JJR.

DMEA-2526
Kyanite
Region II

GEORGE ELMO SHOUP, SALMON, IDAHO. Sparkplug Lode and Sparkplug No. 1, Lemhi County, Idaho. 2-13-53

Letter to the Field, replying to a letter from the applicant and enclosing copies of letters from the applicant and Washington Office reply. The Field is asked to reply to our letter of July 10, 1952.

Denials

4-17-53 DMEA-2526
No. 20 Kyanite
Region II

R

GEORGE ELMO SHOUP, SALMON, IDAHO. Sparkplug Claims, Lemhi County, Idaho.

Letter to the applicant denying the application.

Field Reports

No. 201 DMEA-2526
4-10-53 Kyanite
Region II

GEORGE ELMO SHOUP, SALMON, IDAHO. Sparkplug Claims, Lemhi County, Idaho.

Supplemental Field Report recommending that the application be denied, and giving results of kyanite sampling. The report was referred to the Commodity Group.

6.0

APR 17 1953

Mr. C. Elmo Shoup
Box 756
Salmon, Idaho

Re: Docket No. DMEA-2526 - Kyanite
Sparkplug Prospect
Lemhi County, Idaho

Dear Mr. Shoup:

Your application for aid for an exploration project and other data available to us in Washington concerning the subject property have been reviewed.

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

Careful study of all our information, although noting a small amount of ore on your claims, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mitchenderi

Administrator

JTRobertson:gad 4/15/53
Copy to: Admr. R. File
Docket File
Operating Committee
Field Team, Region II
Mr. Gumsallus, 3522
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

April 15, 1953

Memorandum

To: Administrator

From: Nonmetallic Minerals Division

Subject: A closing review of DMEA-2526 - Kyanite
Contract: None
Property: Sparkplug Prospect
6 unpatented lode claims.
Eureka Mining District
Lemhi County, Idaho
Applicant: George Elmo Shoup, owner
P. O. Box 756
Salmon, Idaho
Amount applied for - $1,400
Amount approved - None

A Denial (after field examination). Letter of denial attached hereto.

Docket Summary:

5/13/52 Received application MF-103, dated 9/23/51, through Region II, and accompanied by field team report by J. J. Vhay. He recommended bulldozer trenching in amount of $1,400.

5/28/52 Received memorandum from G. H. Espenshade, Geological Survey, recommending sampling and testing of kyanite; however, thought deposits were small.

6/11/52 Letter - Nonmetallic Minerals Division to Hewitt Wilson, Electrotechnical Laboratory, Norris, Tennessee, in regard to tests.

6/12/52 Letter from Shoup to Adams requesting that Sparkplug No. 2, No. 3, No. 4, and No. 5 be added to original application.

6/30/52 Received report on sample sent to Norris Laboratory. Sample tested 32-plus cone-equivalent test compared to 37-plus required by National Stockpile specifications.

7/10/52 Letter - Operating Committee to Weissenborn transmitting results of above test and other data.

2/6/53 Letter - Nonmetallic Minerals Division to Mr. Shoup transmitting a list of domestic buyers of kyanite material.

3/6/53 Letter - Region II to Operating Committee. Reported Weissenborn's talk with Jack Vhay, examining geologist. In light of unfavorable tests on kyanite sample, they both agree that the proposed exploration project should be denied.

Resume: The Sparkplug Group is located on the east slope of a mountainous area, elevation 6,000 feet, about four miles northeasterly from Salmon, Idaho. It is accessible by truck.

Much of the surface is covered with about three feet of soil. At the few places where veins containing kyanite are exposed by bulldozing, the kyanite occurs as relatively large crystals, showing cleavage faces as long as three inches. The vein material and bleached quartzite formation in which the veins occur is the result of recrystallization by hydrothermal solutions. At one of the best exposures, there is 2.5 feet of kyanite-bearing material in a total width of seven feet, veinlets a foot or less thick; there are numerous strongly bleached outcrops, but on the whole, the kyanite-bearing vein-matter is narrow and occurs in parallel lenses in the wider bleached zones.

A full description, together with maps, is contained in the field report made by J. [illegible]. Vhay, field geologist. This report was followed by a test on a sample by the Electrotechnical Laboratory, Norris, Tennessee. The results were unfavorable; the cone-equivalent test was 32-plus compared to a minimum of 37-plus required in the specifications for kyanite for National Stockpile purchases.

In a letter, dated April 1, 1953, the final conclusions of the DMEA Field Team, Region II, is quoted as follows:

"It is recommended that the application be denied as the sample that has been tested did not meet National Stockpile specifications and as there is reason to believe the deposit does not economically warrant further exploration."

Comment:

The Nonmetallic Minerals Division agrees with the Field Team recommendation in this case. Attached hereto is a copy of the letter of denial of application.

Jasper T. Robertson
Nonmetallic Minerals Division

Attachment
JTRobertson:gad 4/15/53
Copy to: Admr. R. File Docket File
Mr. Houk

IN REPLY REFER TO:

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

G-MD-CNM

April 13, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2526 (Kyanite).

To: L. G. Houk, Defense Minerals Exploration Administration.
From: D. M. Larrabee, U. S. Geological Survey.
Applicant: G. E. Shoup.
Name of property: Sparkplug prospect.
Location of property: Lemhi County, Idaho.
Date of field team report:
Authorship of field team report: Jack Vhay.
Field team's recommendation:
Final recommendation to have been based upon tests of kyanite. Decision made to deny the application but no memo prepared by the Field Team.

Letter, Weissenborn and Velin to Selfridge April 1, 1953 recommends denial.

Action suggested:
Follow field team's recommendation.

D. M. Larrabee

IN REPLY REFER TO:

G-MD-CNM

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

April 13, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION IdSA-2526 (Kyanite).

To: L. G. Houk, Defense Minerals Exploration Administration.
From: D. M. Larrabee, U. S. Geological Survey.
Applicant: G. E. Shoup.
Name of property: Sparkplug prospect.
Location of property: Lemhi County, Idaho.
Date of field team report:
Authorship of field team report: Jack Vhay.
Field team's recommendation:

Final recommendation to have been based upon tests of kyanite. Decision made to deny the application but no memo prepared by the Field Team.

Letter, Weissenborn and Volin to Selfridge April 1, 1953 recommends denial.

Action suggested:

Follow field team's recommendation.

D. M. Larrabee

IN REPLY REFER TO:

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

April 13, 1953

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMMA-2526 (Kyanite).

To: L. [illegible]. Houk, Defense Minerals Exploration Administration.
From: D. M. Larrabee, U. S. Geological Survey.
Applicant: G. E. Thoup.
Name of property: Sparkplug prospect.
Location of property: Lemhi County, Idaho.
Date of field team report:
Authorship of field team report: Jack Vhay.
Field team's recommendation:

Final recommendation to have been based upon tests of kyanite. Decision made to deny the application but no memo prepared by the Field Team.

Letter, Weissenborn and Velin to Selfridge April 1, 1953 recommends denial.

Action suggested:

Follow field team's recommendation.

D. M. Larrabee

600

FEB 16 1953

Mr. G. Elmo Shoup
Box 756
Salmon, Idaho

Subject: Docket No. DMEA-2526 - Kyanite
Sparkplug Prospect
Lemhi County, Idaho

Dear Mr. Shoup:

Reference is made to your letter of February 4, 1953, on the subject application and your request for information on kyanite.

The mineral kyanite exists in nature in many degrees of purity, and with different physical characteristics. Most domestic kyanite requires beneficiation to eliminate the impurities. The Defense Minerals Exploration Administration is interested in exploring for sources that will provide kyanite of stockpile quality.

A list of private buyers is enclosed for your information and aid in developing a market for your kyanite. While strategic kyanite is listed among the commodities authorized for purchase for the National stockpile, purchases are not being made at this time.

Your interest in the exploration program is appreciated. The self-addressed envelope is returned herewith, inasmuch as official Government correspondence does not require postage.

Sincerely yours,

Lawrence O. Houk, Chief
Nonmetallic Minerals Division

Enclosures 2/13/53
Copy to: Admr. R. File
Docket File
Field Team, Region II
Mr. Gunsallus, 3522
Mr. Morton, G-232 GSA Bldg.
Mr. Houk

600

FEB 1 6 1953

Air Mail

Mr. A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II
South 157 Howard Street
Spokane 8, Washington

Subject: Docket No. DMEA-2526 - Kyanite
Sparkplug Prospect
Lemhi County, Idaho

Dear Mr. Weissenborn:

Reference is made to the subject application and the enclosed letter of February 4, 1953 from the applicant, and a copy of our reply.

Please review the results of the tests, as suggested in our letter of July 10, 1952, and make your recommendations to this office as promptly as possible.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hodges
Member, Bureau of Mines

D. M. Lemmon
Member, Geological Survey

Enclosures 2

LGHouk:gad 2/13/53
Copy to: Admr. R. File
Docket File
Operating Committee
Mr. Gunsallus, 3522
Mr. Norton, Q-232 GSA Bldg.
Mr. Houk

C
O
P
Y

G. ELMO SHOUP
Mines and Minerals Consultant
Box 756
Salmon, Idaho

February 4, 1953

Administrative Officer
Defense Minerals Exploration Administration
Washington 25, D. C.

Subject: DMEA-2526
Re: Sparke Plug Lode Claims
Kyanite Property

Dear Sir:

Since the above Loan is not possible or probable and as the Ore Kyanite is still strategic. Why is it not possible that a market for our Ore or property cannot be found?

Assays from our Ore Samples to private Assayers have showen a HIGH-GRADE product, the price of the Kyanite is high and seems to be enough that tonnage from this point is feasible.

We would like information where to market our Ore eather in Goverment stockpile or private concerns. Or we would like to see the Kyanite (Cyanite) withdrawen from the strategic list of Minerals.

An early reply from your office would be appreciated.

Sincerely yours,

/s/ G. Elmo Shoup

G. Elmo Shoup.

Encl: Self-addressed envelope for reply. GES

C
O
P
Y

G. ELMO SHOUP
Mines and Minerals Consultant
Box 756
Salmon, Idaho

February 4, 1953

Administrative Officer
Defense Minerals Exploration Administration
Washington 25, D. C.

Subject: DMEA-2526
Re: Sparke Plug Lode Claims
Kyanite Property

Dear Sir:

Since the above Loan is not possible or probable and as the Ore Kyanite is still strategic. Why is it not possible that a market for our Ore or property cannot be found?

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We would like information where to market our Ore eather in Goverment stockpile or private concerns. Or we would like to see the Kyanite (Cyanite) withdrawen from the strategic list of Minerals.

An early reply from your office would be appreciated.

Sincerely yours,

/s/ G. Elmo Shoup

G. Elmo Shoup.

Encl: Self-addressed envelope for reply. GES

FEB 2

Mr. A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II
South 157 Howard Street
Spokane 8, Washington

Dear Mr. Weissenborn:

Transmitted herewith is the evaluation of the kyanite samples submitted by John H. Denoo at the suggestion of your office and a copy of our letter to Mr. Denoo.

Samples should not be submitted to this office for evaluation until a DMEA application has been received. If a prospective applicant desires to determine the strategic value of the mineral before he makes an application, he should procure representative samples of the deposit by employing a reputable engineer to supervise the sampling. In some cases where the applicant has a property of merit and he is unable or unwilling to assume the cost of sample procurement, the DMEA may designate an engineer to supervise the sampling. However, he must provide the labor, materials, and supplies at no cost to the Government. The above procedure is recommended in the interest of economy as promiscuous testing of minerals for their strategic value without knowledge of their extent and true character is expensive and wasteful.

The brick test suggested by Kenneth G. Skinner in the enclosed covering letter costs approximately $1,500, and it is not the intention of DMEA to provide the funds for this evaluation.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

Enclosures 2

LGHouk:gad 1/30/53
Copy to: Mr. K. G. Skinner, Norris, Tenn.
Admr. R. File
Records File
Mr. Houk
Operating Committee

FEB 2 1953

Mr. John H. Denoo
Box 276
Tekoa, Washington

Dear Mr. Denoo:

Reference is made to your letter of December 29, 1952 and our reply of January 15, 1953.

The samples of kyanite-andalusite have been evaluated by the Electrotechnical Laboratory of the Bureau of Mines at Norris, Tennessee. The preliminary testing by this agency indicates that the samples submitted may be beneficiated to stockpile specifications.

Sincerely yours,

SIGNED

Lawrence G. Houk, Chief
Nonmetallic Minerals Division

LGHouk:gad 1/30/53

Copy to: Mr. K. G. Skinner, Norris Tenn.
Admr. R. File
Records File
Mr. Houk
Operating Committee

600

January 15, 1953

Kyanite

Mr. John H. Denoe
Box 276
Tekoa, Washington

Dear Mr. Denoe:

Reference is made to your letter of December 29, and samples of Kyanite sent to this office for evaluation.

You will find enclosed a list of possible buyers of Kyanite. This administration knows of no government agency that maintains a listing of firms interested in acquiring mineral properties.

The current price of Kyanite varies between $29.00 - $40.00 depending upon the degree of grinding and certain other requirements.

The results of the sample evaluation will be forwarded to you when they are received from the laboratory.

Sincerely yours,

Lawrence G. Houk, Chief
Nonmetallic Minerals Division

Enclosure

LGHouk:fls 1/15/53

Copy to: Admr. R. File
Docket File
Mr. Houk

600

Kyanite

Mr. Kenneth S. Skinner
U.S. Bureau of Mines
Chief Ceramic Branch
Industrial Minerals Division
Norris, Tennessee

JAN 5 1953

Dear Mr. Skinner:

Transmitting under separate cover are samples of kyanite received in this office from John A. Adams of Box 276, Teran, Washington for evaluation.

Nothing is known of the extent of the deposit. There has not been a firm application for assistance on this prospect. It is therefore felt that the preliminary testing for quality of this material be kept at a minimum. Please advise this office of the results of your testing.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

LCHook:fls 1/13/53
Copy to: Admr. R. File
Docket File
Operating Committee (2)
Mr. Gunsallus, 3522
Mr. Norton, G-232 GSA Bldg.
Mr. Hook

George Elmo Shoup
Salmon, Idaho

DMEA-2526
Kyanite

7/29/52 - Telephone conversation between L. G. Houk and Bureau of Mines, College Park.

Bureau of Mines, College Park, Region VIII, called with regard to further testing the kyanite samples. "Preliminary evaluation indicates unlocking between 10 and 20 mesh. Percentage of kyanite in the samples will be evaluated by heavy media tests and result supplied within the week."

Mr. A. E. Weissenborn
Executive Officer, DMRA
Field Team, Region II
South 157 Howard Street
Spokane 8, Washington

Subject: Docket No. DMRA-2526 - Kyanite
Sparkplug Prospect
Lemhi County, Idaho

Dear Mr. Weissenborn:

Reference is made to the above captioned docket, with respect to which on May 3, 1952, you submitted to this office an application, a proposed contract, and an examination report. At that time, the Field Team recommended an exploration program consisting of bulldozer trenching in the amount of $1,400.00.

A sample of kyanite was submitted to the Electrotechnical Laboratory for the purpose of testing the strategic quality of the kyanite. The result of the test of this one sample is enclosed. It seems advisable that the enclosed test results should be reviewed by the Regional Field Team. Please note in the accompanying report from the Electrotechnical Laboratory that the samples as received are not suitable for purchase by the National Stockpile and that indications are that relatively fine grinding will be required to liberate the kyanite from the associated gangue and difficulty will be experienced in meeting the particular size specifications in P-27.

The small size of the sample submitted to this office indicates that this material may be selected specimens and not indicative of the type of material that would be mined at this deposit. If this material is not truly representative of the deposit then the Field Team should sample the deposit. If the raw material as mined is deemed acceptable for stockpiling a weighted composite should be made from the samples and this composite should be sent to the Electrotechnical Laboratory at Norris, Tennessee. Should the material as mined require beneficiation, there is enclosed for your metallurgical staff a copy of stockpiling specifications P-27 for their information and guidance in preparing a beneficiated composite for stockpile acceptability. The sampling and evaluation tests of the percentage of kyanite in the rock should be a part of the Field Team examination and the simple beneficiation tests completed in the Regional Laboratories.

While this deposit does not appear to qualify for exploration assistance under DMEA the Operator should be advised of possible commercial outlets which may be interested in receiving samples of his kyanite for appraisal and possible purchase.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Approved:

J. H. Hedges

Member, Bureau of Mines

T. P. Thayer

Member, Geological Survey

Enclosures 2

LGHouk:gad 7/7/52

Copy to: Admin. Reading File
Docket File
Operating Committee (2)
Mr. Espenshade, G-232 GSA Bldg.
Mr. Kauffman, Jr., 1347
Mr. Houk

600

July 2, 1952

Memorandum

To: Gilbert H. Espenshade, U. S. Geological Survey

From: Jasper T. Robertson, Non-Metallic Minerals Division

Subject: Docket No. DMEA-2526 - Kyanite
Electrotechnical Laboratory's test of sample sent in by Field Team

Attached please find copy of a report received by Mr. Houk from Electrotechnical Laboratory on test of a sample of kyanite from Sparkplug Prospect near Salmon, Idaho.

Jasper T. Robertson
Non-Metallic Minerals Division
Defense Minerals Exploration
Administration

Attachment

JTRobertson:mp
cc: Docket File
Field Team, Region II
Adm. Reading File
Mr. Norton, G-232, GSA Bldg.
Mr. Gunsallus, 3071
Mr. Kauffman, Jr., 1347
Mr. Houk

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. Lawrence Hook

DATE: June 18, 1952

FROM : G. H. Espenshade.

SUBJECT: DMEA-2526

JTR

The attached papers amending the original application, DMEA-2526, do not give any additional information about these kyanite deposits which would help in appraising the application. The outcome of the test on the sample sent to the Bureau's Norris Lab. should be the deciding factor.

G.H.E.

recorded 6-17-52.

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : S. G. Hook, DMEA

DATE: 6/9/52

FROM : G. H. Espenshade, USGS. (Mr. Robertson)

SUBJECT: Sample of kyanite from Sparkplug prospect near ~~Clifton~~ Salmon, Idaho
DMEA docket 2526.

J. S. Vhay, U.S.G.S., Spokane has submitted the enclosed sample of kyanite from the Sparkplug prospect near Salmon, Idaho in connection with DMEA application, docket #2526. The material is mixed with considerable quartz and mica, and is evidently not of strategic grade. Dwight Lemmon has suggested that I submit the sample to your office in case you wish to send it to the Bureau of Mines' Electro technical Lab., Norris, Tenn. for testing. G.H.E.

600

JUN 2 1 1952

Mr. Hewitt Wilson
Regional Director, Bureau of Mines
Electrotechnical Laboratory
P. O. Box 217
Norris, Tennessee

Subject: Docket No. DMEA-2526 - Kyanite
Sparkplug Prospect
Near Salmon, Idaho

Dear Mr. Wilson:

Transmitted herewith are samples of kyanite from the Sparkplug Prospect near Salmon, Idaho, DMEA Docket No. 2526. These samples have been submitted by Mr. J. S. Vhay, of the U. S. Geological Survey Spokane office to this office for evaluation.

Will you kindly test and evaluate these samples of kyanite and inform this office as to whether or not this material is of strategic quality or if it can be milled to specifications that will make it acceptable for purchase for the National stockpile.

Sincerely yours,

SIGNED

Lawrence G. Houk, Chief
Non-Metallic Minerals Division
Defense Minerals Exploration
Administration

Enclosure

LGHouk:gad 6/11/52

Copy to: Admin. Reading File
Docket File
Mr. Gunsallus, 3071
Mr. Norton, G-232, GSA Bldg.
Mr. Houk

IN REPLY REFER TO:
G-MD-GHE

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

Air Mail

June 6, 1952

DMEA-2526

Mr. John S. Vhay
S. 157 Howard Street
Spokane, Washington

Dear Jack:

Thanks for sending in the sample of kyanite from the Sparkplug prospect near Salmon, Idaho in connection with the application for exploration aid, DMEA docket no. 2526. I am turning the sample over to Mr. Lawrence Houk, head of the non-metallic branch of DMEA, with the suggestion that it be sent to the Electrotechnical Laboratory of the Bureau of Mines in Norris, Tennessee for testing.

As you point out, the kyanite is well mixed with quartz and mica. Some muscovite seems to be interlayered along the cleavage planes of the kyanite. The quartz and mica would have to be removed by some milling process, which would require crushing and grinding and would result in a rather fine grained kyanite concentrate. It is most unlikely that such a concentrate would be of strategic quality. However, the Bureau's lab at Norris can give the final answer.

Sincerely,

Gilbert H. Espenshade

cc: L. G. Houk

Subject: DMEA-2526
Re: Exploration Loan
Spark Plug Lode and Spark Plug
Lode No.1.

June 2, 1952.

Mr. Robert E. Adams.
Administrative Officer
Defense Minerals Exploration Administration
Washington 25,D. C.

Dear Sir:

We wish toamend our application as of above and add the following Claims, Spark Plug No. 2, Spark Plug No.3, Spark Plug No.4 and Spark Plug No.5. This will give us the total of Six (6) Spark Plug Lode Claims with the above added.

This change is necessary in order to cover the Vein or Deposite containing the Kyanite Ore, which we wish to develope by the Exploration Loan

The Location and Assessment work has been done on these Claims and they are now in the process of Filing in the Local Recorder Office.

Additional Ore reserve was found in the Location or Discovery drifts of these added Claims.

Sincerely yours,

George Elmo Shoup. Partner and Owner,
Mgr. Spark Plug Lode Claims.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. _____

Date received _____

[illegible] GOLD GROUP
P. O. BOX 756
SALMON, IDAHO.

Name and address of applicant

Date June 2, 1952.

INSTRUCTIONS

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

GENERAL TECHNICAL DATA

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

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products? Kyanite (Cyanite)
   (*b*) What are the byproducts, if any? Not Knowen
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly). Surface Striping ±850 Linear Feet.

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point. 5 Miles West of Salmon, Idaho.
   (*b*) Mining district. Eureka
   (*c*) Township, Section, Range.
   (*d*) County, State. Lemhi County, Idaho State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated. No
   (*b*) Are you operating this property as:
   - [x] Owner.s
   - [ ] Lessee.
   - [ ] Contractor.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 16 1952

5. Number of years in production New
   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project. 22 Years of Experience in all phrases of Mining.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

(See Report by U.S. Geological Survey for above)

16—63792-2

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

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

If more lines are needed continue on separate sheet.

9. Capital Stock Issues: None

For Corporate Applicants

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

*Indicate period covered.

10. Production: None

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

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

12. Ore or Mineral Reserves:

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

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Refer to U. S. Geological Survey Report

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

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

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

TOTAL ORE OR MINERAL RESERVES

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

(*c*) If placer:

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

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

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

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

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

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

13. Access Roads:

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

Five (5) Miles. Road in Good Condition.

14. Water Supply:

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

Springs and small Creek give ample Water Supply

15. Power:

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

Ample Power supply available at Property.

16. Labor:

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

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation. NONE

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain. NO

CERTIFICATION

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

(Name of company)

By George Elmo Shoup
(Signature of authorized official)

(Date)

Manager of Spark Plug Lode Clm.
(Title)

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

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

IN REPLY REFER TO:

G-MD-GHE

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

May 28, 1952

Memorandum

To: L. G. Houk, DMEA, through J. J. Norton, USGS.

From: G. H. Espenshade, USGS.

Subject: DMEA docket 2526: Application for exploration contract for Sparkplug Kyanite prospect, Salmon, Idaho.

I think that some sampling and testing of the kyanite from the Sparkplug deposits should be done before considering the exploratory trenching recommended by J. S. Vhay in his memorandum of April 10, 1952, and by the Region II field team in its memo of May 8, 1952.

From the geologic description of these deposits, I suspect that the kyanite would not meet the chemical and physical specifications for strategic kyanite. However, I recommend that representative samples of a few pounds of the material be taken and sent to the Electrotechnical Laboratories of the Bureau of Mines, Norris, Tennessee for examination and testing. Some estimate of kyanite content in present vein exposure should be made, if possible. It is more appropriate to make these tests now than after spending more money for exploration. If the kyanite is not of strategic grade, then the deposits are of little interest since they seem to be small and have a low kyanite content. The mineral kyanite is not a scarce mineral; it occurs in large amounts at different places in the country, and is currently being produced from large deposits in Virginia and South Carolina, but these concentrates do not fully meet the exacting specifications for strategic kyanite. Small deposits of kyanite aren't worthwhile unless the kyanite is of strategic quality.

Gilbert H. Espenshade

GHEspenshade:hhp
G-5/28/52
cc: Director's Reading file, 4212
Branch Reading file, 4212
DMEA
GHEspenshade
extra
extra

DMEA-2526

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

No. 157 Howard Street
Spokane 4, Washington

April 10, 1952

Reviewed by
DMEA OPERATING COMMITTEE
5-21-52
(date) (NS)

Memorandum

To: Field Team, Region II

From: J. S. Vhay

Subject: Application for exploration contract for Sparkplug Kyanite Prospect.

INTRODUCTION

Early last summer Mr. G. Elmo Shoup of Salmon, Idaho, sent in a sample containing coarse kyanite. Since kyanite is high on the strategic mineral list, the prospect was looked at briefly, and a preliminary study and map made of the deposit. Last October an application for an exploration contract was made which proposed spending $400.00 on road improvement and $1,000.00 on bulldozing the deposit. As the deposit can be reached by truck it is recommended that the contract be changed so that the $1,400.00 be spent on bulldozing. Somewhat more could be spent to properly explore the area for kyanite, but $1,400 worth of bulldozing will show whether more work here is justified.

APPLICANT AND HISTORY

The applicant, G. Elmo Shoup, a resident of Salmon, Idaho, is interested in prospecting and promoting the development of mineral deposits, but he apparently has not had much actual mining experience. He has a partner who operates, and may own, a bulldozer. The kyanite apparently was discovered in 1950 and a number of claims were staked around the discovery point. Some bulldozing was done, most of it on the ridge south of the gulch running through the center of the map, where no kyanite was exposed, but enough was done north of the gulch (at points indicated by "x" on fig. 2) to show that kyanite is present on the property.

LOCATION AND ACCESSIBILITY

The Sparkplug claims are located four miles west-northwest of Salmon, Idaho (see fig. 1), in the southern part of section 2, and the northern part of section 34, T. 22 N., R. 21 E. They are on the steepest slope of the Salmon River mountains at altitudes between 3000 and 3400 feet.

The area can be reached by a poor dirt road, having very steep grades, that leaves the northeast corner of Salmon. This road will have to be improved, or perhaps even relocated, before much heavy hauling can be done on it. The recently installed power line to Cobalt, Idaho, passes less than a thousand feet south of the claims.

GEOLOGY

The claims are on the east side of the Salmon River mountains at an altitude where the slopes are moderate. The slopes are steeper both farther down and higher up the mountain. Somewhat more than half the area on the map (see fig. 2) is covered with soil which is rarely more than three feet deep except in the gulches. Trees cover the north slopes. Grass and sagebrush grow on the rest of the area. The gulch through the center of the mapped area was dry in September; a little water was flowing in the next drainage line south.

The country rock in this area is Belt quartzite. The quartzite is generally impure, fine grained, well bedded, and from dark to light grey in color. Besides quartz, the rock contains considerable muscovite and biotite, formed from the impurities in the rock during metamorphism. Some variation in the composition of different beds shows up as differences in color or in the alteration along the zones in which the quartz, tourmaline, mica and kyanite occur.

The only igneous rock in the mapped area is a metamorphosed basic dike, now consisting mostly of hornblende with a little quartz, oligoclase and zoisite; it may have been a diabase before metamorphism.

The structure of the rocks is relatively simple. Bedding is nearly flat, having low dips, which do not exceed 15 degrees, in various directions. The rocks show several directions of joints, the strongest of which usually controls the later alteration; these strong joints range in direction from N. 70 E. through east-west to N. 70 W.; the average trend is close to east-west. The joints dip steeply either to the north or south. In the northwest part of the mapped area, shearing has produced a zone of closely spaced joints so that the rock appears almost schistose.

The quartzite has been altered in a number of zones approximately parallel to the strong joints. North of the gulch the trend of these zones is close to east-west, and they range from a few feet to over a hundred feet in width (see fig. 2). On the ridge south of the gulch, the alteration is almost continuous for a distance of about 1400 feet in a direction about N. 60 W.; the strikes of the joints in this zone range from about east-west to N. 60 E. This alteration appears mostly as recrystallization of the quartzite; the

quartz, biotite and muscovite are much coarser, chlorite has replaced some of the biotite, and some tourmaline and a phosphate has probably been introduced. The net effect of this recrystallization has been to produce a much lighter colored rock with, in places, spots of biotite; this rock will hereafter be referred to as bleached.

Veins occur within these bleached zones. They are from a few inches up to thirty feet wide. Many of the veins, especially the thicker ones, consist mostly of quartz, with or without some feldspar, mica, and tourmaline. Others consist largely of a fine-grained green mica (?), whereas still others consist of mainly coarse mica, feldspar and some quartz. Commonly in the more micaceous veins considerable amounts of a phosphate mineral, probably dehrnite, are present. At the few places where veins containing kyanite are exposed by bulldozing, the kyanite occurs as relatively large crystals, showing cleavage faces as long as three inches; it is associated with coarse-grained quartz, muscovite, and in places tourmaline. The country rock next to the kyanite-bearing veins has been altered to an easily weathered soft sandy material, which may account for the fact that kyanite was seen in only one natural outcrop. Everywhere else it has been exposed by the bulldozing of from one to two feet of soil. In addition to the places (marked "K" on fig. 2) where kyanite was seen in place, pieces of kyanite float were seen at two other places (marked "K" on fig. 2).

The vein material and bleached quartzite are believed to have originated mostly by metamorphic recrystallization in the presence of some introduced hydrothermal solutions, which must have brought in at least phosphorous and boron, as is indicated by the relatively large amount of dehrnite and tourmaline. Whether any alumina was brought in or the kyanite has resulted merely from the recrystallization of the impure quartzite is difficult to say at present. At least some iron and probably other bases have been removed from the kyanite-bearing veins, which consist almost solely of quartz, kyanite, and muscovite.

ECONOMIC CONSIDERATION

At the best exposure there are 2.5 feet of kyanite-bearing material in a total width of seven feet, in veins a foot or less in thickness. It is probable that the individual veins do not have much length, but rather occur as a number of parallel lenses within the bleached zones. Economically, therefore, what has been exposed by the small amount of bulldozing does not look worthwhile. With kyanite in short supply, however, it is felt that more bulldozing of the soil-covered rock opposite the most strongly bleached and veined outcrops would be a worthwhile gamble.

CONCLUSION

Inasmuch as there is some chance that considerable more kyanite may be present under some of the soil-covered areas on the Sparkplug claims, it is recommended that an exploration contract for $1,400 worth of bulldozing be entered into with Mr. C. Elmo Shoup on a 10-90 basis. The Government's representative should spot in the trenches and keep a close eye on the work as it progresses.

cc: USBM - Spokane
USBM - Albany

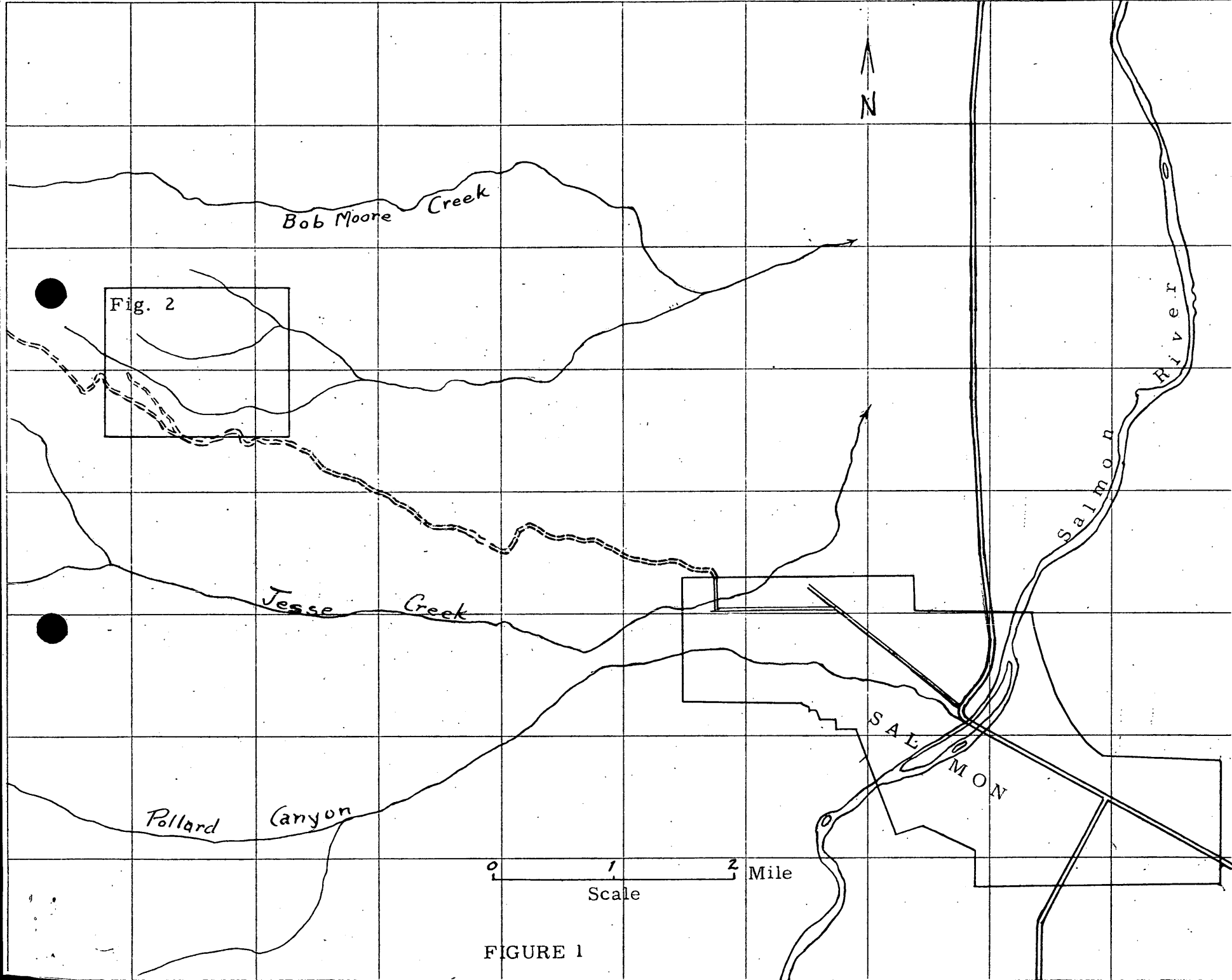

N
Bob Moore Creek
Fig. 2
Jesse Creek
Pollard Canyon
Salmon River
SALMON
0
1
2
Mile
Scale

FIGURE 1

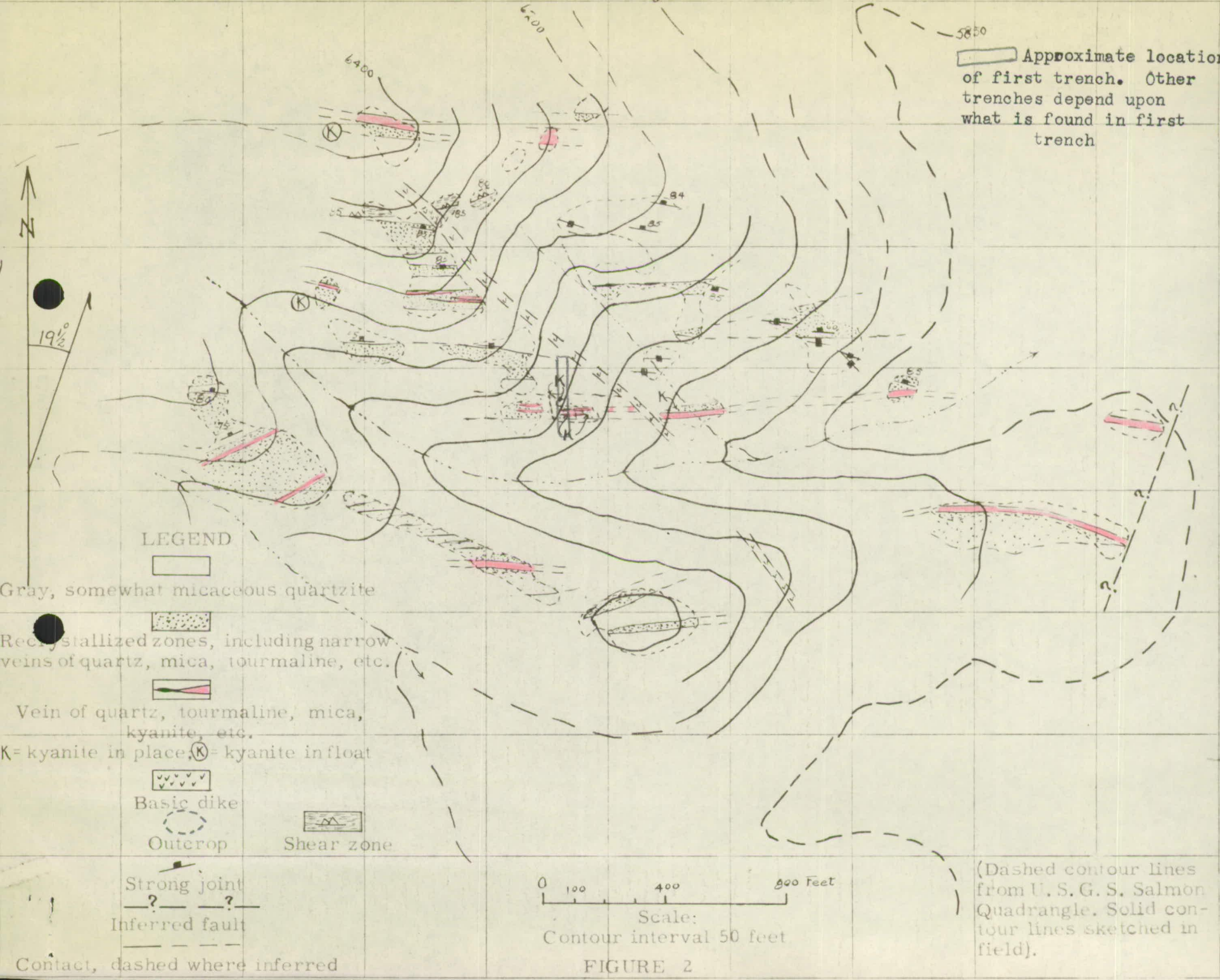
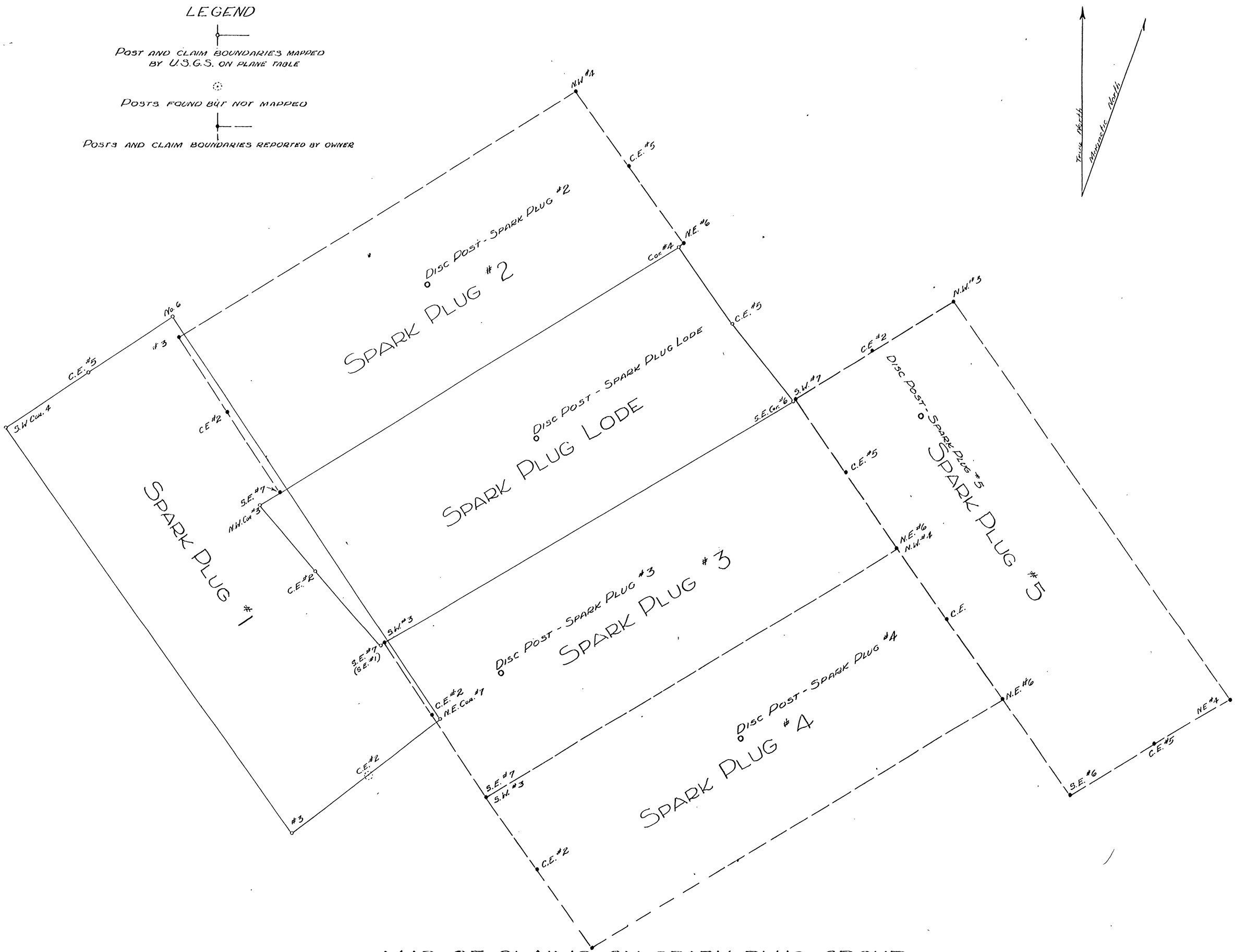

6400
6500
5850
Approximate location of first trench. Other trenches depend upon what is found in first trench
N
19½°
LEGEND
Gray, somewhat micaceous quartzite
Recrystallized zones, including narrow veins of quartz, mica, tourmaline, etc.
Vein of quartz, tourmaline, mica, kyanite, etc.
K = kyanite in place, Ⓚ = kyanite in float
Basic dike
Outcrop
Shear zone
Strong joint
Inferred fault
Contact, dashed where inferred
0 100 400 800 Feet
Scale:
Contour interval 50 feet
(Dashed contour lines from U. S. G. S. Salmon Quadrangle. Solid contour lines sketched in field).

FIGURE 2



MAP OF CLAIMS ON SPARK PLUG GROUP