DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

GEOLOGICAL SURVEY

OFFICIAL DOCKET FILE

Idm-E NO._____

OME ~~DMEA~~ NO. 6553

Application
- [ ] Denied
- [x] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

April 26, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
APR 26 1966

INITIALS	CODE

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
Region II

Subject: New Application (Gold)
Sourdough Creek Claims
Carl J. Carlson
Fairbanks District, Alaska

Enclosed is an Application for Financial Assistance submitted to our office by Mr. Carl J. Carlson, 331 Seventh Ave., Fairbanks, Alaska, in the amount of $11,613.

The property is on Sourdough Creek, a tributary of the Chatanika River, about 60 miles from Fairbanks, Alaska. There has been no production from the property, although some production has come from upstream and downstream from the claims.

The Applicant proposes to explore the claims by bulldozing three trenches to bedrock and washing the gravel to determine if an economic paystreak is present.

H. K. Stager

Enclosure

MME Form 40
Jan. 65

Budget Bureau No. 42-R1508
Approval expires Dec. 31, 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OFFICIAL COPY O.M.E. RECEIVED APR 28 1966 INITIAL CODE

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

Carl J. Carlson
331 Seventh Ave.
Fairbanks, Alaska

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER 6553

DATE RECEIVED 4-26-66 4/28/66

REGION III

DIVISION CODE

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	X
CORPORATION	
PARTNERSHIP	
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED Alaska

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Gold

ESTIMATED COST OF PROJECT: $ 11,613

PROPERTY NAME: Nos. 3,4,&5 Above Sourdough Creek

LOCATION COUNTY: Fairbanks Recording Dist.

STATE: Alaska

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit two copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

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, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

April 23, 1966
DATED

Carl J. Carlson
BY *(Signature)*

Owner
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings [illegible] *each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

INT.-DUP. SEC., WASH., D.C.

INFORMATION REQUIRED WITH APPLICATION

1. Financial Eligibility

(a) See Enclosed Exibit A

(b) Not Applicable

(c) By actual work and cash outlay

2. Applicant's Right in Land

(a) I am the sole owner of the claims to be explored.

(b) The names of the claims are #3, 4, 5. Above Discovery Sourdough Creek, a tributary of the Chatineka River, Fairbanks Recording Dist., Alaska. They are located three miles north of the Steese Highway at Milepost 66. The locations are recorded in Book 31 on pages 129,132 and 131 respectively.

(c) Not applicable.

3. Physical Description

(a) The subject claims have not been mined. However values were found in prospect holes on each of the claims. (See Exibit B. Figure 3)

(b) Prospect Holes #1 and 2 were dug by the written. Holes 3 and 4 were dug by a former claim holder who stated he found coarse gold in each.

(c) Not known

(d) Not known

(e) The predominaint formation in the whole area is the Birch Creek Schist (See Exibit B. Figure 1) Overlaying this in a thickness of from 10-15 feet is poorly sorted alluvium rangeing in size from fine sand to bolders. There is no permafrost in this area and the ground is quite wet near bderock. Gold found in adjacent areas was always on, or very nearly on, bedrock. Practically none in the gravel.

(f) Although the subject claims have not been mined, largescale operations were conducted above and below them during the thirties and forties by and Anthony Zimmerman.

In the operation below the subject claims, Mr. Zimmerman discontinued mining about a claims length below #3 as the gold was not sufficently concentrated in a paystreak and too much gravel had to be worked. He moved his operation about 1½ miles upstream where he hoped the gold would be coarser and more concentrated. This proved to be true and a successful operation was conducted on the remainder of the creek upstream.

The subject claims are thus in a proven mineralized area. Minable ground above and below with no change in topography indicate a strong probability of good ground in between. Prospect holes on each claim definitely prove the presence of gold.

(g) No report made.

4. Accessibility of Property

(a) Carl J. Carlson, 313 Seventh Ave., Fairbanks, Alaska

Property can be reached by proceeding from Fairbanks to Mile 66 on the Steese Highway, turn left on first sideroad past roadhouse and proceed three miles to campsite.

(b) Fairbanks--69 miles

5. Exploration Work

(a) Exploration will be by cross-cut trenches put down to bedrock and sampled every 20 feet to determine where a paystreak occurs. Channel samples will be cut from undisturbed altermate sides of the trenches, panned clean and the values weighed. A log will be kept of all data.

It is planned to crosscut the center of each claim as shown on Exibit B., Figure 3. The trenches will straddle the present creek bed but the water will be diverted to a ditch which heads at the upper end of #5 above and bypasses the area to be explored. The ground will still be wet, however, and it will be necessary to dig drains approximately 75 feet long from the center of each trench downstream.

The trenches will be approximately 12 feet at the bottom and 24 feet at the top and from 10-15 feet deep. Each trench will be approximately 250 feet long and will necessitate the removal of some 7500 cubic yards. With approximately 600 cubic yards to be removed from the drains the total volume to be moved will be 8100 cubic yards.

As the excavation will be the most expensive part of the program, the gravel will be moved as short a distance as parctieable. It will not be necessart to clean the entire length of a trench at one time to insure good sampling. Instead, one section of about 30 feet will be cleared to bedrock, examined and sampled. Then this finished section will be backfilled with gravel from the adjacent section and so one untillthe entire length of the trench will have been cleared, examined and sampled.

(b) Approximately four days will be spent in road repair.

(c) It is hoped to start this program in early July. Forty-five days are anticipated for completion.

6. <u>Experience</u>

I have had about 10 years experience placer mining. I own three claims below the subject claims and have mined on them.

The person who will supervise the program is a consulting mining geologist. He is a graduate of the University of california and has considerable experience in exploration and placer mining.

7. Estimate of Costs

8 hr day = 6.25/hr.

(a)	None	
(b)	Catskinner $50.00 a day for 45 days	$2,250
	Personal services for 45 days	2,250
	Analytical, clerical, engineering and planning	750
(c)	Diesel fuel--2100 gal. @ 37¢ a gal.	770
	Oil and Grease	50
(d)	Rental of D7 (T3 series) Cat. (applicant owned) (Based on 22 day month as per A.E.D. manual)	3,996
	176 hr. 8 hr day - 22.70/hr.	
(e)	None	
(f)	None	
(g)	Subsistance two men 45 days @ $11.00 a day	495
	Estimated repairs including allowance for parts, electric welder, Oxy-acetyline torches etc.	500
	1400 miles transportation @ 10¢ a mile	140
	Alaska Employment Security Commission tax 2.9%	152
	Social Security tax 4.2%	220
	Sales tax 3% (oil, fuel, grease, and food)	40
	TOTAL	$11,613

Exibit B

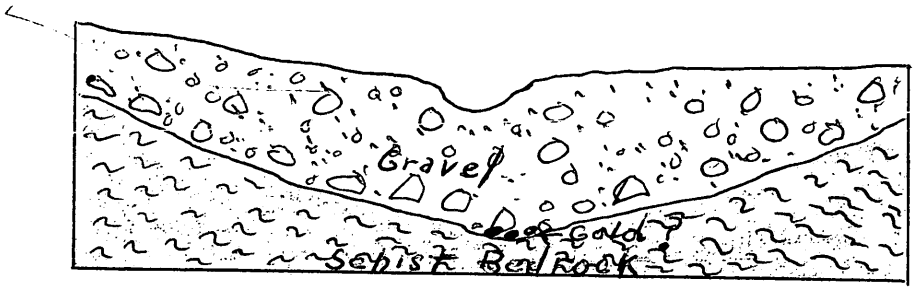

Fig I Generalized X-Section of Claims

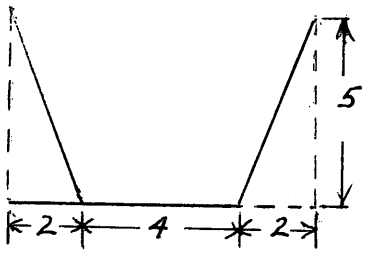

Fig 2 X-Section of trench
Dimensions in yds.

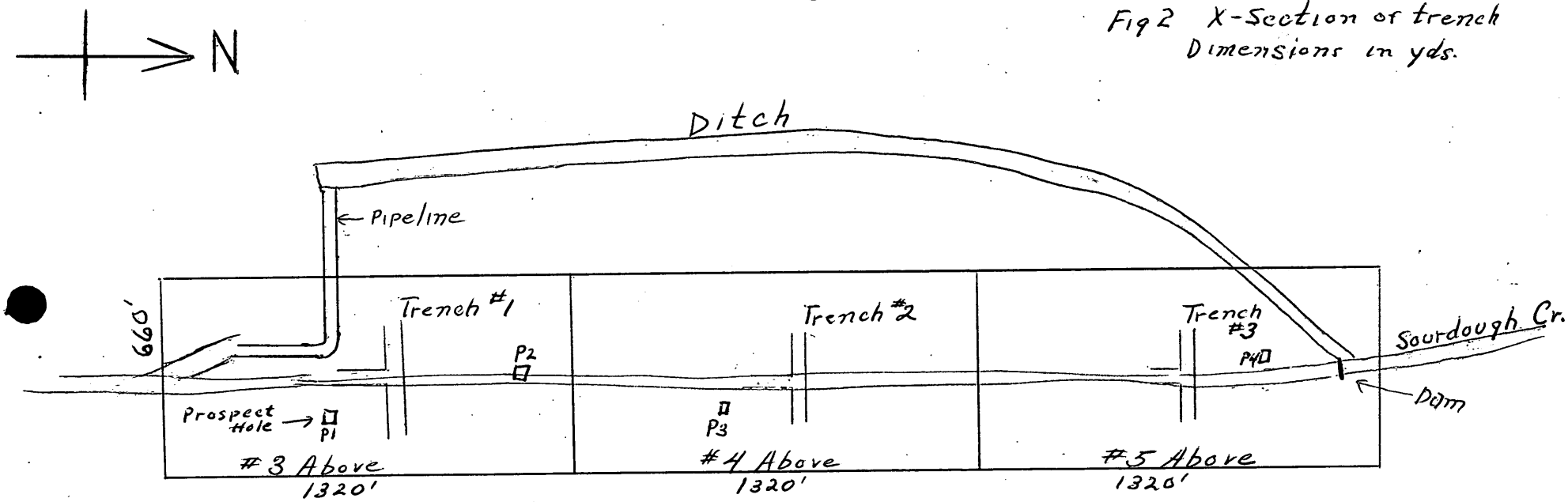

Fig 3 Exploration Map Showing Proposed Trenches + Drains

No Scale

Exibit A

ALASKA STATE BANK

OFFICES IN

ANCHORAGE • FAIRBANKS • KENAI

KENNETH G. THOMPSON
ASSISTANT MANAGER
P. O. BOX 769
FAIRBANKS, ALASKA

April 18, 1966

Carl J. Carlson
331 Seventh Avenue
Fairbanks, Alaska

Re: Application for loan

Dear Mr. Carlson:

We appreciate the opportunity to consider your loan request for $5,000.00 to be used for exploration work on your property on Sourdough Creek.

From the information we have it does not appear that our bank would be willing to extend this type of risk capital and therefore we must inform you that your loan request has been declined.

Sincerely,

K. G. Thompson

K. G. Thompson
Assistant Vice President & Assistant Manager

KGT:pkf

331 Seventh Ave.
Fairbanks, Alaska
April 18, 1966

Mr. K. G. Thompson
Alaska State Bank
Fairbanks, Alaska

Dear Mr. Thompson:

I am planning an exploration program on my property on Sourdough Creek to acertain if the property warrants mining. Aside from my own investment in machinery, time and money, I need approximately $5000.00 additional capital. Therefore, I would like to make application for a loan of $5000.00 to be repaid on a royalty on production basis. Please advise.

Yours truly

Carl J. Carlson

ALASKA NATIONAL BANK
of Fairbanks
NORTHWARD BUILDING "The Friendly Bank" FAIRBANKS, ALASKA - 99701

April 25, 1966

Mr. Carl J. Carlson
331 Seventh Avenue
Fairbanks, Alaska

Dear Mr. Carlson:

This is in reply to your letter of April 18 regarding an application for a loan of $5,000.00 to be used in exploration of your property on Sourdough Creek.

We regret very much to inform you that your application has been rejected for the reason that we are not making this type of loan.

Yours very truly,

Robert Gray
Assistant Vice President

RG/lm

FEDERAL DEPOSIT INSURANCE CORPORATION $10,000 MAXIMUM INSURANCE FOR EACH DEPOSITOR MEMBER

PLEASE SEND ALL CORRESPONDENCE TO ALASKA VIA AIR MAIL

RECEIVED
APR 21 1966
U.S. GEOLOGICAL SURVEY
DIVISION OF MINERAL RESOURCES

331 Seventh Ave.
Fairbanks, Alaska
Aptil 18, 1966

Mr. Emmitt Wilson
Alaska National Bank of Fairbanks
Northward Bldg.
Fairbanks, Alaska

Dear Mr. Wilson:

I am planning an exploration program on my property on Sourdough Creek to acertain if the property warrants mining. Aside from my own investment in machinery, money ,and time, I will need approximately $5000.00 additional capital. therefore, I would like to apply for a loan of $5000.00 to help finance this program and to be repain on a royalty on production basis. Please advise.

Yours truly

Carl J. Carlson

RECEIVED
APR 26 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/27	Kirkemo	120
		110
		220

December 27, 1966

Memorandum

To: The File

From: Chief, Office of Minerals Exploration

Subject: OME-6553 (Gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

The Applicant has not replied to our letter of November 23, 1966.

Accordingly, the subject docket is referred to the inactive file and the application is considered as having been withdrawn.

Frank E. Johnson

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Region II
OME Reading File
Mr. Kirkemo

GLAult/a 12-27-66

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11/23/66	Kirkemo	
11/23	Cal	21 U
		120M

AIRMAIL

NOV 2 3 1966

Mr. Carl J. Carlson
331 Seventh Avenue
Fairbanks, Alaska

Re: OME-6353 (Gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

Dear Mr. Carlson:

Careful study of your application for financial assistance to explore your claims on Sourdough Creek, and of other information available to us indicates that the proposed trenching program is not feasible under existing conditions; and, therefore, does not justify Government participation therein.

We understand, however, that you are considering a churn drilling program which was suggested to you by our field examiner, Mr. R. M. Chapman, U. S. Geological Survey. About two months have passed since this suggestion was offered, and we have not heard from you.

Please advise us of your plans as soon as possible because we cannot maintain an application in an inactive status indefinitely. We will consider your application as withdrawn if we do not hear from you within 30 days of the date of this letter.

Sincerely yours,

FRANK E. JOHNSON (gla)

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Econ. Geol. File
OME-Docket
OME Reading File
Region II
R. M. Chapman

HKirkemo/mm (11/23/66)

23263

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27
5010-103

UNITED STATES GOVERNMENT

Memorandum

OFFICIAL COPY
O. M. E.
RECEIVED
OCT 19 1966

INITIALS	CODE
glm	170 m
~~JJ~~	~~110~~
HK	~~120~~

TO : H. K. Stager
OME, Menlo Park

DATE: October 12, 1966

FROM : R. M. Chapman
Alaskan Geology Branch, College

2 copies made for 6534 + 6546 Smith

SUBJECT: Information on current OME projects ~~and applications~~.

OME-6553 Kirkham

I have talked with Mr. Carl Carlson and also Richard Rowe about Carlson's Sourdough Creek placer gold application. Rowe actually prepared most of the application for Carlson, and Carlson has had some second thoughts about the trenching proposal and is not really unhappy that we do not want to approve it. It seems to me that neither of them had fully realized the difficulties that would more than likely be involved in draining the trenches and in moving a rather large yardage of gravel.

They had not considered drilling chiefly because they had no drill, and thought it would be difficult and expensive to obtain one. Rowe claims to have had considerable drilling experience while working for Union Carbide in the Colorado Plateau, and with a little instruction and supervision, which he could get from people here (such as Ernest Wolff), he should be able to use a churn drill satisfactorily. The standard placer drilling operation is really quite simple as long as one has good equipment and is careful in recovering and handling the material from the hole. A good discussion of this method is given by Wolff in his book "Handbook for the Alaskan Prospector", p. 236-265.

I have suggested to Carlson and Rowe that, if they wish, Ernie Wolff and I will review their problems with them and help them to outline a reasonable drilling program. Carlson is undecided as to exactly what he wants to do, and, until he has a chance to talk with Rowe and think over the costs, he will not want to make any further proposal. Drilling could be done in the winter months, but it would be much easier and cheaper to do it next spring. I will let you know when I hear anything further from them, but I do not anticipate that Carlson will make any decision in the near future.

OME-6534 Smith

Work on the Busty Belle property is progressing satisfactorily. The adit is in about 190 feet now. You should have received reports from them for August and September. They did have the report forms that you said were sent to them, but the forms had been misplaced.

OME-6546 Smith

I am writing to Kirk Stanley in regard to his Silver Creek prospect application. He should be back in Anchorage from the field by now.

Bob

RECEIVED
OCT 17 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

September 14, 1966

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 16 1966

INITIALS	CODE
	130
	120 M
	110
	120 K

To: Chief, Office of Minerals Exploration
Washington, D. C.

From: Field Officer
OME, Region II

Subject: OME-6553 (Gold)
Carl J. Carlson
Claims 3-, 4-, 5-Above
Sourdough Creek
Fairbanks Recording District, Alaska

Enclosed is an Application Report on the subject property by Mr. R. M. Chapman, Alaskan Geology Branch.

Mr. Chapman does not make a definite recommendation that an exploration contract be granted. In my opinion the project appears less than favorable. The applicant is not an experienced miner, the method of exploration is costly and probably would not yield satisfactory results. Cost data are not presented for any other type of exploration. The size and grade of the possible pay streak do not appear large enough to repay the Government's investment.

I recommend that the application for financial assistance be denied.

H. K. Stager

Enclosure

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

5010-108

UNITED STATES GOVERNMENT

Memorandum

TO : H. K. Stager
Field Officer, OME, Menlo Park

DATE: September 12, 1966

FROM : Robert M. Chapman
Alaskan Geology Branch, College

SUBJECT: Report on OME-6553 (Gold) application, Carl J. Carlson; Claims 3-, 4-, 5-Above, Sourdough Creek, Alaska

Enclosed are 2 copies of my report on the above-mentioned Sourdough Creek property.

Bob

OFFICIAL COPY
O. M. E.
RECEIVED
SEP 16 1966

INITIALS	CODE

Enclosures

RECEIVED
SEP 14 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

Investigation and evaluation of placer gold claims 3-, 4-, and 5-Above on Sourdough Creek, Alaska

Report prepared for review of application for financial assistance in minerals exploration, OME-6553 (Gold), by Carl J. Carlson

by

Robert M. Chapman
Alaskan Geology Branch
U.S. Geological Survey
College, Alaska

September 9, 1966

ON-SITE REPORT

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Conclusions	7
Recommendations	8

Illustration

Figure 1 -- Map of Sourdough Creek area

Introduction

The application of Carl J. Carlson, 331 Seventh Avenue, Fairbanks, Alaska, dated April 23, 1966, docket number OME-6553 (Gold) was referred to the writer for field examination and comments. I visited Mr. Carlson at his property on Sourdough Creek on June 22, 1966 and went over the placer gold claims with him and gathered additional information from conversations with him. Some information and opinions also were obtained from qualified placer mining engineers.

Location, accessibility, and local facilities

Carlson's placer gold claims are on Sourdough Creek, in its middle to upper course, at about 65° 18' N., and 146° 29' W., in Sections 14, 15, 22, 23 of T. 6 N., R. 6 E., Fairbanks Meridian (see Circle B-5, 1:63,360 quadrangle). Sourdough Creek, a south-flowing tributary of the Chatanika River, is 48 airline miles northeast of Fairbanks or about 66 miles from Fairbanks via the Steese Highway. The claims, numbers 3-, 4-, and 5-Above, that Mr. Carlson proposes to work are between 3 and 4 miles upstream (north) from the mouth of Sourdough Creek and the Steese Highway crossing. They can be reached via a single-lane side road which is suitable for passenger cars as far as the downstream end of claim 3-Above. This road extends a total of about 5 miles, to Silver Creek, but in its present condition the upper portion is suitable only for trucks, 4-wheel drive vehicles, or tractors. Improvements to this road, or additional roads, could be made easily. An airstrip, if needed, could be constructed at minimum expense in the tailing pile areas.

The Steese Highway normally is not kept open for vehicle travel beyond about mile 35 (from Fairbanks) during the period of approximately October 20 to May 15. The side road on Sourdough Creek is not maintained at any time by the State. Thus, Carlson's property is accessible only by tracked, or snow vehicles during the winter months.

There are no settlements or public service and supply facilities within 30 miles of Sourdough Creek, except for a small store at the mouth of Sourdough Creek that caters to summer tourist trade. A small State Highway Department camp at about mile 78 is usually staffed with a few men during the summer months.

Currently there is little other mining activity in the area. One prospector is doing some work on Sourdough Creek at the mouth of Silver Creek, and there is a small-scale placer gold operation on Faith Creek, about 6 miles east of Sourdough Creek.

The camp that Mr. Carlson has is adequate to support his proposed exploration or mining operations. It includes a large log house, several cabins, storage shed, and a small shop building.

Terrain, vegetation, and water supply

Sourdough Creek heads in moderately rugged hills that have maximum altitudes of 4,000-4,500 feet. The divides in the vicinity of Carlson's claims rise to about 3,000 feet from about 1,700 feet altitude at the creek. The lower slopes are only moderately forested with spruce, aspen, and birch, few of which trees exceed 6-8 inches in diameter, and the underbrush is not dense. The slopes above 2,500 feet have few to no trees. The timber in the valley bottom is not large, or in thick stands, but enough could be obtained for the needs of prospecting and mining operations.

The valley bottom is about 250 feet wide, is relatively level in cross-section, and no significant benches are apparent or reported in the area of Carlson's claims. A bench is reported to be present below Ruby Creek, however. The creek has a gradient of about 130 feet per mile in the subject block of claims. Sourdough Creek is 5-12 feet wide in the stretch between Polar and Bear Creeks, and when examined was generally 6-10 inches deep, which is a normal to low water stage.

A water supply adequate for operation is normally available throughout the summer season. Adequate construction and drain facilities to withstand and handle heavy runoff and flash floods from summer thunder storms will be required, as several washouts and damage to dams and sluice boxes have occurred in the past.

History and production

Extensive placer gold mining has been done on Sourdough Creek both downstream and upstream from Carlson's claims 3-, 4-, and 5-Above. Most of this work was done in the 1930's and early 1940's, and perhaps a little as late as 1946, chiefly by Mr. A. A. "Tony" Zimmerman. This is briefly noted in accounts of the 1939 season by P. S. Smith-- "...another outfit belonging to... (A. A. Zimmerman) ...on Sourdough Creek, some 50 miles northeast of Fairbanks, had a successful season" (U.S.G.S. Bull. 926-A, p. 42-43). P. S. Smith also states-- "Nine records of gold from Sourdough Creek show finenesses that range from 922 1/2 to 925..." (U.S.G.S. Bull. 910-C, p. 194).

It is doubtful that any reliable production records for this ground can be obtained. Zimmerman is not living, and if his widow, from whom Carlson purchased the ground and buildings, does have such records she has not made them available. Reports vary as to how much money Zimmerman actually made from his mining on Sourdough Creek, and it is difficult to assess such reports because he also had gold production from several operations on other creeks during part of the time that he was working Sourdough Creek.

It seems safe to assume that at least some of this ground was profitable to work in 1930-1942. Carlson reports that Zimmerman took $100,000.00

from this creek, and that $28,000.00 of this came from cuts just upstream from Polar Creek. Mr. J. D. Crawford, of U.S.S.R. & M. Co., told me that Zimmerman finally "went broke" on Sourdough Creek. This also is unconfirmed, and may well have been due to inefficient mining practices here, or to problems connected with his other ventures. It is generally reported that Zimmerman did no drilling or advance prospecting. He is quoted as saying that he "could smell the gold", and therefore needed no prospecting information. This was apparently a practice he carried over from previous work on Kokomo Creek where the gold was evenly distributed across the valley bottom and was almost impossible to miss.

Property and ownership

As stated in the application, Carlson is the sole owner of the subject claims-- 3-, 4-, and 5-Above Discovery. He is also owner of Discovery, and numbers 1-, and 2-Above, and of numbers 6-, 7-, and 8-Above.

State of development

The subject claims have not been worked. Development consists of a diversion dam and gate on 3-Above, with a bulldozed drain below it, and a small dam and gate at the upper end of 5-Above. A ditch extends along the right limit slope from the upper end of 5-Above to the lower end of 3-Above. This appeared to be in good condition but would probably require minor rehabilitation.

Exact information on the amount of gold recovered from the 4 prospect pits on the subject claims could not be obtained. Carlson did not have a record of his holes (1 and 2). Holes 3 and 4 were dug in about 1945 or 1946 by a Mr. Chenoff, who had been Zimmerman's foreman, and reportedly he said he found "good prospects".

Competency of the applicant

I do not believe that Mr. Carlson is an experienced placer miner. He has been in Alaska many years and is primarily a skilled carpenter, cabinet maker, and saw-filer. He has had the ground on Sourdough Creek for 10 years and has done some mining and development on the claims below the subject claims, and he seems to have an understanding of placer mining operation. He would plan to employ a reportedly competent man, probably a Dick Rowe who is referred to on page 4 of the application, to assist him. Carlson is to the best of my knowledge a thoroughly reputable and honest person, and is financially responsible and able to handle his share of exploration costs. I feel sure he would need to hire the services of a local bookkeeping firm to accomplish his financial paper work.

General geology

Detailed geologic mapping has not been done in the Sourdough Creek area. Generalized geologic maps are given by Mertie (Bull. 872, pl. 1) and by West and Matzko (Circ. 348, p. 8), and this mapping is shown on figure 1.

The bedrock in most of the Sourdough Creek drainage basin is Precambrian Birch Creek Schist. Quartz-mica schist, quartzite schist, and phyllite are the common rock types in the creek gravel and tailings. A granitic stock is exposed in the headwaters of the creek and is mapped on the west side of the creek nearly as far downstream as Polar Creek. The boundaries of this body are probably only approximately correct. It is described (West and Matzko, Circ. 348, p. 10) as a biotite-tourmaline granite, medium-grained to coarse-grained porphyritic, which is cut by quartz and quartz-tourmaline veins, and by granitic and aplitic dikes. Monzonite and diorite are probably included in this mapping unit. Quartz-pyrite-fluorite veins are also reported in schist near the granite contact.

The alluvial gravels on Carlson's ground appear to be about 10-15 feet thick, as stated in the application. I was able to roughly verify this at the lower end of claim 3-Above, and it appears from the mined areas both above and below this point that the gravel section has a consistent thickness. It is unlikely that the gravel is much more than 15 feet in thickness in the unmined ground below Polar Creek, and it may be slightly thinner.

The creek and tailings gravel is mostly platy to subangular. The pieces average about 5 inches in mean diameter, and rarely exceed 12 inches in maximum dimension. The largest boulders are said to be 18-24 inches in diameter, but I saw very few that are this big. The granite farther upstream forms boulders, but few granite cobbles and boulders are present in the gravel below Polar Creek.

Ore deposits

No lode deposits are known in the area of Carlson's claims or farther downstream. There is a report that in about 1937 a gold-quartz vein was encountered in a placer cut near the mouth of Silver Creek, and a prospector has been trying for the past several years to relocate it. A quartz vein containing lenses of stibnite as much as 1 foot in thickness is present on Dempsey Pup, and in 1942 an estimated 50 tons of stibnite-mineralized quartz had been sorted from several short adits in this deposit. There are also unconfirmed reports of a stibnite occurrence on the right limit of Sourdough Creek between Silver and Polar Creeks, and of a pegmatite dike near the mouth of Silver Creek. A stibnite deposit is reported on upper Hope Creek, and stibnite is also reported on Deep Creek ---these are both tributary to Faith Creek and are roughly 5 miles northeast of upper Sourdough Creek.

It can be reasonably assumed that the placer gold in Sourdough Creek is derived from bedrock sources within the upper portion of the present drainage basin. In the absence of information or indications that the placer gravels have been materially enriched from any of the tributary streams, or that any major drainage changes have occurred since deposition of the placer gold, it appears that the chief source of gold was in the main valley in the vicinity of Silver Creek and that the gold has been carried directly down the main valley. Probably the gold originated in gold-quartz veins in the Birch Creek Schist peripheral to the granitic intrusives. Placer gold has been produced from Faith and Nome Creeks, immediately to the east and west respectively, which have a common headwater area and the same geologic setting as Sourdough Creek.

In view of the production of gold on Sourdough Creek above and below Carlson's unmined ground, it is logical to look for a continuation of the paystreak through this area. There is no apparent geological reason why this block of placer ground should be barren, and I think it is advisable to prospect this unmined area, as Zimmerman's decisions to skip over certain blocks of placer ground were not based on valid sampling. It is reported that Zimmerman ran out of "good pay" approximately 1,000 feet below Carlson's camp, and that he then moved up to the ground at the mouth of Bear Creek to continue mining. Presumably he found at least some gold in this area as he continued working upstream some distance from this point, and I cannot determine whether work was terminated in the cuts just above Bear Creek because the operation was uneconomic or because of the cessation of gold mining operations throughout Alaska during World War II. I believe that the latter was the critical factor.

Ore reserves

Prospecting data for the subject block of ground cannot be documented, and the reports of gold found in the 4 prospect pits mentioned in the application are at best a subjective qualitative estimate. Trenching, drilling, or pitting to bedrock are required in order to sample the placer ground, and such sampling could not be done in the field investigation.

Some assumptions may be helpful in assessing the possible reserves in this ground. A paystreak length of about 3,900 feet on the 3 claims is possible. If a paystreak width of 50 feet is assumed (it is not implied that it might not be greater than this), 195,000 square feet of auriferous ground could be worked, and, if an average gravel and bedrock section thickness of 12 feet is assumed, about 86,700 cubic yards of gravel and rock would have to be moved. Probably the gold is concentrated in the bottom 2 feet, or less, of gravel and the top foot or so of bedrock, and therefore the upper section of gravel could be stripped and would not be sluiced through the boxes.

The best cost information that I can obtain indicates that the minimum gold value which would permit ground such as that on Sourdough Creek to be

worked profitably under present economic conditions is 50¢ to 75¢ or $1.00 per cubic yard, or 25-35¢ per square foot. Therefore, if a paystreak having the assumed dimensions given above is present, the minimum economic return from it would have to be $43,350.00 to $48,750.00. A paystreak width of 100 feet and/or a greater gold value per foot or yard might be expected, which would perhaps double these figures and make a more attractive mining venture. The proposed exploration would enable one to determine whether a greater return could be expected, and whether the ground should be mined selectively.

Proposed exploration

Trenching ideally would give a better sampling and knowledge of the mining section than churn drilling or pitting. A gravel depth of 10-12 feet is generally regarded as the maximum thickness for prospecting by trenching or opencutting. Water drainage and sloughing of the trench walls in cuts as much as 15 feet in depth might cause difficulties. However, the walls of a cut 10-11 feet deep in gravel below the dam on claim 3-Above are still standing nearly vertically after 3 years, and thus it seems likely that this gravel could be trenched to bedrock and maintained with a minimum of sloughing. Diverting the creek from the working area should be no great problem, but obtaining adequate drainage of water that would almost certainly flow into a trench through the gravel would be a considerable undertaking. The proposal to secure drainage with cuts 75 feet long does not seem feasible, in view of the gradient of the valley bottom. It appears to me that cuts considerably longer than 75 feet would be required in order to adequately drain a trench that is 12-15 feet deep. The cost and problems involved in maintaining drainage may well be materially greater than the operator anticipates. There are also problems in connection with collecting samples and accurately calculating sample volumes from trench-wall samples, and several men who are experienced in evaluating placer ground feel that a more reliable volume and area determination can be made from drill hole samples using standard calculation methods.

Drilling, if properly conducted, will give satisfactory results. It would be essential to select a competent driller and crew, and to have experienced guidance in locating and spacing the holes. Careless drilling practice, resulting in incomplete recovery of gold, or in "salting" due to sloughing-in at the casing shoe, has often caused trouble with placer drilling projects in the past. If the pay is spotty, or the paystreak is narrow or braided, drill holes can miss a significant amount of the gold unless they are closely spaced. This ground is in part, or entirely, unfrozen, and therefore cased drill holes would be required.

Pitting is, in my opinion, impractical. It is slow and laborious, and high labor costs, pumping of water, and proper driving of caisson would be the chief problems.

A magnetometer survey of this block of ground could be done quickly and cheaply, but it would yield results only if a significant amount of magnetite is exclusively associated with the paystreak. Unfortunately this is not known, and there are no reports of unusual concentrations of "black sand". If, as prospecting progressed, the presence of magnetite in the paystreak is established, then a magnetometer survey should be helpful in directing the remaining work.

All things considered, drilling is, in my opinion, the most practical method to use in prospecting this block of ground. There would be no difficulty in getting a drill into the area and moving it around. The unfrozen, relatively shallow ground and the generally small-sized gravel should be easy to drill, and 1 to 2 holes should be possible per day. The exact number, spacing, and location of drill holes would be contingent upon results as the work progressed, but probably a minimum of 18 holes at 50-foot intervals on 3 lines would be needed.

Costs

The cost estimates presented in the application are reasonable and in line with the scale in the Fairbanks area. In view of the rather small size of the subject block of ground, the expectable gold yield, and the small scale mining operation that would be justified to work the ground, this is probably as much exploration cost as is warranted. Under present economic conditions, I doubt that exploration of this ground will be possible without O.M.E. participation.

Conclusions

The block of ground on Sourdough Creek that is covered by claims 3-, 4-, and 5-Above is easily accessible from Fairbanks via existing roads, and it presents no logistic problems. Facilities and most of the equipment to handle placer mining are available on the property. The applicant, Mr. Carl J. Carlson, is a reputable, honest, and financially responsible person, and he has had some experience with placer mining, although it is my impression that he is not a highly skilled miner. I doubt that he has had any experience in prospect drilling, and, lacking this knowledge and the drilling equipment, he has not seriously considered this method of prospecting.

Indications of the probability of placer gold deposits in the subject block of ground are favorable:--a granitic body intruding schist within the drainage basin; known or reported lode deposits of antimony and gold; placer gold production from this creek both above and below the ground; and placer gold production from creeks in this general area. The subject ground should be easy to mine as it is relatively shallow (10-15 feet), contains very few large boulders, and apparently is mostly or entirely

unfrozen. An adequate water supply is normally available, and precautions against damage from occasional flash-flood runoff are necessary.

Unfavorable factors are:--the lack of reliable quantitative figures on past gold production from Sourdough Creek; and the lack of any previous documented prospecting in the subject block of ground. The total block of potentially auriferous ground consists of the valley bottom portion of 3 claims. This, together with the unworked portions of adjacent claims owned by Carlson, is a rather small deposit.

The important and presently unknown factors are:--the tenor of gold per unit area and volume; the width, length, and continuity of a potential paystreak; and the exact amount of prospecting that will be required to give a reasonable evaluation of the block of ground. If the presence of an economic amount of gold can be established, this deposit would be amenable to working with a simple, small-scale placer operation.

Recommendations

It is my conclusion, based in part on discussions with several mining engineers who are familiar with placer operations, that the proposed program of exploration by bulldozer trenching is not the best method. The rather large amount of material that would have to be moved, the probable difficulties in adequately draining the trenches, the apparent inadequate allowance for length of proposed drains, and the difficulties that are apt to be encountered in collecting and quantitatively evaluating trench-wall samples are the chief factors supporting this conclusion.

If it is determined that the subject block of ground constitutes an attractive target, the conventional churn drilling method for prospecting placer ground would be preferable to trenching and might also be cheaper. This would require hiring a drill outfit and a competent driller, and the panning and sample weighing should be adequately supervised.

OFFICIAL COPY
O. & E.
RECEIVED

R. M. Chapman
College, Alaska

August 23, 1966

Field Officer
OME, Region II

OME-6553 (gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

Will you please advise me the present status of the subject application.

The last word we have is your memo of June 15, 1966, that mentioned that you were planning to visit the property the next week.

H. K. Stager

cc: Chief, OME, WDC
Director
ACG RF
MP RF
File 6553
HKStager:mlb

IN REPLY REFER TO:

G-ALAS-RMC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ALASKAN GEOLOGY BRANCH
BOX 580
COLLEGE, ALASKA 99735

RECEIVED
JUN 17 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

June 15, 1966

Mr. E. K. Stager
Field Officer, O.M.E.
U. S.Geological Survey
345 Middlefield Road
Menlo Park, California

Dear Hal:

I had a call today from a Mr. Dan Coben who is interested in applying for O.M.E. assistance to explore a gold-platinum prospect on or near the East Fork of Chistochina River. I suggested that he write to you for the appropriate forms and other instructions for submitting his application.

Kirk Stanley has now furnished all of the additional data on costs, etc., that were questioned in connection with his Silver Creek application (OME-6546). I will finish off this report and submit it soon.

The application of Mr. Carl J. Carlson, for gold exploration on Sourdough Creek (OME-6553) appears questionable as to his choice of bulldozer trenching rather than drilling as an exploration method. I have not been able to talk with him yet, but I plan to visit the property next week and will keep you advised.

Sincerely,

Bob

Robert M. Chapman
Geologist-in-charge
College office

OFFICIAL
COPY
O. M. E.
RECEIVED
MAY
INTERIOR

Robert M. Chapman
College, Alaska

May 16, 1966

Field Officer
OME, Region II

OME-6553 (Gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

Enclosed is the docket for OME-6553. Will you please contact Mr. Carlson in Fairbanks and make arrangements for a field examination. This is the application I mentioned when George Gryc and I were talking to you by telephone a few weeks ago.

The entire docket should be returned to this office, with your report, when you have finished. Please keep me informed as to your progress.

Charge any field and travel expenses for this and other OME examinations, to Project No. 940104.

H. K. Stager

Enclosure

cc: Chief, WDC
D RF
ACG RF
MP RF
MP File 6553
HKStager:mlb

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/9/66	Kirkham	120
		110
5/9	CJC	220
		130

AIRMAIL

MAY 9 1966

Mr. Carl J. Carlson
331 Seventh Avenue
Fairbanks, Alaska

Re: OME-6553 (Gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

Dear Mr. Carlson:

The application for assistance in exploring the subject claims has now been reviewed by the Washington Office and referred to Mr. H. K. Stager, Field Officer, Region II, U. S. Geological Survey, Office of Minerals Exploration, 345 Middlefield Road, Menlo Park, California 94025.

The Regional Office will notify you in case additional information concerning the application is needed.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region II (2)
MMerrithew/mm (5/6/66)

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/5/66	Kirkemo	120
		110
		220
		120 m

AIRMAIL

MAY 9 1966

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6353 (Gold)
Carl J. Carlson
Claims 3, 4, and 5
Sourdough Creek
Fairbanks Recording District, Alaska

We refer this application to you for review and a field examination if you decide that one is justified. Few comments are offered herewith because the property is known to our representatives in Alaska, and the property is easily accessible from Fairbanks.

No data were submitted to support the Applicant's contention that gold values were encountered in Prospect Holes 1 and 2. Is there a less costly method of testing the ground than moving 8,100 cubic yards of gravel, or a more practical way of sampling than attempting to trench across a water saturated stream channel? Would borings or a number of test pits through gravel to bedrock provide sufficient material for a representative sampling of the property?

The Applicant states that mining was not economic about 1,500 feet downstream from No. 3 claim, but was successful about 1½ miles upstream. Is it possible that a stream with its accompanying gold-bearing gravels bypassed the Applicant's property?

In the event a contract is recommended and a bulldozer project is planned, are the total estimated costs involving the Applicant-owned dozer reasonable?

FRANK E. JOHNSON

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading
130
Kirkemo (5/5/66)

23263

April 28, 1966

Mr. Carl J. Carlson
331 Seventh Avenue
Fairbanks, Alaska

Subject: OME-6553

Dear Mr. Carlson:

Your application for exploration assistance, dated April 23, 1966, submitted to our office at Menlo Park, California, has been assigned Docket No. OME-6553.

Please identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to Region II

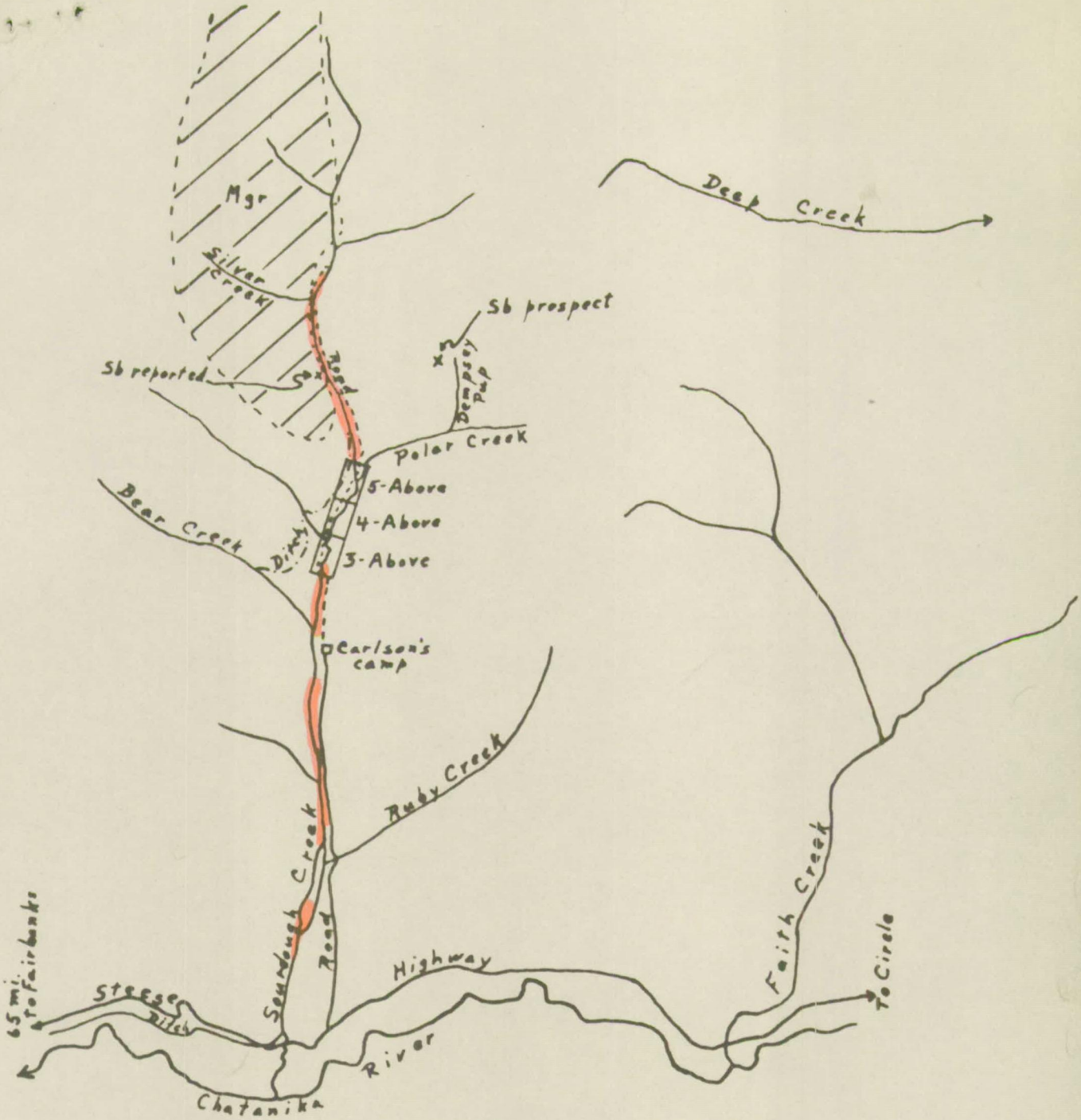

Figure 1
Map of Sourdough Creek area.

N

Mgr -- Mesozoic granitic rocks.

All other is Precambrian Birch Creek schist.

-- Tailing piles.

0.5 0 1 2 miles

1/63,360