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

224 New Customhouse
Denver 2, Colorado

August 25, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 3026 (Copper), F. A. Coupens' Boliver claims, Salt Lake County, Utah.

Enclosed are four copies of the final report on the subject docket, a copy of the letter of denial to the applicant, and two copies of Form 3b.

W. H. King
W. H. King

E. N. Haschmann
per A. N. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
9-4-53
(date)

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

224 New Customhouse
Denver 2, Colorado

August 25, 1953.

Mr. Francis A. Coupens
8126 South 150 West
Midvale, Utah

Re: Docket DMEA-3026

Dear Mr. Coupens:

Reference is made to your application for Government aid on the Boliver Claims.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding material of acceptable grade, and in quantities that will significantly improve the mineral supply position for the National Defense Program.

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of copper by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W. H. King
W. H. King
Field Team, Region IV

E. N. Haushman
for A. H. Koschmann
Field Team, Region IV

HMC:cwm

cc: Docket
Administrator, DMEA
SRWilson
Ralph Roberts
AHKoschmann (2)
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
9-4-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

August 6, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3026, F. A. Coupen's Bolivar claims, Salt Lake County, Utah

Enclosed are 9 copies of a final geologic report by Max D. Crittenden, Jr. of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be denied.

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

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
9-4-53
(date)

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
July 30, 1953

Memorandum

To: A. H. Koschmann
Field Team, Region IV

From: C. G. Tillman for R. J. Roberts
Utah-Nevada District Office

Subject: DMEA Docket 3026, F. A. Coupens' Bolivar claims,
Salt Lake County, Utah

Enclosed are nine copies of a final geologic report on the Bolivar (Alta-Helena group) claims of F. A. Coupens by Max D. Crittenden, Jr., geologist, U. S. Geological Survey.

F. A. Coupens applied for a DMEA loan to aid in exploration for copper on the Bolivar claims, Salt Lake County, Utah.

Copper mineralization in this area occurs principally in the Ophir limestone of Cambrian age where it is cut by easterly-striking faults or fissures. Copper is associated with garnet-epidote tactite in the Ophir limestone.

Copper-bearing material exposed over a 600-foot distance at the surface is not of commercial grade and there is no evidence that higher grade or larger ore-bodies are to be expected at the depth of the proposed adit. It is recommended, therefore, that the application be denied.

Ralph J. Roberts

By: _____
C. G. Tillman

Enclosures - 9
CGT/rs

9-4-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3026 (Copper) - F. A. Coupens, Bolivar Claims

Salt Lake County, Utah

By

Max D. Crittenden, Jr.
U. S. Geological Survey

July 30, 1953

Released by
DMEA OPERATING COMMITTEE
9-4-53
(date)

F. A. Coupens, Beliver Claims

Salt Lake County, Utah

DMEA-3026 (Copper)

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Ownership, production and development	2
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Figure 1 - Index map showing location of deposit

Figure 2 - Geologic map and selection of part of the Beliver Claims

Figure 3.- Photographs of the No. 3 prospect

FINAL GEOLOGIC REPORT

F. A. COUPENS, BOLIVER CLAIMS

SALT LAKE COUNTY, UTAH

DMEA-3026 (Copper)

INTRODUCTION

On August 30, 1952, Francis A. Coupens of Midvale, Utah made application for assistance in the exploration of copper showings in the Boliver and contiguous claims of the Alta-Helena group, in the Little Cottonwood Mining district near Alta, Utah.

It is proposed to undertake exploration consisting of 2 days of bulldozer work and 600 feet of drifting together with repairs, supplies, and equipment at a total cost of $7,687.00. Government participation would amount to 50%.

A field examination was made by M. D. Crittenden Jr., U. S. Geological Survey, on July 1, 1953, during which the underground workings were examined and surface workings were inspected, sketched, and sampled.

Location and Accessibility

The Boliver group of claims comprises the old Alta-Helena company holdings shown on Plate 30, U.S.G.S. PP 201. It is situated at an altitude of 9,550 feet, at the foot of the steep slopes northeast of Albion Basin, about 1½ miles airline southeast, of the old mining camp of Alta.

Paved road ends at Alta, and 2 miles of easy grade but rough gravel road lead to Albion basin, whence 1/2 mile of dirt road leads to the dump of the Alta-Helena adit. The cost of trucking from Alta to the smelter is reported to be $4.50 per ton. The road to Alta is maintained the year around, but deep snow would limit exploration work in Albion Basin to the period between June 15 and November 15.

A steep bulldozer trail was built in 1952 from the adit to the old shafts and prospect pits on the hill above. A moderate amount of work would

make this trail passable for a jeep or 4-wheel drive truck.

Ownership, development and production

The application is accompanied by a copy of a 3-year lease dated July 18, 1952, between the Alta-Helena Mining and Milling Company, lessor, and Francis A. Coupens, lessee. The lease includes the Beliver, Helena, Beliver No. 1, Beliver fraction, Century Copper Nos. 1, 2, & 3, Dumfool, and Fleur De Lis claims.

Underground development consists of an adit at an altitude of 9,550 feet called the Alta-Helena tunnel. This working has two branches totalling about 900 feet in length, and from the end of the northern branch, a raise has been driven about 75 feet to the east at an angle of 45°.

On the surface, a discovery shaft was begun about 300 feet above the adit level. It is reported to be 50 to 100 feet deep, but is caved and water was standing at a depth of 15 feet or so when visited. Nearby are a number of prospect pits dug on various mineralized showings (see fig. 2).

The only production reported is a 4-ton trial shipment made by the applicant in 1952. Settlement sheets are not available, but it is said to have assayed 4 percent copper.

GEOLOGY

The geology of Alta-Helena group is described by Calkins and Butler, U. S. G. S. Prof. Paper 201, and is shown on the geologic map, Plate 3 of that publication. A larger scale map sketched in the field is included as Figure 2 of this report.

The present workings are in rocks of the Cambrian Tintic quartzite and Ophir shale about 700 feet from the south edge of the Alta stock. The metamorphism associated with this body has converted the Ophir shales to black hornfels, and the Ophir limestones to garnet-epidote tactites. The pure lime-

stones are recrystallized to marble. The most prominent structural feature in the area of the claims is a fault herein referred to as the Alta-Helena fault. It strikes N. 70° E., dips steeply and appears to displace the beds about 250 feet vertically down on the south.

The mineralization present on the surface is mostly, but not entirely, associated with a tactite zone developed from impure beds at the base of the Ophir limestone. Locally ore-bearing quartz is present along the fissure where it cuts other rocks, but this material appears to be lower in grade than that sampled. The discovery shaft is collared in the tactite zone at the base of the Ophir lime just north of its intersection with the Alta-Helena fault. The dip of the beds is such that the shaft should have passed into the Ophir shales within a few feet, but the dump shows that it encountered porphyry and probably continued in it for some depth. The mineralized material stacked on the dump consists of garnet-epidote tactite and magnetite, stained by copper oxide minerals. Only a few pieces of this material were included in the trial shipment because the material from this shaft is reported to contain only 1 to 2 percent copper.

The downthrown segment of this Ophir lime horizon was encountered in prospect pit No. 1, just south of the Alta-Helena fault. Here, and for 100 feet or so east along the fault, copper-stained vein material consisting largely of epidote and garnet crops out. The copper content of such material is reported by the applicant to be less than that of Pit No. 3.

Prospect pit No. 2 is about 110 feet south-southeast of the main shaft, and on the opposite side of the Alta-Helena fault. It was sunk on copper-stained tactite developed near the base of the sandy pale-gray dolomite formation called Jefferson dolomite by Calkins. Though mineralized, this zone is low grade and was not sampled.

The largest piles of sorted material are present on the dump of prospect

pit No. 3 (see Figs. 3 & 4). Here a weak, nearly vertical fissure striking N. 50° to 60° E. cuts the tactite zone at the base of the Ophir lime. In this zone the ore attained a width of 2 to 4 feet, but the fissure does not appear to cross the ledges of Ophir shale below and to the west, and can be seen to pinch out at the upper edge of the pit (Fig. 4).

The ore in this prospect consists of garnet, epidote, magnetite, pyrite, chalcopyrite, along with some secondary copper minerals. A chip sample of several tons of such material stacked on the dump assayed 3.5 percent copper, a chip sample across 18 inches to 2 feet of the pinching vein in the face of the pit assayed 2.41 percent copper.

Prospect pit No. 4 is also on the tactite at the base of the Ophir lime, but shows weaker copper mineralization than that at No. 3.

The adit, (formerly called the Alta-Helena tunnel) begins north of the fault in Tintic quartzite. At a distance of 600 feet from the portal it encountered a fault along which porphyry has been intruded for a distance of 30 feet or so. Beyond this point, the northernmost heading follows a branch of the fault observed on the surface, with Tintic quartzite on the northwest side and metamorphosed Ophir shale on the southeast side. Beyond station 14, both walls are metamorphosed Ophir shale. The raiseway up the raise is untimbered, and wet, so was not examined. No mineralization of significance was encountered in these underground workings.

CONCLUSIONS AND RECOMMENDATIONS

The only significant mineralization observed in the area under consideration occurs in narrow shoots at the intersection of the lower beds of the Ophir lime with easterly-striking faults or fissures. Of the four places where such shoots

crop out along the course of the Ophir lime horizon, the best material, at prospect pit No. 3, assayed only 3.5 percent copper. Other outcrops are still lower grade. These surface indications are believed to be typical of what can be expected at depth; there is nothing to indicate that higher grade or larger ore bodies are to be expected at the depth of the proposed adit.

Inasmuch as the ore exposed over a 600-foot distance on the surface is not commercial, and because there is no reason to expect improvement at depth, the prospects for a discovery resulting from the work proposed is poor.

It is recommended, therefore, that the application be denied.

Fig. 3 - Hand sorted ore piled on dump of prospect pit No. 3. This material assayed 3.5 percent Cu.

Fig. 4 - Mineralized zone (to left and above hammer) cutting tactite zone at the base of the Ophir limestone at prospect pit No. 3. This zone assayed 2.41 percent Cu.

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

C
O
P
Y

August 25, 1953

224 New Customhouse
Denver 2, Colorado

Mr. Francis A. Coupens
8126 South 150 West
Midvale, Utah

Dear Mr. Coupens:

Reference is made to your application for Government aid on the Boliver Claims.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding material of acceptable grade, and in quantities that will significantly imporve the mineral supply position for the National Defense Program.

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of copper by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W. H. King
Field Team Region IV

/s/ E. N. Harshman
for A.H. Koschmann
Field Team Region IV

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

224 New Customhouse
Denver 2, Colorado

August 25, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 3026 (Copper), F. A. Coupens' Boliver claims, Salt Lake County, Utah.

Enclosed are four copies of the final report on the subject docket, a copy of the letter of denial to the applicant, and two copies of Form 3b.

W. H. King
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E. M. Haschman
A. H. Koschmann

Enclosures

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

200 New Customhouse
Denver 2, Colorado

August 6, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3026, F. A. Coupen's Bolivar claims, Salt Lake County, Utah

Enclosed are 9 copies of a final geologic report by Max D. Crittenden, Jr. of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be denied.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
July 30, 1953

Memorandum

To: A. M. Koschmann
Field Team, Region IV

From: C. G. Tillman for R. J. Roberts
Utah-Nevada District Office

Subject: DMEA Docket 3026, F. A. Coupens' Beliver claims,
Salt Lake County, Utah

Enclosed are nine copies of a final geologic report on the Beliver (Alta-Helena group) claims of F. A. Coupens by Max D. Crittenden, Jr., geologist, U. S. Geological Survey.

F. A. Coupens applied for a DMEA loan to aid in exploration for copper on the Beliver claims, Salt Lake County, Utah.

Copper mineralization in this area occurs principally in the Ophir limestone of Cambrian age where it is cut by easterly-striking faults or fissures. Copper is associated with garnet-epidote tactite in the Ophir limestone.

Copper-bearing material exposed over a 600-foot distance at the surface is not of commercial grade and there is no evidence that higher grade or larger ore-bodies are to be expected at the depth of the proposed adit. It is recommended, therefore, that the application be denied.

Ralph J. Roberts

By: _____
C. G. Tillman

Enclosures - 9
CGT/rs

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3026 (Copper) - F. A. Coupens, Boliver Claims

Salt Lake County, Utah

By

Max D. Crittenden, Jr.
U. S. Geological Survey

July 30, 1953

F. A. Coupens, Boliver Claims

Salt Lake County, Utah

DMEA-3026 (Copper)

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FINAL GEOLOGIC REPORT

F. A. COUPENS, BOLIVER CLAIMS

SALT LAKE COUNTY, UTAH

DMEA-3026 (Copper)

INTRODUCTION

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crop out along the course of the Ophir lime horizon, the best material, at prospect pit No. 3, assayed only 3.5 percent copper. Other outcrops are still lower grade. These surface indications are believed to be typical of what can be expected at depth; there is nothing to indicate that higher grade or larger ore bodies are to be expected at the depth of the proposed adit.

Inasmuch as the ore exposed over a 600-foot distance on the surface is not commercial, and because there is no reason to expect improvement at depth, the prospects for a discovery resulting from the work proposed is poor.

It is recommended, therefore, that the application be denied.

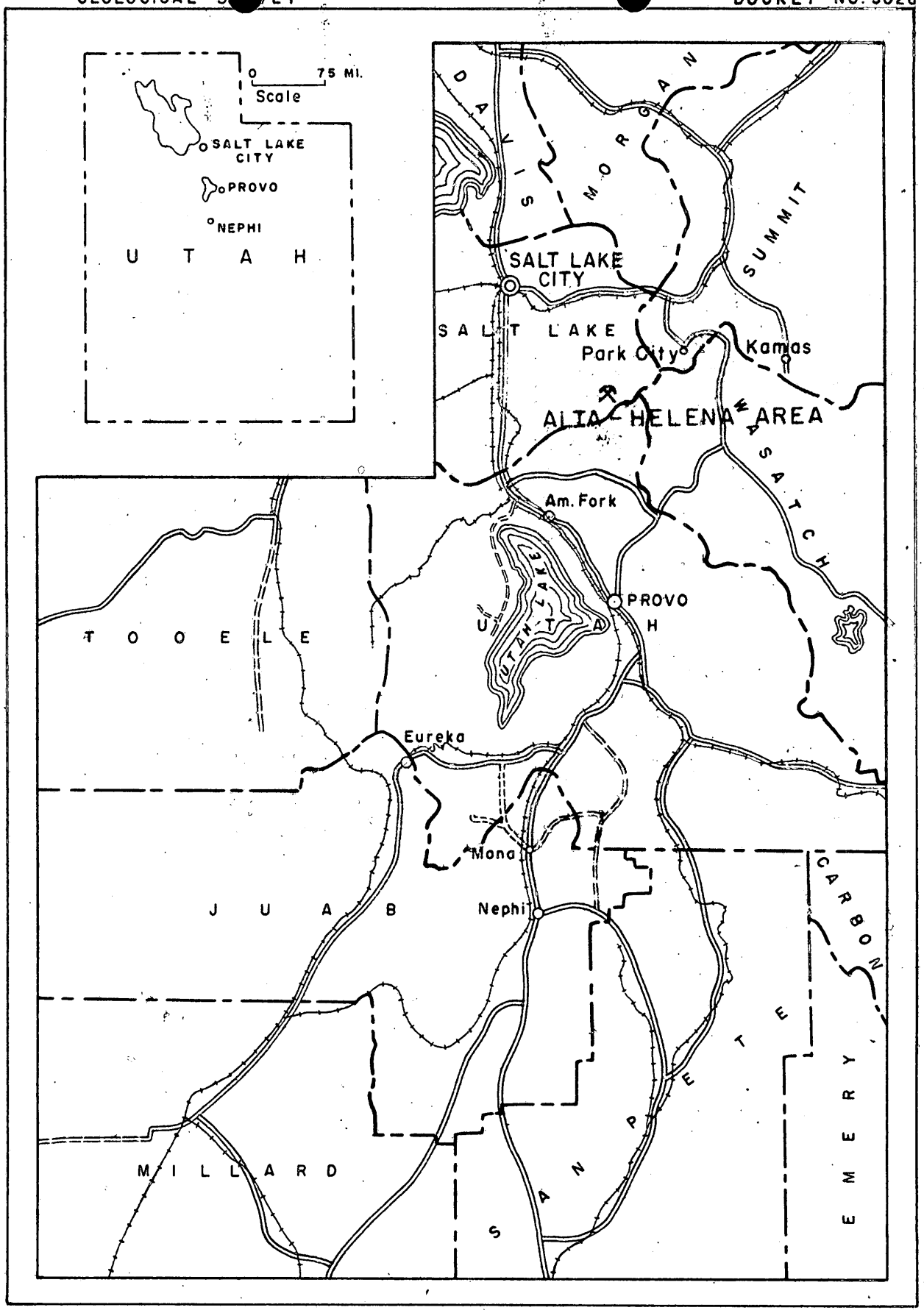

FIG. 1 INDEX MAP OF CENTRAL UTAH

0 5 10 15 20 MILES
Scale

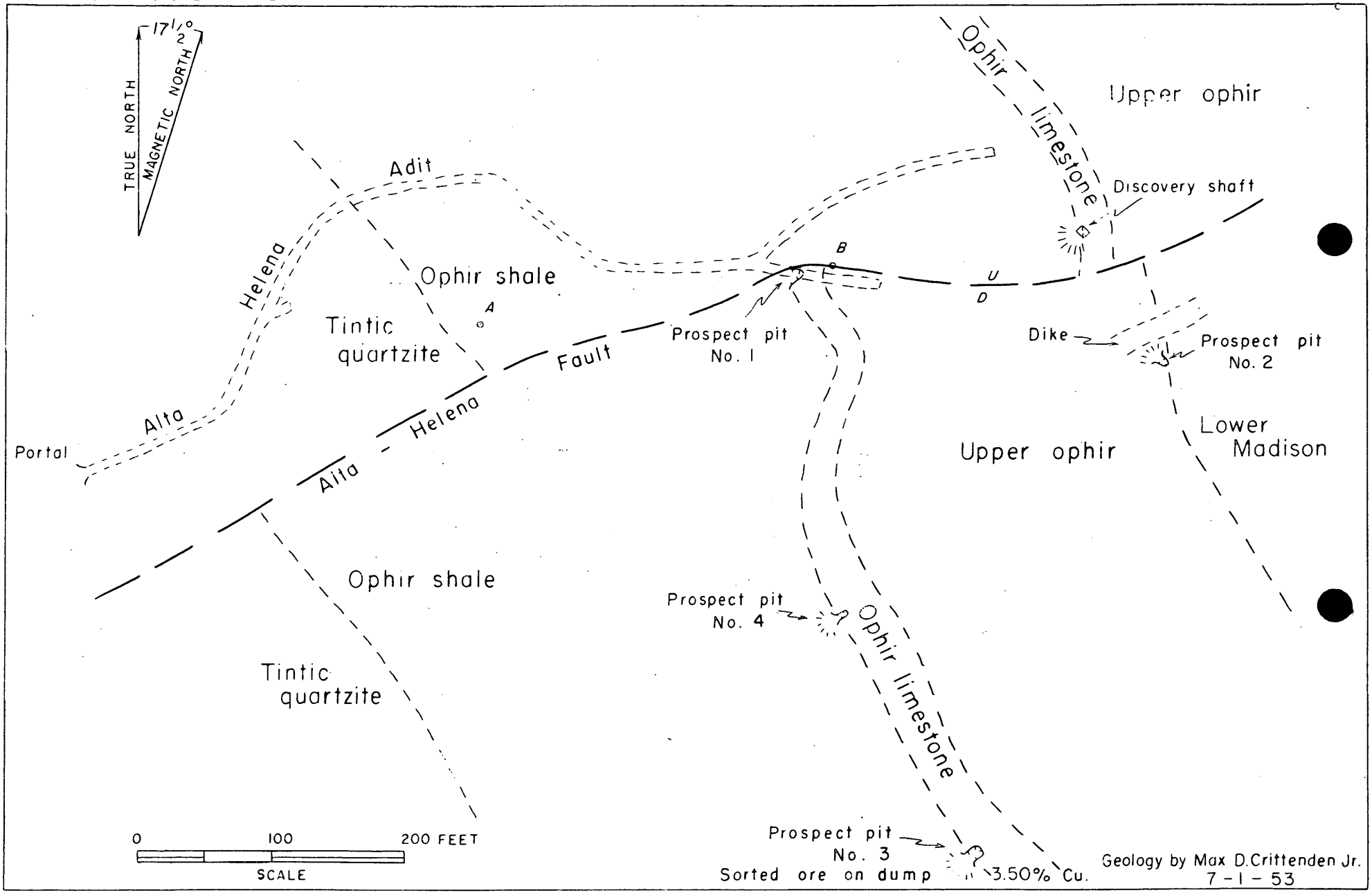

FIG. 2 GEOLOGIC SKETCH MAP OF THE ALTA-HELENA AREA, SALT LAKE COUNTY, UTAH

Fig. 3 - Hand sorted ore piled on dump of prospect pit No. 3. This material assayed 3.5 percent Cu.

Fig. 4 - Mineralized zone (to left and above hammer) cutting tactite zone at the base of the Ophir limestone at prospect pit No. 3. This zone assayed 2.41 percent Cu.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved
Budget Bureau No. 42-R1035.2.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 8 1953

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-3026
Metal or Mineral
Date Received 5/8/53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Francis A. Coupons, 6126 South 150 West, Midvale, Utah

Partners: Melvin Thompson, 106 Payson St., Midvale, Utah
Floyd Hartley, 357 East Wasatch, Midvale, Utah

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract The Bolivar-#161; The Helena-#5733; The Bolivar #1; The Bolivar Fraction Lode Mining Claims; Century Copper #1; Century Copper #2; Century #3, Danfool; and Fleur De Lis, all in the Little Cottonwood Mining District, Situated in the County of Salt Lake and State of Utah

(*b*) State any mine name by which the property is known. —See "a" above

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it Unknown

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. Access roads partly made—little repair work necessary; 35 miles to shipping points—10 receiving points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. All available

16—66551-1

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within as soon as acceptable days and be completed within 4 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. Six years of leading experience and 12 years in the mines.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [X] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated April 30, 1953

Francis A. Compere
(Applicant)

By

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—66551-1

4. Physical Description

(a) In 1939 75' of raise and drifting was put in . In 1952 75' of portal cave in was cleaned out and partly retimbered. Cabin compressor/rebuilt in 1952 and about two miles of road was built. Some prospecting down on copper outcrops in 1952. The mine workings are readily accessible.

(b) No production except three tons of trial ores shipped to Garfield in 1952.

(c) Good bedding of lime and perfre and copper fissure running from 1-% copper; copper fissure on surface running from two-six feet in width; secondary fissure meeting with other fissures in proper fault line.

5. The Exploration Project

(b) See map attached.

6. Estimate of Costs

(a) Independent Contracts:	
Bulldozer operations——2 days @ $100.00 per day	$200.00
600 feet of drifting @ $7.50 per foot	4,500.00
(b) Labor, Supervision, Consultants	
Survey work	50.00
Extra help—miscellaneous	50.00
(c) Operating Materials and Supplies and Minor Equipment	
Hoses	100.00
Carbide	12.00
Oil	25.00
Powder and Caps	110.00
Fuses	10.00
Gas	100.00
Picks & Shovels	20.00
Pipe	200.00
Timbers	300.00
Tail hose oiler	20.00
(d) Operating Equipment	
Tugger	350.00
Liner with bar and arm	700.00
Compressor-Already Installed——rental value	300.00
Jack-Hammer and wiggle tail stoper—rental value	80.00
Sharpening Bits or trade ins	100.00
Cable	200.00
Rail-200 Feet @ $1.00 per foot	200.00
(e) Rehabilitation and Repairs	
Finish repairs to Building	100.00
Repairs to Portal	50.00
Compressor receiver tank repaired	10.00
(f) New Buildings, Improvements, Installations	-0-
(g) Miscellaneous	-0-
(h) Contingencies	-0-
TOTAL	$7,637.00

COPY

7. All three partners intend to invest private funds, utilize the equipment available on the premises and if private funds and present equipment insufficient then to obtain the balance by the extension of credit.

COPY

MINING LEASE

This Indenture made this 18th day of July 1952, by and between ALTA HELENA MINING & MILLING COMPANY, a corporation, Lessor and FRANCIS A COUPENS of Midvale, Utah, Lessee, WITNESSETH:

The Lessor, for and in consideration of the royalties, covenants and agreements hereinafter reserved and by the Lessee to be paid, kept and performed, has granted, demised and let unto the Lessee all of the following mine and mining property situated in the Little Cottonwood Mining District, situated in the County of Salt Lake and State of Utah, known and described as follows:

The Bolivar - #4161
The Helena - #5733
The Bolivar No. 1
The Bolivar Fraction Lode Mining Claims.

Also, all interest of the Lessor in and to the following claims:

Century Copper #1
Century Copper #2
Century Copper #3
Dumfool
Fleur De Lis,

more fully described in the patents for said claims which are hereby referred to, together with the appurtenances and the machinery and equipment thereon; Subject to rights-of-way.

TO HAVE AND TO HOLD unto the said Lessee for the term of three (3) years from the date hereof, expiring at noon on the 18th day of July 1955, unless sooner forfeited through the violation of any covenant hereinafter against the said Lessee reserved.

AND IN CONSIDERATION of the said demise, the said Lessee does covenant and agree with the said Lessor as follows, to-wit:

First: To commence work within thirty (30) days upon the said premises and work the same in a good and miner'like manner, working the aforesaid premises steadily and continuously from the date of commencement of said work; and that a failure to do and perform at least twenty-five (25) lineal feet of tunnel, drift, raise, winze or crosscut in said premises, during each calendar month thereafter, shall be considered a violation of this covenant, provided that said work need only be kept up continuously six (6) months of each calendar year and may be excused during the other six (6) months of such calendar year. All work to be done hereunder shall be at least 4 by 6 feet in the clear. The above requirement as to the performance as to at least 25 lineal feet of work in each month shall be excused during the period when Lessee is removing ore from any part of said premises. During the first six months of the lease, the continuous work of two men in constructing a road to the shaft shall be deemed a compliance with the above requirements.

Second: To timber said mine, when and where necessary, at Lessee's own expense and to install suitable track in all main tunnels thereof.

Third: To allow the Lessor, or its agent, to enter upon and into all parts of said mine for the purpose of inspection thereof at all reasonable times.

Fourth: To not assign this lease or any interest therein without the written consent of the Lessor.

Fifth: To pay and deliver to Lessor as royalty a flat royalty of 15% on net value of a ll ore extracted from said premises during the life of this

lease. Net value means the proceeds of ore sold, less the cost of transportation from mine to smelter or sampler, and smelting, sampling and assaying charges. Ores may be shipped in the name of either party and the Smelter may make settlements according to this agreement with each of said parties.

Sixth: To deliver up to said Lessor the said premises with the appurtenances, together with all machinery and equipment included therein and all improvements placed thereon by Lessee, in good order and condition, ordinary wear and tear excepted, without demand or further notice, on the said 18th day of July 1955 at noon, or at any time previous thereto, upon demand for forfeiture. Lessee shall be permitted to remove his own machinery and equipment placed on said premises upon termination hereof, Provided he has fully complied with the provisions hereof.

Seventh: To operate said property in all particulars as a Lessee and independent contractor, the Lessor retaining no direction or control thereof, and to pay and discharge and save Lessor harmless from any liability and obligation for labor, material, supplies and any other obligations incurred by Lessee in developing and operating said property; and in this connection to post any notices required by law with respect to same.

Eighth: To pay and discharge and to save Lessor harmless from any liability for workman's compensation insurance premiums and social security, unemployment, payroll and any other taxes arising from the operation of said property hereunder whether levied or assessed by the United States, State of Utah or any other governmental body; and to comply with all state and federal laws and regulations that may affect Lessee's operations.

Ninth: General property taxes upon said premises shall be paid by Lessor. Any taxes incurred by reason of ore extraction from said premises including any net proceeds taxes shall be paid by the parties in proportion to the amount received by each from the proceeds of the ore so extracted and sold.

Tenth: To deliver up to Lessor said premises in good order and condition, together with any permanent improvements placed therein, reasonable wear and tear excepted, without demand or further notice at the expiration hereof or at any time previous upon forfeiture of this lease in accordance with the provisions hereof and demand by Lessor.

Each and every clause and covenant of this indenture shall extend to the assigns, heirs, executors, administrators and successors of the parties hereto.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed in duplicate the day and year first above written.

ALTA HELENA MINING & MILLING COMPANY

By s/s ALCOT E. ANDERSON
President
Lessor

s/s FRANCIS A. COUPENS
Francis A. Coupens
Lessee

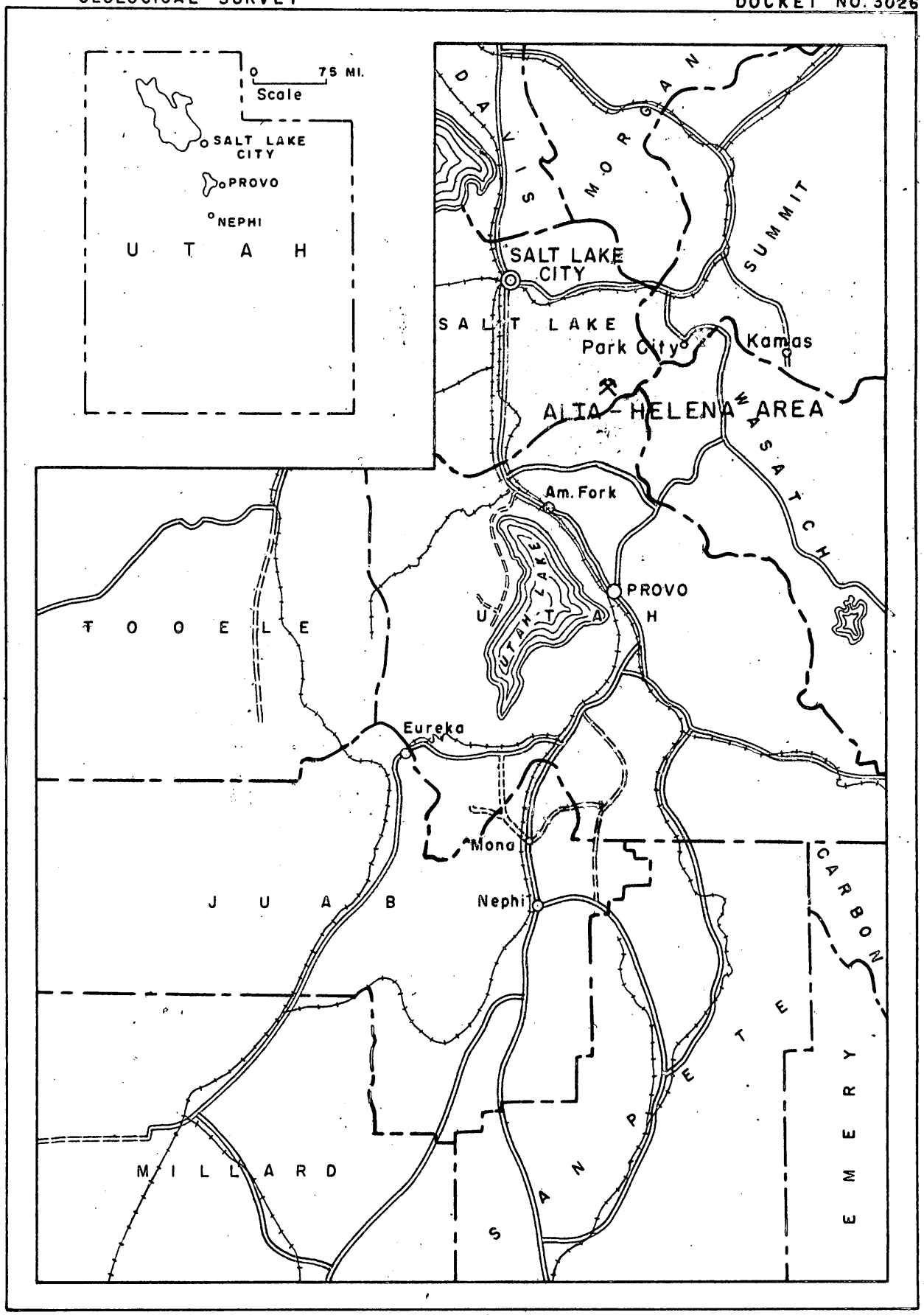

FIG. 1 INDEX MAP OF CENTRAL UTAH

0 5 10 15 20 MILES
Scale

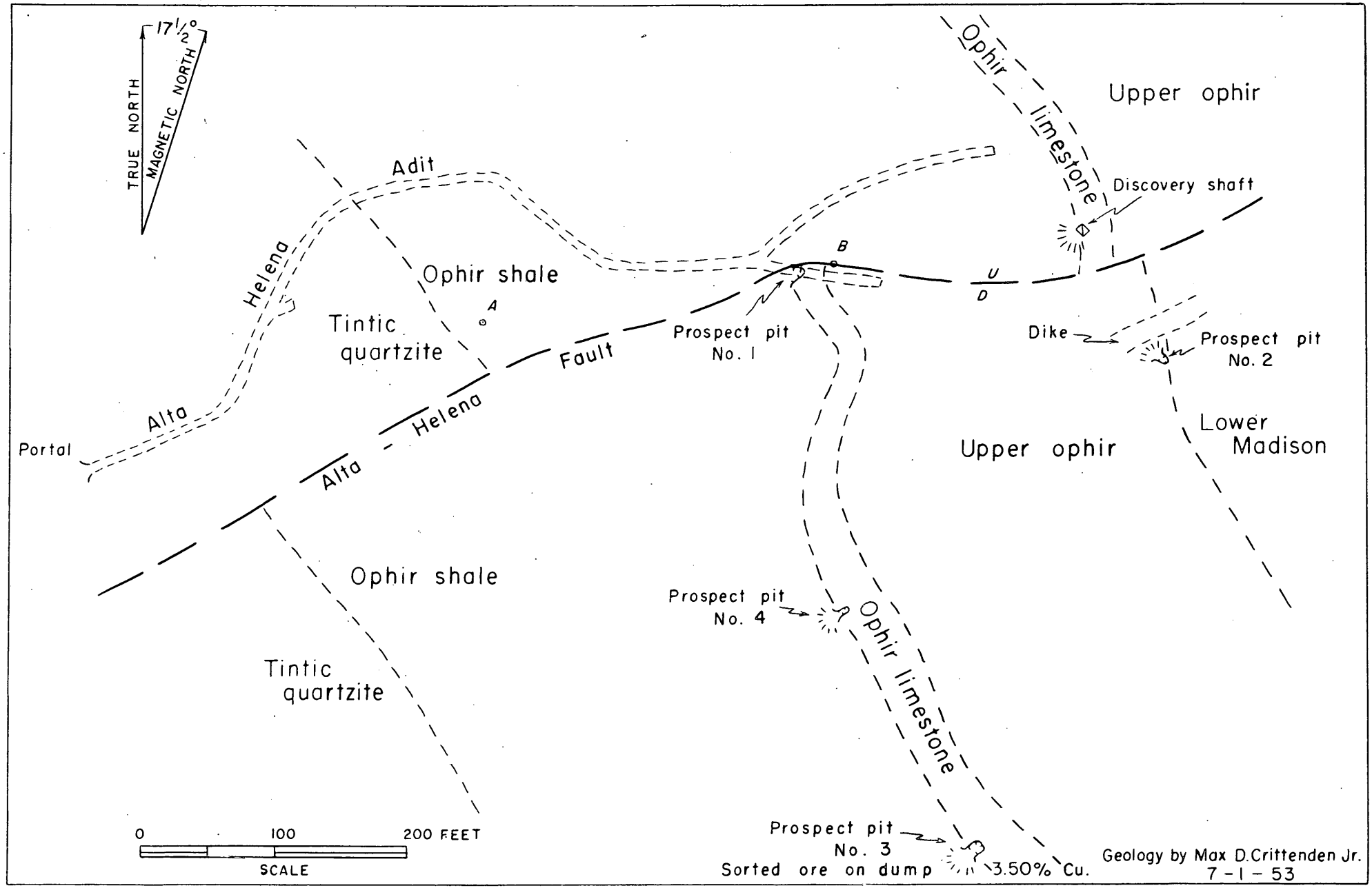

FIG. 2 GEOLOGIC SKETCH MAP OF THE ALTA-HELENA AREA, SALT LAKE COUNTY, UTAH

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Coupens, Francis A
DMEA 3026

Maps

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