DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 14 X

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 LOAN

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

Routing Slip

To:	SUPPLY DIVISION	Date	AUG 24 1951
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CONTROLLED DOCUMENT

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

AUG 28 1951

Re: DMA-14X
LeGrande J. Higginson
Mine near Santaquin, Utah
Exploration loan
Lead, zinc, copper

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Denial of loan

The field team report shows that the lead and zinc are oxidized and occur in isolated pockets that cannot be economically worked. None of the pockets give promise in yielding more than a few tons of ore and the outlook for discovery for higher grade material by lateral drifting or by exploration in depth is not promising. The exploratory work proposed by the applicant was suggested without regard of the geologic features that control the ore at the property. The field has recommended that the application be denied and the Lead-Zinc Branch concurs with this recommendation.

Returned herewith are:

1 copy of field team report with transmittal letter of July 20.
Original and carbons of various transmittal memoranda.
2 copies of MF-103
2 copies of MF-100
1 copy proposed contract filled in by the applicant.
Original application dated October 30, 1950
Letter of inquiry to J. H. East, dated October 19, 1950.
3 copies of descriptions headed, Names of Mining Claims.

T. P. Billings by
T. P. Billings, Chief
Lead-Zinc Branch

Approved:
Director, Supply Division

FILE COPY
SURNAME:

350

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

McKnight
O'Leary
(Fontana)
Johnson

AUG 28 1951

Re: DMA-14X
LeGrande J. Higginson
Mine near Santaquin, Utah
Exploration loan
Lead, zinc, copper

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Denial of loan

The field team report shows that the lead and zinc are oxidized and occur in isolated pockets that cannot be economically worked. None of the pockets give promise in yielding more than a few tons of ore and the outlook for discovery for higher grade material by lateral drifting or by exploration in depth is not promising. The exploratory work proposed by the applicant was suggested without regard of the geologic features that control the ore at the property. The field has recommended that the application be denied and the Lead-Zinc Branch concurs with this recommendation.

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2 copies of MF-100
1 copy proposed contract filled in by the applicant.
Original application dated October 30, 1950
Letter of inquiry to J. H. East, dated October 19, 1950.
3 copies of descriptions headed, Names of Mining Claims.

T. P. Billings by [illegible]
T. P. Billings, Chief
Lead-Zinc Branch

DJ 8/28

Approved:

Tom Lyon

Director, Supply Division

ETMcKnight:emp
G 8-23-51

Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote

Reports & Records
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

FILE COPY
SURNAME:

350

McKnight
O'Leary
(For Mote)
Johnson

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

AUG 28 1951

Re: D[illegible]-14X

Mr. LeGrande J. Higginson

Santaquin, Utah

Dear Mr. Higginson:

Your application for a loan to explore the New Deal, Utah Leader and Silver Star groups of mining claims has been reviewed by the Defense Minerals Administration. We have the report of a field examination made on your property to help us in judging your application.

On the basis of this report, we must conclude that the chances of finding any significant new tonnage of lead, zinc, or copper by the exploration that you propose are not favorable. The ore showing on the outcrop is too pockety to be of much economic value, and the outlook for extension of the deposit laterally or in depth is not promising. Under these circumstances, endexpenditure of public funds for the explorations that you propose is unwarranted. I regret, therefore, that your application must be declined.

We wish to thank you for bringing the property to our attention.

Very truly yours,

BJ 8/28

Tom Lyon
Tom Lyon, Director
Supply Division

ETMcKnight:emp
G 8-23-51

Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
R. H. Mote
Reports and Records
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

14X

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

224 New Customhouse
Denver 2, Colorado

July 20, 1951

Memorandum

To: Landon Strobel, Executive Secretary

From: DMA Field Team, Region IV

Subject: DMA Docket 14X - Legrande Higginson, New Deal Mining Claim, Utah County, Utah

Herewith is transmitted the original and two copies of the examiners report on the above docket.

We concur with the recommendation that the loan be denied.

J. H. East, Jr.

A. H. Koschmann

Attachment

Original copy by air mail
Two copies by regular mail

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 23 1951
LANDON F. STROBEL
Executive Secretary

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
20 June 1951

Mr. A. H. Koschmann
U. S. Geological Survey
200 New Customhouse
Denver 2, Colorado

Dear Mr. Koschmann:

Enclosed are 7 copies of the report on Docket DMA-14X, Legrande Higginson, New Deal Mining Claim, Utah County, Utah.

The property was examined by J. W. Hasler, R. W. Osterstock, and B. J. Sharp of the Geological Survey and by H. F. Buchholtz of the Bureau of Mines to determine the feasibility of the proposed project to explore oxidized lead showings near Santaquin, Utah.

The ore reserves are small and the lead-zinc mineralization is low grade. The outlook for the discovery of new ore bodies is not promising. It was accordingly recommended by the examining geologists and engineer that the request for a loan be denied. I concur in this recommendation.

Sincerely yours,

Ralph J. Roberts

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

(Lead-Zinc)

H. F. Buchholtz, Mining Engineer
U. S. Bureau of Mines

J. W. Hasler, Geologist
U. S. Geological Survey

June 20, 1951

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to be used to explore an oxidized lead property near Santaquin (Docket DMA-14X).

The Field Team, Region IV on May 31 requested that short investigation be made to determine the feasibility of the exploration project.

The lead deposit consists of gossan-like bodies along northeastward trending fractures in limestone. The lead-zinc metallization is low grade and discontinuous; the outlook for extension of the deposit laterally or in depth is not promising, and the project is not considered to have merit.

It is therefore recommended that the request by Legrande J. Higginson for a loan to explore the New Deal, Utah Leader, and Silver Star groups be denied.

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

INTRODUCTION

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to explore an oxidized lead deposit on the New Deal mining group near Santaquin, Utah.

The property is 4 1/2 miles southeast of Santaquin, Utah County, Utah in the Santaquin Mining District, and consists of the New Deal Nos. 1, 2, and 3, Utah Leader Nos. 1 and 2, and Silver Star claims. These claims were formerly known as the Blue Eagle group, and are now owned by Mr. Higginson. They are on the south slope of the south peak of Santaquin Ridge and can be reached by going southeast from Santaquin on the Santaquin Canyon road 4 1/2 miles, then taking a trail the last 400 feet to the mine. The production from the property is not known, but four shipments of silver ore and 2 shipments of zinc are reported by the applicant. It is doubtful that the shipments totalled more than a few tons in all.

The examination was made June 12 by J. W. Hasler, R. W. Osterstock, and B. J. Sharp of the Geological Survey and H. F. Buchholtz of the Bureau of Mines.

GEOLOGY

The lead-zinc deposits are in dense, grayish-black limestone of Mississippian age. In the mine area the limestone strikes northward and dips eastward. The limestone is cut by irregularly spaced fractures trending northeastward and dipping steeply southeastward. The fractures are generally tight and lack continuity.

The lead minerals are cerrusite and anglesite which occur sporadically associated with iron oxides in pockets along the fractured zones. Selected samples are reported to contain 2-13 percent zinc, 2 percent lead, and as much as 1.2 oz. silver to the ton. None of the pockets give promise of yielding more than a few tons of material.

Ore Reserves

There are only a few tons of indicated and inferred ore exposed in the area. The exposed material containing lead and zinc is not ore of commercial grade, and the outlook for discovery of higher grade material is not promising. The proposed exploratory work outlined in the application was suggested without regard to the geologic features that control ore at the property.

CONCLUSIONS

It is concluded that the exploration proposals made by Legrande Higginson on the Higginson property are without merit. It is therefore recommended that the application be denied.

GEC

224 New Customhouse
Denver 2, Colorado

July 20, 1951

Memorandum

To: Landon Strebel, Executive Secretary

From: DMA Field Team, Region IV

Subject: DMA Docket 14X - Lagrande Higginson, New Deal Mining Claim, Utah County, Utah

Herewith is transmitted the original and two copies of the examiners report on the above docket.

We concur with the recommendation that the loan be denied.

J. R. East, Jr.

A. H. Koschmann

Attachment

Original copy by air mail
Two copies by regular mail

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

a. E.C. -

200 New Customhouse
Denver 2, Colorado

June 26, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 14X--Lagrande Higginson, Dev Deal Mining Claim, Utah County, Utah.

Enclosed are 7 copies of the report on DMA Docket 14X by J. W. Hazlor, R. W. Osterstock, and R. J. Sharp of the Geological Survey and by M. D. Lucholtz of the Bureau of Mines.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (7)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 23 1951
Executive Secretary

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Room 307, 320 South Main
Salt Lake City 1, Utah
20 June 1951

Mr. A. H. Koschmann
U. S. Geological Survey
200 New Customhouse
Denver 2, Colorado

Dear Mr. Koschmann:

Enclosed are 7 copies of the report on Docket DMA-141, Legrande Higginson, New Deal Mining Claim, Utah County, Utah.

The property was examined by J. W. Hasler, R. W. Osterstock, and B. J. Sharp of the Geological Survey and by H. F. Buchholtz of the Bureau of Mines to determine the feasibility of the proposed project to explore oxidized lead showings near Santaquin, Utah.

The ore reserves are small and the lead-zinc metallization is low grade. The outlook for the discovery of new ore bodies is not promising. It was accordingly recommended by the examining geologists and engineer that the request for a loan be denied. I concur in this recommendation.

Sincerely yours,

Ralph J. Roberts

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

(Lead-Zinc)

H. F. Buchholtz, Mining Engineer
U. S. Bureau of Mines

J. W. Hasler, Geologist
U. S. Geological Survey

June 20, 1951

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to be used to explore an oxidized lead property near Santaquin (Docket DMA-14X).

The Field Team, Region IV on May 31 requested that short investigation be made to determine the feasibility of the exploration project.

The lead deposit consists of gossan-like bodies along northeastward trending fractures in limestone. The lead-zinc metallisation is low grade and discontinuous; the outlook for extension of the deposit laterally or in depth is not promising, and the project is not considered to have merit.

It is therefore recommended that the request by Legrande J. Higginson for a loan to explore the New Deal, Utah Leader, and Silver Star groups be denied.

DM1-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

INTRODUCTION

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to explore an oxidized lead deposit on the New Deal mining group near Santaquin, Utah.

The property is 4 1/2 miles southeast of Santaquin, Utah County, Utah in the Santaquin Mining District, and consists of the New Deal Nos. 1, 2, and 3, Utah Leader Nos. 1 and 2, and Silver Star claims. These claims were formerly known as the Blue Eagle group, and are now owned by Mr. Higginson. They are on the south slope of the south peak of Santaquin Ridge and can be reached by going southeast from Santaquin on the Santaquin Canyon road 4 1/2 miles, then taking a trail the last 400 feet to the mine. The production from the property is not known, but four shipments of silver ore and 2 shipments of zinc are reported by the applicant. It is doubtful that the shipments totalled more than a few tons in all.

The examination was made June 12 by J. W. Hasler, R. W. Osterstock, and B. J. Sharp of the Geological Survey and H. F. Buchholts of the Bureau of Mines.

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The lead-zinc deposits are in dense, grayish-black limestone of Mississippian age. In the mine area the limestone strikes northward and dips eastward. The limestone is cut by irregularly spaced fractures trending northeastward and dipping steeply southeastward. The fractures are generally tight and lack continuity.

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Ore Reserves

There are only a few tons of indicated and inferred ore exposed in the area. The exposed material containing lead and zinc is not ore of commercial grade, and the outlook for discovery of higher grade material is not promising. The proposed exploratory work outlined in the application was suggested without regard to the geologic features that control ore at the property.

CONCLUSIONS

It is concluded that the exploration proposals made by Legrande Higginson on the Higginson property are without merit. It is therefore recommended that the application be denied.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 31, 1951

Memorandum

To: S. R. Wilson
(Through Chief, Mining Division)

Ralph Roberts

From: DMA Field Team, Region IV

Subject: DMA Docket 14X, LeoGrande J. Higginson, Santaquin, Utah, New Deal Mining Claim

We are forwarding you the brochure of application DMA 14X, LeoGrande J. Higginson. You will note that the Coordinating Committee recommends that a short investigation be made to determine the feasibility of the exploration project. You will also note that the statement in the letter by B. S. Butler.

Please consider this application and make a report without spending too much time as this is an exploration project.

Please return the brochure with your report.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Attachments
DMA 14 brochure

U. S. GEOLOGICAL SURVEY
RECEIVED
JUN 4 1951
POST BRANCH

May 31, 1951

Memorandum

To: S. R. Wilson
(Through Chief, Mining Division)

Ralph Roberts

From: DMA Field Team, Region IV

Subject: DMA Docket 14X, LeoGrande J. Higginson, Santaquin, Utah, New Deal Mining Claim

We are forwarding you the brochure of application DMA 14X, LeoGrande J. Higginson. You will note that the Coordinating Committee recommends that a short investigation be made to determine the feasibility of the exploration project. You will also note that the statement in the letter by B. S. Butler.

Please consider this application and make a report without spending too much time as this is an exploration project.

Please return the brochure with your report.

J. H. East, Jr.

A. H. Koschmann

Attachments
DMA 14 brochure

R&R
6/4/51

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

FILE COPY
NAME:

ALBrokaw
McNaught
Strobel
Lyon
Moon

May 22, 1951

Re: Docket DMA-14X

Mr. LeoGrande J. Higginson
Santaquin, Utah

Dear Mr. Higginson:

Your application (Docket DMA-14X) for a Government loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to the Executive Officer of the Field Team, Mr. J. H. East, Jr., 224 New Customhouse, Denver 2, Colorado, with the request that the needed information be supplied to us.

Very truly yours,

Tom Lyon, Director
Supply Division

ALBrokaw:emp
G 5/22/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
Tom Lyon
Directors reading file 4214 GSA
Br. reading file 4214 GSA
Files

FILE COPY
~~NAME~~

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

AlBrokaw
McKnight
Harrison

File Sent To 5/25/51

May 21, 1951

Re: Docket DMA-14X
LeoGrande J. Higginson
Santaquin, Utah
New Deal Mining Claim

Mr. J. H. East, Jr. Executive Officer
DMA Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

The amended application (14X), filed by Mr. Higginson, for an exploration loan of $20,935 has been reviewed by the Lead-Zinc Branch. The following pertinent facts should be noted.

1. This original request for a mining loan of $27,500 was denied by the Defense Minerals Administration in December 1950.

2. A second denial of the application was sent to the applicant on January 29, 1951.
1-31-51

These denials were based on B. S. Butler's conclusions that depth extensions of these deposits could not be expected since the ore now present was the result of downward leaching of primary ore bodies now removed by erosion. The original application suggested a plan for topping the ore zone 3500 feet below the out crop.

The exploration project now under consideration suggests a plan to explore and develop the ore exposed on the surface and in short adits already driven. These are oxidized ores of lead and zinc but the geologic nature of their occurrence is not clearly stated. The tonnage of ore that might be uncovered by this project is not based on accepted geologic deductions and therefore does not represent a valid evaluation of the possible ore reserves. The applicant proposes to finance this work by substituting the value of his labor and that of one miner in lieu of actual cash. He also anticipates an income from immediate ore sales.

It is recommended that this property be examined by the field team to determine if the proposed project is feasible and one that merits consideration for the exploration program.

AlBrokaw-drc
G: 5-21-51

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Approved:

Lowell B. Moon

Member, Bureau of Mines
Olaf N. Rove

Member, Geological Survey

Copy to: J.H. East, Jr. Region IV(2)
Chief, Lead-Zinc Br.
E.T. McKnight, 4203, GSA
L.B. Moon
E.M. Mote
L.F. Strobel
T.Lyon
Dr.Read. file 4212
Br.Read.file 4212
Files

DMA 14

856

FILE COPY
SURNAME:

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

May 10, 1951

Mr. Le Grande J. Higginson
Santaquin
Utah

Subject: DMA-14 X
Re: Exploration Loan
Silver Star, Utah Leader,
and New Deal Mines

My dear Mr. Higginson:

Receipt is acknowledged of your application and attachments of April 27, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number 14 X and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch, on May 7, 1951.

In any future correspondence relating to your application, Kindly refer to DMA-14 X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:aec
cc: Strobel-2
Files
Mr. Herres
Mr. Lyon

DMA 14

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA-14X

Date received 5/7/51

Participation

LeGrand J. Higginson
Santaquin, Utah

Name and address of applicant

Date April 27, 1951

FILL IN THIS BLOCK

Date of application April 27, 1951 Estimated cost $20,935

Mineral or metal zinc, lead, silver, gold, copper, iron, sulfur Percentage of Government participation 50%

Location of mine Santaquin Mining District, Santaquin, Utah

Date of filing MF-100 DMA Docket Number, if available DMA-14X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

---------- (Name of company)

By ---------- (Signature of authorized official)

---------- (Date)

---------- (Title)

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

*Same as footnote on page 1.

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

1/ Le Grand Higginson Santaquin, Utah D.M.A. 14

Application for aid for an Exploration Project Pursuant to mineral order 5, Under Defence Production Act of 1950

1. 2. 3. 4. 5. answered on M 7-100 In no. 6.

6. There is no Claims, liens, or encumbrances against this property.

7. No lease

8. There has been no profit for me on these Claims I have done assessments for 2 years on these Claims A Cost of $1400.

9. I am not able to invest any money at all in this project. All I can do is the work myself And I will furnish one miner to work with me

10. (a) The New Ideal Covers four mining Claims and Utah Leader covers three Claims and the Silver Star covers one Claim. There is no other property involved.

(b) The work will be done on a zinc vein on the New Ideal mining Claim. And on Utah Leader No1 mining Claim on a zinc croping. And on Silver Star. Please refer to first D.M.A. 14.

11. 12. Answered on M 7-100. 11 in no. 2. 12 in no. 3

13. There is plenty of water in Santaquin Summit Creek, the year around, 1500 ft. below these workings

14. All I have to work with on the property is hammers, drills, picks and shovels.

15. The way it is now the ore would have to be carted down the hill 1500 ft. to the canyon road. Then it would be sent to the railroad on trucks, shipped by railroad to the zinc mill in Midvale, Utah. Operated by the United States Smelter Milling and Refining Co. Salt Lake City, Utah.

16. Answered on M 7-100. In no. 7.

17. Production: None at present.

18. (a) (b) (c) answered in the first D.M.A 14 papers sent you. Maps are also there.

19. This property in my opinion if worked the ore should make a new mine, we haven't had one in our state for some time.

31 Le Grand Higginson Santaquin, Utah D.M.A. 14

The Exploration application

20. Lead zinc silver and copper, iron and gold.

21. The proposed work and the estimated time required to complete it is in the first D.M.A. 14 sent you. But I think as the work moves on maybe it will not require all that I have put in for it may be the ore will pay from the places started at first and will not have to run that 500 ft tunnel as stated.

22. The assay sheets and statements for this question are in the first D.M.A. 14 papers sent you.

23. (a) One miner at $13.00 per day.
(b) Supervisor as myself and helping to assist with the miners work at $10.00 per day. This work would consist of helping miner, supervising the mine and keeping all books straight.
(c) There is no buildings to repair and I could not have any made till I get to shipping ore. And get my share of the money out of the ore. I would not want to spend money on these things till I know that the ore has made good.
(d) Same as above (c). Things can be put away in the tunnel away from the water. I can make a good door and lock it up when I am away. They can be kept as good as in a building.
(e) A Cauldrwood machine to drill with a good hand machine. It is a 14 lb hammer on a upright bar. It rachets the drill each hit you can drill a round with one set up with this machine. Cost $300. Also a car to get to the mine. Cost $200 and to haul things back and forth in.
(f) I don't intend to rent equipment.
(g) no rental value of any equipment.
(h) Cost of items less than $50 each
15 shovels $3 each $45
15 picks $3 each $45
Machine steel $49
(i) Cost of Blacksmith equipment to keep tools sharp $150. Cost of powder, and blasting equipment $2500 a total of $2839

3) LeGrande Higginson Santaquin, Utah D.M.A. 14

Exploration application

24. Cost of items for project $2839
Cost of labor and supervising $18,096
$20,935

with a total of $20,935 for 2 years or 24 months work listed above. This will be six days a week as me acting as supervisor and miner with a wage for this at $16.00 a day. And a miner at $13.00 a day to work with me. I will hire my miner. This work will be done on the ore and not in any tunnel as was stated in the first D.M.A. 14 contract. The may consist of stopeing out the ore or tunneling in on it or sinking down on it the way it looks like it will pay best will be the only way I would want to work it.

Dma - 14 X
~~LANDON F. STROBEL~~
Mr. Jones

Santaquin, Utah
April 30, 1951

U.S. Department of the Interior
Defense Minerals Administration
Washington 25, D. C.

Dear Sir:

I have filled out the exploration project blanks and contract to the best of my knowledge. I hope they complete the application correct.

Please answer and tell me if they are correct. Inform me as what to do next.

Yours Truly
LeGrand J. Higginson
Santaquin, Utah

MAY 8 1951

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma - 14X

Date received 5/7/51

Participation

Le Grande J. Higginson
Santaquin, Utah

Name and address of applicant

Date April 27, 1951

FILL IN THIS BLOCK

Date of application April 27, 1951 Estimated cost $20,935

Mineral or metal zinc, lead, silver, gold, copper, iron, sulfur. Percentage of Government participation 50%

Location of mine Santaquin Mining District, Santaquin, Utah

Date of filing MF-100 DMA Docket Number, if available D.M.A. 14X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

---------- By ----------
(Name of company) (Signature of authorized official)

---------- ----------
(Date) (Title)

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

*Same as footnote on page 1.

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

1/ Le Grand Higginson Santaquin, Utah D.M.A. 14

Application for aid for an Exploration Project Pursuant to Mineral order 5, Under Defence Production Act of 1950.

1. 2. 3. 4. 5. answered on M7-100 In no. 6
6. There is no claims, liens or encumbrances against this property
7. No lease
8. There has been no profit for me on these claims I have done assessments for 2 years on these claims. A cost of $1400
9. I am not able to invest any money at all in this project. All I can do is the work myself and I will furnish one miner to work with me.
10. (a) The New Deal Covers four mining claims and Utah Leader Covers three claims And the Silver Star Covers one claim. There is no other property involved.
(b) The work will be done on a zinc vein on the New Deal mining claim. And on Utah Leader No. 1 mining claim on a zinc croping and on Silver Star. Please refer to first D.M.A. 14.
11. 12. answered on M7-100. 11 in no. 2. 12 in no. 3.
13. There is plenty of water in Santaquin Summit creek the year around, 1500 ft below these working.
14. All I have to work with on the property is hammers, drills, picks and shovels.
15. The way it is now, the ore would have to be carted down the hill 1500 ft. to the Canyon road. Then it would be sent to the railroad on trucks, shipped by railroad to the zinc mill in Midvale Utah. Operated by the United States Smelter milling and Refining Co. Salt Lake City, Utah
16. answered on M7-100. In no. 7
17. Production: none at present
18. (a) (b) (c) answered in first D.M.A. 14 papers sent you. Maps are also there.
19. This property in my opinion if worked the ore should make a new mine. We haven't had one in our state for some time

21 Le Grande Higginson Santaquin Utah D.M.A. 14.

The Exploration application

20. Lead, zinc, silver, and copper, iron and gold.

21. The proposed work and estimated time required to complete it is in the first D.M.A. 14 sent you. But, I think as the work moves on, maybe it will not require all that I have put in, for it may be the ore will pay from the places started at first and will not have to run that 500 ft. of tunnel as stated.

22. The assay sheets and statements for this question are in the first D.M.A. 14 papers sent you.

23. (a) One miner at $3.00 per day.
(b) Supervisor, as myself, and helping to assist with the miners work at $6.00 per day. This work would consist of helping miner, supervising the mine, and keeping all books straight.
(c) There is no buildings to repair. And I could not have any made till I got to shipping ore and get my share of the money out of the ore. I would not want to spend money on these things till I know, that the ore has made good.
(d) Same as above (c). Things can be put away in the tunnel away from the water, I can make a good door and lock it up when I am away. They can be kept as good as in a building.
(e) A Cauldenwood machine to drill with, a good hand machine. It is a 14 lb. hammer on a upright bar. It rachets the drill each hit. You can drill a round with one set up with this machine. Cost $300. Also a car to get to the mine. Cost $200 and to haul things back and forth in.
(f) I don't intend to rent equipment.
(g) No rental value of any equipment.
(h) Cost of items less than $50 each.
15 shovels $3 each $45
15 picks $3 each $45
Machine steel $49
(i) Cost of Blacksmith equipment to keep tools sharp $150. Cost of powder, and blasting equipment, $2500 a total of $2839

3/ Le Grande Higginson Santaquin Utah D.M.A. 14

Exploration application

24. Cost of items for project $2839
Cost of labor and supervising 18096
$20,935

with a total of $20,935 for 2 years, or 24 months, work listed above. This will be six days a week as me acting as supervisor and miner with a wage for this as $6.00 a day and a miner at $3.00 a day to work with me. I will hire my miner. This work will be done on the ore and not in any tunnel, as was stated in the first D.M.A. 14 Contract. The work may consist of stoping out the ore, or tunneling in on it, or sinking down on it, the way it looks like it will play best will be the only way I would want to work it.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma-14X

Date received 5/7/51

LeGrande J. Higginson
Santaquin, Utah

Name and address of applicant

Date April 27, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124–A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production .....

   If not in production or operation, estimated date when production will begin .....
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

_____ (Name of company)

By _____ (Signature of authorized official)

_____ (Date)

_____ (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

Form DIF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma - 14 X

Date received 5/7/51

LeGrand Higginson
Santaquin, Utah.

Name and address of applicant

Date April 27, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124–A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

Dma 14 X (3 copies)

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
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3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

_____ (Name of company)

By _____ (Signature of authorized official)

_____ (Date)

_____ (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

1

LeGrand J. Higginson Santaquin Utah D.M.9.14

General Technical Data

1. Materials produced
(a) Zinc
(b) sulfur
2. Names of mine: New Deal, Nos. 1, 2, 3. Utah Leader Nos. 1, 2. Silver Star. Old name of property was Blue Eagle Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9.
Type of mine is tunnels and incline.
Extent of workings:
(a) 300 ft of incline shafts.
(b) None
(c) 500 ft. of tunnels
(d) 30 ft. into a cave with zinc ore in it. Mine is not flooded there is no pumping problems. Productive Capacity could be 30 to 60 tons of ore a day.
3. (a) Four miles from town of Santaquin 4½ miles from shipping point
(b) Santaquin Mining District.
(c) On forest reserve Uintah Range.
(d) Utah County, Utah.
4. (a) No.
(b) Owner.
5. It produced ore for 2 years. Production should begin within 15 days of starting work.
6. I, the applicant and the person who will manage the project have had 15 years mining experience in large ore bodies in mines, and have also had 15 years experience in prospecting. The County records on mining claims will show this record. I have done this because I like it. I am well acquainted with rock and rock formation. I am the owner and operator of these claims.
7. History:
(a) The place where I will do the work is in the ore veins. For the cost of labor and other things to mine with, cost too much. That is one of the reasons this property quit operation before was that they done too much work away from the ore. (b) One mile to the north of this property is the Union Chief mine which produced $50,000 in lead

silver, and zinc ore. This mine does not operate any more because of trouble with the silver holders. 1580 ft. west of this mine is uranium rock, 3,000,000 tons of radio active ore in the pegmatites dikes in the granite formation. There is also fluorspar, some copper and a large amount of iron ore in this granite formation. To the South of this property about 5 miles is the Eva mine, which produced about $1,000,000 in high grade lead, silver ore, before it was cut off by a fault.

(c) This ore I intend to work on is not a high grade ore. In one place it assays from 1% to 48% zinc as a picked sample. This vein is 12 ft. wide. Another place it assays 1% to 5% zinc. This rock is heavy in sulfur. The vein is 15 ft. wide. Another place 20 ft. wide assays 2% to 7% zinc. These croppen's of ore are on the surface. They should develop into a good grade of ore. This ore is not far from a good road, about from 1500 ft. to 2500 ft.

Form MF-103
(April 1951)

U. DEPARTMENT OF THE INTER
DEFENSE MINERALS ADMINISTRATION

Budget Bu No. 42-R1035.
Approval e s 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma-14X

Date received 5/7/51

Participation

Name and address of applicant

LeGrande J. Higginson
Santaquin, Utah.

Date April 27, 1951

FILL IN THIS BLOCK

Date of application April 27, 1951 Estimated cost $20,935

Mineral or metal Zinc, lead, silver, gold, Copper, iron, sulfur Percentage of Government participation 50%

Location of mine Santaquin Mining District Santaquin, Utah

Date of filing MF-100 DMA Docket Number, if available DMa-14

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

---------- By ----------
(Name of company) (Signature of authorized official)

---------- ----------
(Date) (Title)

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

*Same as footnote on page 1.

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

1

LeGrande Hyggenson Santaquin, Utah D.M.a.14

Application for aid for a exploration Project Pursuant to Mineral Order 5, Under Defence Production Act of 1950

1. 2.3.4.5 answered on M7-100. In no. 6.

6. There is no claims, liens, or encumbrances against this property.

7. No lease.

8. There has been no profit for me on these claims I have done assesments for 2 years on these claims a Cost of $1400

9. I am not able to invest any money at all in this project all I can do is the work myself and I will furnish one miner to work with me

10. (a) The New Deal Covers four mining Claims, and the Utah Leader covers three claims and the Silver Star covers one claim. There is no other property involved.

(b) The work will be done on a zinc vein on the New Deal Mining Claim and on Utah Leader No. mining claim, on a zinc croping and on Silver Star. Please refer to first D.M.a.14.

11. 12 answered on M7-100. 11 in no 2. 12 in no. 3.

13. There is plenty of water in Santaquin Summit Creek the year around, 1500 ft. below these working.

14. All I have to work with on the property is hammers, drills picks and shovels.

15. The way it is now the ore would have to be carted down the hill 1500 ft. to the Canyon road Then it would be sent to the railroad on trucks Shipped by railroad to the zinc mill in Midvale, Utah. Operated by the United States Smelters milling and Mining Co. Salt Lake City, Utah.

16. answered on M7-100 In no. 7.

17. Production: None at present.

18. (a) (b) (c) answered in the first D.M.a.14 papers sent you. Maps are also there

19. This property in my opinion, if worked the ore should make a new mine. We haven't had one in our state for some time.

Le Grand Higginson Santaquin, Utah D.M.A. 14

The Exploration Application

20. Lead Zinc Silver and Copper iron and gold

21. The proposed work and the estimated time required to complete it is in the first D.M.A. 14 sent you. But I think as the work moves on maybe it will not require all that I have put in for it maybe the ore will pay from the places started at first and will not have to run that 500 ft. of tunnel as stated

22. The assay sheets and statements for this question are in the first D.M.A. 14 papers sent you

23. (a) One miner at $1.00 per day

(b) Supervisor as merely add helping to assist with the miners work at $6.00 per day. This work would consist of helping miner, supervision the mine and keeping all books straight.

(c) There is no buildings to repair and I could not have any made till I got to shipping ore and get my share of the money out of the ore. I would not want to spend money on these things till I know that the ore has made good.

(d) Same as above (c). Things can be put away in the tunnel away from the water. I can make a good door and lock it up when I am away. They can be kept as good as in a building

(e) A Caulderwood Machine to drill with a good hand machine. It is a 14 lb. hammer on a upright bar. It rachets the drill each hit you can drill a round with one set up with this machine Cost $300. also a car to get to the mine. Cost $300 and to haul things back and forth in.

(f) I dont intend to rent equipment.

(g) no rental value of any equipment.

(h) Cost of items less than $50 each

15 shovels $3 each $45

15 picks $3 each $45

machine steel $49

(i) Cost of Blacksmith equipment to keep tools sharp $150. Cost of powder and blasting equipment $2500 a total of $2839

3) Le Grand J. Higginson Santaquin, Utah D.M.A. 14

Exploration Application

24. Cost of items for project $2839
Cost of labor and supervising 18096
$20,935

with a total of $20,935 for 2 years or 24 months work listed above. This will be six days a week as me acting as supervisor and miner with a wage for this at $6.00 a day and a miner at $3.00 a day to work with me. I will hire my miner. This work will be done on the ore and not in any tunnel, as was stated in the first D.M.A. 14 Contract. The work may consist of stopeing out the ore, or tunneling in on it, or sinking down on it, the way it looks like it will pay best, will be the only way I would work to work it.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma-14X

Date received 5/7/51

Le Grande J. Higginson
Santaquin, Utah

Name and address of applicant

Date April 27, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production .....

   If not in production or operation, estimated date when production will begin .....
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

_____ (Name of company)

By _____ (Signature of authorized official)

_____ (Date)

_____ (Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

L. Grandy Higginson Santaquin Utah U.M.A. 14

General Technical Data

1. Materials produced:
(a) Zinc
(b) Sulfur
2. Names of mine: New Deal, Nos. 1, 2, 3. Utah Leader No. 1, 2 Silver Star. Old name of property was Blue Eagle Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9.
Type of mine is tunnels and incline
Extent of workings:
(a) 300 ft of incline shafts.
(b) None
(c) 500 ft of tunnels
(d) 30 ft into a cave, with zinc ore in it. Mine is not flooded, there is no pumping problems. Productive Capacity could be 30 to 50 tons of ore a day.
3. (a) 7 our miles from town of Santaquin. 4 1/2 miles from shipping point.
(b) Santaquin Mining District.
(c) On forest reserve. Unitah Range.
(d) Utah County, Utah
4. (a) No.
(b) Owner.
5. It produced ore for 2 years. Production should begin within 15 days of starting work.
6. I, the applicant and the person who will manage the project have had 15 years mining experience in large ore bodies in mines, and have also had 15 years experience in prospecting. The County records on mining claims will show this record. I have done this because I like it. I am well aquainted with rock and rock formations. I am the owner and operator of these claims.
7. History:
(a) The places where I will do the work is in the ore veins. For the cost of labor and other things to mine with cost too much. That is one of the reasons this property quit operation before was that they done too much work away from the ore.
(b) One mile to the north of this property is the Union Chief mine which produced $60,000 in lead

Silver and zinc ore. This mine does not operate any more because of trouble with the share holders. 1500 ft. west of this mine is Uranium rock, 3,000,000 tons of radio active ore in the pegmatite dikes in the granite formation. There is also fluorspar, some copper and a large amount of iron ore in this granite formation. To the South of this property about 5 miles is the Eva mine, which produced about 1,000,000 in high grade lead, silver ore, before it was cut off by a fault.

(c) This ore I intend to work on is not high grade ore. In one place it assays from 1% to 48% zinc as a picked sample. This vein is 12 ft. wide. Another place it assays 1% to 5% zinc. This rock is heavy in sulfur. The vein is 15 feet wide. Another place 20 ft. wide assays 2% to 7% zinc. These croppen's of ore are on the surface. They should develop into a good grade of ore. This ore is not far from a good road, about, from 1500 ft. to 2500 ft.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma - 14 X

Date received 5/7/51

Participation

LeGrande J. Higginson
Santaquin, Utah

Name and address of applicant

Date April 27, 1951

FILL IN THIS BLOCK

Date of application April 27, 1951 Estimated cost $20,935

Mineral or metal Zinc, lead, silver, gold, copper, iron and sulfur. Percentage of Government participation 50%

Location of mine Santaquin Mining District, Santaquin, Utah.

Date of filing MF-100 DMA Docket Number, if available D.M.A. 14 X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

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

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

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

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

16—64067-1

THE PROPERTY

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

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

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

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

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

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

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

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

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

CERTIFICATION

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

---------- By ----------
(Name of company) (Signature of authorized official)

---------- ----------
(Date) (Title)

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

*Same as footnote on page 1.

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

1

Le Grande Higginson Santaquin, Utah. D.M.A. 14

Application for aid for an Exploration Project Pursuant to mineral order 5, Under Defence Production Act of 1950.

1. 2. 3. 4. 5. answered on M.7-100. In no. 6

6. There is no claims, liens or encumberances against this property.

7. No lease.

8. There has been no profit for me on these claims. I have done assessments for 2 years on these claims. A cost of $1400

9. I am not able to invest any money at all in this project. All I can do is the work myself. And I will furnish one miner to work with me

10. (a) The New Deal covers four mining claims and Utah Leader covers three claims and the Silver Star covers one claim. There is no other property involved.

(b) The work will be done on a zinc vein on the New Deal mining claim. And on Utah Leader no. 1 mining claim of a zinc croping. And on Silver Star Please refer to first D.M.A. 14.

11. 12. answered on M.7-100. 11 in no. 2. 12 in no. 3.

13. There is plenty of water in Santaquin Summit Creek, the year around, 1500 ft. below these workings

14. All I have to work with on the property is hammers, drills, picks and shovels.

15. The way it is now, the ore would have to be carted down the hill 1500 ft. to the canyon road. Then it would be sent to the railroad on trucks shipped by railroad to the zinc mill in Midvale, Utah. Operated by the United States Smelter Milling and Refining Co. Salt Lake City, Utah.

16. answered on M.7-100. In no. 7.

17. Production: None at present.

18. (a) (b) (c) answered in the first D.M.A. 14 papers sent you. Maps are also there.

19. This property in my opinion, if worked, the ore should make a new mine. We haven't had one in our state for some time.

The Exploration application

20. Lead, zinc, silver, and copper, iron and gold.

21. The proposed work and the estimated time required to complete it is in the first D.M.A. 14 sent you. But I think as the work moves on, maybe it will not require all that I have put in, for it maybe the ore will pay from the places started at first, and will not have to run that 500 ft. of tunnel as stated.

22. The assay sheets and statements for this question are in the first D.M.A. 14 papers sent you.

23. (a) One miner at $3.00 per day.
(b) Supervisor as myself and helping to assist with the miners work at $6.00 per day. This work would consist of helping miner, superv[illegible] the mine and keeping all books straight.
(c) There is no buildings to repair. And I could not have any made till I got to shipping ore and get my share of the money out of the ore. I would not want to spend money on these things till I know that the ore has made good.
(d) Same as above. (c). Things can be put away in the tunnel away from the water. I can make a good door and lock it up when I am away. They can be kept as good as in a building.
(e) A Caulderwood Machine to drill with, a good hand machine. It is a 14 lb. hammer on a upright bar. It rachets the drill each hit. You can drill a round with one set up with this machine. Cost $300. Also a car to get to the mine. Cost $200, and to haul things back and forth in.
(f) I don't intend to rent equipment.
(g) no rental value of any equipment.
(h) Cost of items less than $50 each

15 shovels	$3 each	$45
15 picks	$3 each	$45
~~1 hammer~~	~~$3 each~~	~~$18~~
Machine steel		$49

(i) Cost of Blacksmith equipment to keep tools sharp $150. Cost of powder, and blasting equipment $500 a total of $839

(3) Le Grand J. Higginson Santaquin Utah D.M.9.14

Exploration application

24. Cost of items for project $2839
Cost of labor and supervising $18,096
$20,935

with a total of $20,935 for 2 years, or 24 months work listed above. This will be six days a week as me acting as supervisor and miner with a wage for this at $16.00 a day. And a miner at $13.00 a day to work with me. I will hire my miner. This work will be done on the ore and not in any tunnel as was stated in the first D.M.9.14 contract. The work may consist of stoping out the ore, or tunneling in on it. or sinking down on it the way its looks like it will pay best will be the only way I would want to work it.

Form MF-100
(March 1951)

U. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma - 14X

Date received 5/7/51

LeGrand J. Higginson
Santaquin, Utah.

Name and address of applicant

Date April 27, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124–A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

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

(Name of company)

By ---
(Signature of authorized official)

(Date)

(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

FILE COPY
SURNAME:

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

APR 12 1951

In reply please refer to DMA-14

Mr. Le Grande J. Higginson

Santaquin, Utah

Dear Mr. Higginson:

One of the purposes of the Defense Production Act of 1950 is the encouragement of exploration, development and mining of strategic minerals and metals. Where an applicant has proven reserves of strategic materials, Federal aid in mining can be given through procurement contracts for such materials as are in short supply. On the strength of these contracts, the applicant can obtain private financing in most instances.

The program recently approved for encouragement of exploration of strategic materials calls for participation on the part of the applicant. For zinc, lead and copper deposits it will be necessary to match Government funds on an equal basis. Funds advanced by the Government will be considered a loan, to be repaid if the exploration is profitable, but to be canceled if unsuccessful. The details of the plan, explaining the projects that will be eligible for assistance, the terms and schedules of financing, repayment, and other pertinent information, are enclosed.

A review of your application (DMA-14) for financial aid in exploring by drifting on your prospect indicates that your proposal may be considered under this exploration program. Details concerning expenditures that will be considered chargeable to exploration aid will be subject to a final determination by negotiation. The amount that will be applied toward the total request will depend upon the amount requested in your formal application.

Before we can proceed further with consideration of your application, which may or may not require a field examination, please indicate your willingness to provide your share of the funds needed to carry out the proposed exploration. Any modification of your original proposal that you may wish to make will be considered, but you should be specific concerning the work you wish to undertake.

ALBrokaw:emp G 3/30/51
Copies to: 2 copies to
J. H. East, Jr. Region IV
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
C. O. Mittendorf
Files

Enclosures

Very truly yours,

Otto Herres

OTTO HERRES, Chief
Lead-Zinc Branch

DMA-14

956

Application for Government Loan (D. M. A. 14)
LeGrande J. Higginson, Santaquin, Utah

LANDON F. STROBEL
Mail
Santaquin, Utah
March 12, 1951

United States Dept. of The Interior
Defence Minerals Administration
Washington 25, D. C.

Dear Sir:-

In reply to your last letter to me, of January 31, 1951, regarding my application for a Government loan (D. M. A. 14)

It seems to me you got a misunderstanding of how I wanted to do the work. The way I would like to do the work on your new matching plan, is to work in this ore fisher which is 12 ft. wide, with zinc ore in it that assays from 5% zinc to 48% zinc, is to go in on this ore fisher for 100 ft. I can sort out the zinc that will ship as I work in on it. And I think by the time I have went in on this ore for 100 ft it will be a good grade of ore the width of the fisher.

This place I am referring to is about 1500 ft. from a good road, which is about four miles from the railroad, the shipping point Santaquin.

I think there is a good chance on this project to develop a mine.

Hoping to hear from you soon, I remain

Yours Truly
LeGrande J. Higginson
Santaquin, Utah

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1951
LANDON F. STROBEL
Executive Secretary

MAR 27 1951

copy to: Chief, Lead-Zinc Branch
Geological Survey - McKnight
J. H. Hedges
R. H. Mote
2 copies to Executive Officer,
Regional Field Team, Region IV
Strobel
Mittendorf
Files

FILE COPY
SURNAME:

14

Al Brokaw
McKnight for Beers

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

January 31, 1951

Mr. Le Grande J. Higginson

Santaquin, Utah

Dear Mr. Higginson:

In reply to your letter of January 15 regarding your application for a Government loan (DMA ~~15~~ 14):

As explained in the enclosed press release, before a loan for development will be made by the Reconstruction Finance Corporation, the Defense Minerals Administration must certify that the minerals sought are necessary for national defense. Furthermore, projects to be approved by the Defense Minerals Administration must, in its judgment, show definite promise of yielding material of acceptable grade, physical character, and specifications in amounts that will significantly improve the mineral supply position for national defense.

The documents supporting your application show that a little lead-zinc ore has been produced by your property. Your application does not indicate that there are measured ore reserves. The probable success of your proposal to develop the downward extension of a fissure vein 3,500 below its surface exposure is not substantiated by evidence submitted. In view of the conclusions made by competent geologists it is doubtful that commercial ore bodies of lead and zinc will be found by exploring this fissure to great depths.

Under these circumstances the Lead-Zinc Branch, DMA, does not believe it is a justifiable expenditure of public funds to finance an exploration project of the type you propose. The long range supply picture for lead and zinc is not at present so critical as for some other minerals, hence only the more promising lead-zinc projects can be supported at this time.

The Lead-Zinc Branch wishes to thank you for bringing to its attention this additional information on your property.

Very truly yours,

EJLyons:jeh
G-1/31/51

S. H. Williston, Director
Supply Division
Defense Minerals Administration

Enclosure 1

Dma-14

8526

copy to: Chief, Lead-Zinc Branch
Geological Survey - Denver
J. H. Jones

L. H. Cote
2 copies to Executive Officer,
Regional Field Team, Region IV
Strobel
Sittenhorf
Files

January 31, 1952

Mr. Le Grande J. Hamilton

Antequin, Utah

Dear Mr. Hamilton:

Reply to your letter of January 15 regarding your application for a Government loan (DMA 14):

As explained in the enclosed form letter, before a loan for a development mill is made by the Reconstruction Finance Corporation, the Defense Minerals Administration must certify that the minerals sought are necessary for national defense. Furthermore, projects to be approved by the Defense Minerals Administration must, in its judgment, show definite promise of yielding not less than acceptable grade, physical character, and specifications for amounts that will satisfy the requirements for national defense.

The documents supporting your application show that a little lead-zinc ore has been produced by your property. Your application does not indicate that there are reserves or resources sufficient to justify the expense of your proposal to develop the downward extension of a fissure vein 2,500 below the surface as occurs in not substantiated by evidence submitted. In view of the conclusions made by competent geologists it is doubtful that commercial ore bodies of lead and zinc will be found by exploring this fissure to great depth.

Under these circumstances the Lead-Zinc Branch, DMA, does not believe it has a justifiable expenditure of public funds to finance an exploration project of the type you propose. The long range supply picture for lead and zinc is not at present so critical as for some other minerals, hence only the most promising lead-zinc projects can be supported at this time.

The Lead-Zinc Branch wishes to thank you for bringing to its attention this additional information on your property.

Very truly yours,

LHJones:jch
G-1/31/51

J. E. Elliston, Director
Supply Division
Defense Minerals Administration

Enclosure 1

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

Memorandum

To: Executive Officer of Field Team, Region IV

From: Nonferrous Committee, DMA

Subject: Docket DMA-14, Mr. LeGrande J. Higginson, Santaquin, Utah.

The application for government financial aid to develop the Silver Star, Utah Lead, and New Deal mining claims in the Santaquin district, Utah, as presented by LeGrande J. Higginson has been reviewed by the Nonferrous Metals Commodity Committee.

It is apparent from the application that the mine made up of the claims listed above has no measured ore reserves and that the funds requested will be used largely for exploration.

This mine has been examined by Geologists of the U. S. Geological Survey. They concluded that the ore bodies explored resulted from downward leaching of a primary ore body since removed by erosion. Therefore, the possibility of finding primary ore at depth is negligible.

The committee therefore recommends:

1) That the project not be considered for a development loan.

2) That the project not be considered for DMA's grant-for exploration program.

CHARLES W. MERRILL, Acting Chairman
Nonferrous Committee, DMA

Copy to: Chairman, Commodity Committee
Geological Survey, McKnight
Merrill
Regional Director, Region IV
Williston
Files

APPROVED:
DMA Operating Committee

S. H. Williston, Chairman

J. H. Hedges

Olaf N. Rove.

DRAFT OK

January 30, 1951

Mr. Le Grande J. Higginson

Santaquin, Utah

Dear Mr. Higginson:

In reply to your letter of January 15 regarding your application for a Government loan (DMA 15):

As explained in the enclosed press release, before a loan for development will be made by the Reconstruction Finance Corporation, the Defense Minerals Administration must certify that the minerals sought are necessary for national defense. Furthermore, projects to be approved by the Defense Minerals Administration must, in its judgment, show definite promise of yielding material of acceptable grade, physical character, and specifications in amounts that will significantly improve the mineral supply position for national defense.

The documents supporting your application show that a little lead-zinc ore has been produced by your property. Your application does not indicate that there are measured ore reserves. The probable success of your proposal to develop the downward extension of a fissure vein 3,500 below its surface exposure is not substantiated by evidence submitted. In view of the conclusions made by competent geologists it is doubtful that commercial ore bodies of lead and zinc will be found by exploring the fissure to great depths.

Under these circumstances the Lead-Zinc Branch, DMA, does not believe it is a justifiable expenditure of public funds to finance an exploration project of the type you propose.

Do you remember the mining docket well enough to be sure of these facts? You can't afford a mistake here. Is he really proposing to explore 3,500 ft below the surface opening? Are?

The long range supply picture for lead and zinc is not at present so ~~acute~~ critical as for some other minerals, hence only the more promising lead-zinc projects can be supported at this time.

The Lead-Zinc Branch wishes to thank you for bringing to its attention this additional information on your property.

Very truly yours,

S. H. Williston, Director
Supply Division
Defense Minerals Administration

Enclosure 1

ALBrokaw:jeh

G-1/30/51

LeGrande J. Higginson
Project DMA 14.

LANDON F. STROBEL

Santaquin, Utah
Jan. 15, 1951

U. S. Dept. of the Interior
Defense Minerals Administration
Washington 25 D. C.

BUREAU OF MINES
WASHINGTON, D. C.
JAN 26
12 29 PM '51

Chief Supply Division, D.M.A.
Dear Sir:-

I am writing you in regards for Government financial aid on the Silver Star Utah Leaders, and New Deals, mining claims situated in the Santaquin mining district, Utah County, Utah. You will note, that you rejected on the basis of geological information supplied by the United States Geological survey. Geologists of the organization have examined the area in which my mine is located and claim that the existing ore bodies are the result of downward leaching of a primary ore body since removed by erosion. I hope that is not the way it is, and so does all the other men that live around here, that are interested in prospects and mines. We fellows around here have spent lots of time and money holding on to our claims. We are men that have worked in different mines around the country, both

large and small. And are acquainted with most all formations, where ore makes, in little mountains and in large mountains Santa Cruz mountains where my prospect is, is 10,000 ft. elevation where the ore crops. The place where I would like to work on is about 6,500 ft elevation. Park City mines is that high and higher, and Alta mines are still higher. They have been going for 75 years, and they are on the same range of mountains. In Silverton Colorado the town is 10,000 ft high and these mines are in the highest mountain and have produced millions. There is some better.

On my claims the ore is in fishers. These fishers cut the formation and that is what makes ore bodies, is old water courses where different elements of the earth come in contact with heat, and the cooling of the elements. That is where the ore was in the mines that I worked. In the Tintic Standard, The Mammoth mine, Eureka Standard, Iron Blossoms, Nos. 1, 2 and 3, Blue Rock, mine, these mines were all made on one big fisher, or old water course, and they were

all big mines. Some of them 50 years old, and are still producing. The history of the big mines was made and opened up by hard headed old prospectors. It is easy ~~too~~ after mines are developed, for the geologists to come in and make out a report. But you can take the history of most all mines and it has been the prospector that went in and found and developed the first mine. That is the way about all mines were found.

I am in hopes you will reconsider my mining loan and see it in a more favorable report. Hoping I will hear from you soon I remain

Yours Truly
LeGrand J. Higginson
Santaquin Utah

Project No. U.M.A. 14

FILE COPY
SURNAME:

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

January 4, 1951

Mr. Lorenzo J. Higginson

Santaquin, Utah

Dear Mr. Higginson:

Your application for Government financial aid to develop the Silver Star, Utah Lead, and New Deal mining claims in the Santaquin district, Utah has been reviewed by the Lead-Zinc Committee of the Defense Minerals Administration and is rejected on the basis of geological information supplied by the United States Geological Survey. Geologists of that organization have examined the area in which your mine is located and have concluded that the existing ore bodies are the result of downward leaching of a primary ore body since removed by erosion. The possibility of finding primary ore at depth through further exploration is thus negligible. If, however, you have additional information available which in your opinion has a bearing on the geological information already at hand and would alter the basic conclusions already reached the Lead-Zinc Committee would be pleased to review it.

I regret that I cannot give you a more favorable report on your application.

Very truly yours,

Otto Herres
Acting ~~S. H. WILLISTON~~, Chief
Supply Division, DMA

RHMOTE/ppm

Copy to - Base Metals Branch
Mrs. Parker
R. H. Mote
Chairman, Commodity Committee
Mr. Otto Herres
S. H. Williston
J. H. Hedges, (Minerals Division)
Mr. McKnight, (Geological Survey)
O. H. Rove
2 carbons to - Mr. John Hast, Jr. Executive Officer Field Team, Denver, Colorado

Files

15

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

January 4, 1951

Memorandum S H Williston

To: Executive Officer Operating Committee

From: Nonferrous Committee, DMA

Subject: Docket DMA-14, Mr. LeGrande J. Higginson, Santaquin, Utah

The application for government financial aid to develop the Silver Star, Utah Lead, and New Deal mining claims in the Santaquin district, Utah, as presented by LeGrande J. Higginson has been reviewed by the Nonferrous Metals Commodity Committee.

It is apparent from the application that the mine made up of the claims listed above has no measured ore reserves and that the funds requested will be used largely for exploration.

This mine was examined by B. S. Butler of the U. S. Geological Survey. He concluded that the ore bodies explored resulted from downward leaching of a primary ore body since removed by erosion. Therefore, the possibility of finding primary ore at depth is negligible.

The committee therefore recommends:

1. That the project not be considered for a development loan.

2. That the project not be considered for DMA's grant-for exploration program.

3. The attached letter conveying this negative conclusion and the reason for it be sent to the applicant.

Otto Herres
OTTO HERRES, Chairman
Lead-Zinc Committee, DMA

APPROVED:
DMA Operating Committee

Otto Herres
acting ~~S. H. Williston~~, Chairman

J. H. Hedges
J. H. Hedges

Olaf N. Rove
Olaf N. Rove

DMA-14

298

FILE COPY
SURNAME:

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

January 4, 1951

Memorandum S M Williston

To: Executive Officer Operating Committee

From: Nonferrous Committee, DMA

Subject: Docket DMA-14, Mr. LeGrande J. Higginson, Santaquin, Utah

The application for government financial aid to develop the Silver Star, Utah Lead, and New Deal mining claims in the Santaquin district, Utah, as presented by LeGrande J. Higginson has been reviewed by the Nonferrous Metals Commodity Committee.

It is apparent from the application that the mine made up of the claims listed above has no measured ore reserves and that the funds requested will be used largely for exploration.

This mine was examined by B. S. Butler of the U. S. Geological Survey. He concluded that the ore bodies explored resulted from downward leaching of a primary ore body since removed by erosion. Therefore, the possibility of finding primary ore at depth is negligible.

The committee therefore recommends:

1. That the project not be considered for a development loan.

2. That the project not be considered for DMA's grant-for exploration program.

3. The attached letter conveying this negative conclusion and the reason for it be sent to the applicant.

/s/ OTTO HERRES, Chairman
Lead-Zinc Committee, DMA

APPROVED:
DMA Operating Committee

/s/ O. Herres
~~S. H. Williston, Chairman~~

/s/ J. H. Hedges

/s/ Olaf N. Rove

RHLOTE/ppn
Copy to - Base Metals Branch
Mrs. Parker
R. H. Lote
Chairman, Commodity Committee
Otto Herres
S. H. Williston
J. H. Hedges
O. N. Rove
Mr. McKnight - Geological Surv.
Files

1) Le Grand Pigeon Santaquin Utah U.M.A. 14

General Technical Data

1. Materials produced:
(a) Zinc
(b) Sulfur
2. Name of mine: New Deal, Nos. 1, 2, 3. Utah Leader Nos. 1, 2. Silver Star. Old name of property was Blue Eagle Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9.
Type of mine is tunnels and incline.
Extent of workings:
(a) 300 ft. of incline shafts.
(b) None
(c) 500 ft. of tunnels
(d) 30 ft. into a cave, with zinc ore in it. Mine is not flooded, there is no pumping problems. Productive capacity could be 30 to 50 to 100 of ore a day.
3. (a) Four miles from town of Santaquin. 4 1/2 miles from shipping point.
(b) Santaquin Mining District.
(c) On forest reserve. Unitah Range.
(d) Utah County, Utah.
4. (a) No.
(b) Owner
5. It produced ore for 2 years. Production should begin within 15 days of starting work.
6. I the applicant, and the person who will manage the project have had 15 years mining experience in large ore bodies in mines and have also had 15 years experience in prospecting. The county records on mining claims will show this record. I have done this because I like it I am well aquainted with rock and rock formations. I am the owner and operator of these claims.
7. History:
(a) The places where I will do the work is in the ore veins. For the cost of labor and other things to mine with cost too much. That is one of the reasons this property quit operation before was that they done too much work away from the ore.
(b) One mile to the north of this property is the Union Chief mine which produced $500,000 in lead

silver and zinc ore. This mine does not operate any more because of trouble with the share holders. 1500 ft west of this mine is Uranium rock, 3,000,000 tons of radio active ore in the pegmatites dikes in the granite formation. There is also fluorspar, some copper and a large amount of iron ore in this granite formation. To the south of this property about 5 miles, is the Eva mine, which produced about $1,000,000 in high grade lead silver ore, before it was cut off by a fault.

(5) This ore I intend to work on is not high grade ore. In one place it assays 1% to 48% zinc as a picked sample. This vein is 12 ft wide. Another place it assays 1% to 5% zinc. This rock is heavy in sulfur. The vein is 15 ft wide. Another place 20 ft wide assays 2% to 7% zinc. These croppings of ore are on the surface. They should develope into a good grade of ore. This ore is not far from a good road, about from 1500 ft to 2500 ft.

1/ Le Grand Higgins Santaquin Utah D.M.A. 14

General Technical Data

1. Materials produced:
(a) Zinc
(b) Sulfur
2. Names of Mine: New Deal, Nos 1, 2, 3 Utah Leader, Nos 1, 2. Silver Star. Old name of property was, Blue Eagle Nos 1, 2, 3, 4, 5, 6, 7, 8, 9.
Type of mine is tunnels and incline.
Extent of workings:
(a) 300 ft. of incline shafts
(b) none
(c) 500 ft. of tunnel
(d) 30 ft. into a cave with zinc ore in it. Mine is not flooded, there is no pumping problems. Productive capacity could be 30 to 60 tons of ore a day.
3. (a) 7 our miles from town of Santaquin 4 1/2 miles from shipping point
(b) Santaquin Mining District
(c) On forest reserve Unitah Range
(d) Utah County, Utah.
4. (a) No.
(b) Owner.
5. If produced ore for 2 years. Production should begin within 15 days of starting work.
6. I, the applicant and the person who will manage the project, have had 15 years mining experience in large ore bodies in mines and have also had 15 years experience in prospecting. The county records on mining claims will show this record. I have done this because I like it. I am well aquainted with rock and rock formations. I am the owner and operator of these Claims
7. History:
(a) The places where I will do the work is in the old veins. For the cost of labor and other things to mine with cost too much. That is one of the reasons this property quit operation before was that they done too much work away from the ore. (b) One mile to the north of this property is the Union Chief mine which produced $500,000 in lead

Le Grand Higginson Santaquin, Utah U.M.A. 14

General Technical data

Silver, and zinc ore. This mine does not operate any more because of trouble with the shareholders. 1500 ft. west of this mine is Uranium rock 3,000,000 tons of radio active ore in the pegmatite dikes in the granite formation. There is also fluorspar, some copper and a large amount of iron ore in this granite formation. To the south of this property about 5 miles is the Eva mine, which produced about 1,000,000 in high grade lead, silver ore, before it was cut off by a fault.

(c) This ore I intend to work on is not high grade ore. In one place it assays from 1% to 48% zinc as a picked sample. This vein is 15 ft. wide. Another place it assays 1% to 5% zinc. This rock is heavy in sulfur. The vein is 15 ft. wide. Another place 20 ft. wide assays 2% to 7% zinc. These croppings of ore are on the surface. They should develop into a good grade of ore. This ore is not far from a good road, about from 1500 ft. to 2500 ft.

FILE COPY
Surname:

December 4, 1950

Mr. LeGrande J Higginson

Santaquin, Utah

My dear Mr. Higginson:

Your request for assistance under the Defense Production Act of 1950 has been received and is being considered for eligibility under the Act.

All correspondence relating to your project should be identified with the Docket Number DMA-14.

Very truly yours,

CHARLES W MERRILL, Chief
Base Metals Branch

CWMERRILL:mec
12/4/50

Copy to - Base Metals Branch
Lowell Moon
Files

DMA 14

B

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to be used to explore an oxidized lead property near Santaquin (Docket DMA-14X).

The Field Team, Region IV on May 31 requested that short investigation be made to determine the feasibility of the exploration project.

The lead deposit consists of gossan-like bodies along northeastward trending fractures in limestone. The lead-zinc metallization is low grade and discontinuous; the outlook for extension of the deposit laterally or in depth is not promising, and the project is not considered to have merit.

It is therefore recommended that the request by Legrande J. Higginson for a loan to explore the New Deal, Utah Leader, and Silver Star groups be denied.

DMA-14X, Legrande Higginson, New Deal Mining Claim

Utah County, Utah

INTRODUCTION

Legrande J. Higginson of Santaquin, Utah has applied for a loan of $20,935 to explore an oxidized lead deposit on the New Deal mining group near Santaquin, Utah.

The property is 4 1/2 miles southeast of Santaquin, Utah County, Utah in the Santaquin Mining District, and consists of the New Deal Nos. 1, 2, and 3, Utah Leader Nos. 1 and 2, and Silver Star claims. These claims were formerly known as the Blue Eagle group, and are now owned by Mr. Higginson. They are on the south slope of the south peak of Santaquin Ridge and can be reached by going southeast from Santaquin on the Santaquin Canyon road 4 1/2 miles, then taking a trail the last 400 feet to the mine. The production from the property is not known, but four shipments of silver ore and 2 shipments of zinc are reported by the applicant. It is doubtful that the shipments totalled more than a few tons in all.

The examination was made June 12 by J. W. Hasler, R. W. Osterstock, and B. J. Sharp of the Geological Survey and H. F. Buehbolts of the Bureau of Mines.

GEOLOGY

The lead-zinc deposits are in dense, grayish-black limestone of Mississippian age. In the mine area the limestone strikes northward and dips eastward. The limestone is cut by irregularly spaced fractures trending northeastward and dipping steeply southeastward. The fractures are generally tight and lack continuity.

Original Application

REGIONAL DIRECTOR'S
OFFICE
REGION IV
NOV 2 1950
BUREAU OF MINES
DENVER, COLORADO

Denied

Santaquin, Utah
Oct. 30, 1950

Mr. J. H. East Jr.
Regional director
Bureau of Mines

Dear Mr. East:

I am sending you all the information I can on my mining property regarding the minority loan. I hope it will be excepted.

Sincerely yours
LeGrand J. Higginson
Santaquin, Utah

FORM SL-1021 10M 4-29-42

COPPER SMELTER
GARFIELD, UTAH

ASSAY CERTIFICATE

LEAD SMELTER
MURRAY, UTAH

AMERICAN SMELTING AND REFINING COMPANY

UTAH MINING AND SMELTING DEPARTMENTS

700 McCORNICK BUILDING, SALT LAKE CITY, UTAH

PURCHASERS OF GOLD, SILVER, COPPER, LEAD AND ZINC ORES AND CONCENTRATES

MINE LeGrand Higginson

SAMPLE NO. 4142

ADDRESS Santaquin, Utah

DATE September 14, 1944

No.	Class	Gold ozs./ton	Silver ozs./ton	Lead Per Cent	Copper Per Cent	Zinc Per Cent	Insoluble Per Cent	Iron Per Cent	Lime Per Cent	Sulphur Per Cent	Arsenic Per Cent	Antimony Per Cent		
1		None	1.0	0.4		11.6								
2		None	1.2	2.2		13.0								
3		None	0.2											

REMARKS

NO

ASSAYER M. A. Yeager

TELEPHONE 3-3302

Hand Sample Serial 57686

Mine U.S. 716 Le Grande Higginson

Santaquin, Utah

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
A. C. SELBY, Vice-Pres. & Treas.
A. C. SELBY, Jr., Secretary

Salt Lake City 11, Utah

RESULTS PER TON OF 2000 POUNDS

Aug. 31, 1949

NO.	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent Wet	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent	VALUE GOLD
	None	0.3	None			4.9						

Remarks

Charges $

FORM SL-1021 10M 10-47
COPPER SMELTER
GARFIELD, UTAH

ASSAY REPORT

LEAD SMELTER
MURRAY, UTAH

AMERICAN SMELTING AND REFINING COMPANY

UTAH MINING AND SMELTING DEPARTMENTS

700 PACIFIC NATIONAL LIFE BUILDING, SALT LAKE CITY 1, UTAH

PURCHASERS OF GOLD, SILVER, COPPER, LEAD AND ZINC ORES AND CONCENTRATES

MINE Le Grande J Higginson

SAMPLE NO. 39

ADDRESS Santiquin, Utah

DATE March 25,1949

No.	Class	Gold ozs./ton	Silver ozs./ton	Lead Per Cent	Copper Per Cent	Zinc Per Cent	Insoluble Per Cent	Iron Per Cent	Lime Per Cent	Sulphur Per Cent	Arsenic Per Cent	Antimony Per Cent		
1		None	.2	None	None	4.1								
2		None	None	None	None	2.0								
3		None	None	None	None	None								

REMARKS

ASSAYER L Butchin

W. A. BROWN

W. L. BROWN

CERTIFICATE OF ASSAY

BROWN & BROWN

ASSAYERS AND CHEMISTS

Phone 249-R **P. O. Box 310**

EUREKA, UTAH

ASSAY PER TON OF 2,000 POUNDS.

Assayer W.L.Brown

Date 6/26/50

DESCRIPTION	GOLD Ozs.	SILVER Ozs.	LEAD %	COPPER %	ZINC %		
LeGrande Higginson				0.25			
Will hold sample,it would be wise to run this sample for Manganese and Iron.might be of a commercial grade.							

CHARGES

Form 1-3M-8-49 A.C.P.Co.

11

Names of mining Claims.

Silver Star — Utah Leader No. 2.
Utah Leader — New deal
Utah Leader No. 1. — New deal No. 1
New deal No. 2.

When ore was shipped off this ground the names of the mining claims were named, Blue Eagles.

Past production of this mine was four shipments of lead silver ore, And two shipments of zinc The lead silver ore was shipped to American Smelters and Refining Co, Midvale Utah, 70 miles from mine. The zinc ore was shipped to Joplin, Missouri.

Charles W. Higginson was the previous operator and J. Le Grande J. Higginson is in charge now. Both residing in Santaquin, Utah.

The mine is not producing any ore at present. There has been $50,000 worth of work done on this ground.

The proposed work for which this loan is requested, is to sink a hole down 100 ft. on a vein of zinc and manganese And to tunnel in on a vein 150 ft. of zinc in the lime. It assays from 17% to 48% zinc.

Application for mining loan.

This work can be done for $3000 at this place. Then I would like to come down the hill and run a tunnel under this ore and take it out through the tunnel. By doing this the ore would be on the canyon road, 4 miles from railroad. The tunnel would have to be run 500 ft. This would cost around $10,000.

Another place on these claims is close to the above place, on a zinc vein or fisher, 12 ft. wide of lime, bearing ore inbetween the quartzside formation. This vein goes from 1% to 48% zinc, as a pick sample. I would like to sink a incline shaft on this, 150 ft. deep. The cost would be around $4500, and I think it would make commercial ore. I would also like to run a drift from the above tunnel north 300 ft. and tap this ore fisher. The cost of this drift would be around $6000.

Another place on these claims, there is a quartz vein, that comes into the canyon and crosses the canyon road and crops out on surface 4500 ft. long and from 8 ft. to 30 ft. wide in places. This quartz assays in zinc 2½% and in lead 2%.

I would like to run a tunnel in on

this for 200 ft. long. It is a steep hill, and I think it would make this a good grade of ore. This work would cost around $4000. The ore when out of the tunnel would be on the Canyon road, 4 1/2 miles from railroad. All the tools I have to work with is hand steel drills, hammers, pick shovels and wheel car.

The new equipment I need is 1/2 ton pick up truck. To haul men and equipment back and forth to the mine. A portable compressor, two water liner machines and one jack hammer. Drills for these machines or bits to fit the drills. Money for blacksmith work to keep the tools sharp. Also money for new pick and shovels. Rails and Cars for the tunnel and inclines. Also powder, blasting caps. The timber for the mine is available on the ground and can be framed there. The men would have to be covered with insurance and Social Security.

The estimated employees needed would be one miner and two muckers. I would want the job of running the mine, for I would want to know the money is spent right. I have to pay it back out of the ore. I can get the miners and

muckers in this town, that are experienced men.

This ore can be shipped to mills and smelters around Salt Lake City, about 70 miles from mine. It would have to be hauled in trucks to the railroad a distance of 4½ miles. The mills and smelters address are American Smelters, Salt Lake City. And the United States mills and Smelters, Salt Lake City, Utah.

When this work is complete it should produce about 50 tons of ore per day. I would like two years to do this work in. But I think in one year it will be producing 50 tons of ore per day.

The road to one of these places is a good automobile road. From the road there is just a trail to the other two places; one is 1200 ft. and the other is 2000 ft. from road.

This mine could operate on the price paid for metals now. For I think it will be a good grade of zinc and lead. The ore that has been shipped is of that grade.

I think the estimates of ore reserves on these claims could be 600,000 tons, for that quartz fisher with lead and zinc on is 5000 ft. long and from 8 to 30 ft. wide in

places. And crops out on the surface. I think the depth on this fisher will make a good grade of lead zinc ore.

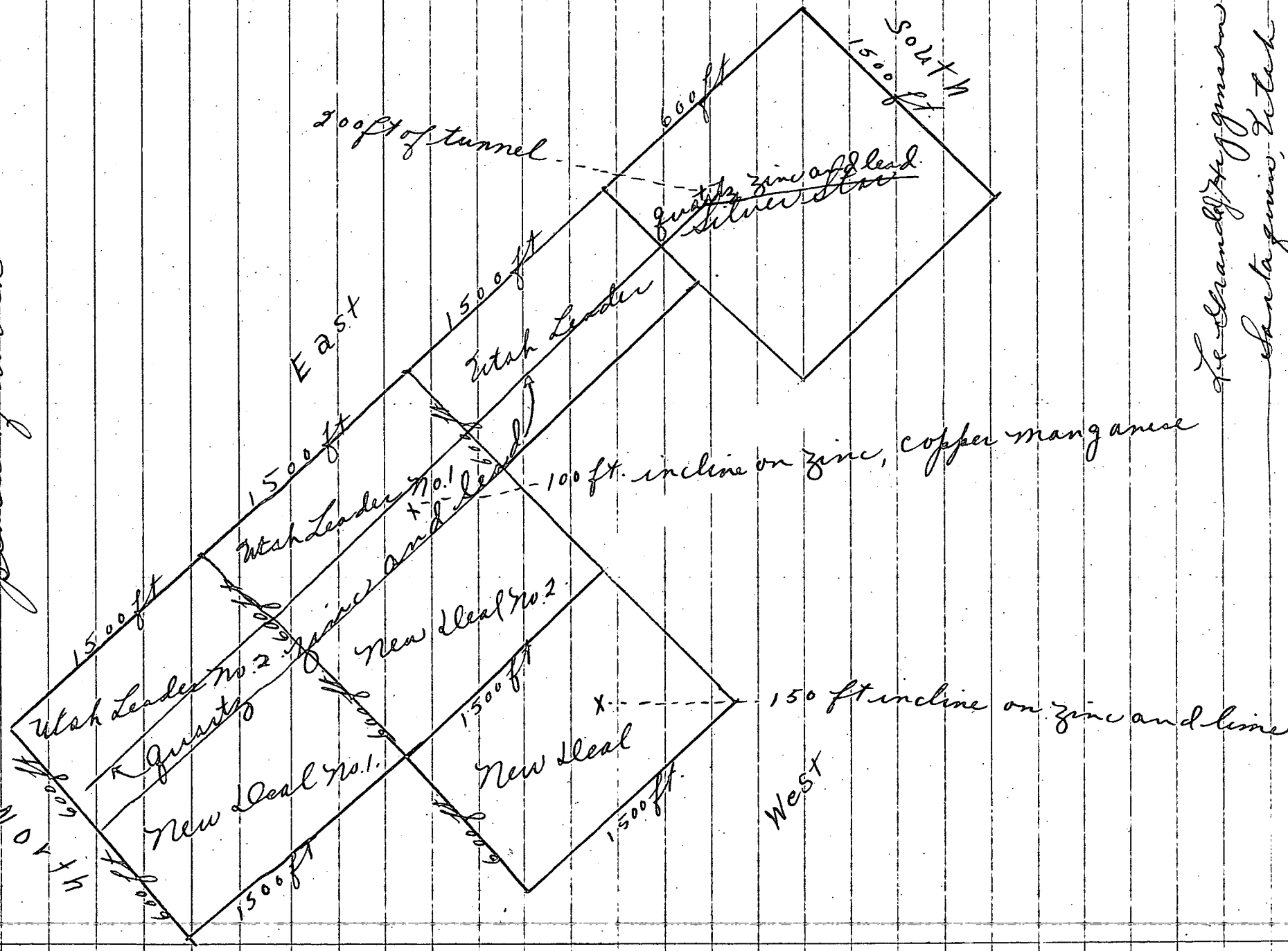
The engineers and geologists that have looked over this mining country, claims it should be O.K. for mines, because it has the right formation for ore to live in. This ore is made in the lime formation with quartzside foot wall on both sides And is pulpy over flow on the side of the quartzside formation. This is the same way the ore is made in the Tintic district, 20 miles west of here. I have worked in the Tintic mines for 15 years. So I have had experience of mine management.

I have tried to get mining companies to take these claims over and all they say is they are having a hard time of operating their mines. All that they can work is just ore that is high enough to dig just the richest ore.

These claims are in the Santaquin mining district. All business can be done with me with the government.

Le Grande J. Higginson
Santaquin, Utah

Map of Claims and placer ground



L. Brandt & J. Jensen
Santaquin, Utah

REGIONAL DIRECTOR

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

Mining Division
Date Rec'd.
OCT 24 1950
BUREAU OF MINES
Denver, Colorado

October 24, 1950

Mr. LeGrande J. Higginson
Santaquin, Utah

Dear Mr. Higginson:

This will acknowledge receipt of your letter dated October 19, 1950 in reference to your mining property.

The mechanics for securing loans under the Defense Production Act of 1950 have not been issued, and we are unable to advise you what steps must be taken to secure a loan; however, we are enclosing a form letter which will indicate the type of information you should furnish, if available.

I judge from your letter that very little work has been done on your property and that much of the information requested in the form letter is not available. It is suggested that you secure as much of the data requested as possible and forward it to this office, and when instructions have issued from Washington we will be glad to consider your property.

Sincerely yours,

J. H. East, Jr.
J. H. East, Jr.
Regional Director

Enclosure

JHE:ln

cc: PT Allsman
Wilson

into comerical ore by a little dept
the grants had I refer to comes into the
road in the bottom of the canyon
and crops on both sides of the canyon
which would make it handy for mining
There is a mine on the north of this ground
that shipes $500,000 worth of lead silver ore
there is a mine on the south that shiped
lead zinc ore, I think if I could get a loan
of $25000 I could develope a comerical ore
from these out crops of ore, I think that the
loan could soon be paid back on reality
out of the ore that was shiped I hope if
it is possible for you to send an engineer
out to look over the ground I would like
to get started to work on this ore before
winter set in if possible. I could put
3 or 4 men to work if I had the machinery
and ways and means of working these
claims, hoping to hear from some
of you soon, I remain yours Truly

Le Grande J Higginson

adress →

Santaquin Utah
County Utah

REGIONAL DIRECTOR
OFFICE
REGION IV
OCT 23 1950
BUREAU OF MINES
DENVER, COLORADO

Salaquin Utah County Utah

Oct. 19, 1950.

Regional Bureau of Mines Director
Salt Lake City Utah

Dear Sir-

I am writing you in regards to a mining loan I have 3 good big out crops of zinc ore on my mining claims, one out crop is 20 ft wide and goes 50 ft zinc, another is zinc in the lime 12 ft wide in between the quartzite formation and will assay from 10% to rich samples as high as 48% zinc. another is a quartz lead 8 ft to 30 ft in with and 4500 ft in length. this quartz has zinc and lead in it assays 1% lead and 2½% zinc.

my father years ago shipped ore off this ground 4 cars of zinc which assayed 48% zinc, 3 cars of lead silver ore which assayed 62% lead 38 ounces of silver to the ton. this ore was shipped from out crops that was in a steep place hard to get at only by pack mules but those other out crops of ore are down the hill more, not far from the canyon road but along the same fissures, and I think they can be developed

Names of Mining Claims

Silver Star Utah Leader No 2.
Utah Leader New Deal
Utah Leader No 1. New Deal No 1.
New Deal No 2.

When ore was shipped off this ground the names of the mining claims were named, Blue Eagles.

Past production of this mine was four shipments of lead silver ore and two shipments of zinc. The lead silver ore was shipped to American Smelters and Refining Co., Midvale, Utah 70 miles from mine. The zinc ore was shipped to Joplin, Missouri.

Charles W. Higginson was the previous operator and J. Le Grande J. Higginson is in charge now. Both residing in Santaquin, Utah.

The mine is not producing any ore at present. There has been $50,000 worth of work done on this ground.

The proposed work for which this loan is requested, is to sink a hole down 100 ft. on a vein of zinc and manganese and to tunnel in on a vein 150 ft of zinc in the lime. It assays from 1% to 48% zinc.

Application for Mining loan.
This work can be done for $3000 at this place. Then I would like to come down the hill and run a tunnel under this ore and take it out through the tunnel. By doing this the ore would be on the Canyon road, 4 miles from railroad. The tunnel would have to be run 500 ft. This would cost around $10,000.

Another place on these claims is close to the above place, on a zinc vein of fisher 12 ft wide of lime, bearing ore inbetween the quartzide formation. This vein goes from 17% to 48% zinc, as a pick sample I would like to sink a incline shaft on this, 150 ft deep. The cost would be around $4500, and I think it would make commercial ore. I would also like to run a drift from the above tunnel north 300 ft. And try this ore fisher. The cost of this drift would be around $6000.

Another place on these claims, there is a quartz vein, that comes into the canyon and crosses the canyon road and crops out on surface 4500 ft. long and from 8 ft. to 30 ft wide in places. This quartz assays in zinc 2 1/2% and in lead 2%. I would like to run a tunnel in on

this for 200 ft. long. It is a steep hill, and I think it would make this a good grade of ore. This work would cost around $4000. The ore when out of the tunnel would be on the canyon road 4½ miles from railroad. All the tools I have to work with is hand steel drills, hammers, pick, shovels and wheel car.

The new equipment I need is ½ ton pick up truck to haul men and equipment back and forth to the mine. A portable compressor, two water liner machines and one jack hammer drills for these machines or bits to fit the drills. Money for black smith work to keep the tools sharp. Also money for new picks and shovels. Rails and cars for the tunnel and incline also powder and blasting caps. The timber for the mine is available on the ground and can be framed there. The men would have to be covered with insurance and social security.

The estimated employees needed would be one miner and two muckers. I would want the job of running the mine, for I would want to know the money is spent right. I have to pay it back out of the ore. I can get the miners and

muckers in this town, that are experienced men.

This ore can be shipped to mills and smelters around Salt Lake City, about 70 miles from mine. It would have to be hauled in trucks to the railroad a distance of 4 1/2 miles. The mills and smelters address are American Smelters, Salt Lake City and the United States mills and Smelters, Salt Lake City, Utah.

When this work is complete it should produce about 50 tons of ore per day. I would like two years to do this work in. But I think in one year it will be producing 50 tons per day.

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place, and crops out on the surface. I think the depth on this fisher will make a good grade of lead zinc ore.

The engineers and geologists that have looked over this mining country, claim it should be O.K. for miles, because it has the right formation for ore to live in.

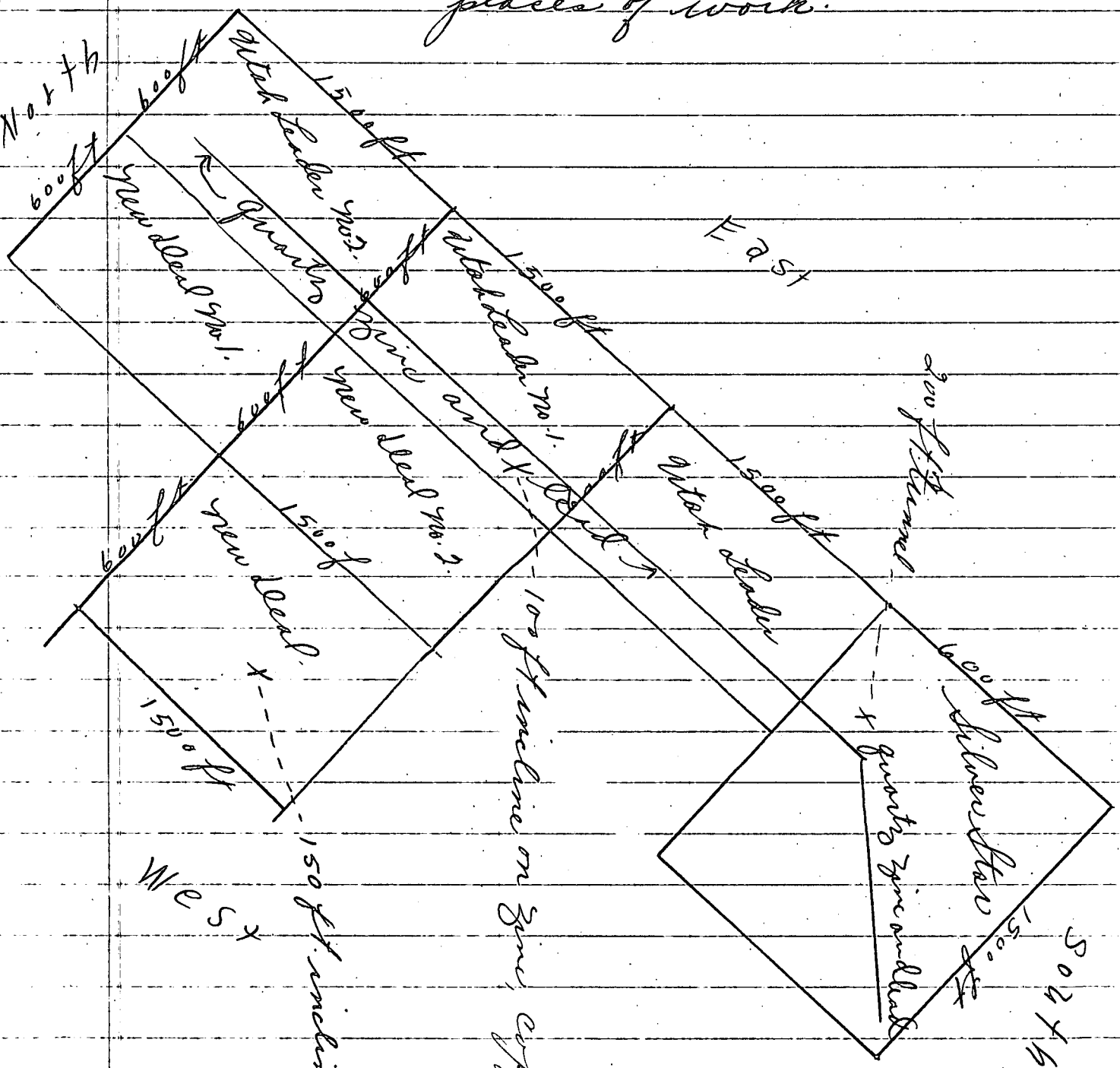
This ore is made in the lime formation with quartzide foot wall on both sides and is pulpy overflow on the side of the quartzide formation. This is the same way the ore is made in the Tintic District, 20 miles west of here. I have worked in the Tintic mines for 15 years. So I have had experience of mine management.

I have tried to get mining companies to take these claims over, and all they say is they are having a hard time of operating their mines. All that they can work is just ore that is high enough to dig just the richest ore.

These claims are in the Santaquin mining district. All business can be done with me with the government.

Le Grande J. Higginson
Santaquin, Utah

Map of claims and places of work.



Le Grande J. Higginson
Santaquin, Utah

1)

Names of mining claims

Silver Star	Utah Leader No. 2
Utah Leader	New Deal
Utah Leader No. 1	New Deal No. 1

New Deal No. 2

When ore was shipped off this ground the names of the mining claims were named, Blue Eagles.

Past production of this mine was four shipments of lead silver ore, and two shipments of zinc. The lead silver ore was shipped to American Smelter and Refining Co, Midvale, Utah, 70 miles from mine. The zinc ore was shipped to Joplin, Missouri.

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Application for mining loan.

This work can be done for $3000 at this place. I hend would like to come down the hill and run a tunnel under this ore and take it out through the tunnel. By doing this the ore would be on the Canyon road, 4 miles from railroad. The tunnel would have to be run 500 ft. This would cost around $10,000.

Another place on these claims is close to the above place, on a zinc vein or lieber, 12 ft. wide of lime, bearing ore inbetween the quartzside formation. This vein goes from 1% to 48% zinc, as a pick sample. I would like to sink a incline shaft on this, 150 ft. deep. The cost would be around $4500, and I think it would make commercial ore. I would also like to run a drift from the above tunnel north 300 ft. and try this ore lieber. The cost of this drift would be around $6000.

Another place on these claims, there is a quartz vein that comes into the Canyon and crosses the Canyon road. Crops out on surface 4500 ft. long and from 8 ft. to 30 ft. wide in places. This quartz assays in zinc 2½% and in lead 2%. I would like to run a tunnel in on

this for 200 ft long. It is a steep hill, and I think it would make this a good grade of ore. This work would cost around $4000. The ore when out of the tunnel would be on the canyon road, 4 1/2 miles from railroad.

All the tools I have to work with is hand steel drills, hammers, picks & shovels and wheel car.

The new equipment I need is 1/2 ton pick up truck to haul men and equipment back and forth to the mine. A portable compresser, two water liner machines and one jack hammer drills for these machines or bits to fit the drills. Money for black smith work to keep the tools sharp. Also money for new picks and shovels. Rails and cars for the tunnel and incline. Also powder, blasting caps. The timber for the mine is available on the ground and can be framed there. The men would have to be covered with insurance and Social Security.

The estimated employes needed would be one miner and two muckers. I would want the job of running the mine, for I would want to know the money is spent right. I have to pay it back out of the ore. I can get the

miners and muckers in this town that are experienced men.

This ore can be shipped to mills and smelters around Salt Lake City, about 70 miles from mine. It would have to be hauled in trucks to the railroad a distance of 4 1/2 miles. The mills and smelters address are American Smelters, Salt Lake City. And the United States mills and Smelters, Salt Lake City, Utah.

When this work is complete it should produce about 50 tons of ore per day. I would like two years to do this work in. But I think in one year it will be producing 50 tons of ore per day.

The road to one of these places is a good automobile road. From the road there is just a trail to the other two places, one is 1300 ft. and the other is 2000 ft. from road.

This mine could operate on the price paid for metals now. For I think it will be a good grade of zinc and lead. The ore that has been shipped is of that grade.

I think the estimates of ore reserves on these claims could be 600,000 tons, for that quartz fissure with lead and zinc on is 5000 ft. long and from 8 to 30 ft. wide in

places, and crops out on the surface. I think the depth on this fisher will make a good grade of lead zinc ore.

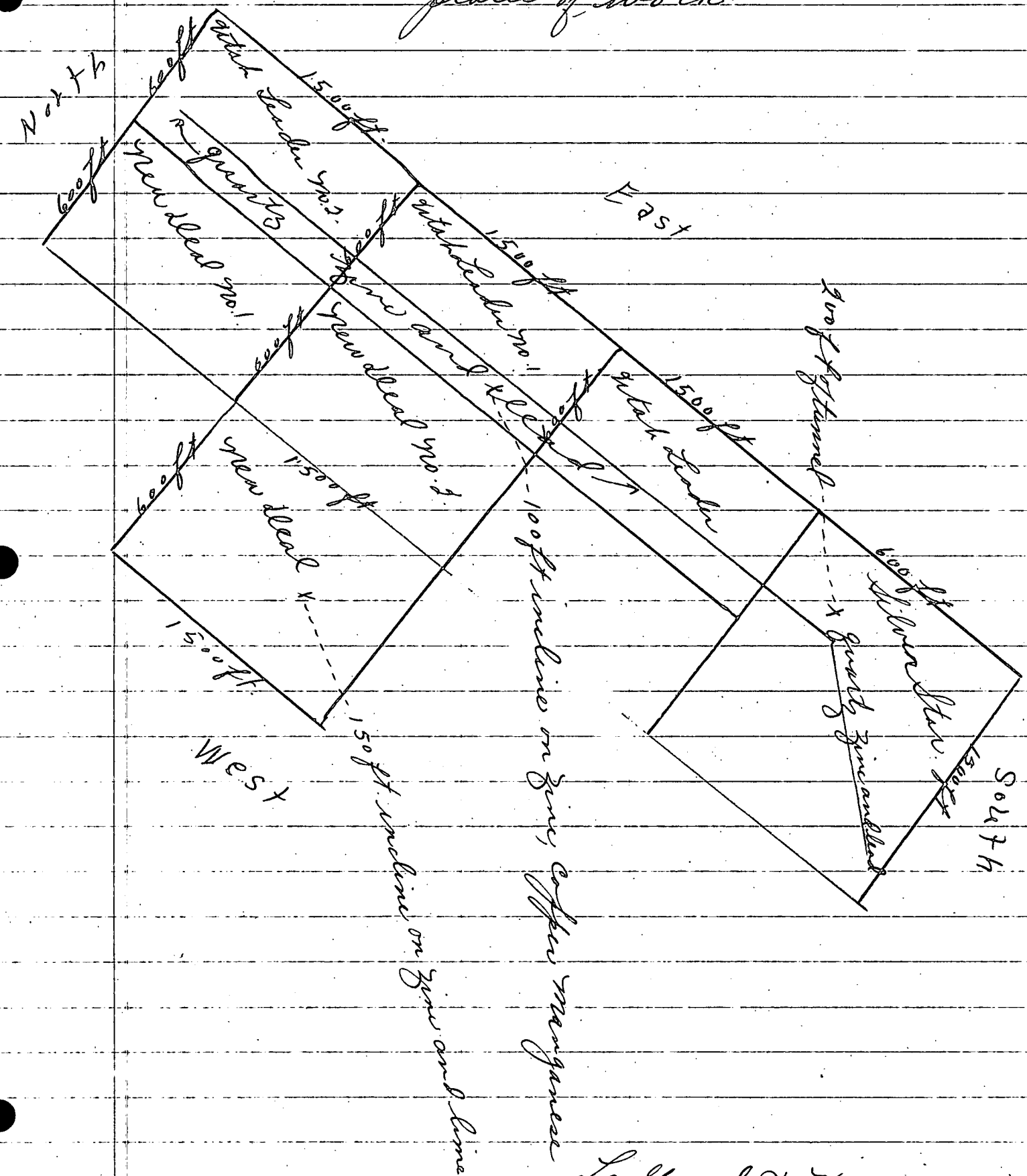
The engineers and geologists that have looked over this mining country claim it should be O.K. for mines, because it has the right formations for ore to live in. This ore is made in the lime formation with quartzite foot wall on both sides and is fully over flow on the side of the quartzite formation. This is the same way the ore is made in the Tintic district, 20 miles west of here. I have worked in the Tintic mines for 15 years. So I have had experience of mine management.

I have tried to get mining companies to take these claims over and all they say is they are having a hard time of operating their mines. All that they can work is just ore that is high enough to dig just the richest ore.

These claims are in the Santaquin mining district. All business can be done with me with the government.

Le Grand J. Higginson
Santaquin, Utah

Map of Claims and places of work.



Le Grand J. Higginson
Santaquin Utah

1

Names of Mining Claims.

Silver Star — Utah Leader No. 2
Utah Leader — New Deal
Utah Leader No. 1 — New Deal No. 1
New Deal No. 2.

When ore was shipped off this ground the names of the mining claims were named, Blue Eagles.

Past production of this mine was four shipments of lead silver ore, and two shipments of zinc. The lead silver ore was shipped to American Smelter and Refining Co, Midvale, Utah, 70 miles from mine. The zinc ore was shipped to Joplin, Missouri.

Charles W. Higginson was the previous operator and J. LeGrande J. Higginson is in charge now. Both residing in Santaquin, Utah.

The mine is not producing any ore at present. There has been $50,000 worth of work done on this ground.

The proposed work for which this loan is requested, is to sink a hole down 100 ft. on a vein of zinc and manganese. And to tunnel in on a vein 150 ft. of zinc in the lime. It assays from 1% to 48% zinc.

Application for Mining loan.

This work can be done for $3000 at this place. Then I would like to come down the hill and run a tunnel under this ore and take it out through the tunnel. By doing this the ore would be on the Canyon road, 4 mile from railroad. The tunnel would have to be run 500 ft. This would cost around $10,000.

Another place on these claims is close to the above place, on a zinc vein or fissure 12 ft. wide of lime, bearing ore in between the Quartzite formation. This vein goes from 1% to 48% zinc, as a pick sample. I would like to sink a incline shaft on this, 150 ft deep. The cost would be around $4500, and I think it would make commercial ore. I would also like to run a drift from the above tunnel north 300 ft. and tap this ore fissure. The cost of this drift would be around $6000.

Another place on these Claims, there is a quartz vein, that comes into the Canyon and crosses the Canyon road, and crops out on surface 4500 ft. long and from 8 ft. to 30 ft. wide in places. This quartz assays in zinc 2½% and in lead 2%. I would like to run a tunnel in on

this for 200 ft. long. It is a steep hill, and I think it would make this a good grade of ore. This work would cost around $4000. The ore when out of the tunnel would be on the Canyon road, 4½ miles from railroad.

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The new equipment I need is ½ ton pick up truck to haul men and equipment back and forth to the mine. A portable compressor two water line machines, and one jack hammer drills for these machines or bits to fit the drills. Money for black smith work to keep the tools sharp also money for new pick and shovels. Rails and cars for the tunnel and inclines. Also powder, blasting caps. The timber for the mine is available on the ground and can be framed there. The men would have to be covered with insurance and social security.

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5)

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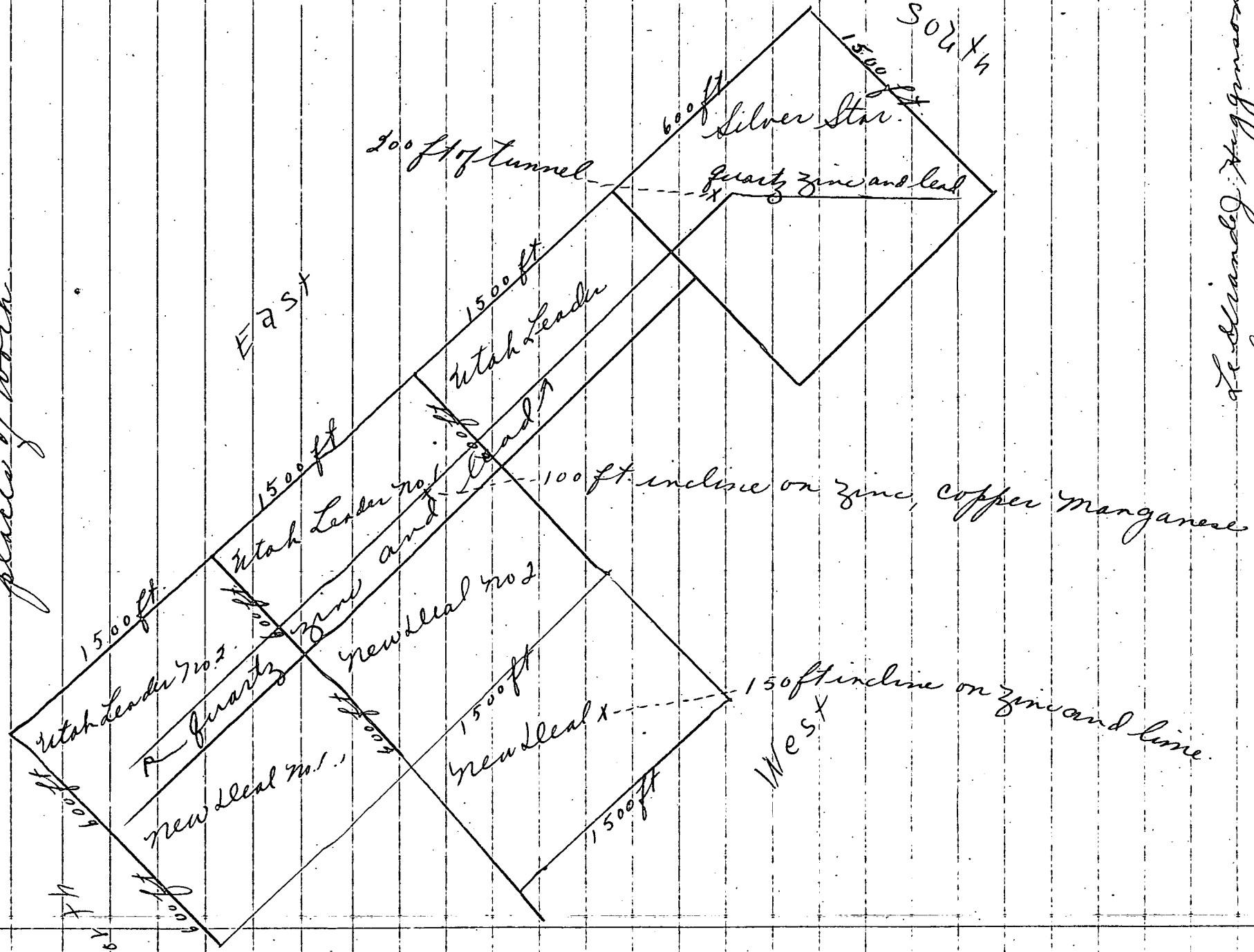
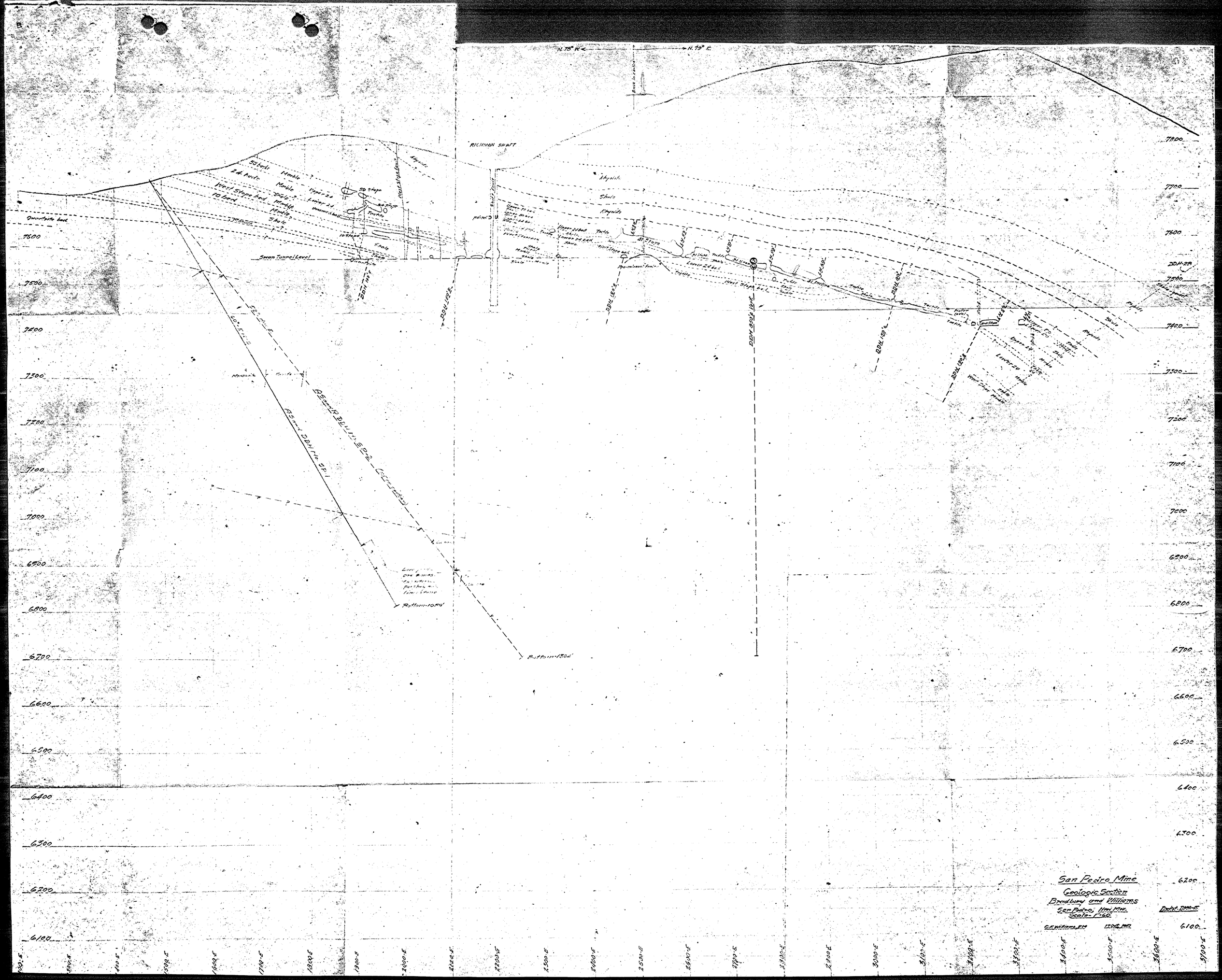
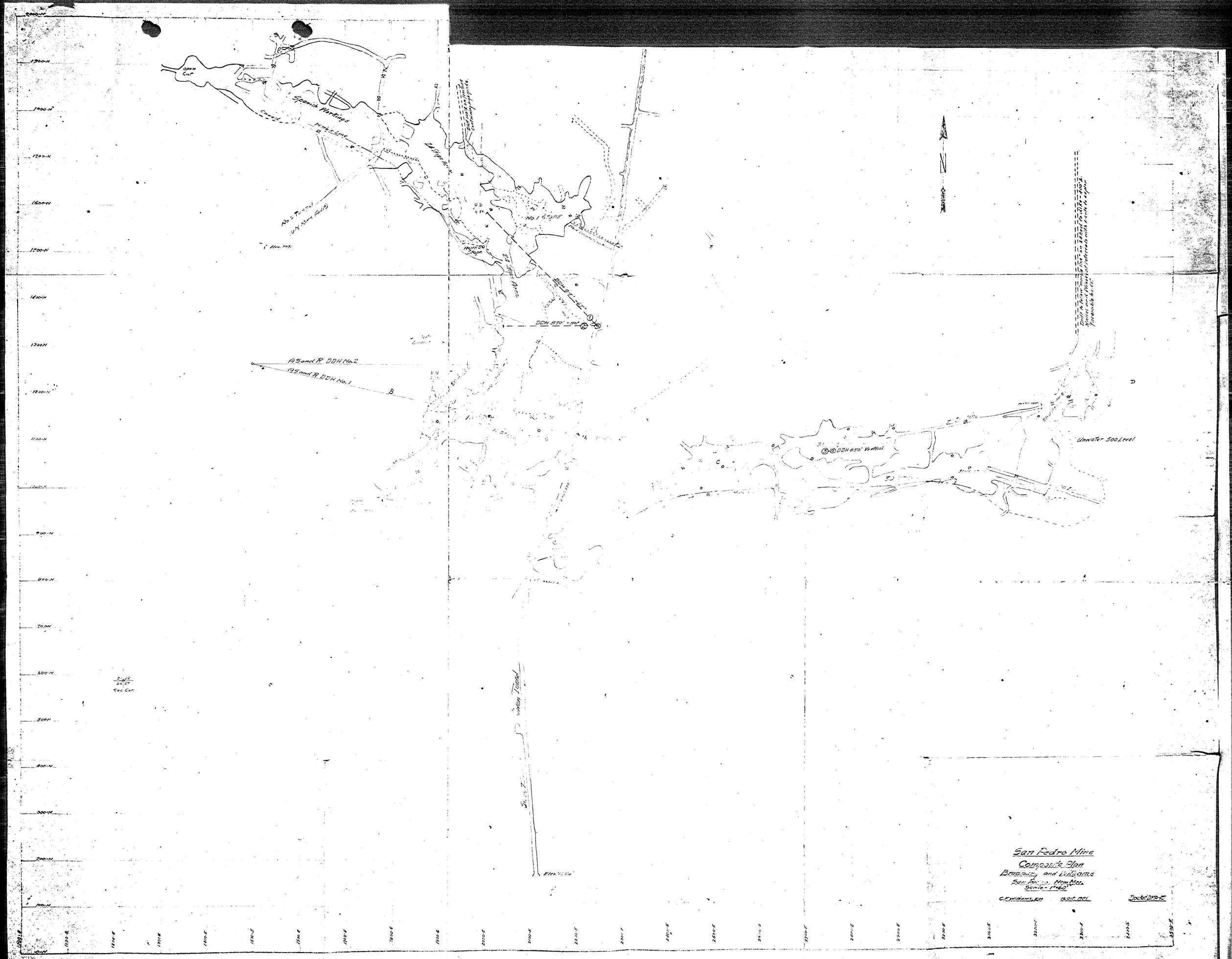
Santaquin, Utah

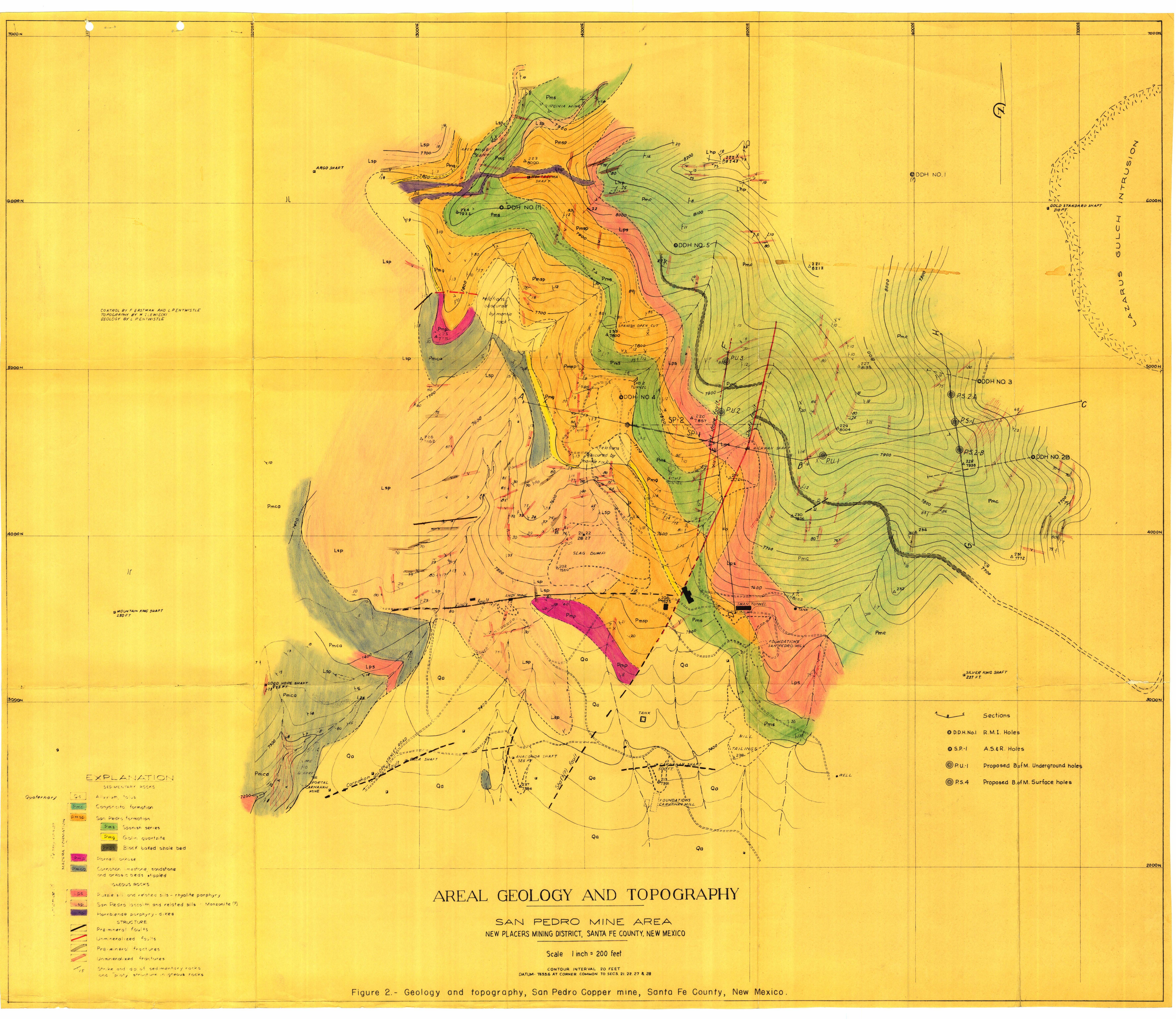
Map of Claims and
places of work.



Ferdinando Higgins
Santaquin, Utah


N. 78° W.
N. 79° E.
RICHMAN SHAFT
Argillite
Shale
Rhyolite
50 beds
24 beds
West Slope bed
10 bed
Marble
Upper 24
Lower 24
Swan Tunnel Level
Quartzite bed
50 stope
10 stope
Tuffs
DDH 143
DDH 149
DDH 159
DDH 169
DDH 179
DDH 189
DDH 199
DDH 209
DDH 219
DDH 229
Bottom-1054'
Bottom-1304'
7800
7700
7600
7500
7400
7300
7200
7100
7000
6900
6800
6700
6600
6500
6400
6300
6200
6100
1700-E
1800-E
1900-E
2000-E
2100-E
2200-E
2300-E
2400-E
2500-E
2600-E
2700-E
2800-E
2900-E
3000-E
3100-E
3200-E
3300-E
3400-E
3500-E
3600-E
3700-E
3800-E
3900-E
San Pedro Mine
Geologic Section
Bradbury and Williams
San Pedro, New Mex.
Scale 1"=50'
C.F. Williams, E.M.
1906


Open Cut
Spanish Workings
Caved
Main Line
No. 2 Tunnel
(Old Mine Grid)
Elev. 773'
No. 1 Stope
No. 2 Stope
Stope Area
DDH 870' - 40°
A Sand R. DDH No. 2
A Sand R. DDH No. 1
DDH 850' Vertical
Unwater 500 Level
Main Tunnel
Elev. 1100'
N
San Pedro Mine
Composite Plan
Braden and Williams
San Pedro, New Mex.
Scale - 1"=60'
C.F. Williams, B.E.
16 Oct. 1951
Docket DM-4-E



AREAL GEOLOGY AND TOPOGRAPHY

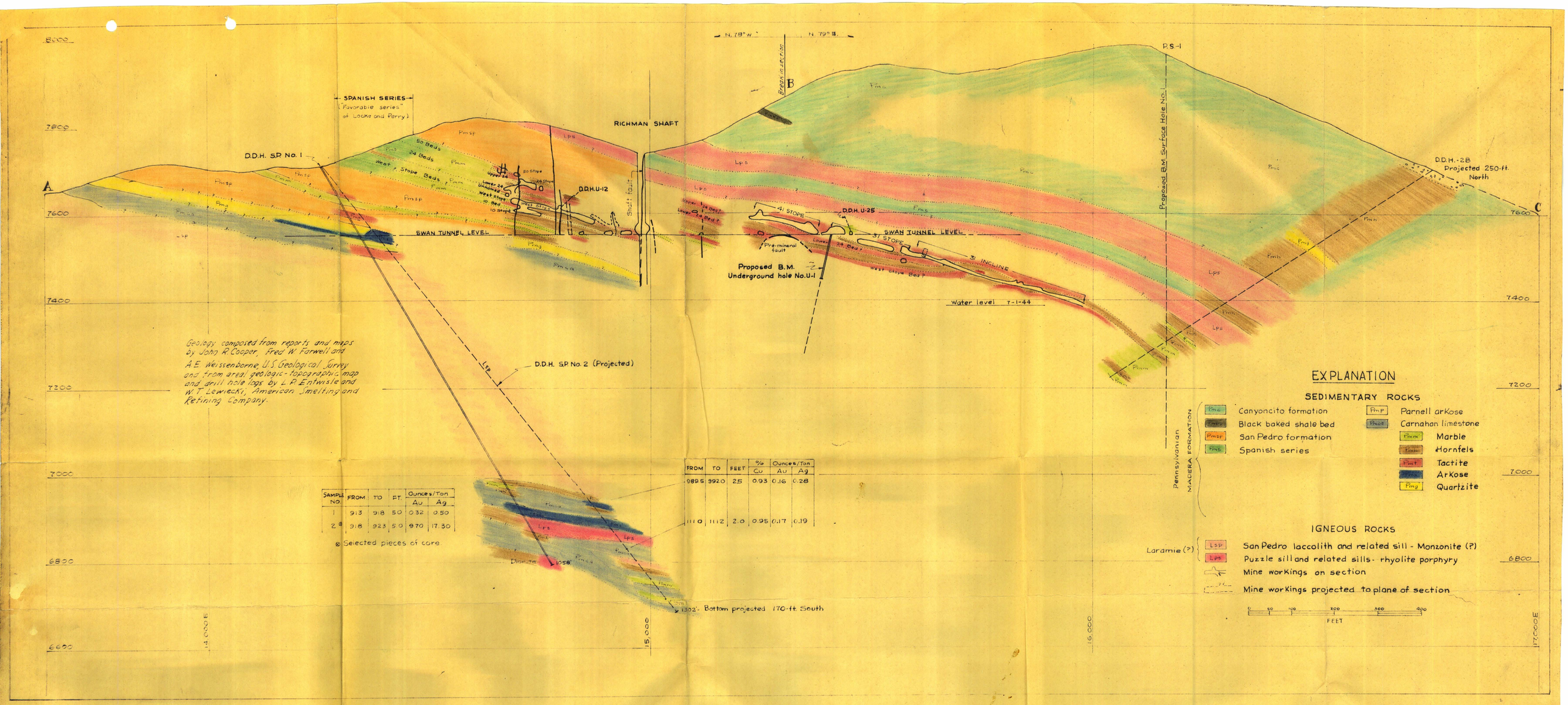
SAN PEDRO MINE AREA

NEW PLACERS MINING DISTRICT, SANTA FE COUNTY, NEW MEXICO

Scale 1 inch = 200 feet

CONTOUR INTERVAL 20 FEET
DATUM - 7653.6 AT CORNER COMMON TO SECS. 21, 22, 27 & 28

Figure 2.- Geology and topography, San Pedro Copper mine, Santa Fe County, New Mexico.



SAMPLE NO.	FROM	TO	FT.	Ounces/Ton Au	Ounces/Ton Ag
1	9.13	9.18	5.0	0.32	0.50
2 ⊗	9.18	9.23	5.0	9.70	17.30

⊗ Selected pieces of core

FROM	TO	FEET	% Cu	Ounces/Ton Au	Ounces/Ton Ag
989.5	992.0	2.5	0.93	0.16	0.28
111.0	113.2	2.0	0.95	0.17	0.19

Figure 3.- Longitudinal section A, B, C, geology and mine workings, San Pedro Copper mine, Santa Fe County, New Mexico.

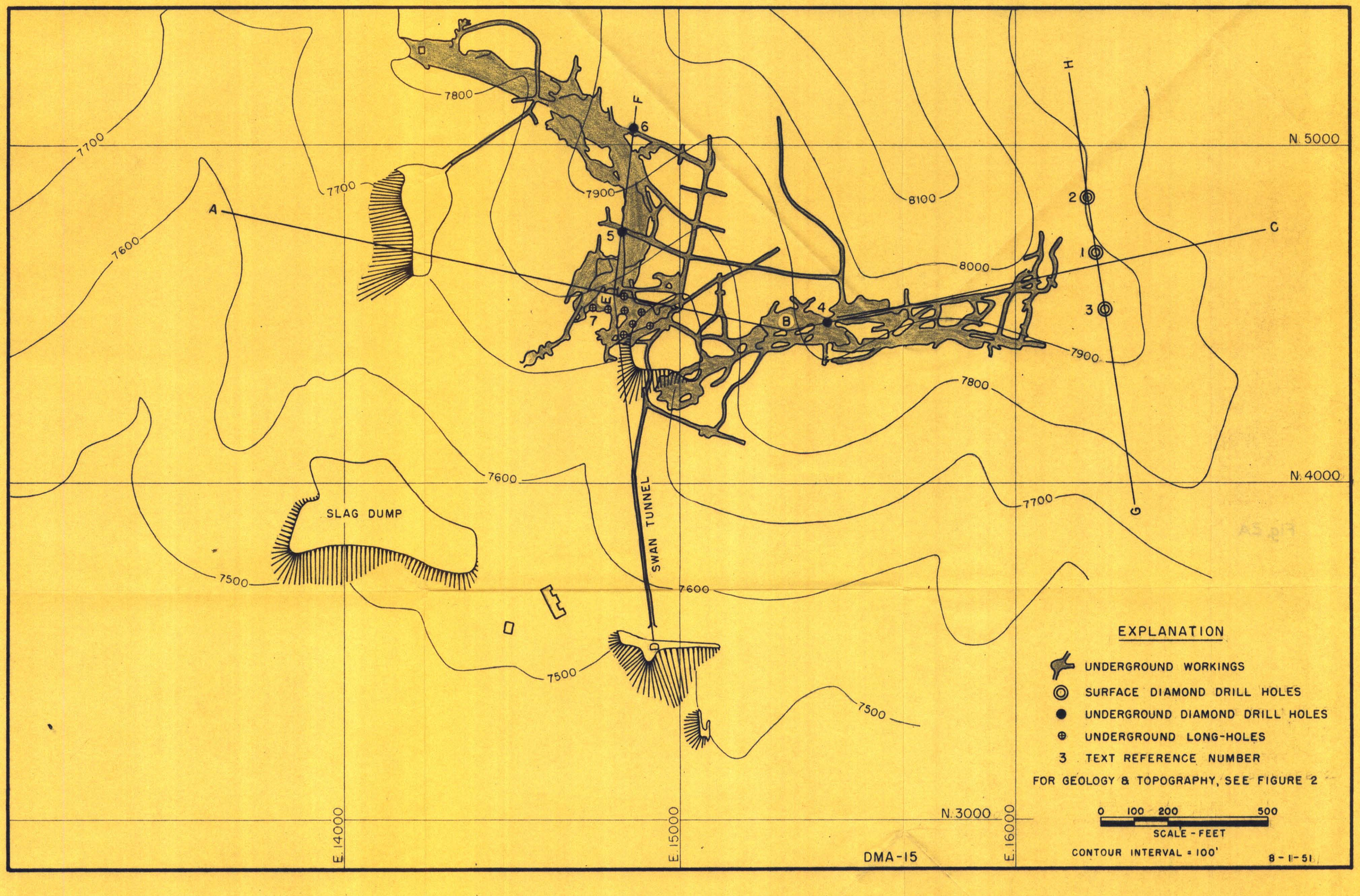


FIGURE 2A — PROPOSED EXPLORATION, SAN PEDRO MINE

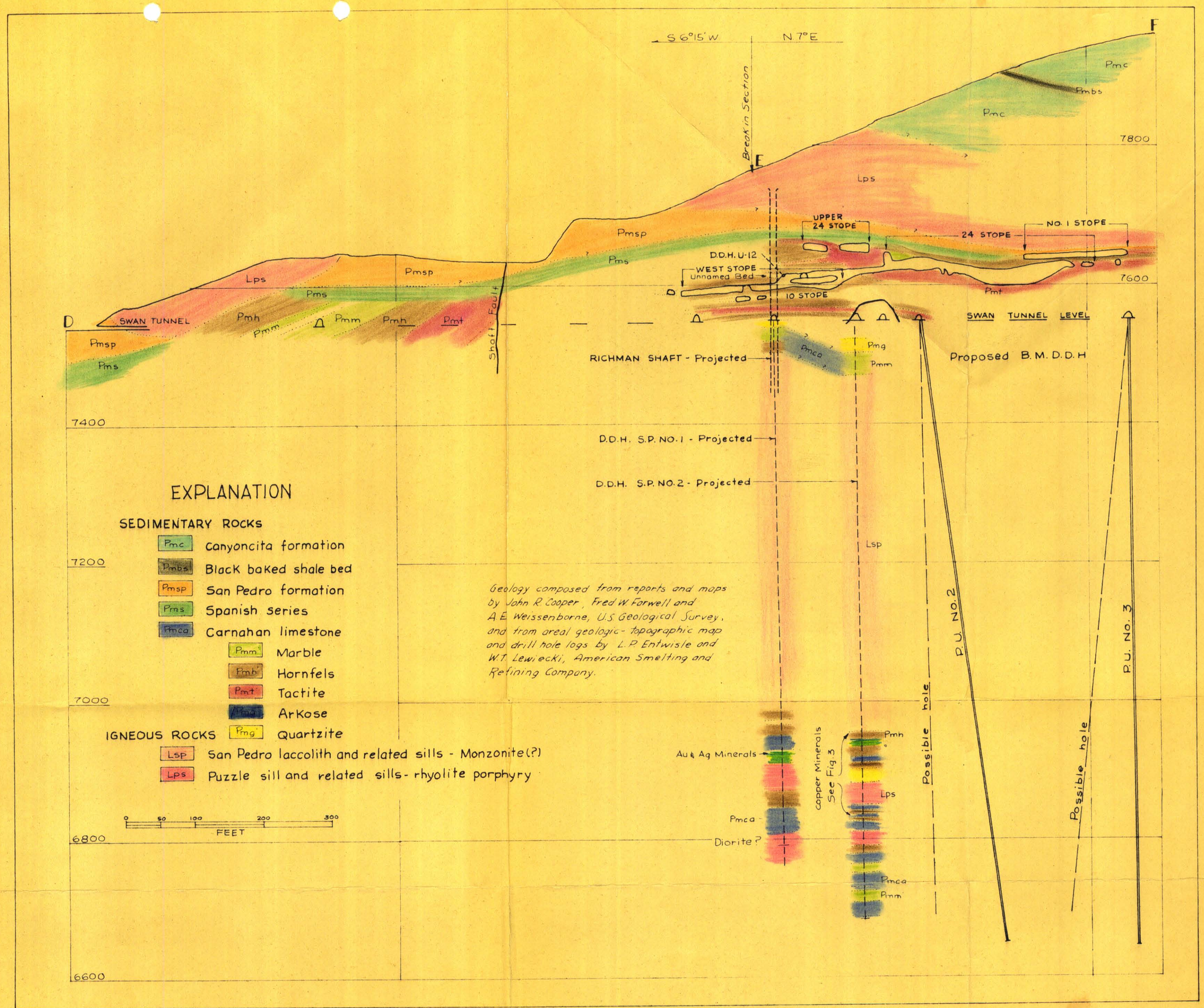


Figure 4.- Cross section-geology and mine workings, San Pedro Copper mine, Santa Fe County, New Mexico.

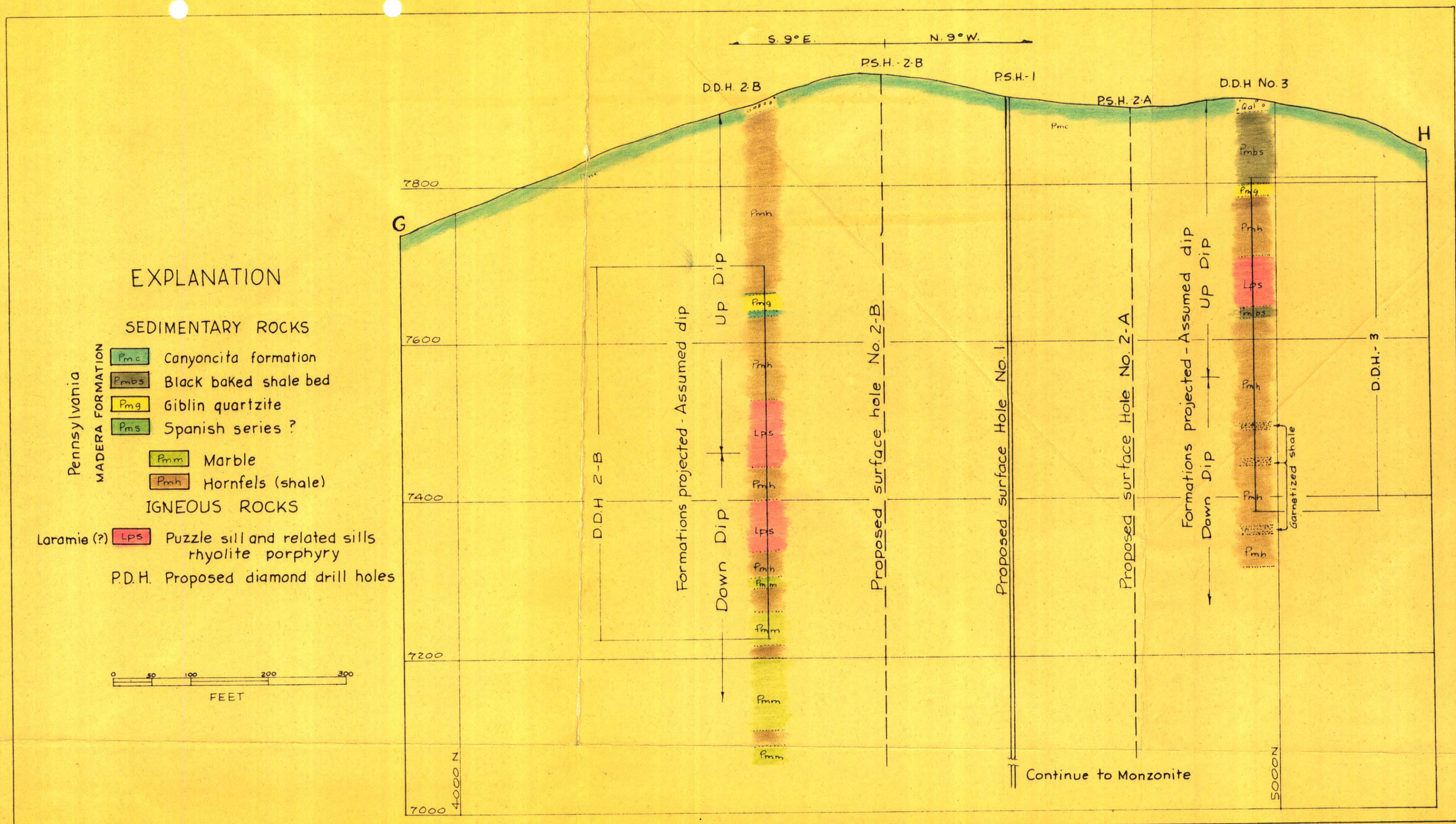


Figure 5.- Cross section G-H through D.D. holes 2B and 3, San Pedro Copper mine, Santa Fe County, New Mexico.

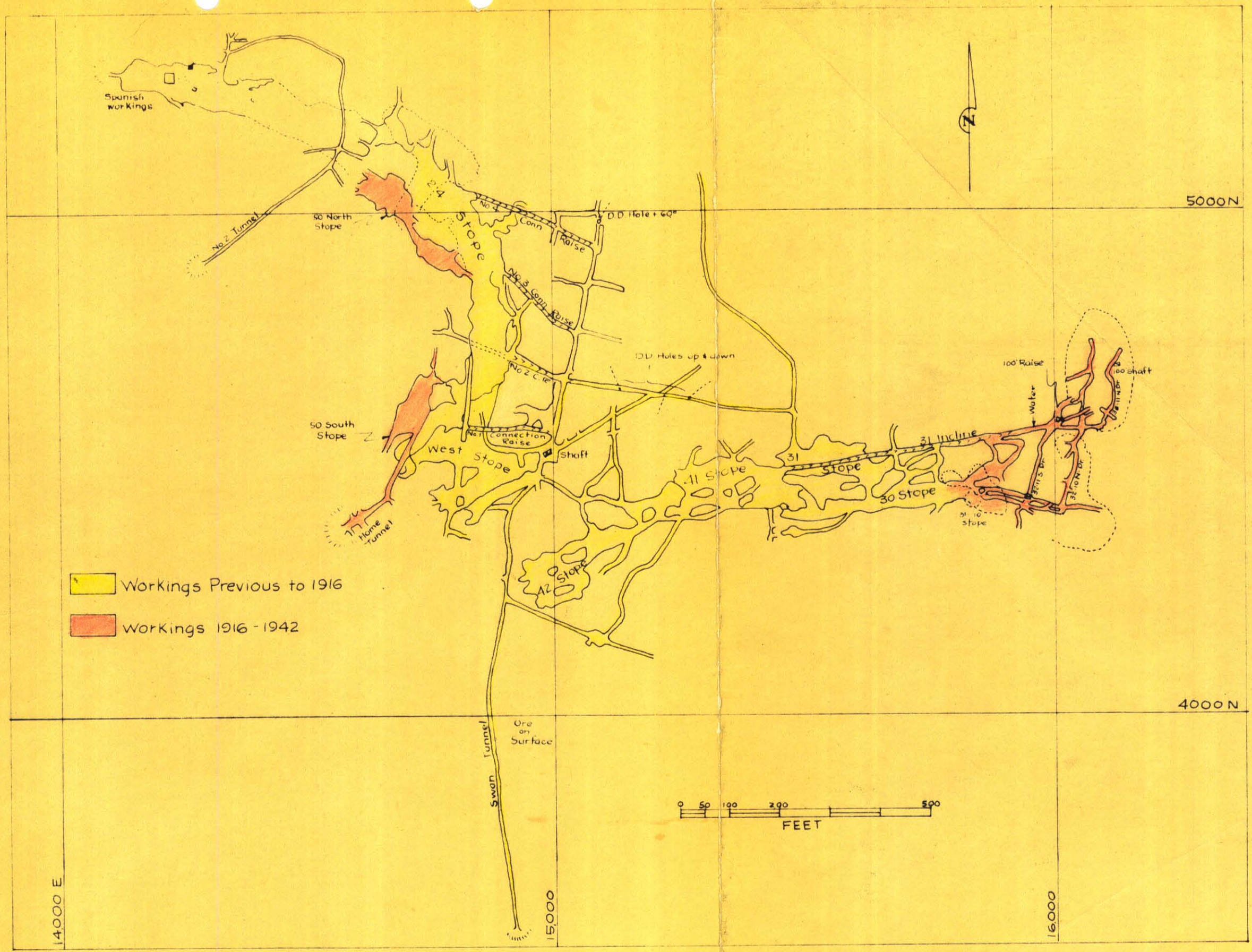


Figure 6.- Plan of mine workings, San Pedro Mine, Santa Fe County, New Mexico.

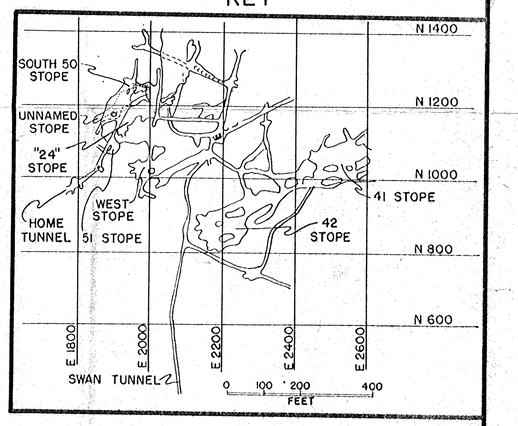
ANALYSES

SAMPLE NUMBER	SAMPLE LENGTH	OUNCES PER TON		PERCENT	
		Au	Ag	Cu	WO_3
1	6.3	0.03	0.60	1.30	0.08
2	4.4	0.03	0.45	1.15	0.05
3	4.3	Tr.	0.35	0.20	0.03
4	3.2	0.01	0.10	0.50	0.08
5	1.2	0.01	0.15	0.15	1.55
6	5.5	0.01	0.25	1.15	0.03
7	1.4	0.01	0.15	0.55	Tr.
8	5.5	Tr.	0.15	0.35	0.02
9		0.1	0.68	2.07	0.28
10	3.8	0.01	0.30	1.20	Tr.
11	5.0	0.02	0.50	1.35	Tr.
12	4.8	Tr.	0.15	0.80	Tr.
13	3.7	0.02	0.20	0.80	0.01
14	4.5	Tr.	Tr.	0.20	0.02
15	6.8	0.02	0.10	0.35	0.05
16		Tr.	0.52	1.97	0.16
17	6.0	0.03	0.35	2.10	0.15
18	GRAB	0.01	0.35	1.10	0.03
19	4.6	0.02	0.10	0.35	Tr.
20	4.5	0.06	0.65	1.70	0.03
21		Tr.	0.50	2.18	0.45
22	5.6	0.06	0.10	1.15	0.15
23	5.1	0.01	0.50	1.30	0.15
24	4.3	0.03	0.40	1.25	0.10
25	3.3	0.12	0.95	4.95	0.35
26	5.6	0.09	0.35	3.80	0.10
27		0.04	0.70	4.36	0.49
28	5.2	0.07	0.55	3.70	0.30
29	4.8	0.03	0.10	0.55	0.08
30	5.1	Tr.	Tr.	0.10	0.05
31	3.6	0.01	0.25	0.50	0.05
32	3.3	0.09	2.05	4.15	0.28

EXPLANATION

- (6) SAMPLE NUMBER AND LOCATION
- RAISES AND WINZES
- OUTLINES OF WORKINGS
- OUTLINES OF TUNGSTEN CONCENTRATIONS

KEY



ADAPTED FROM MAPS BY U.S. GEOLOGIC SURVEY

5-22-51

Figure 2.—ASSAY PLAN OF TUNGSTEN AREAS, SAN PEDRO MINE, SANTE FE COUNTY, NEW MEX.