It would be interesting to know what the enclosures were.

WSM
1/19/53

1/23/53
Mr. Adams office says our 400 copy of the 1/16 letter is the only "enclosure" received.

LS

Note Mr. Chapman's 8/25 memo had been filed by R.+R. despite

its being clearly marked
~~Code~~ "400" at top.
LS

400

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 16 1953

2606

January 16, 1953

Memorandum

To: Chairman of the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: DMEA Docket 2606, (Tungsten) Reo Sanders, Theris Nielson, Ell A. Fowles, Eleven O'Clock Claims, Millard County, Utah

Reference is made to your letter dated December 5, 1952 regarding our denial of Docket No. 2606.

We have reviewed the final report. In our opinion, the property lacks merit and we still recommend that the application be denied.

W. H. King
W. H. King

A. N. Koschmann
A. N. Koschmann

Enclosure

Mr. Selfridge
400

400

DEC 5 1952

Mr. W. H. King, Executive Officer
Field Team, DMEA Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. 2608 - Tungsten
Rae Sanders, Theris Nielsen,
and Ell A. Fowles
Eleven O'Clock Claims
Millard County, Utah

Dear Mr. King:

Please refer to the field examination report upon which the application for exploration aid for the above-noted property was recently denied.

The summary states that the vein is exposed for about 150 feet on the surface and averages about 2.0 feet in width. The ore averages 0.50 percent WO_3 and 0.55 percent Cu. It is composed of scheelite and chalcopyrite in a gangue of calcite. Inferred reserves are approximately 1,000 tons in the block below and southeast of the Black Bird adit. The possibility of finding additional reserves down the dip of this vein are good.

The loan was denied because the tungsten ore was considered to be of marginal quality and the expense of concentration of scheelite in iron sulphides costly.

While the impression of the property's potentiality might have warranted the decision reached, the report raises some doubt. The gross content of the mineralization is approximately $34.15 across 2.0 feet. The type of ore can be treated as evidenced by the Nevada Massachusetts operation. The vein within a vertical distance of 20 feet changes from an oxide zone that contains little or no scheelite to a sulphide zone that contains a moderate amount of scheelite. An 18-inch chip sample taken at the bottom of the winze assayed 0.41 percent WO_3 and 0.83 percent Cu.

In this particular case it is believed that metallurgy should not be considered at this time in reaching a decision for exploration aid. The vein cuts the bedding approximately stratigraphically. Thus more favorable ground might be encountered with shallow depth. Widening of the vein to three feet, a minable width, would change the economic picture appreciably.

Therefore, it is our opinion that some work should be done on the property. Further sinking of the winze on the vein at least an additional 50 feet with or without some drifting appears to be warranted. May we have your comment?

Sincerely yours,

George C. Selfridge
ACTING Chairman, Operating Committee

Approved:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinsel
Member, Geological Survey

COPY TO; Docket
Admn. Read. File
Field Team, Reg. 4
Oper. Committee
G. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM

GCSelfridge:ls 12/1/52

STANDARD FORM NO. 64

400

400

Office Memorandum • UNITED STATES GOVERNMENT

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

DATE: August 25, 1952

FROM : T. L. Chapman

SUBJECT: Docket No. DMEA 2606 - Tungsten
Eleven O'Clock Claims
Millard County, Utah
Application for exploration assistance in the amount of $12,000.00

An examination of the property was made by John F. Powers and Byron J. Sharp of the U. S. Geological Survey on July 22-23, 1952.

Work consists of one 30-foot drift, a winze and three prospect pits.

Tungsten occurs in veins and veinlets from 6 inches to 3 feet in width.

The two open cuts, 30-foot adit and winze are all on a sulphide vein.

Sample 18" wide, bottom of winze	0.41% WO_3, 0.83% Cu
Sample in upper open cut	0.85% WO_3, 0.28% Cu
Sample southeast of above adit	0.40% WO_3

Estimated ore reserves in block 150 feet long, 24 feet deep and 2 feet wide. One thousand (1000) tons showing 0.41% WO_3.

Geologists recommend that logical exploration would best be by a shaft on or along sulphide vein 50 feet deep and some drifting.

Summary and Conclusions by Geologists

The sulphide vein is exposed on surface over a length of 150 feet and averages 2 feet in width, and averages 0.50% WO_3 and 0.55% Cu. Ore is composed of scheelite and chalcopyrite in calcite.

The possibility of finding additional reserves is good.

The property is unfavorable because the ore is of marginal quality. The prospect, therefore, lacks merit, and it is recommended that the loan be denied.

Note: It appears from the report that the property warrants exploration. T.L.C.

T. L. Chapman

T. L. Chapman

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 19 1953

224 New Customhouse
Denver 2, Colorado

January 16, 1953

Memorandum

To: Chairman of the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: DMEA Docket 2606, (Tungsten) Reo Sanders, Theris Nielson, Ell A. Fowles, Eleven O'Clock Claims, Millard County, Utah

Reference is made to your letter dated December 5, 1952 regarding our denial of Docket No. 2606.

We have reviewed the final report. In our opinion, the property lacks merit and we still recommend that the application be denied.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

400

FILE COPY
SURNAME:

Selfridge
Gerhard
Fejsman

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

DEC 5 1952

Mr. W. H. King, Executive Officer
Field Team, DMEA Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. 2606 - Tungsten
Ree Sanders, Theris Nielson,
and Ell A. Fowles
Eleven O'Clock Claims
Millard County, Utah

Dear Mr. King:

Please refer to the field examination report upon which the application for exploration aid for the above-noted property was recently denied.

The summary states that the vein is exposed for about 150 feet on the surface and averages about 2.0 feet in width. The ore averages 0.50 percent WO_3 and 0.55 percent Cu. It is composed of scheelite and chalcopyrite in a gangue of calcite. Inferred reserves are approximately 1,000 tons in the block below and southeast of the Black Bird adit. The possibility of finding additional reserves down the dip of this vein are good.

The loan was denied because the tungsten ore was considered to be of marginal quality and the expense of concentration of scheelite in iron sulphides costly.

While the impression of the property's potentiality might have warranted the decision reached, the report raises some doubt. The gross content of the mineralization is approximately $34.15 across 2.0 feet. The type of ore can be treated as evidenced by the Nevada Massachusetts operation. The vein within a vertical distance of 20 feet changes from an oxide zone that contains little or no scheelite to a sulphide zone that contains a moderate amount of scheelite. An 18-inch chip sample taken at the bottom of the winze assayed 0.41 percent WO_3 and 0.83 percent Cu.

In this particular case it is believed that metallurgy should not be considered at this time in reaching a decision for exploration aid. The vein cuts the bedding approximately stratigraphically. Thus more favorable ground might be encountered with shallow depth. Widening of the vein to three feet, a minable width, would change the economic picture appreciably.

Therefore, it is our opinion that some work should be done on the property. Further sinking of the winze on the vein at least an additional 50 feet with or without some drifting appears to be warranted. May we have your comment?

Sincerely yours,

George C. Selfridge (JHB)
ACTING Chairman, Operating Committee

JH. 12-5-52

Approved:

Jo. H. Hedges (JHB)
Member, Bureau of Mines

A. R. Kinkel, Jr. (JHB)
Member, Geological Survey

COPY TO; Docket
Admn. Read. File
Field Team, Reg. 4
Oper. Committee
G. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM

GCSelfridge:ls 12/1/52

FILE COPY
SURNAME:

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

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

August 25, 1952

Chapman
Selfridge

T. L. Chapman

Docket No. DMEA 2606 - Tungsten
Eleven O'Clock Claims
Millard County, Utah
Application for exploration assistance in the amount of $12,000.00

An examination of the property was made by John F. Powers and Byron J. Sharp of the U. S. Geological Survey on July 22-23, 1952.

Work consists of one 30-foot drift, a winze and three prospect pits.

Tungsten occurs inveins and veinlets from 6 inches to 3 feet in width.

The two open cuts, 30-foot adit and winze are all on a sulphide vein.

Sample 18" wide, bottom of winze	0.41% WO_3, 0.83% Cu
Sample in upper open cut	0.85% WO_3, 0.28% Cu
Sample southeast of above adit	0.40% WO_3

Estimated ore reserves in block 150 feet long, 24 feet deep and 2 feet wide. One thousand (1000) tons showing 0.41% WO_3.

Geologists recommend that logical exploration would best be by a shaft on or along sulphide vein 50 feet deep and some drifting.

<u>Summary and Conclusions by Geologists</u>

The sulphide vein is exposed on surface over a length of 150 feet and averages 2 feet in width, and averages 0.50% WO_3 and 0.55% Cu. Ore is composed of scheelite and chalcopyrite in calcite.

The possibility of finding additional reserves is good.

The property is unfavorable because the ore is of marginal quality. The prospect, therefore, lacks merit, and it is recommended that the loan be denied.

<u>Note</u>: It appears from the report that the property warrants exploration. T.L.C.

cc: Admn. Reading File
Docket
G. C. Selfridge
T. L. Chapman

T. L. Chapman
TLChapman'lm - 8/25/52

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

221 New Customhouse
Denver 2, Colorado

August 11, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 2006 (Tungsten), Geo Sanders, Theris Wilson, Fil A. Fowler, Eleven O'Clock Claims, Millard County, Utah

Enclosed are the original and three copies of the final report on DMA 2006, the original and one copy of Form 3b, and a copy of the letter of denial to the applicants.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

SFWilson w/copy of final report
RFRoberts w/copy of final report
Mining Div. w/copy of final report
DMA Final Report
AHKoschmann w/copy of final report

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

224 New Customhouse
Denver 2, Colorado

August 11, 1952

(Same letter sent to each of the following)

Mr. Reo Sanders, 379 East Center, Richfield, Utah
Mr. Theris Nielson, 205 East 1st North St., Richfield, Utah
Mr. Ell A. Fowles, R. F. D., Delta, Utah

Reference is made to your application for Government aid on the Eleven O'Clock 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 by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise you that your application for exploration aid is denied.

Very truly yours,

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

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

HMC:jp
cc Actg Administrator DMEA
SRWilson
Subject
Chron
AHKoschmann (2)

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

200 New Customhouse
Denver 2, Colorado

August 8, 1952

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2606, Reo Sanders, Theris Nielson, Eli A. Fowles, Eleven O'Clock Claims, Millard County, Utah. (Tungsten)

Enclosed are 8 copies of the geologic report covering the above docket. It has been recommended that the loan be denied.

The brochure is enclosed.

The U. S. Bureau of Mines will not submit a report.

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

Enclosures (9)

Room 208, 222 So. West Temple
Salt Lake City 1, Utah
6 August 1952

Memorandum

To: A. M. Koschmann

From: J. William Mealer

Subject: Docket DMEA-2606 (Tungsten), Rae Sanders, Theris Nielson, Eli A. Fowles, Eleven O'Clock Claims, Millard County, Utah.

Enclosed are eight copies of a geologic report on the Eleven O'Clock group of claims, Millard County, Utah, DMEA Docket 2606.

The owners have applied to the Defense Minerals Exploration Administration for a loan to explore for tungsten. Scheelite occurs in small veinlets and veins of iron sulfide and calcite in upper Cambrian limestone. The ore averages 0.50 percent WO_3 and 0.55 percent copper. There has been no production from the property.

The property is unfavorable because the tungsten ore is of marginal quality, and the expense of concentration of scheelite in iron sulfides is costly. The property therefore lacks merit, and it is recommended that the loan be denied.

I concur with the conclusions and recommendations of the examining geologists that the application for a loan to explore for tungsten on the Eleven O'Clock Claims, Millard County, Utah be denied.

The brochure is enclosed. There will be no participation by the U. S. Bureau of Mines on this property.

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History and production	1
Geology	2
Ore Deposits	2
Ore Reserves	3
Proposed exploration	3
Summary and Conclusions	4

ILLUSTRATIONS

Figure 1. Index Map of Western Utah

Figure 2. Geologic Sketch Map of Eleven O'Clock Claims, Millard County, Utah.

DMEA-2606 (Tungsten), Eleven O'Clock Claims

Millard County, Utah

INTRODUCTION

Messrs. Roe Sanders, Theris Nelson, and Ell A. Fowles owners of the Eleven O'Clock Claims, Millard County, Utah, have applied to the Defense Minerals Exploration Administration for a loan of $12,000 to be used for the exploration of tungsten at their property.

A field examination was requested by the Field Team Region IV, July 10, 1952 to determine whether a significant amount of tungsten ore reserves is present to justify government assistance. The examination was made on July 22-23, 1952 by John F. Powers and Byron J. Sharp, Geologists of the U. S. Geological Survey.

Location and accessibility

The Eleven O'Clock Claims are located west of Delta, Millard County, Utah in the central part of the House Range (Fig. 1). The mine can be reached via U. S. Highway 6, by traveling 48 miles west of Delta, Utah thence 1½ miles south from Marjum Pass into Bird Canyon to the Eleven O'Clock Claims. The road from U. S. Highway 6 to the Eleven O'Clock Claims is an unimproved dirt road passable only during dry weather.

History and production

The presence of scheelite in the vicinity of the Eleven O'Clock Claims has been known for a number of years, but there has been no production of scheelite from the property. The property consists of five unpatented claims. The workings consist of one 30 foot drift, a winze and three prospect pits.

GEOLOGY

The sedimentary rocks in the area are of upper Cambrian age probably the Marjum limestone which is overlain by the Orr and Weeks formations, also of upper Cambrian age. Two miles south of the claims, the Orr and Weeks formations have been intruded by the Notch Peak intrusive. The limestone is very gently folded and is cut by a set of parallel veins and veinlets that strike NW and dip steeply NE (Fig. 2). The ore is disseminated in these veins.

The Marjum limestone in the mine area consists of alternating light cream and buff colored recrystallized limestone, that is fine-grained and thin-bedded. The upper units of the formation contain some dark gray shale and thin dark limestone. Locally the limestone has been bleached and metamorphosed to tactite. The Marjum limestone has a total thickness of more than 1,500 feet, half of it being exposed in the Eleven O'Clock Claims. The strike of the limestone is N. 80° E. and dips from 5° to 15° SE. No intrusive rock is exposed in the immediate vicinity of the claims.

The rocks are displaced by small faults that are parallel to the veins and have but a few feet of displacement.

ORE DEPOSITS

At the Eleven O'Clock claims, tungsten occurs in veins and veinlets that range in size from 6 inches to 3 feet in width and are from 10 to 150 feet long. The ore veins so far discovered average about 0.55 percent WO_3.

The tungsten mineral is fine-grained scheelite disseminated throughout iron sulphide and calcite veins. The wall rock is relatively free of any ore minerals.

A scheelite-bearing sulphide vein that strikes N. 80° W. and dips steeply northward has been explored in the Black Bird adit for a distance of about 30 feet along its strike (Fig. 2). This vein within a vertical distance of

20 feet changes from an oxide zone that contains little or no scheelite to a sulphide zone that contains a moderate amount of scheelite. Associated with the scheelite are pyrite and chalcopyrite in a gangue of calcite. An 18-inch chip sample taken at the bottom of the winze (fig. 2) assayed 0.41 percent WO_3, 0.83 percent copper, 0.1 oz. silver and 0.005 oz. gold. On the surface this vein is mostly white calcite with some scheelite and ferruginous calcite intermittently distributed in the center of the vein.

In the two open cuts southeast of the Black Bird adit (fig. 2) scheelite and iron sulphides are exposed in small veinlets along the bedding as well as in joints in the limestone. A sample taken in the uppermost of these open cuts assayed 0.85 percent WO_3, 0.28 percent copper, 0.1 oz. silver and 0.005 oz. gold.

Southeast of the Black Bird adit an open cut has exposed a ferruginous calcite vein about 1 foot wide and 50 feet long that assays 0.40 percent WO_3.

ORE RESERVES

The scheelite-bearing sulphide vein in the Black Bird adit is inferred to have 1,000 tons averaging 0.41 percent WO_3. The ore is inferred by taking a block 150 feet by 24 feet and with an average thickness of two feet. It is reasonable to infer that a block of the same dimensions with presumably the same grade may be found lower in depth.

No ore reserves can be calculated in the open cuts because the ore is either in too small quantities or too low grade to mine.

PROPOSED EXPLORATION

The applicant has proposed no exploration program. However, the vein in the Black Bird adit could best be explored by sinking the winze and drifting into the vein at a depth of 50 feet.

SUMMARY AND CONCLUSIONS

The owners of the Eleven O'Clock Claims have applied for a Defense Minerals Exploration Administration loan of $12,000 to explore for tungsten ore at their property. The claims are located in the House Range, Millard County, Utah.

Scheelite occurs in veins and veinlets of iron sulphides and calcite in upper Cambrian limestone. The scheelite-bearing sulphide vein strikes almost east-west and dips northeast. It is exposed on the surface for about 150 feet along strike and averages about 2 feet in width. The ore averages 0.50 percent WO_3 and 0.55 percent copper. The ore is composed of scheelite and chalcopyrite in a gangue of calcite.

Inferred ore reserves are approximately 1,000 tons in the block below and southeast of the Black Bird adit. The possibility of finding additional reserves down the dip of this vein are good.

The property is unfavorable because the tungsten ore is of marginal quality, and the expense of concentration of scheelite in iron sulphides is costly. The prospect therefore lacks merit, and is recommended that the loan be denied.

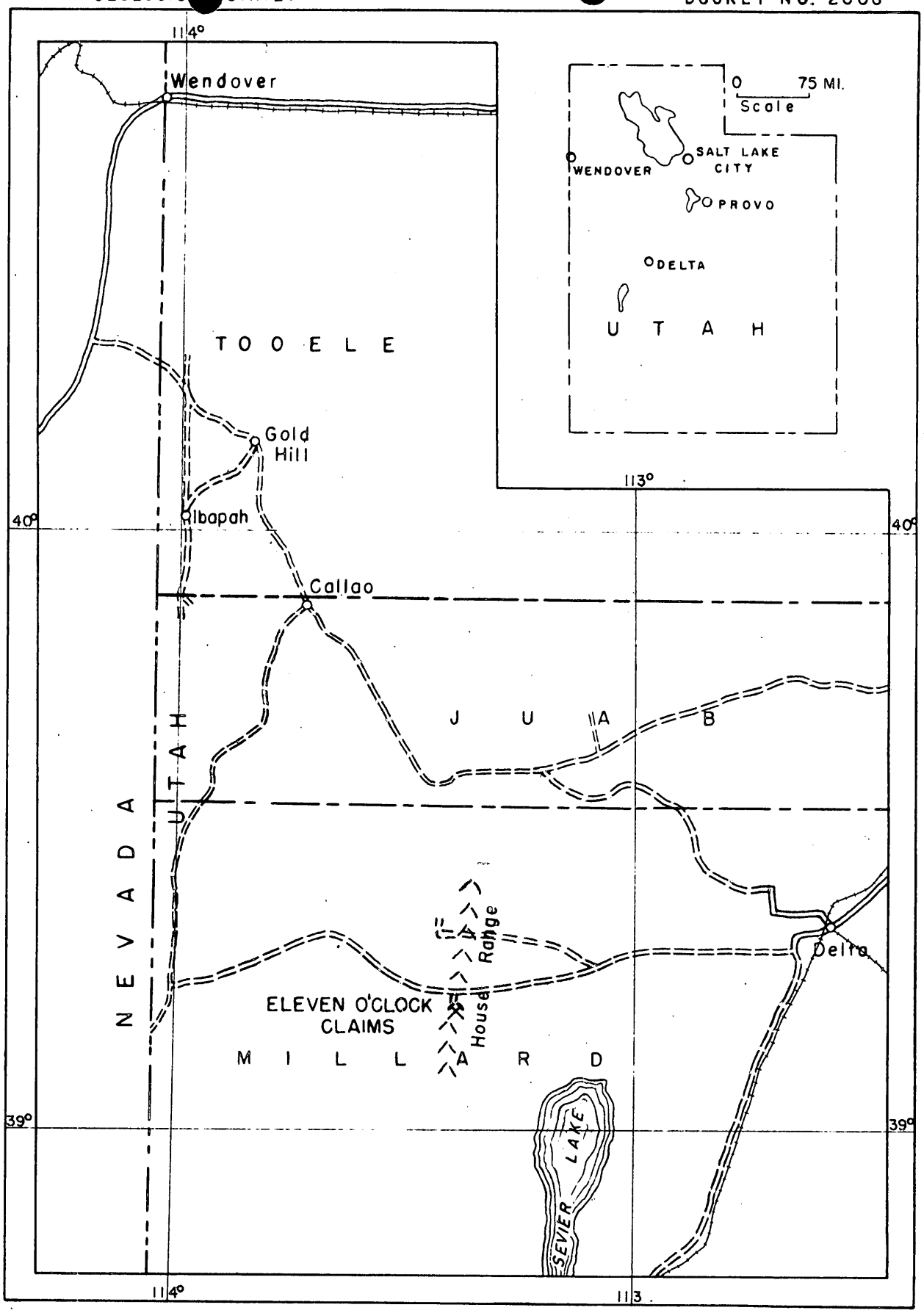
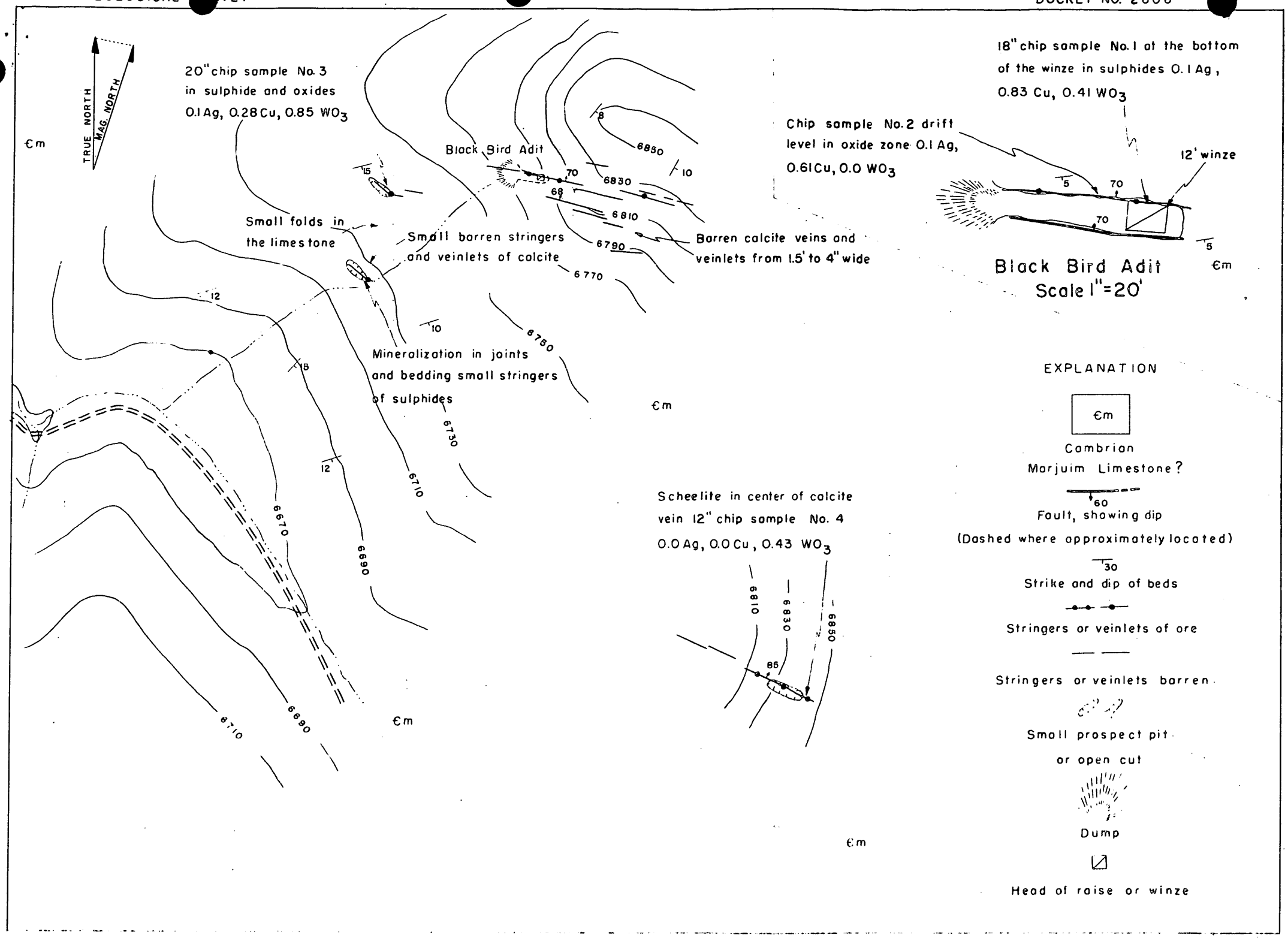


FIG. 1 INDEX MAP OF WESTERN UTAH

0 5 10 15 20 MILES
Scale



GEOLOGY BY JOHN F POWERS & BYRON J. SHARP
JULY 22, 1952

FIG. 2 GEOLOGIC SKETCH MAP OF ELEVEN O'CLOCK CLAIMS

MILLARD COUNTY, UTAH

0 100 200 FEET
Scale
Contour interval 20 feet

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

224 New Customhouse
Denver 2, Colorado

August 11, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 2606 (Tungsten), Geo Sanders, Therin Nielson, Bill A. Fowler, Eleven O'Clock Claims, Millard County, Utah

Enclosed are the original and three copies of the final report on DMA 2606, the original and one copy of Form 3b, and a copy of the letter of denial to the applicants.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

SRWilson w/copy of final report
RRoberts w/copy of final report
Mining Div. w/copy of final report
DMA Final Report
AHKoschmann w/copy of final report

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

[illegible] Customhouse
Denver 2, Colorado

August 8, 1952

Memorandum

To: DMEA Field Bureau, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2006, Rob Sanders, Theris Wilson, Ella A. Fowles, [illegible] O'Clock Claims, Millard County, Utah. (Tungsten)

Enclosed are 8 copies of the geologic report covering the above docket. It has been recommended that the loan be denied.

The brochure is enclosed.

The U. S. Bureau of Mines will not submit a report.

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE

11-15-52.
(date)

Room 208, 222 So. West Temple
Salt Lake City 1, Utah
6 August 1952

Memorandum

To: A. H. Koschmann

From: J. William Hasler

Subject: Docket DMEA-2606 (Tungsten), Roe Sanders, Theris Nielson, Nil A. Fowles, Eleven O'Clock Claims, Millard County, Utah.

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The owners have applied to the Defense Minerals Exploration Administration for a loan to explore for tungsten. Scheelite occurs in small veinlets and veins of iron sulfide and calcite in upper Cambrian limestone. The ore averages 0.50 percent WO_3 and 0.55 percent copper. There has been no production from the property.

The property is unfavorable because the tungsten ore is of marginal quality, and the expense of concentration of scheelite in iron sulfides is costly. The property therefore lacks merit, and it is recommended that the loan be denied.

I concur with the conclusions and recommendations of the examining geologists that the application for a loan to explore for tungsten on the Eleven O'Clock Claims, Millard County, Utah be denied.

The brochure is enclosed. There will be no participation by the U. S. Bureau of Mines on this property.

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DMEA-2606 (Tungsten), Eleven O'Clock Claims

Millard County, Utah

INTRODUCTION

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The Marjum limestone in the mine area consists of alternating light cream and buff colored recrystallized limestone, that is fine-grained and thin-bedded. The upper units of the formation contain some dark gray shale and thin dark limestone. Locally the limestone has been bleached and metamorphosed to tactite. The Marjum limestone has a total thickness of more than 1,500 feet, half of it being exposed in the Eleven O'Clock Claims. The strike of the limestone is N. 80° E. and dips from 5° to 15° SE. No intrusive rock is exposed in the immediate vicinity of the claims.

The rocks are displaced by small faults that are parallel to the veins and have but a few feet of displacement.

ORE DEPOSITS

At the Eleven O'Clock claims, tungsten occurs in veins and veinlets that range in size from 6 inches to 3 feet in width and are from 10 to 150 feet long. The ore veins so far discovered average about 0.55 percent WO_3.

The tungsten mineral is fine-grained scheelite disseminated throughout iron sulphide and calcite veins. The wall rock is relatively free of any ore minerals.

A scheelite-bearing sulphide vein that strikes N. 80° W. and dips steeply northward has been explored in the Black Bird adit for a distance of about 30 feet along its strike (Fig. 2). This vein within a vertical distance of

20 feet changes from an oxide zone that contains little or no scheelite to a sulphide zone that contains a moderate amount of scheelite. Associated with the scheelite are pyrite and chalcopyrite in a gangue of calcite. An 18-inch chip sample taken at the bottom of the winze (fig. 2) assayed 0.41 percent WO_3, 0.83 percent copper, 0.1 oz. silver and 0.005 oz. gold. On the surface this vein is mostly white calcite with some scheelite and ferruginous calcite intermittently distributed in the center of the vein.

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ORE RESERVES

The scheelite-bearing sulphide vein in the Black Bird adit is inferred to have 1,000 tons averaging 0.41 percent WO_3. The ore is inferred by taking a block 150 feet by 24 feet and with an average thickness of two feet. It is reasonable to infer that a block of the same dimensions with presumably the same grade may be found lower in depth.

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PROPOSED EXPLORATION

The applicant has proposed no exploration program. However, the vein in the Black Bird adit could best be explored by sinking the winze and drifting into the vein at a depth of 50 feet.

SUMMARY AND CONCLUSIONS

The owners of the Eleven O'Clock Claims have applied for a Defense Minerals Exploration Administration loan of $12,000 to explore for tungsten ore at their property. The claims are located in the House Range, Millard County, Utah.

Scheelite occurs in veins and veinlets of iron sulphides and calcite in upper Cambrian limestone. The scheelite-bearing sulphide vein strikes almost east-west and dips northeast. It is exposed on the surface for about 150 feet along strike and averages about 2 feet in width. The ore averages 0.50 percent WO_3 and 0.55 percent copper. The ore is composed of scheelite and chalcopyrite in a gangue of calcite.

Inferred ore reserves are approximately 1,000 tons in the block below and southeast of the Black Bird adit. The possibility of finding additional reserves down the dip of this vein are good.

The property is unfavorable because the tungsten ore is of marginal quality, and the expense of concentration of scheelite in iron sulphides is costly. The prospect therefore lacks merit, and is recommended that the loan be denied.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2606

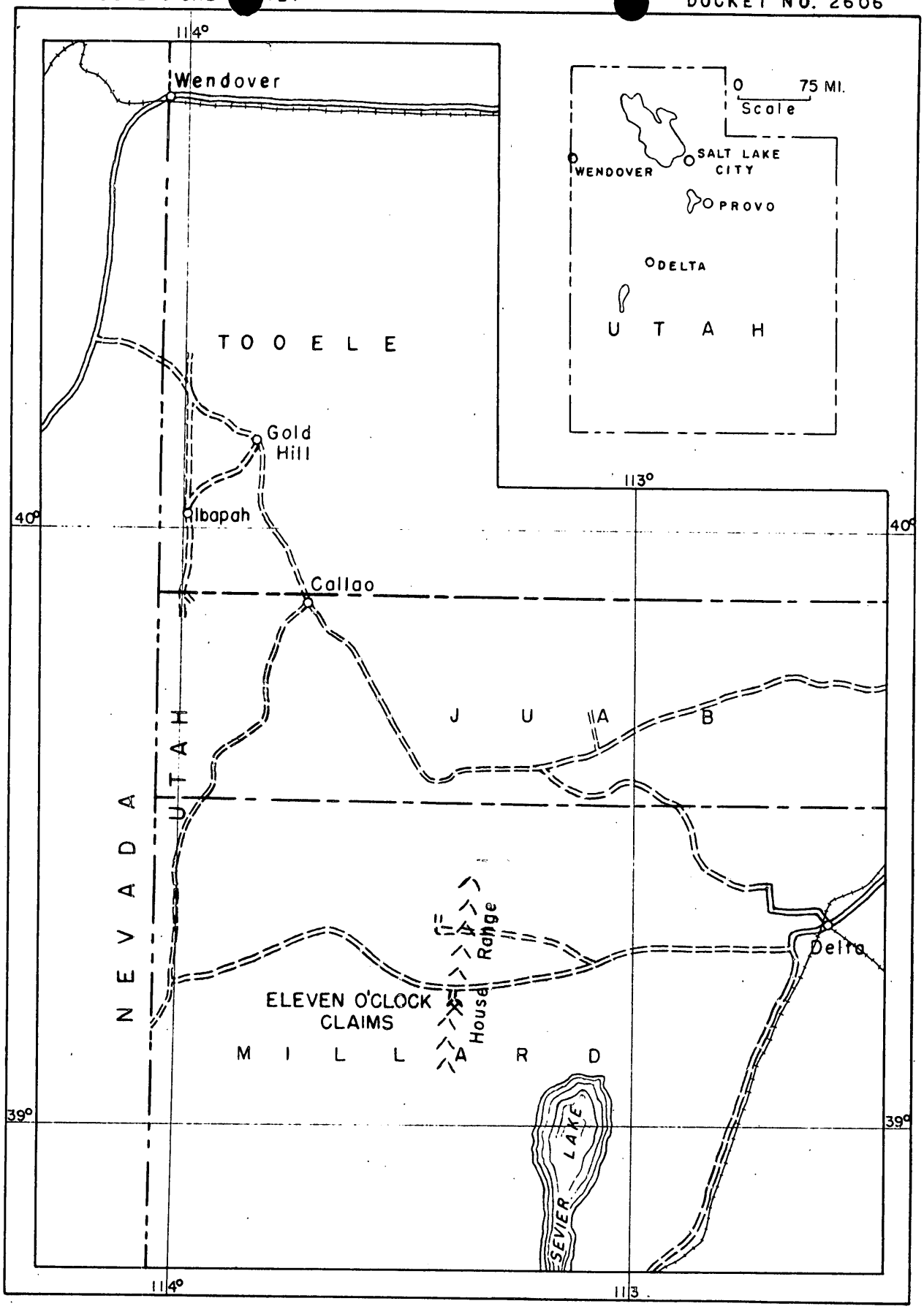


FIG. I INDEX MAP OF WESTERN UTAH

0 5 10 15 20 MILES
Scale

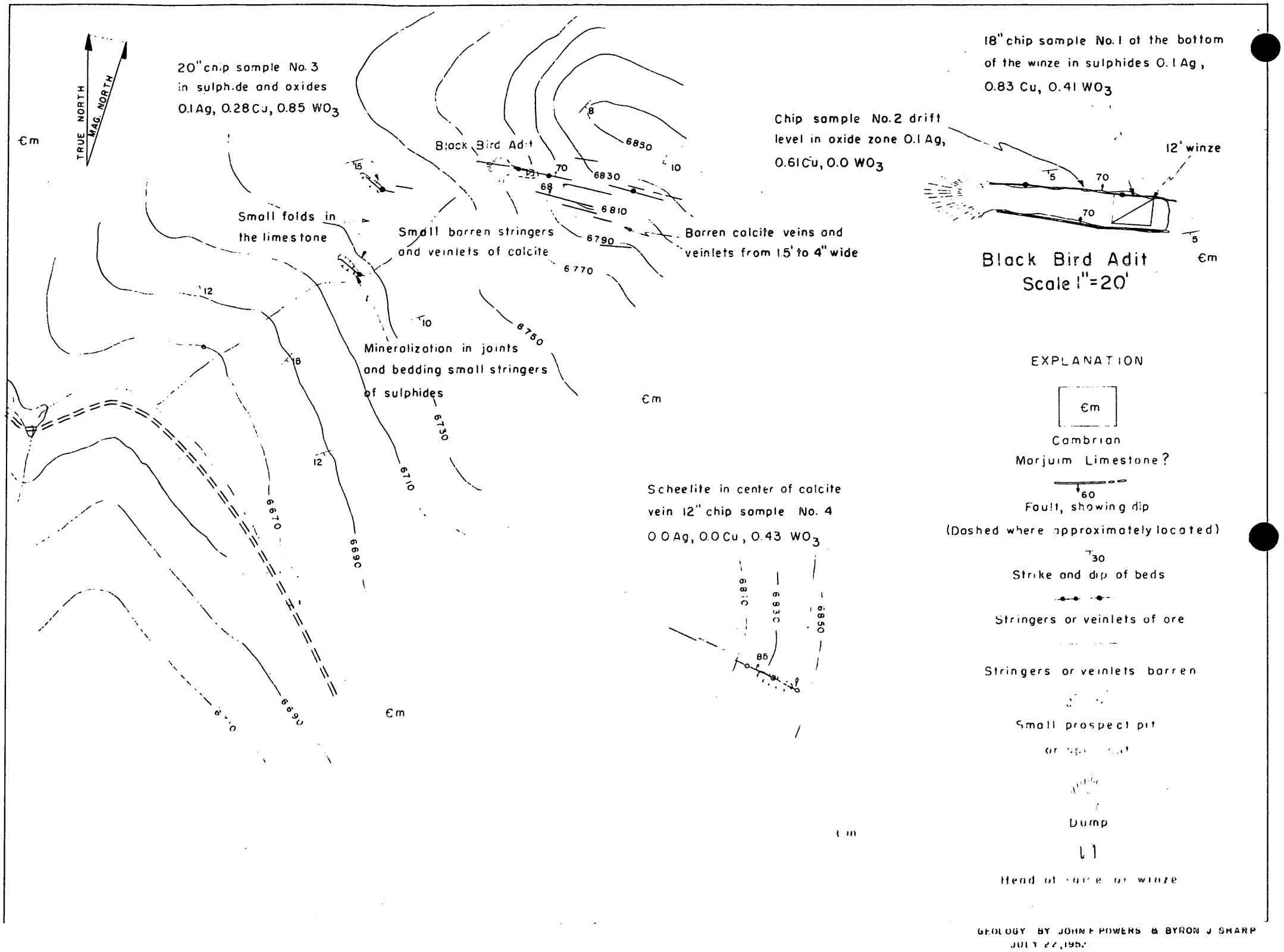


FIG. 2 GEOLOGIC SKETCH MAP OF ELEVEN O'CLOCK CLAIMS

MILLARD COUNTY, UTAH

0 100 200 FEET
Scale
Contour interval 20 feet

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

224 New Customhouse
Denver 2, Colorado

July 3, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: Code 210

From: Executive Officer, Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate are DMA Forms 3a and MF-103 in triplicate and supporting data pertaining to the following applications for Government assistance in exploration work:

S. E. & W. E. Burleson
DMEA-2604-P. O. Box 209
Salida, Colorado

E. B. Killion
DMEA-2605-2705 North Kansas St.
El Paso, Texas

Reo Sanders, Theris Nielson and Ell A. Fowles
DMEA-2606-R.F.D. - Delta, Utah

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 7 - 1952

W. H. King

W. H. King

Enclosures

Returned to Regional office:
DMEA-2604 - Two copies each of MF-103, Agreement, and Assignment, and other attachments.
DMEA-2605 - Two copies MF-103.

DMEA-2606 - Two copies MF-103

sd

Mining Division
Date Received
JUL 1 - 1952
BUREAU OF MINES
Denver, Colorado

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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-2606
Metal or Mineral
Date Received 7-7-52
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: Rex Sanders 379 East center, Richfield, Utah
Theris Nielson, 205 East 1st North, Richfield, Utah
Ell A. Fowler R.F.D Delta Utah.
Partnership

(*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 Bird Canyon at Marquam Pass on highway 6. 5 6 miles west of Delta, Utah
Recorded Location 7-30. Book 12. pg. 606, 74031 B. 12, P 596
74324, B12, P609, 74307 B12, P606, 74308 B12 P 607, 74309 B12 P607

(*b*) State any mine name by which the property is known. Eleven O'clock

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

(*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. none

(*e*) If you own the land, describe any liens or encumbrances on it none

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Cont. 74312, Book 12 P 608, 74311 B. 12 Page 608

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.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 7 - 1952

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

(*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 10 days and be completed within ..... 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.

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.). none

(*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 [ ] Use of equipment owned by you [X] Other work

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 ....., 195...

(Applicant)

By C. A. Fowler

Leo Sanders

Thera Nielson

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 (A) We are following a vein of sheelite along out crops, by hand drilling and blasting.

(B)

Five opening with veins from 1 to 5 feet assay's 1.65

(C)

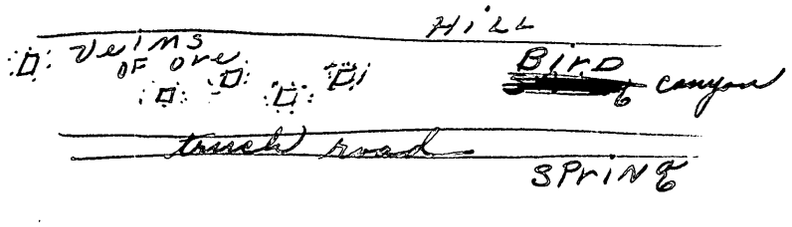
The mineral is sheelite, gangue limestone The Igneus, intrusive, is no where in sight. The sheelite is, embedded in the lime. and follows the fractures, There is also a small amount of iron sulfides.

(note) - A Prelimnary Geologic survey will be in progress by July 1st 1952. - Also will send survey desription as soon as work completed.

(D) There is a truck road within 200yd of the diggings one mile from Highway no. 6 a. gravel road, from Delta to Nevada, shipping point. Pioche Nevada are Bishop California,

(E) Six men working. Hand tools for drilling. supplies. a small spring for culinary water

5 (B)



(D) E. A Fowles exp pierenced miner, Powder + blasting.
Reo Sanders mechanic
Iheris Nielson welder.

over 1

(6) SALARY FOR MINERS, INSURANCE & LIABILITY'S

RENTAL (COMPRESSOR, DRILLS, CATAPILLAR, TRUCK) MISC. POWDER CAPS, FUSE, GAS,

(7) LABOR + MONEY.

We estimated about $12,000.00 would be suffecient to explore + develope these claims