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

224 New Customhouse
Denver 2, Colorado

August 31, 1954

Mr. W. A. Jarvis, President
Industrial Metals and Chemical Corporation
Riverton, Wyoming

Re: Docket No. DMEA-3345

Dear Mr. Jarvis:

Reference is made to your application for Government aid on the Whippet 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 beryl and tantalum 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
DMEA Field Team, Region IV

E. N. Hauschmann
per A. H. Koschmann
DMEA Field Team, Region IV

HMC:mb

cc: Docket
Chairman, Operating Committee, DMEA
SRWilson
AHKoschmann
Chron.

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

224 New Customhouse
Denver 2, Colorado

August 31, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Report of Examination - Docket No. DMEA 3345 (Beryl-Tantalum) Industrial Metals and Chemical Corp., Whippet Claims, Fremont County, Wyoming.

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

W. H. King

W. H. King

E. N. Hershman
for A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

AUG 31 1954

Memorandum

To: DMEA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, DMEA Docket 3345 (Beryl-Tantalum) Industrial Metals & Chemical Corporation, Whippet Claims, Fremont County, Wyoming.

Enclosed are nine copies of the engineering report of examination on the subject docket.

The applicant requested $12,432 to build a road and trench the pegmatite dike with a bulldozer. The examining engineer concludes that sufficient work has been done in crosscutting the pegmatites to appraise their significance, and he recommends that the application be denied.

We concur in this recommendation.

W. H. King

W. H. King

Enclosures

August 23, 1954

Memorandum

To: W. E. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3345 (Beryl-Tantalum), Industrial Metals and Chemical Corp., Fremont County, Wyoming.

Enclosed are the original and eight copies of an engineering report covering examination of property controlled by the subject company. The examination was made for DMEA loan appraisal by W. E. Young, with D. R. MacLaren of the Survey. Also included with the report are copies of a separate section, Summary, Conclusions and Recommendations, and three copies each of forms 6-803 and 6-993.

The examining team concludes that the loan request should be denied inasmuch as beryl is present only in amounts insufficient for economic hand cobbing and the quantity of expected tantalum is too small to be considered feasible to mine. It appears unlikely that the proposed work will result in exposure of mineralization of different character than that at the surface.

I concur with the conclusions of the examiners.

Stephen R. Wilson

Stephen R. Wilson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

July 15, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3345, Industrial Metals and Chemical Corporation, Fremont County, Wyoming

Enclosed are 9 copies of the geologic report by D. R. MacLaren of the U. S. Geological Survey covering the above docket.

The applicant corporation proposes to explore for beryl and tantalum in a quartz-potash feldspar-albite-muscovite pegmatite emplaced in pre-Cambrian metamorphic rocks. The pegmatite body is exposed for a length of 300 feet and a maximum width of 60 feet.

Beryl is exposed in a zone no more than 4 feet thick; columbite has been found associated with the beryl.

MacLaren concludes that exploration will not lead to the discovery of significant amounts of either beryl or columbite and recommends that the application for exploration assistance be denied.

I concur with this recommendation.

E. W. Hirschman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By D. R. MacLaren and W. E. Young

The Whippet beryl-tantalum claims in Fremont County, Wyoming, under lease to Industrial Metals and Chemical Corp., were examined by DMEA personnel during June 1954. The lessee has requested a loan of $12,482 to conduct surface exploration in one of the larger pegmatite dikes on the property. The examination was made to appraise the proposals in the application.

Rocks in the area of the Whippet claims consist of a complex sequence of pre-Cambrian basic schists, amphibolites, gneisses and igneous dikes intruded by granite and pegmatite dikes. The pegmatites contain potash, feldspar, quartz, albite, muscovite, columbite and beryl.

Pegmatite dike No. 81 on the Whippet No. 1 and No. 2 claims is exposed for a strike length of 300 feet and averages approximately 8 feet in thickness.

It is concluded dike No. 81 contains a minor amount of beryl, and that many of the beryl crystals are too small and scattered to permit economic hand cobbing. Columbite occurs in pockets too small to be considered feasible to mine, and the muscovite and feldspar are not of proper quality to warrant recovery and sale. It appears unlikely that the work proposed by the applicant will result in exposure of mineralization of different character than that at the surface. It is therefore recommended that the loan request be denied.

INDUSTRIAL METALS AND CHEMICAL CORPORATION

FREMONT COUNTY, WYOMING

DMEA DOCKET 3345

Geologic Report

By D. R. MacLaren
U. S. Geological Survey

INDUSTRIAL METALS AND CHEMICAL CORPORATION
FREMONT COUNTY, WYOMING

INTRODUCTION

The Industrial Metals and Chemical Corporation of Riverton, Wyoming, has applied to the Defense Minerals Exploration Administration for assistance to explore for beryl and tantalum on the Whippet No. 4 claim, sec. 28, T. 40 N., R. 93 W., Fremont County, Wyoming. The applicant proposes to do a small amount of access road work, estimated by the examiners to be about 500 feet, and to make a longitudinal open-cut 500 feet long in the beryl-bearing zone of pegmatite dike 81 (McLaughlin, 1940) at an estimated total cost of $12,482 (Government's share 75% or $9,361.50).

A field examination was made June 22, 1954, in the company of W. A. Harvis, president, and D. F. Haddenham, superintendent, of the applicant corporation, and W. E. Young of the U. S. Bureau of Mines. The Whippet claims are on the southern edge of the Owl Creek (Bridger) Mountains and may be reached from Shoshoni by following 14 miles of good graded county road to the Quien Sabe ranch and 1-1/2 miles of fair ungraded ranch road to within 500 feet of dike 81. Following heavy rainfall or snow, the road is impassable. Although the application states that work will be done on Whippet No. 4 claim, reference to the claim map (insert, figure 2) indicates that the dike to be explored is partly on Whippet No. 1 and partly on Whippet No. 2 claims, and is the dike McLaughlin (1940) shows on his map as dike 81.

It is concluded that existing pits indicate dike 81 contains pockets that will yield a few hundred pounds each of fair sized beryl crystals, but that the beryl bearing zone as a whole probably contains no more than three tons of beryl, part of which is in crystals too small for

cobbing. It is also concluded that the mica and feldspar are of inferior grade, and that columbite occurs erratically in amounts too small to be economic. It is therefore recommended that this application be denied.

GEOLOGY

The geology of the Owl Creek (Bridger) Mountain pegmatites is described in volume 25 of The American Mineralogist by Thad G. McLaughlin (1940); in U. S. Geological Survey Professional Paper 227 by John B. Hanley, E. Wm. Heinrich, and Lincoln R. Page; and in a U. S. Bureau of Mines War Minerals Memorandum by N. L. Wimmler (1943). These papers have been drawn upon freely in the preparation of this report.

The rocks of the area in which the Whippet claims are located are a complex sequence of pre-Cambrian basic schists, amphibolites, gneisses, and igneous dikes that have been intruded by granite dikes and pegmatites. The bedding and foliation of the schist are essentially parallel, striking N. 62° E. to N. 80° E. and dipping 50° to 60° southeast. Granite and pegmatite bodies, rarely more than 20 to 30 feet thick, strike parallel to the foliation but dip 25° to 65o northwest. The degree of dip changes rapidly within short distances. The texture and composition of the pegmatites are extremely variable. Snow-white to bluish potash feldspar crystals, some of them as much as several feet across, are abundant in the coarse-grained pegmatites. Quartz, mostly white and coarse-grained, rarely shows crystal faces. Albite is abundant and coarse-grained in some dikes. Small sheared books of muscovite are abundant in some, particularly in the central part of the area. Tantalite is reported by McLaughlin (1940) in three pegmatites, columbite in five, and beryl in ten.

On the Whippet No. 1 claim there are two pegmatites of significant size. One is designated by McLaughlin as dike 81 and by Hanley as the Whippet No. 1 pegmatite; the other, McLaughlin designates as dike 85, while Hanley only mentions that it is north of Whippet No. 1 pegmatite.

Dike 81 (figure 2) following a shallow, southwest plunging anticline, strikes N. 65° E. and dips 10° to 60° northwest. It is exposed for a length of about 300 feet and a maximum width of about 60 feet. It is irregular, but probably has an average thickness of not over 6 or 8 feet. The southwestern half of the dike is composed almost entirely of white quartz. To the northeast the dike is thinner, and is composed of coarse-grained potash feldspar, albite, and muscovite, with some quartz and a small amount of euhedral beryl crystals. The beryl is estimated to comprise about one part in two hundred fifty parts of pegmatite, or about .4% of the beryl bearing zone. This part of the dike is not more than 4 feet thick, and therefore the amount of beryl that may be expected is about 3 tons, possibly half of which is in crystals too small for cobbing. Although none were observed by the examining team, Hanley reports a few large sheaves of columbite crystals, and several smaller ones.

Dike 85 strikes N. 50° E. and dips 35° to 40° northwest. It is exposed for a length of about 400 feet and a maximum width of about 20 feet. The thickness is about 15 feet. The pegmatite is composed chiefly of white quartz, microcline, and albite. It also contains numerous books of muscovite of inferior grade, and a few scattered crystals of beryl and columbite. Reserves of beryl and columbite are difficult to estimate due to their spotty and erratic distribution. Probably the beryl would

not exceed a few hundred pounds and the columbite a few tens of pounds.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that dike 81 contains pockets that will yield a few hundred pounds each of fair sized beryl crystals, but that the beryl zone as a whole contains only about three tons of beryl, part of which is in crystals too small for economic hand cobbing; that columbite occurs in small pockets too erratically spaced and too small to be of economic value; and that the mica and feldspar are of inferior grade. Therefore it is recommended that this application be denied.

REFERENCES

McLaughlin, T. G. (1940) Pegmatite dikes of the Bridger Mountains, Wyoming; Am. Mineralogist, vol. 25, pp. 46-68, 1940.

Wimmler, N. L. (1943) Bridger Mountain pegmatite dikes, Fremont County, Wyoming; U. S. Bureau of Mines War Minerals Memorandum, 1943.

Hanley, John B., E. Wm. Heinrich, and Page, Lincoln R. (1950) Pegmatite investigations in Colorado, Wyoming, and Utah; U. S. Geol. Survey Prof. Paper 227, pp. 109-112, 1940.

INDUSTRIAL METALS AND CHEMICAL CORP.
THE WHIPPET CLAIMS
FREMONT COUNTY, WYOMING
DMEA-3345
Beryl and Tantalum

Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

INDUSTRIAL METALS AND CHEMICAL CORP.
THE WHIPPET CLAIMS
FREMONT COUNTY, WYOMING

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ILLUSTRATIONS

Fig. 1 Location map, Industrial Metals and Chemical Corp., Whippet Claims, Fremont County, Wyoming

SUMMARY

The Industrial Metals and Chemical Corp. of Riverton, Wyoming, has applied for a DMEA loan to explore for beryl and tantalum on property in Fremont County, Wyoming. The applicant has proposed 500 feet of access road and 500 feet of bulldozer trenching along a pegmatite dike. The estimated cost of this work is $12,482, of which the Government's participation, at 75 percent, is $9,361.50.

A field examination has disclosed that the proposed work will accomplish little to explore the deposit other than to expose mineralization similar to that on the surface. The combined content of minerals has not been sufficient to support an operation in the past. Therefore, it is recommended that this application be denied.

INTRODUCTION

The Whippet pegmatites, in Fremont County, Wyoming, were examined June 22, 1954, by a geologist of the Geological Survey and an engineer of the Bureau of Mines. The examination was made at the request of the Regional Field Team in response to an application from W. A. Jarvis and D. F. Haddenham, for Government assistance in exploration for beryl and tantalum. The applicant proposes access road work (500 feet) and an open-cut bulldozer trench in one pegmatite dike (500 feet). The estimated cost of the work is $12,482, of which the Government participation would be $9,361.50.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The property lies on the southern edge of the Owl Creek (Bridger) Mountains in Sec. 28, T. 40 N., R. 93 W., Fremont County, Wyoming (fig. 1). The area may be reached by following 14 miles of graded road from Shoshoni to the Quien Sabe Ranch and then 1-1/2 miles of fair road to the property.

HISTORY AND PRODUCTION

The claims were located in 1906 and attempts have been made to mine and market the minerals at various times in the past. The applicant has a bond and lease on the property. A small amount of beryl and a few hundred pounds of columbium-tantalum ores have been shipped.

DESCRIPTION OF THE DEPOSITS

The rocks of the area are predominantly pre-Cambrian basic schists and gneisses that have been intruded by granite dikes and pegmatites. Foliation in the schists strikes between N. 60° E. and N. 80° E. and dips 50° to 60° to the southeast. Pegmatite dikes strike parallel to the foliation, but dip in the opposite direction at various attitudes. They are irregular and of variable widths, but average about 16 feet, and are composed principally of feldspar, quartz and mica. A few small beryl crystals are present in zoned areas in the pegmatites. Most of the beryl crystals are too small to justify hand cobbing,

although occasionally large crystals are found. Columbite and tantalite crystals are reported, but were not seen. Considerable mica is present in zoned areas, but much of it is cross crystallized and highly fractured and sheared.

PROJECT PROPOSALS

The applicant proposes to explore one of the deposits by trenching with bulldozer the length of the dike. It would be necessary to drill and blast the rock to do this. Approximately 500 feet of access road will be required to reach the area of proposed exploration.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that zones are present in the pegmatites which contain crystals of beryl, but that the crystals are too small and too scattered to justify economic hand cobbing. It is unlikely the work proposed by the operator would expose mineralization of a different character than that now seen on the surface. Sufficient work has been done in crosscutting the pegmatites to appraise their significance. It is believed that combined values of minerals present in addition to the beryl will not make the operation economically feasible. Therefore, it is recommended that the application be denied.

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

COPY

224 New Customhouse
Denver 2, Colorado

August 31, 1954

Mr. W. A. Jarvis, President
Industrial Metals and Chemical Corporation
Riverton, Wyoming

Re: Docket No. DMEA-3345

Dear Mr. Jarvis:

Reference is made to your application for Government aid on the Whippet 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 beryl and tantalum 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,

/s/ W. H. King
DMEA Field Team, Region IV

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

HMC:mb
cc: Docket
Chairman, Operating Committee, DMEA
SRWilson
AHKoschmann
Chron.

Reviewed by
DMEA OPERATING COMMITTEE

_____
(date)

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

224 New Customhouse
Denver 2, Colorado

August 31, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Report of Examination - Docket No. DMEA 3345 (Beryl-Tantalum) Industrial Metals and Chemical Corp., Whippet Claims, Fremont County, Wyoming.

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

W. H. King
W. H. King

E. N. Hanchmann
for A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

AUG 31 1954

Memorandum

To: DMEA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, DMEA Docket 3345 (Beryl-Tantalum) Industrial Metals & Chemical Corporation, Whippet Claims, Fremont County, Wyoming.

Enclosed are nine copies of the engineering report of examination on the subject docket.

The applicant requested $12,432 to build a road and trench the pegmatite dike with a bulldozer. The examining engineer concludes that sufficient work has been done in crosscutting the pegmatites to appraise their significance, and he recommends that the application be denied.

We concur in this recommendation.

W H King
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

August 23, 1954

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region IV

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3345 (Beryl-Tantalum), Industrial Metals and Chemical Corp., Fremont County, Wyoming.

Enclosed are the original and eight copies of an engineering report covering examination of property controlled by the subject company. The examination was made for DMEA loan appraisal by W. E. Young, with D. R. MacLaren of the Survey. Also included with the report are copies of a separate section, Summary, Conclusions and Recommendations, and three copies each of forms 6-803 and 6-993.

The examining team concludes that the loan request should be denied inasmuch as beryl is present only in amounts insufficient for economic hand cobbing and the quantity of expected tantalum is too small to be considered feasible to mine. It appears unlikely that the proposed work will result in exposure of mineralization of different character than that at the surface.

I concur with the conclusions of the examiners.

Stephen R. Wilson

Stephen R. Wilson

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR

Defense Minerals Exploration Administration
GEOLOGICAL SURVEY
Denver Federal Center
Denver 2, Colorado

July 15, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3345, Industrial Metals and Chemical Corporation, Fremont County, Wyoming

Enclosed are 9 copies of the geologic report by D. R. MacLaren of the U. S. Geological Survey covering the above docket.

The applicant corporation proposes to explore for beryl and tantalum in a quartz-potash feldspar-albite-muscovite pegmatite emplaced in pre-Cambrian metamorphic rocks. The pegmatite body is exposed for a length of 300 feet and a maximum width of 60 feet.

Beryl is exposed in a zone no more than 4 feet thick; columbite has been found associated with the beryl.

MacLaren concludes that exploration will not lead to the discovery of significant amounts of either beryl or columbite and recommends that the application for exploration assistance be denied.

I concur with this recommendation.

E. M. Hawkins
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By D. R. MacLaren and W. E. Young

The Whippet beryl-tantalum claims in Fremont County, Wyoming, under lease to Industrial Metals and Chemical Corp., were examined by DMEA personnel during June 1954. The lessee has requested a loan of $12,482 to conduct surface exploration in one of the larger pegmatite dikes on the property. The examination was made to appraise the proposals in the application.

Rocks in the area of the Whippet claims consist of a complex sequence of pre-Cambrian basic schists, amphibolites, gneisses and igneous dikes intruded by granite and pegmatite dikes. The pegmatites contain potash, feldspar, quartz, albite, muscovite, columbite and beryl.

Pegmatite dike No. 81 on the Whippet No. 1 and No. 2 claims is exposed for a strike length of 300 feet and averages approximately 8 feet in thickness.

It is concluded dike No. 81 contains a minor amount of beryl, and that many of the beryl crystals are too small and scattered to permit economic hand cobbing. Columbite occurs in pockets too small to be considered feasible to mine, and the muscovite and feldspar are not of proper quality to warrant recovery and sale. It appears unlikely that the work proposed by the applicant will result in exposure of mineralization of different character than that at the surface. It is therefore recommended that the loan request be denied.

Reviewed by
DMEA OPERATING COMMITTEE

9-10-54
(date)

INDUSTRIAL METALS AND CHEMICAL CORPORATION

FREMONT COUNTY, WYOMING

DMEA DOCKET 3345

Geologic Report

By D. R. MacLaren
U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

INDUSTRIAL METALS AND CHEMICAL CORPORATION
FREMONT COUNTY, WYOMING

INTRODUCTION

The Industrial Metals and Chemical Corporation of Riverton, Wyoming, has applied to the Defense Minerals Exploration Administration for assistance to explore for beryl and tantalum on the Whippet No. 4 claim, sec. 28, T. 40 N., R. 93 W., Fremont County, Wyoming. The applicant proposes to do a small amount of access road work, estimated by the examiners to be about 500 feet, and to make a longitudinal open-cut 500 feet long in the beryl-bearing zone of pegmatite dike 81 (McLaughlin, 1940) at an estimated total cost of $12,482 (Government's share 75% or $9,361.50).

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It is concluded that existing pits indicate dike 81 contains pockets that will yield a few hundred pounds each of fair sized beryl crystals, but that the beryl bearing zone as a whole probably contains no more than three tons of beryl, part of which is in crystals too small for

cobbing. It is also concluded that the mica and feldspar are of inferior grade, and that columbite occurs erratically in amounts too small to be economic. It is therefore recommended that this application be denied.

GEOLOGY

The geology of the Oxi Creek (Bridger) Mountain pegmatites is described in volume 25 of The American Mineralogist by Thad G. McLaughlin (1940); in U. S. Geological Survey Professional Paper 227 by John B. Hanley, E. Wm. Heinrich, and Lincoln R. Page; and in a U. S. Bureau of Mines War Minerals Memorandum by M. L. Wismier (1943). These papers have been drawn upon freely in the preparation of this report.

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On the Whippet No. 1 claim there are two pegmatites of significant size. One is designated by McLaughlin as dike 81 and by Hanley as the Whippet No. 1 pegmatite; the other, McLaughlin designates as dike 85, while Hanley only mentions that it is north of Whippet No. 1 pegmatite.

Dike 81 (figure 2) following a shallow, southwest plunging anticline, strikes N. 65° E. and dips 10° to 60° northwest. It is exposed for a length of about 300 feet and a maximum width of about 60 feet. It is irregular, but probably has an average thickness of not over 6 or 8 feet. The southwestern half of the dike is composed almost entirely of white quartz. To the northeast the dike is thinner, and is composed of coarse-grained potash feldspar, albite, and muscovite, with some quartz and a small amount of euhedral beryl crystals. The beryl is estimated to comprise about one part in two hundred fifty parts of pegmatite, or about .4% of the beryl bearing zone. This part of the dike is not more than 4 feet thick, and therefore the amount of beryl that may be expected is about 3 tons, possibly half of which is in crystals too small for cobbing. Although none were observed by the examining team, Hanley reports a few large sheaves of columbite crystals, and several smaller ones.

Dike 85 strikes N. 50° E. and dips 35° to 40° northwest. It is exposed for a length of about 400 feet and a maximum width of about 20 feet. The thickness is about 15 feet. The pegmatite is composed chiefly of white quartz, microcline, and albite. It also contains numerous books of muscovite of inferior grade, and a few scattered crystals of beryl and columbite. Reserves of beryl and columbite are difficult to estimate due to their spotty and erratic distribution. Probably the beryl would

not exceed a few hundred pounds and the columbite a few tens of pounds.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that dike 81 contains pockets that will yield a few hundred pounds each of fair sized beryl crystals, but that the beryl zone as a whole contains only about three tons of beryl, part of which is in crystals too small for economic hand cobbing; that columbite occurs in small pockets too erratically spaced and too small to be of economic value; and that the mica and feldspar are of inferior grade. Therefore it is recommended that this application be denied.

REFERENCES

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Wimmler, N. L. (1943) Bridger Mountain pegmatite dikes, Fremont County, Wyoming; U. S. Bureau of Mines War Minerals Memorandum, 1943.

Hanley, John B., E. Wm. Heinrich, and Page, Lincoln R. (1940) Pegmatite investigations in Colorado, Wyoming, and Utah; U. S. Geol. Survey Prof. Paper 227, pp. 109-112, 1940.

INDUSTRIAL METALS AND CHEMICAL CORP.
THE WHIPPET CLAIMS
FREMONT COUNTY, WYOMING
DMEA-2545
Beryl and Tantalum

Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

INDUSTRIAL METALS AND CHEMICAL CORP.
THE WHIPPET CLAIMS
FREMONT COUNTY, WYOMING

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ILLUSTRATIONS

Fig. 1 Location map, Industrial Metals and Chemical Corp., Whippet Claims, Fremont County, Wyoming

Reviewed by
DMEA OPERATING COMMITTEE
9-10-54
(date)

SUMMARY

The Industrial Metals and Chemical Corp. of Riverton, Wyoming, has applied for a DMEA loan to explore for beryl and tantalum on property in Fremont County, Wyoming. The applicant has proposed 500 feet of access road and 500 feet of bulldozer trenching along a pegmatite dike. The estimated cost of this work is $12,482, of which the Government's participation, at 75 percent, is $9,361.50.

A field examination has disclosed that the proposed work will accomplish little to explore the deposit other than to expose mineralization similar to that on the surface. The combined content of minerals has not been sufficient to support an operation in the past. Therefore, it is recommended that this application be denied.

INTRODUCTION

The Whippet pegmatites, in Fremont County, Wyoming, were examined June 22, 1954, by a geologist of the Geological Survey and an engineer of the Bureau of Mines. The examination was made at the request of the Regional Field Team in response to an application from W. A. Jarvis and B. F. Haddenham, for Government assistance in exploration for beryl and tantalum. The applicant proposes access road work (500 feet) and an open-cut bulldozer trench in one pegmatite dike (500 feet). The estimated cost of the work is $12,482, of which the Government participation would be $9,361.50.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The property lies on the southern edge of the Owl Creek (Bridger) Mountains in Sec. 26, T. 40 N., R. 93 W., Fremont County, Wyoming (fig. 1). The area may be reached by following 14 miles of graded road from Shoshoni to the Quien Sabe Ranch and then 1-1/2 miles of fair road to the property.

HISTORY AND PRODUCTION

The claims were located in 1906 and attempts have been made to mine and market the minerals at various times in the past. The applicant has a bond and lease on the property. A small amount of beryl and a few hundred pounds of columbium-tantalum ores have been shipped.

DESCRIPTION OF THE DEPOSITS

The rocks of the area are predominantly pre-Cambrian basic schists and gneisses that have been intruded by granite dikes and pegmatites. Foliation in the schists strikes between N. 60° E. and N. 80° E. and dips 50° to 60° to the southeast. Pegmatite dikes strike parallel to the foliation, but dip in the opposite direction at various attitudes. They are irregular and of variable widths, but average about 16 feet, and are composed principally of feldspar, quartz and mica. A few small beryl crystals are present in zoned areas in the pegmatites. Most of the beryl crystals are too small to justify hand cobbing,

although occasionally large crystals are found. Columbite and tantalite crystals are reported, but were not seen. Considerable mica is present in zoned areas, but much of it is coarse crystallized and highly fractured and sheared.

PROJECT PROPOSALS

The applicant proposes to explore one of the deposits by trenching with bulldozer the length of the dike. It would be necessary to drill and blast the rock to do this. Approximately 500 feet of access road will be required to reach the area of proposed exploration.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that zones are present in the pegmatites which contain crystals of beryl, but that the crystals are too small and too scattered to justify economic hand cobbing. It is unlikely the work proposed by the operator would expose mineralization of a different character than that now seen on the surface. Sufficient work has been done in crosscutting the pegmatites to appraise their significance. It is believed that combined values of minerals present in addition to the beryl will not make the operation economically feasible. Therefore, it is recommended that the application be denied.

FILE COPY
Surname: Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

JUN 1 4 1954

Hon. Lester C. Hunt

United States Senate

Re: Docket No. DMEA-3345 - Beryl-Tantalum
Industrial Metals & Chemical Corp.
Fremont County, Wyoming

My dear Senator Hunt:

Reference is made to your letter of June 9, 1954, regarding the exploration assistance application of the Industrial Metals & Chemical Corp., for beryl-tantalum in Fremont County, Wyoming.

A copy of your letter is being referred to Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, Bureau of Mines, 224 New Customhouse Building, Denver 2, Colorado, inasmuch as exploration assistance of this magnitude is within his jurisdiction.

I am certain that Mr. King will give this application every consideration.

Sincerely yours,
Frank E. Johnson (fwt
~~G. O. Mittendorf~~

ACTING Administrator

LGHouk:gad 6/14/54

Copy to: Admr. R. File
Docket File
Mr. Griffith, 3641A
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk
Region IV

R.C.H.

LEVERETT SALTONSTALL, MASS., CHAIRMAN
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PHILIP K. ALLEN, CHIEF CLERK

United States Senate

COMMITTEE ON ARMED SERVICES

June 9, 1954

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 11 1954

Dmea - 3345

Dear Mr. Mittendorf:

Mr. W. A. Jarvis of Riverton, Wyoming has written us regarding a mining exploration loan which has been filed with you in the name of the Industrial Metals and Chemical Corporation.

We understand that Mr. Jarvis feels that he has located a deposit of beryl and is most anxious to develop it.

Certainly would appreciate anything that you can do to favorably consider Mr. Jarvis' application.

With every good wish, believe me, I am

Yours sincerely,

Lester C. Hunt

LESTER C. HUNT
United States Senator

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

Ma

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 10 1954

Not to be filled in by applicant

Docket No. 3345
Metal or Mineral Beryl-Tantalum
Date Received
Estimated Cost $12,432
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: W. A. Jarvis, Industrial Metals & Chemical Corp. Incorporated in the State of Wyoming. W. A. Jarvis, President Wm. Cloer, Jr., Secretary and Emmet Osborne, Vice-President

(*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 Whippet Claims #1 thru nine, Township 40, North Range 93 West, Fremont County, Wyoming, known as Marion Mine.

(*b*) State any mine name by which the property is known. Marion Mine

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

(*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. refer to contract sale

(*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. refer to 3 f on enclosed sheet

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.

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

(*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 30 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.

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)?

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

[X] Money [ ] Use of equipment owned by you [ ] 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 May 8th, 1954

INDUSTRIAL METALS & CHEMICAL CORP.

(Applicant)

BY

By PRES.

SEC.

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

3. (f) 1 - 4/1/30, Book 47, page 300; 2 - 4/30/30, Book 47, page 301; 3 - 5/22/30, Book 47, page 304; 4 - 11/13/30, Book 47, page 304; 5 - 6/10/30, Book 47, page 409; 6 - 6/10/30, Book 47, page 410; 7 - 7/14/30, Book 47, page 433; 8 - 9/10/30, Book 47, page 435.

4. (a) Mineralization consists of encouraging work pits, also crevicing on beryl veins.

(b) Mineralization never carried out on a systematic scale. Have a quantity of beryl on hand and taken from bloomery site. Beryl occurs evenly distributed from the bloomery, at which no effort has been made to obtain recovery.

(c) This deposit has been traced for better than one half mile, and lies in a zone of hornblende, hornblende schist. The vein lies on about a 60° slope, with a hornblende hanging wall, and a granite hanging wall. The strike of the vein is about northeast and southwest. Systematic exploration has never been conducted, therefore the amount of beryl is not known. The beryl occurs evenly distributed in the bloomery in relation to blocks, and it is our intention to contract in such units operation to expose the deposit for about 500 feet, then will decide as to sinking along this length of the vein, as soon as obtained, which is most probable time of open pit.

(d) Water is within 300 feet of deposit. Small amount of minor work may be necessary to improve accessibility. Forest is all a from village 6 -- 18 miles from power, 45 miles from Riverton the railroad point.

(e) The power is now down from Riverton, 7 miles, line equipment is poor. Should be run to the deposit in order, other than line to Riverton, and to Cheyenne. There within 100 yards, power is in 11 miles. However, amount of mineralization is hard to meet on job.

5. (a) For exact location of proposed project refer to exploration map and note that work on this is. It is proposed to start at bottom of a gentle slope, and excavate down out 60 feet on vein, approximately finding depth of a other ore that is encountered.

Proposed Work.

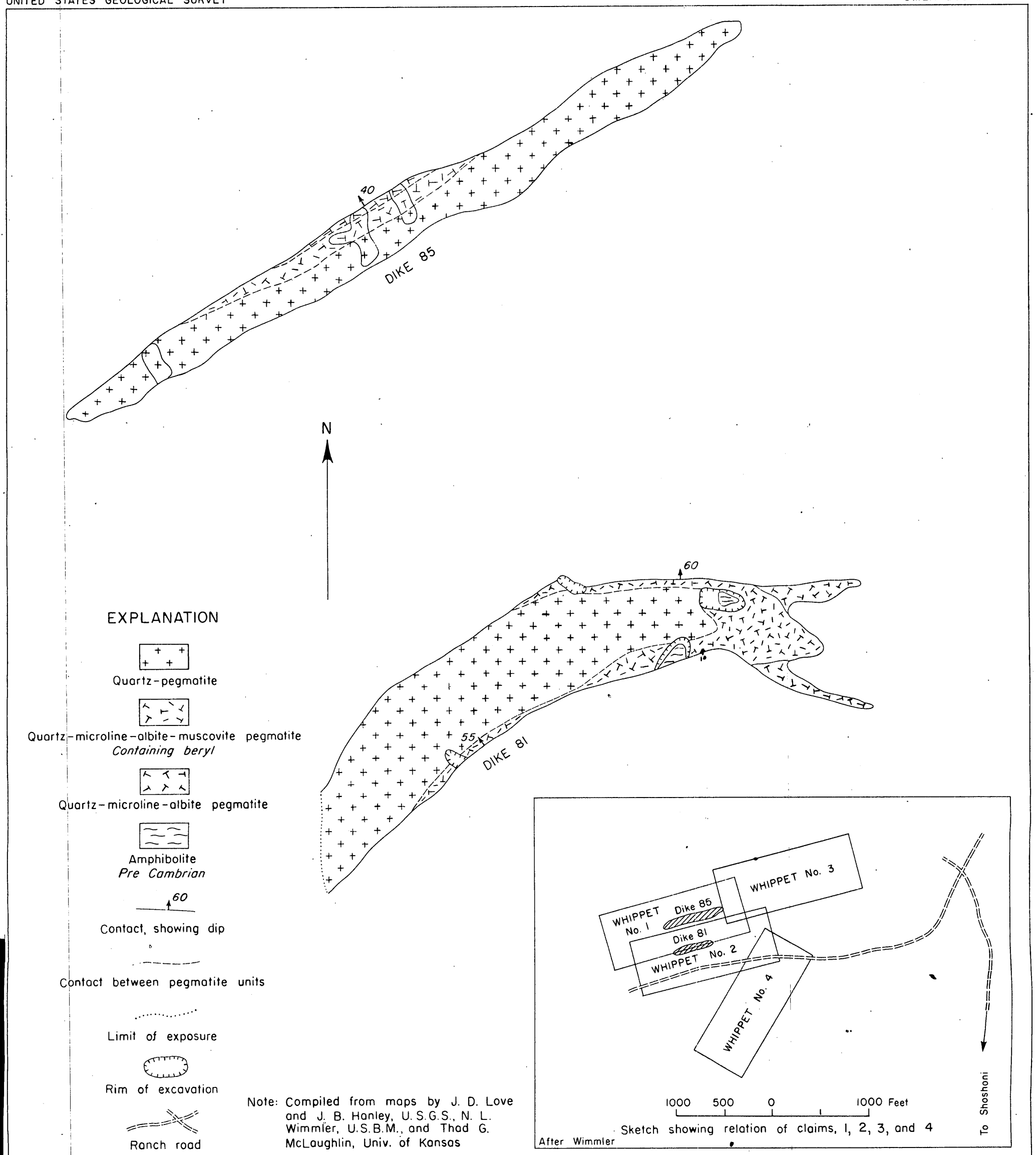
Garnets
Hornblend
Feldspar & Muscovite
Pegs Beryl from fine Sizes
to large Crystals. Small Tantalum

(d) The applicant has had varied business experience in mining properties of all descriptions over a period of forty years, including mining ventures in Canada.

The engineer on the job has had thirty years of actual mining practice in both production and milling methods above ground and under ground. At present time owns a valuable property of his own.

6. (a) None.

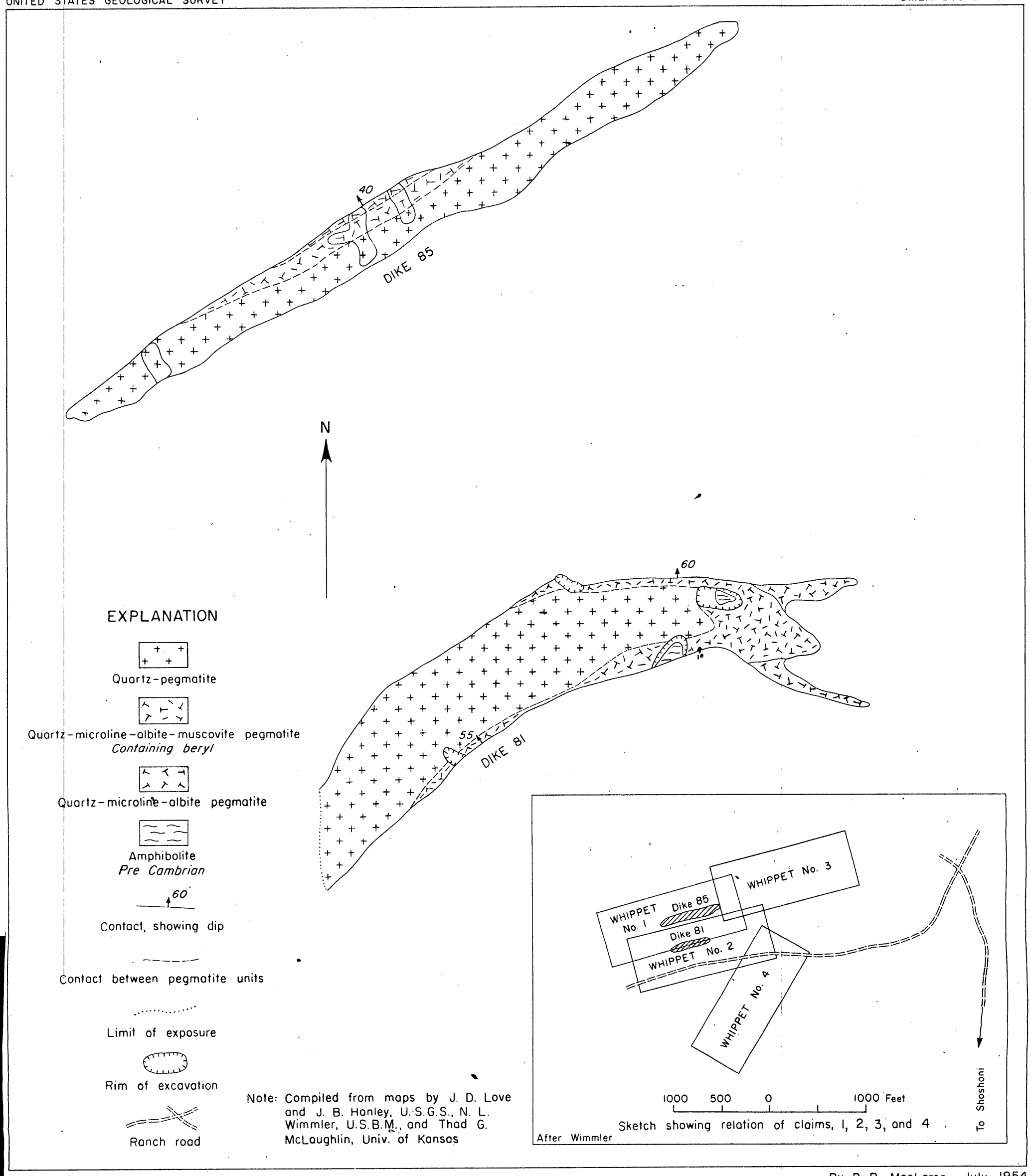
(b)	1 - Machine Operator	$ 1377.00	
	1 - Mucker and Helper	1290.00	
	1 - Cobber	960.00	
	1 - Supervising Engineer	1560.00	
			$ 5187.00
(c)	Lubricants		25.00
(d)	Air Compressor rental @ $24.00 per day		2204.00
	1 - Air Hammer purchased (45%)		300.00
	7/8 Steel		150.00
	Bits		60.00
	1 - 65# Air Hammer - Rental, includes bits and 1" steel		300.00
	Powder, caps and fuse		450.00
	1 - Ore Car		35.00
	335 yards 16 pound rail		400.00
	300 rail ties		60.00
	spikes		25.00
	Assays		350.00
	Cat Hire		150.00
	Fuel		450.00
	Engine Oil		75.00
	Pickup Rental		350.00
	500 Feet - 2" pipe		150.00
(e)	None.		
(f)	1 Tool house and shelter building 10x14 foor frame		300.00
(g)	Accounting		600.00
	Compensation		155.61
	Payroll Tax		155.61
			$ 12432.00



By D. R. MacLaren, July, 1954

FIGURE 2-SKETCH SHOWING GEOLOGY AND RELATION OF PEGMATITE DIKES 81 AND 85, WHIPPET CLAIMS, INDUSTRIAL METALS AND CHEMICAL CORPORATION, FREMONT COUNTY, WYOMING

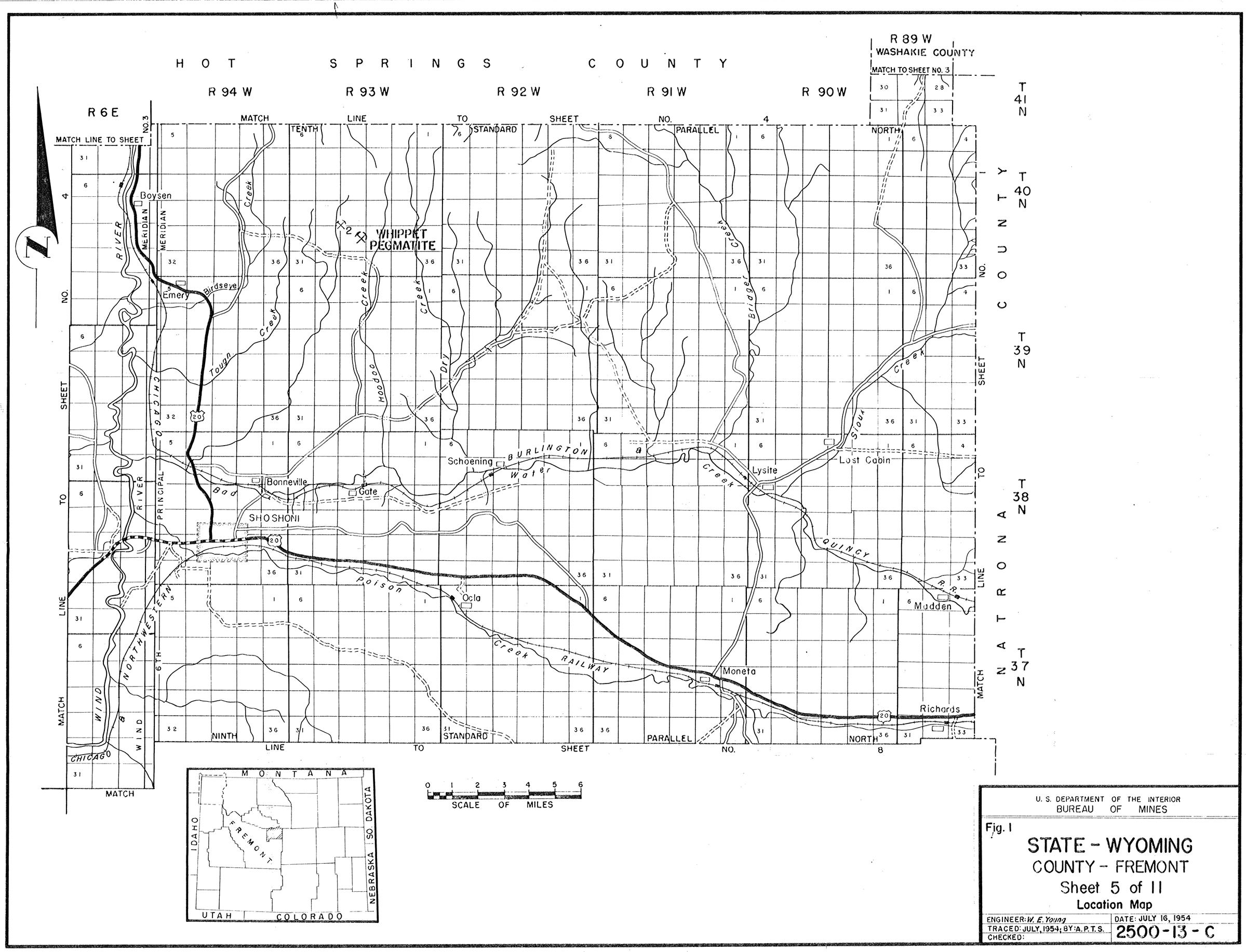
100 50 0 100 Feet



By D. R. MacLaren, July, 1954

FIGURE 2-SKETCH SHOWING GEOLOGY AND RELATION OF PEGMATITE DIKES 81 AND 85, WHIPPET CLAIMS, INDUSTRIAL METALS AND CHEMICAL CORPORATION, FREMONT COUNTY, WYOMING

100 50 0 100 Feet



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1

STATE - WYOMING
COUNTY - FREMONT
Sheet 5 of 11
Location Map

ENGINEER: W. E. Young	DATE: JULY 16, 1954
TRACED: JULY, 1954; BY: A. P. T. S.	2500-13-C
CHECKED:	