
Birmingham, Alabama

1. (a) This property is located one and one-half miles north of Ashland, Alabama. It is a farm on which the president of this corporation was reared. The farm is on hilly land, with the house, road, and creek being in a valley, with the woods raising sharply.

   (b) The Alabama Development Corporation, Inc. owns this farm on which the exploration is to be carried out.

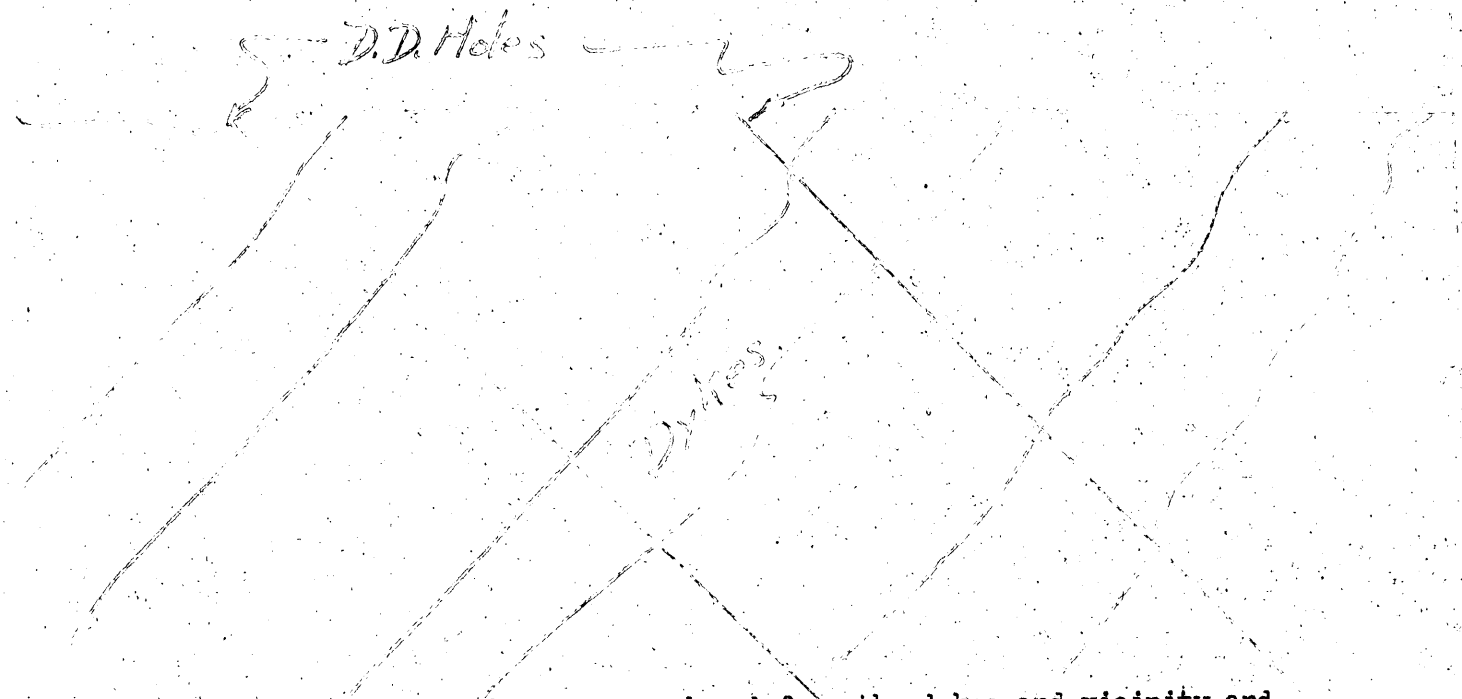
   (c) It is the W 1/2 of the North West Quarter of Section 27, Township 20, Range 8 East. It is 80 acres.

2. (a) We expect to find tin.

   (b) We made no geological examination of this property. The dykes show in the creek, along the road, and up the hill beyond. The minerals and rocks of the dykes are much stronger than the country rocks which are schist or gneiss. In the road you see a good cross section of a dyke. The country rock is weathered but is in place with narrow stringers of limonite and manganese following the dip. We are basing our expectation of finding tin on the old report of "Minerals Resources of the United States for 1882" published in 1893, page 434. Also, on stories heard as a boy about the tin bullion produced here.

Alabama Development Corporation
Birmingham, Alabama

3. (a) We propose to put down a series of Diamond drill holes to cut the dykes or veins, at depths of from 30 to 60 feet.



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We will need approximately 10 holes of plus or minus 150 feet depth drilled on an angle of 45 degrees. These holes we would plan on drilling parallel to the ~~xxxx~~ creek, and in a west direction.

We have a cost of this drilling made by the Joy Manufacturing Co. This was $4.00 per foot. In additional to this we would have the expense of an Engineer ot Geologist and the cost of analyzing the typical cores.

Our estimate of this work is:

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Geologist	500.00
Laboratory Analysis	500.00
Total	7000.00

(b) This can be started in one week and should be completed in a month and a half.

We need to know the grade of the ore (if any) and can make arrangements for mining it, providing we prove it is there in economical grades. We will comply with your Sec. 13 in the operation of a mine if we find we have ore.

Alabama Development Corporation
Birmingham, Alabama

5. There is one 5 room house with electricity and with an added bathroom, which is empty now. The barn might be used for storage of equipment only.

I do not think we will need to spend anything on these as the town of Ashland is only 1-1/2 miles away.

6. We will need no additional facilities.

Alabama Development Corporation
Birmingham, Alabama

7. We will need no Operating equipment.

Alabama Development Corporation
Birmingham, Alabama

8. We will have one Geological consultant for studying the cores and correlating them.

3 days a week --------- $ 500.00

Alabama Development Corporation
Birmingham, Alabama

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Birmingham, Alabama

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Applic. can now raise its share per letter of 11-28-51

(b) We believe this complies with Sec. 9 of MO 5.

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Main vein of gneiss containing the largest contents and best ore.
Massive white quartz with limonite, etc.

The section shows in a space of 800 feet six parallel, nearly vertical, belts of stanniferous gneiss. The tin stuff ranges from a trace up to 2 per cent, averaging 1 1/2 per cent; and is said to be readily concentrated. Certain masive ores in pebblelike pieces have been found on and in the richest gneiss. They have rather more than one-half the specific gravity of Durango tinstones; and yields an alloy of tin and iron very readily in the test crucible. This alloy is easily fused, and is said to reach 45 per cent of the contents of the ore and to resemble the general character of the impure pigs from tin ores charged with iron. The ore is reported to exist in very considerable quantity, and to be free from all traces of arsenic and sulphur. It worked very kindly in the assay and test furnace. Cassiterite is also found in the stream which crosses the lodes, but associated with

titanic and iron compounds, which renders its production troublesome.

No hoisting or pumping machinery is at present required. Reduction works have been erected near the quarries, the distance from the latter to the works being only from 100 to 400 feet. They consist of one light 40-stamp mill, one 5-stamp mill for crushing slag, one rock-breaker, one 15-horse power engine, one table, two jigs, four schlich vats, four settlers, and one tin blast furnace of the Altenberg pattern. The present plan was designed to produce from gneiss ore of 1 1/2 per cent. Tin oxide some 500 pounds of crude pig tin per day. The ore is so easily handled that the cost of stamping is light. The concentrated ore is to smelted in lots of 1,000 pounds.

Regular work began at the Broad Arrow mines March, 1883. The reduction works were built during the winter and spring, and were first tried March 20th. The force employed has averaged four men at the quarries and seven at the works. It cannot be said that the results obtained up to July 1st, were commercially successful. Mr. Gesner attributes this to two leading causes, one of which is the difficulty of sorting from so large a formation of ores rich enough to repay working, and the other is the frequent appearance of titanium in the tin oxide, seriously interfering with reduction. It is expected that when the employers become more familiar with the appearance of the ores and are able to make a proper selection, and when the concentrated apparatus is perfected, operations will proceed more successfully. In the meantime the works have been utilized in milling the low-grade gold ores from the quartz reef next to the tin-bearing gneiss.