MME Form 9
Rev. Nov. 65

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

OFFICIAL DOCKET FILE Contract No. _____ Docket No. 6872

Application
- [x] Denied
- [ ] Withdrawn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 Semiannual 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 Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual 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

72195-65

4-17

Kirk:

I agree with Roscoe on recommending denial. Should we prepare denial here, based on:

(1) Insufficient target to warrant $60,000 program

(2) Most of work indicated is not exploration, but is rehabilitation

(3) Results of the work outlined at present would not establish nature and extent of deposit, but would, possibly, lead to additional request.

We could recommend systematic prospecting and development of a specific small exploration program for future consideration.

United States Department of the Interior

GEOLOGICAL SURVEY
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

April 12, 1972

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 14 197
INITIALS | CODE
4-17 RAW

Memorandum

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

From: Field Officer
Region II

Subject: New Application (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek No. 1, et al., Claims
Chitina Recording District, Alaska

Enclosed is one copy of a new application received in this office on April 11, 1972. A duplicate copy is retained in our files.

The application is exceptionally well organized and presented, but it is incomplete with respect to the following numbered items, owing perhaps to the applicant's lack of professional experience in mining exploration.

Although the application is incomplete, we suggest that you do not request more data from the applicant prior to a field examination because we expect to recommend denial. The region is characterized by very few, narrow, discontinuous veins. The continuity of this one is not known, but several exposures indicate a vertical vein 30 inches wide and possibly 500 feet long (100 tons per foot of depth) containing sulfides that would have to be mined through a wet shaft and milled on the property.

Eight assays ranging from 0.002 to 0.714 oz. Au/ton and 0.09 to 2.60 oz. Ag/ton and one assay of $225,000 per ton based on hearsay in 1926 do not justify a $60,000 project.

2. Applicant's Rights in Land:

A document is required to show transfer of title from the three individuals who located the claims to the corporate applicant. There is no property map suitable for a contract.

3. Physical Description:

There are no maps or sketches on a scale large enough to show the veins and locations of samples. The sampling method is not described, but appears to be selected small specimens.

5. Exploration Work:

The applicant proposes to repair the road, repair an old cabin, clear overburden from the vein, and sample the vein. The time is estimated for each of these jobs, but not the amount of work to be done--length of road, length and depth of stripping. The application requests a blank check to spend four months on the property. Since there is no adequate map, the work items cannot be illustrated for a contract.

7. Estimate of Costs:

The costs of equipment and supplies are not specified but are reduced to a monthly expense. Some equipment (pump, chain saw, trailer) are included at full purchase price, but only depreciation would be allowable. No costs are allowed for restoration of the surface, should they be required.

R M Smith
for H. K. Stager

MME Form 40
(Revised Nov. 71)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Form Approved
Budget Bureau No. 42-R1368

OFFICIAL COPY O. M. RECEIVED APR 14 1972 INITIALS/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.)*

BENITO CREEK MINING COMPANY, INC.
P. O. BOX 2455
ANCHORAGE, ALASKA 99510

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6872

DATE RECEIVED: 4-14-72

REGION: II

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [X]
- PARTNERSHIP [ ]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: Alaska

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
W. O. Holmes	P. O. Box 2455 Anchorage, Ak. 99510	President
Ray W. Thompson	Route A, Box 1507 Anchorage, Ak.	Vice Pres.
Dean Wilson	Copper Center Alaska 99573	Sec-Treas.

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

ESTIMATED COST OF PROJECT: $60,000 for First Phase

PROPERTY NAME	LOCATION COUNTY	STATE
Benito Creek	Valdez Quadrangle	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. II). 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 Department of the Interior, U.S. Geological Survey, Office of Minerals Exploration, Washington, D. C., 20242, 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.

4/7/72
DATED

W. O. Holmes
BY *(Signature)*

President
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

(submit on accompanying pages)

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 (1) *true copies of your letters to credit sources* which show date of loan request, amount and terms requested, and proposed use of loan funds and (2) *true copies of 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 signed by owner on MME Form 52. If the agreements cannot be obtained, state reasons and whether you can furnish a performance bond.

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.

(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) 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. State your reasons for expecting to find ore.

(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, address, and telephone number 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 *for 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 on maps also the relation of the proposed work to any existing mine workings and to *claim 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 time and materials *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 price 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 and mobilization charge. 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, and materials.

(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).]

FINANCIAL
ELIGIBILITY

1. FINANCIAL ELIGIBILITY

	Page No.
(a) Letters Requesting Credit:	
(1) Matanuska Valley Bank	1 - 1
(2) Alaska State Bank	1 - 2
Replies to Loan Requests:	
(1) Matanuska Valley Bank	1 - 3
(2) Alaska State Bank	1 - 4
(b) No other affiliated, parent, or controlling companies or organizations are involved.	
(c) Proposals for furnishing applicants' share of the cost of exploration work:	
(1) Financial Statement from W. O. Holmes	1 - 5
(2) Financial Statement from Dean Wilson	1 - 6
(3) Financial Statement from Ray Thompson	1 - 7

March 25, 1972

Mr. Perry Dowd, Vice President
Matanuska Valley Bank
712 West 4th Street
Anchorage, Alaska

Dear Mr. Dowd:

I am writing to inquire if your bank would consider the possibility of making us a loan for exploration costs to investigate the feasibility of mining the claims we hold near Chitina, Alaska. There are 12 claims held in the name of Benito Creek Mining Company, Inc., and the three principals involved are Dean Wilson, Ray Thompson, and W. O. Holmes. (Mr. Holmes has had a personal checking account at your bank.)

We have retained a consulting geologist and a mining engineer, both of whom have recommended further exploration of this property. There is a mineralized quartz vein, 18" to 4'-5' wide, depth unknown, and which, at one time, was uncovered to a distance of 600 feet. It contains silver, copper and gold, as well as other minerals. I can furnish copies of the assays if you feel these are advantageous to your decision.

The exploration plan outlined by the mining engineer includes improving the existing cabin; removing the overburden from the vein which would require a caterpillar with hydraulic blade; taking various samples from the exposed vein for adequate assays; core drilling; and sinking a shaft into the vein to explore it from the inside. All work would be done under his direction. He feels the approximate cost of the first phase would be around $60,000.

I am attaching hereto financial statements of the Directors of the corporation.

An early reply would be appreciated.

Very truly yours,

BENITO CREEK MINING CO., INC.

By_____
Beth R. Holmes

March 25, 1972

Mr. W. R. McVitty, Vice President
Alaska State Bank
Box 240
Anchorage, Alaska 99510

Dear Mr. McVitty:

I am writing you to inquire if your bank would consider the possibility of making us a loan for exploration costs to investigate the feasibility of mining the claims we now hold near Chitina, Alaska. There are 12 claims held in the name of Benito Creek Mining Company, Inc., and the three principals involved are Dean Wilson of Copper Center, Ray Thompson of Anchorage, and W. O. Holmes, also of Anchorage.

We have retained a consulting geologist and a mining engineer, both of whom have recommended further exploration of the property. There is a mineralized quartz vein, 18" to 4'-5' wide, depth unknown, and which, at one time, was uncovered to a distance of 600 feet. It contains silver, copper and gold as well as other minerals. I can furnish copies of the assays if you feel these are advantageous to your decision.

The exploration plan outlined by the mining engineer includes improving the existing cabin and road; removing the overburden from the vein which would require a caterpillar with hydraulic blade; taking various samples from the exposed vein for adequate assays; core drilling; and sinking a shaft into the vein to explore it from the inside. All work done would be under his direction. He feels the approximate cost of the first phase would be around $60,000.

I am attaching hereto financial statements of the Directors of the corporation.

An early reply would be appreciated.

Very truly yours,

BENITO CREEK MINING CO., INC.

By_____
Beth R. Holmes

MATANUSKA VALLEY BANK

12 SOONER OR LATER 6 9 3

MATANUSKA
VALLEY BANK

PERRY E. DOWD
VICE PRESIDENT

POUCH 7012

MAIN OFFICE
ANCHORAGE, ALASKA 99501

March 30, 1972

Benito Creek Mining Company, Inc.
Post Office Box 2455
Anchorage, Alaska 99510

Gentlemen:

Your request for a loan of $60,000.00 for use in exploration work is acknowledged. It is determined that this application will not meet the loan requirements of this bank and therefore it must be declined.

We regret that we will be unable to assist you in your loan requirements.

Sincerely,

Perry E. Dowd
Vice President

PED/gc

ALASKA state bank

POST OFFICE BOX 240 – ANCHORAGE, ALASKA 99501 (907) 277-5661

April 7, 1972

Benito Creek Mining Company, Inc.
P.O. Box 2455
Anchorage, Alaska 99510

Attention: Beth R. Holmes

Dear Mrs. Holmes:

Thank you for your application to cover exploration costs regarding claims you now hold near Chitina,Alaska.

I am sorry that this is not the type of loan we are looking for at this time; and since the funds will not be used within our normal banking area, we will be unable to comply with your request at this time.

We thank you for thinking of us and hope you will again contact us at some future date when we may be in a better position to help.

Very truly yours,

R. Bundy
Vice President

FINANCIAL STATEMENT

Name WILLIAM O. HOLMES

Address 901 East 9th, Apt. #5, Anchorage, Ak.
Mailing Address: P. O. Box 2455, Anchorage, Alaska 99510
Date of Birth: March 12, 1914 Occupation Ironworker

Married: Yes No. of Dependent Children: 0

Average Earnings past Five Years: Approximately $12,000/yr.

Assets:

Home (~~Owned, Leased,~~ Rented) $ 245 payments per month

Automobiles, Trucks, & Other Vehicles Owned 1967 Plymouth Valiant, 1967 Ford 3/4 ton Pick-Up Truck

Monthly payments on above: $ 0 Balance due: $ 0

Furniture: $ 0 monthly payments Life Insurance $ 13,000

Bank Accounts: Checking $ 1500 Savings $ 0

Accounts Receivable: $1000 due from Dr. R. W. Stagg
$ 200 due from B. J. Holmes

Other Property Owned: (Radios, Guns, Snowmachines, etc.) Ham Radio Equipment and Commercial Cameras Estimated Value $ 7000

Other Real Estate Owned 1960 - 28 ft. Streamline Travel Trailer $7,000

Stocks, Bonds, Investments Current value as of 10/20/71 - $14,000

Liabilities:

Debts owned not shown above: $ None

Average Monthly Expenses: $ 600

- -

Budget for OME loan includes salaries to be paid for working at the claim at the rate of $8.46/hr., 40 hrs. per week, with time-and-a-half for additional 20 hrs. per week. It is customary in Alaska when working in bush country to work 6 days per week, 10 hours per day, plus room and board so these figures are standard. This figures out at $592.20 per week gross. After deductions, net check should be approx. $400/wk. Part of the loan will be paid from my earnings. Any balance will be paid from my own resources, as indicated by above financial statement.

Signed: Wm O. Holmes 1-5 Dated: 1-1-72

FINANCIAL STATEMENT

Name Dean L. Wilson

Address Copper Center Alaska 99573

Date of Birth: 1/14/41 Occupation laborer - trapper

Married: yes No. of Dependent Children: three

Average Earnings past Five Years: $10,000.00 per year

Assets:

Home (Owned, Leased, Rented) $15,000.00 VALUE ~~payments per month~~

Automobiles, Trucks, & Other Vehicles Owned 1969 Chev ½ ton P/u

Monthly payments on above: $ 0 Balance due: $ 0

Furniture: $ 1,000.00 monthly payments 0 Life Insurance $ 10,000.00

Bank Accounts: Checking $ 500.00 Savings $ 2100.00

Accounts Receivable: $ 5000.00 from home property being sold now

Other Property Owned: (Radios, Guns, Snowmachines, etc.) 4 snowmachines, 1 trailer, 4 guns, 2 radios, one tool set. Estimated Value $ 2,000.00

Other Real Estate Owned 2 lots in Glenn Valley (@ 2,000 value) 1 house & lot in Chickaloon (subject to auction sale)

Stocks, Bonds, Investments 0

Liabilities:

Debts owned not shown above: $ only current utility bills

Average Monthly Expenses: $200.00 a month groceries, clothing, utilities, and some expenses

- -

Budget for OME loan includes salaries to be paid for working at the claim at the rate of $8.46/hr., 40 hrs. per week, with time-and-a-half for additional 20 hrs. per week. It is customary in Alaska when working in bush country to work 6 days per week, 10 hours per day, plus room and board so these figures are standard. This figures out at $592.20 per week gross. After deductions, net check should be approx. $400/wk. Part of the loan will be paid from my earnings. Any balance will be paid from my own resources, as indicated by above financial statement.

Signed: Dean L. Wilson 1-6 Dated: Oct 22 1971

FINANCIAL STATEMENT

Name Ray W Thompson

Address RR 4 Box 15507 Anchorage Alaska

Date of Birth: 6/19/21 Occupation Crane Oper.

Married: yes No. of Dependent Children: none

Average Earnings past Five Years: $20,000 per year

Assets:

Home (Owned, Leased, Rented) $ 150.00 payments per month

Automobiles, Trucks, & Other Vehicles Owned 1965 Barracuda 1966 Bronco Holiday Rambler 27' Travel Trailer

Monthly payments on above: $ none Balance due: $ none

Furniture: $ none monthly payments Life Insurance $ 5000.00

Bank Accounts: Checking $ 3000.00 Savings $ 2000.00

Accounts Receivable: $ Gross 1140.00 Per wk - wages

Other Property Owned: (Radios, Guns, Snowmachines, etc. Snowjet air boat 9 ga. guns Estimated Value $ 5000.00

Other Real Estate Owned none

Stocks, Bonds, Investments none

Liabilities:

Debts owned not shown above: $ 20,000 on Home 30,000 value

Average Monthly Expenses: $ 300.00

- -

Budget for OME loan includes salaries to be paid for working at the claim at the rate of $8.46/hr., 40 hrs. per week, with time-and-a-half for additional 20 hrs. per week. It is customary in Alaska when working in bush country to work 6 days per week, 10 hours per day, plus room and board so these figures are standard. This figures out at $592.20 per week gross. After deductions, net check should be approx. $400/wk. Part of the loan will be paid from my earnings. Any balance will be paid from my own resources, as indicated by above financial statement.

Signed: Ray W Thompson Dated: 10-23-71

APPLICANT'S
LAND RIGHTS

2. APPLICANT'S RIGHTS IN LAND

Page No.

(a) Benito Creek Mining Company, Inc. is sole owner of land and mineral rights to property. There are no liens, mortgages, or other encumbrances on the land.

(b) Legal Description - A total of 12 claims were filed and recorded in the Chitina Recording District, Glennallen, Alaska on July 29, 1971. True copies of each claim are attached showing Section, Township and Range, and the book and page number where recorded. These 12 claims are as follows:

(1)	Benito Creek No. 1	2 - 1
(2)	Ada M.	2 - 2
(3)	Beth R.	2 - 3
(4)	Lorraine	2 - 4
(5)	Panama North	2 - 5
(6)	Mother MaCree	2 - 6
(7)	Alaska Queen	2 - 7
(8)	Trappers Cache	2 - 8
(9)	Arctic Spotlite	2 - 9
(10)	Frozen Sourdough	2 - 10
(11)	Silver Dollar	2 - 11
(12)	Sixty One-37 North	2 - 12

The property was first staked in 1911 and has been known as Benito Creek, Canning Property, and Canning-Centino property. There were claims under the old staking with the names of Eugenie, Yellow Jacket, Bruce, Old Boy #2, Vicar of Wakefield, and Sancho Panza. Last Proof of Labor was filed on these claims on March 29, 1920 on the Vicar of Wakefield.

No further claims filed since that date. See letter from State Dept. of Natural Resources dated July 9, 1971. 2 - 13

(c) Not applicable.

Note: Applications have been obtained and are being prepared for filing with the Regional Habitat Office, Alaska Dept. of Fish & Game, and also with the Water Resources Section, Division of Lands, Dept. of Natural Resources, State of Alaska for permission to use the water on the claim.

CHITINA
Serial No. 71-142

BOOK Lode PAGE 150
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM BENITO CREEK No 1. LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

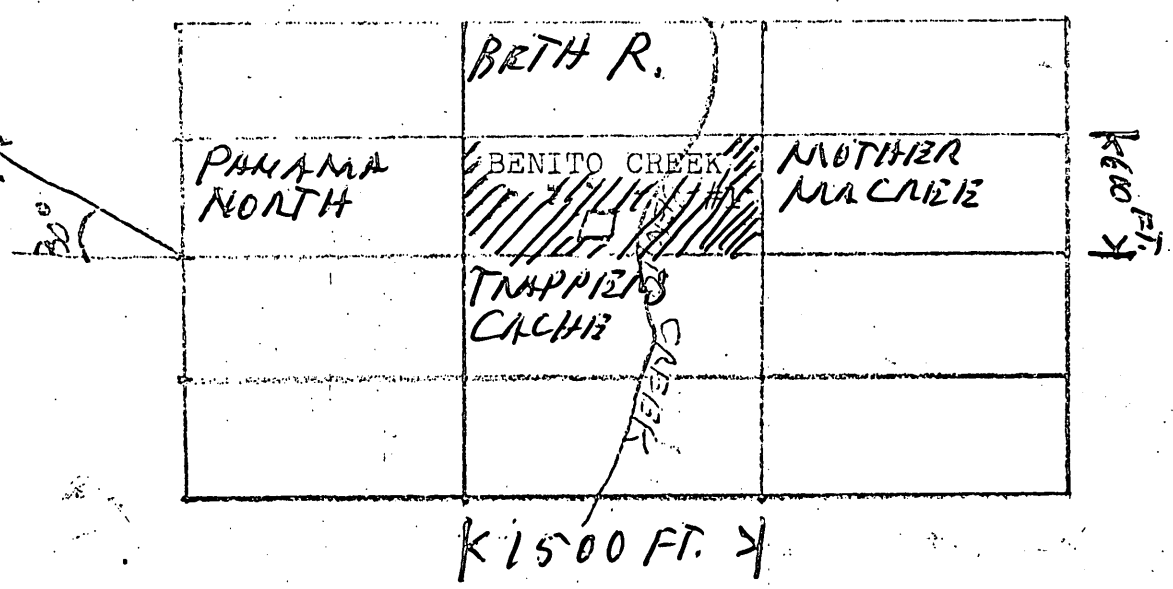
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JUNE 6 1971

DATE OF DISCOVERY: OCT 2 1970

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is 750 ft. in a SOUTH direction from Corner No. 1.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



We hereby certify that we have on this date posted this location notice at the Northeast corner of the said claim in the Chitina Recording District of Alaska, approximately 9 miles in a Southeast direction to Strelna, Alaska. The claim is on Benito Creek on Iron Mountain, Section 9, T3S, R7E, Copper River Meridian, Alaska, as shown on USGS Valdez (C-1) Quadrangle Map.

LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
DATE 7-29 1971
TIME 11:10 A M
Requested by W. O. Holmes
Address Box 2455
Anchorage AK 99501

CHITINA
Serial No. 71-743

BOOK 9 Lode PAGE 151
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM ADA M. LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

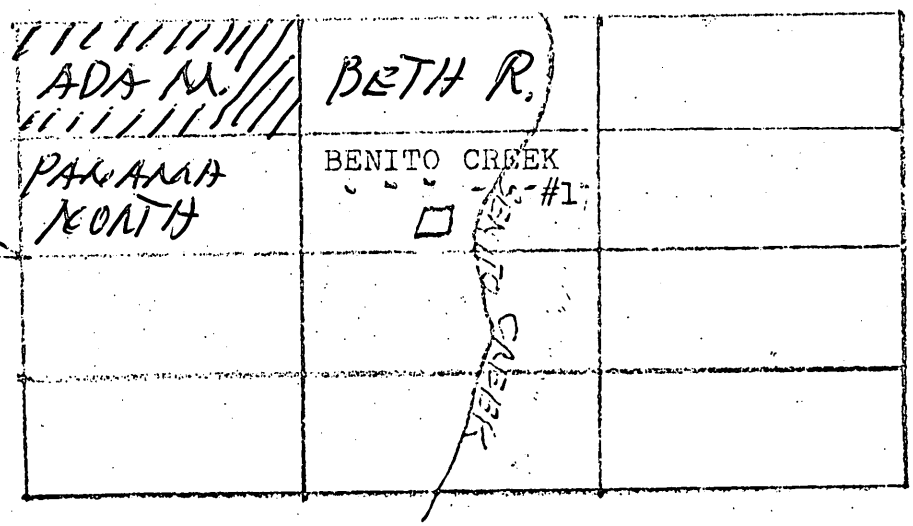
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JUNE 6

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



We hereby certify that we have on this date posted this location notice at the Northeast corner of the said claim in the Chitina Recording District of Alaska, approximately 9 miles in a Southeast direction to Strelna, Alaska. The claim is on Benito Creek on Iron Mountain, Section 9, T3S, R7E, Copper River Meridian, Alaska, as shown on USGS Valdez (C-1) Quadrangle Map.

LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
DATE JUL 29 1971 19__
TIME 11:10 A M
Requested by W. O. Holmes
Address Box 2455
Anchorage AK

CHITINA
Serial No. 71-744

BOOK 9 Lode PAGE 152
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM BETH R. LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

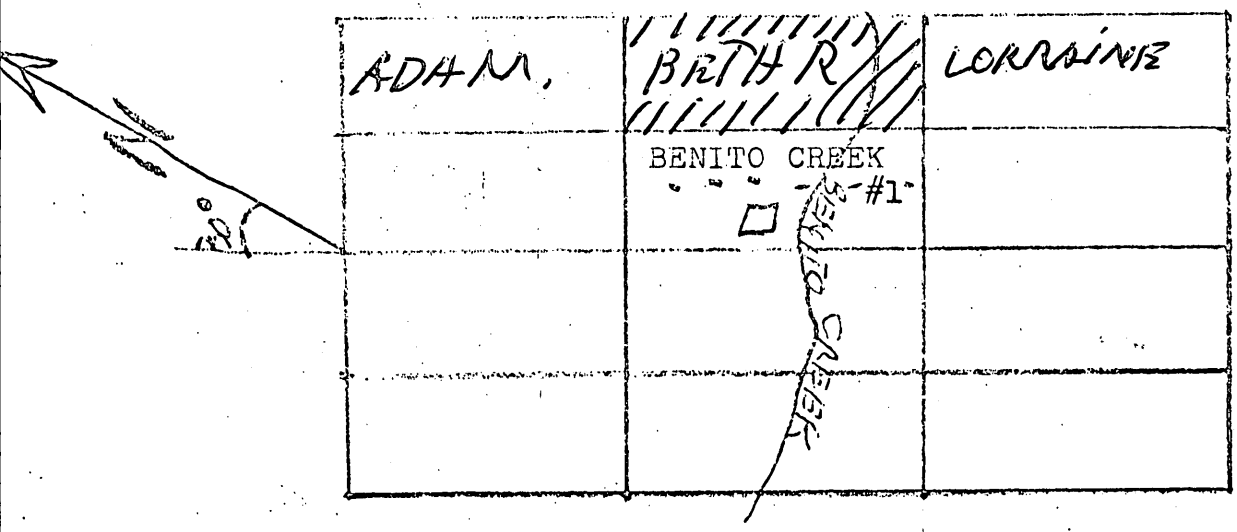
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JULY 6

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



We hereby certify that we have on this date posted this location notice at the Northeast corner of the said claim in the Chitina Recording District of Alaska, approximately 9 miles in a Southeast direction to Strelna, Alaska. The claim is on Benito Creek on Iron Mountain, Section 9, T3S, R7E, Copper River Meridian, Alaska, as shown on USGS Valdez (C-1) Quadrangle Map.

LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED FILED
____ REC. DIST.
DATE JUL 29 1971 19____
TIME 11:10 A M
Requested by W. O. Holmes
Address Box 2455
Anchorage AK.

CHITINA
Serial No. 71-745

BOOK 9 Lode PAGE 153
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM LORRAINE LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JUNE 6 1971

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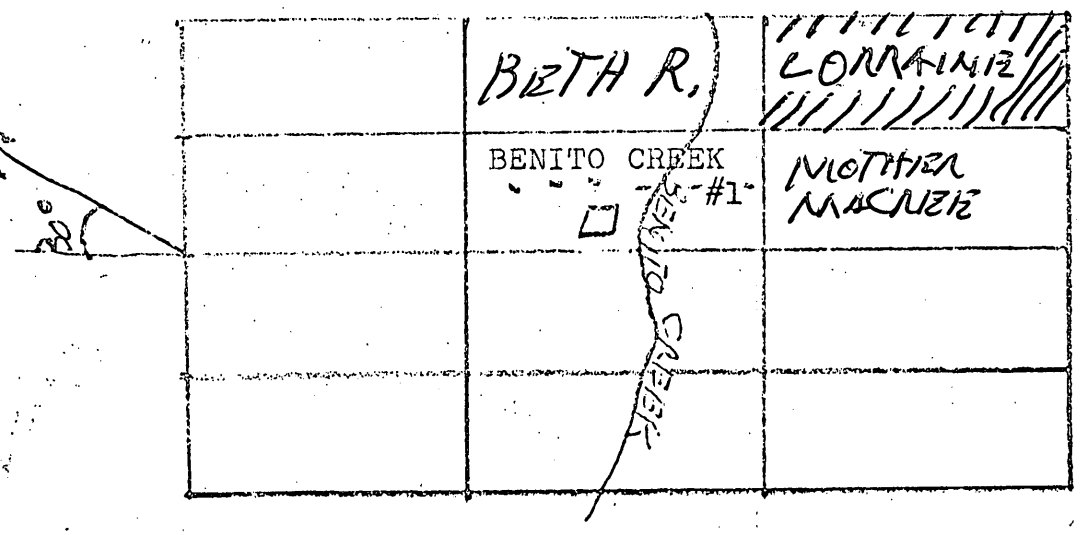
This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



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LOCATORS SIGNATURES:

Dean Wilson
Ray Thompson
W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
JUL 29 1971
DATE ____ 19____
TIME 11:10 A M
Requested by W. O. Holmes
Address Box 2455
Anchorage AK

CHITINA
Serial No. 71-747

BOOK 92 PAGE 155
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM PANAMA NORTH LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

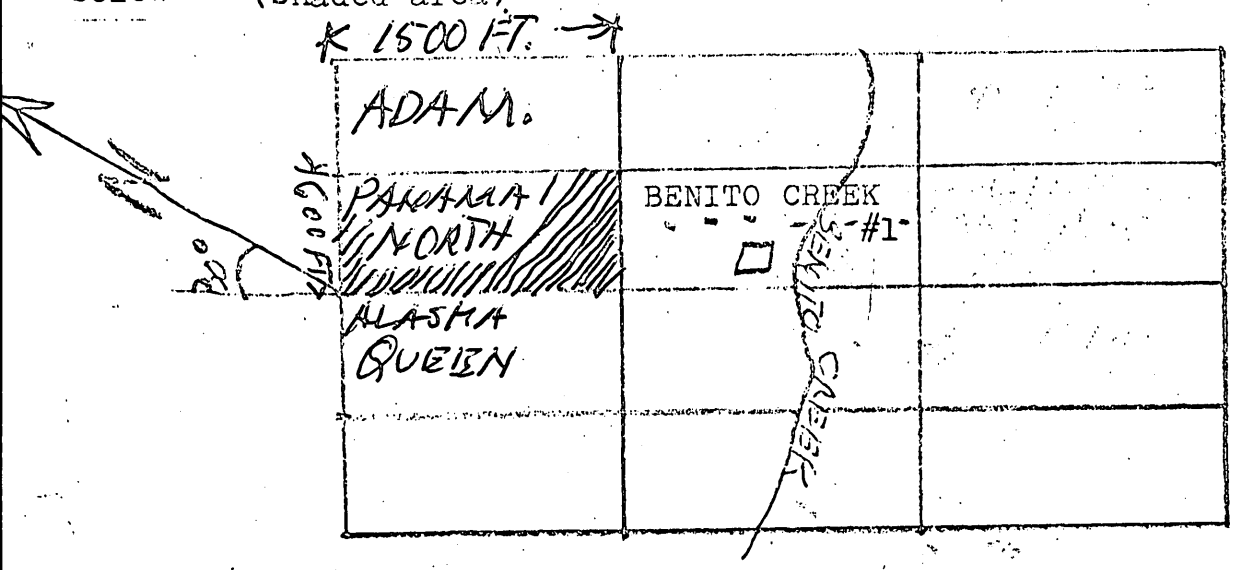
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JUNE 6 1971

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



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LOCATORS SIGNATURES:

Dean Wilson — Dean L. Wilson

Ray Thompson — Ray W. Thompson

W. O. Holmes — W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
JUL 29 1971
DATE ____ 19____
TIME 11:10 A.M.
Requested by W. O. Holmes
Address ____

CHITINA
Serial No. 71-746

BOOK 9 Lode PAGE 154
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM MOTHER MACREE LODE X PLACER ____
(Check One)

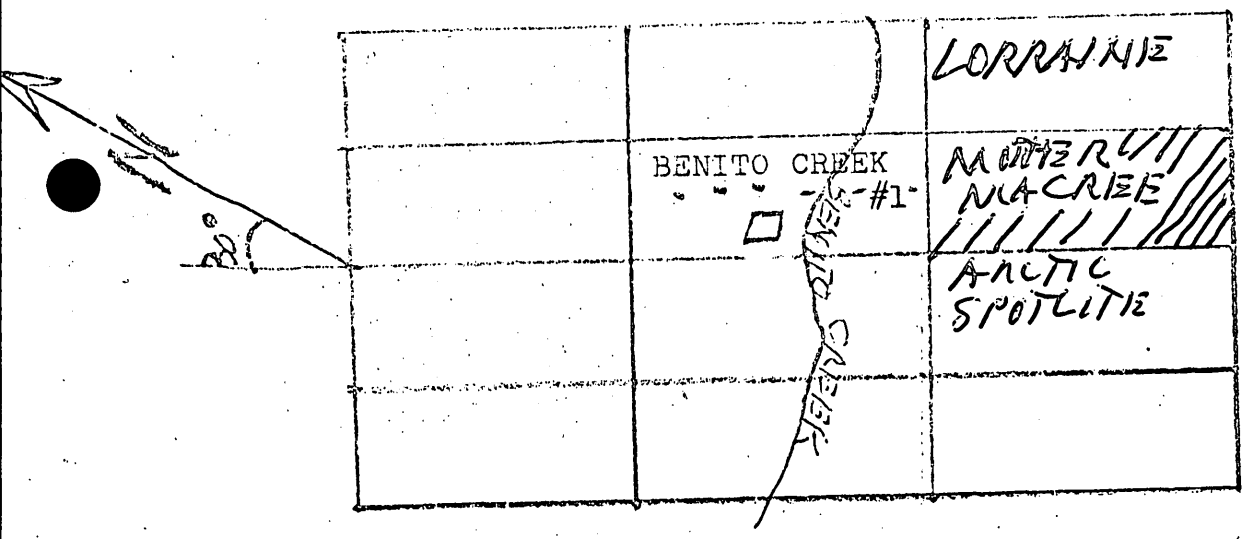
NAMES OF LOCATORS:
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: July 27 1971

DATE OF DISCOVERY: June 6 1971

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



We hereby certify that we have on this date posted this location notice at the Northeast corner of the said claim in the Chitina Recording District of Alaska, approximately 9 miles in a Southeast direction to Strelna, Alaska. The claim is on Benito Creek on Iron Mountain, Section 9, T3S, R7E, Copper River Meridian, Alaska, as shown on USGS Valdez (C-1) Quadrangle Map.

LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
JUL 29 1971
DATE ____ 19____
TIME 11:10 AM
Requested by W.O. Holmes
Address

CHITINA
Serial No. 71-753

BOOK 9 of C PAGE 161
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM ALASKA QUEEN LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

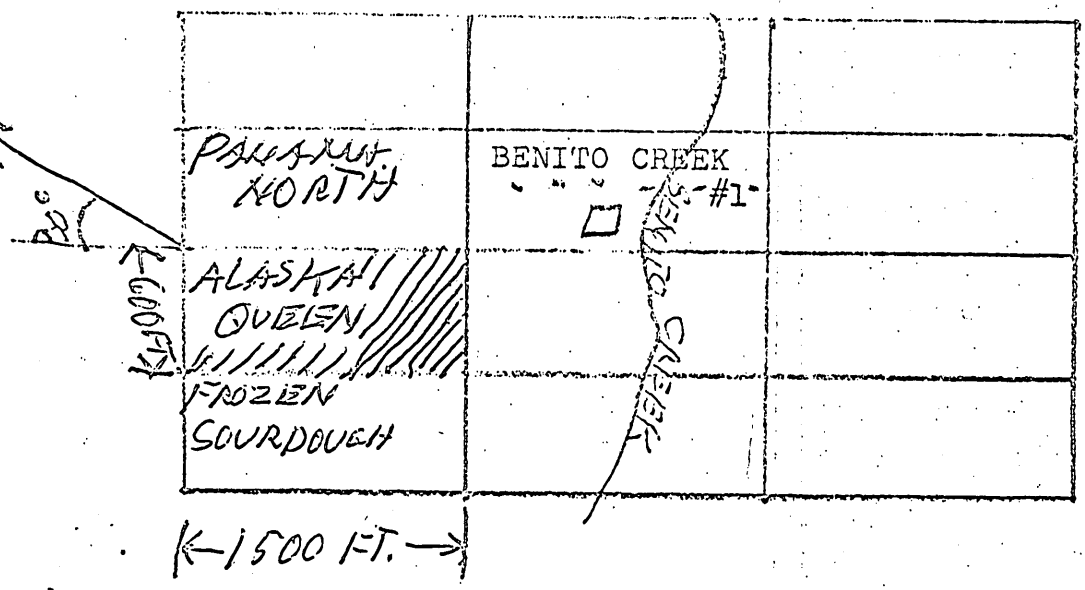
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JUNE 6 1971

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



We hereby certify that we have on this date posted this location notice at the Northeast corner of the said claim in the Chitina Recording District of Alaska, approximately 9 miles in a Southeast direction to Strelna, Alaska. The claim is on Benito Creek on Iron Mountain, Section 9, T3S, R7E, Copper River Meridian, Alaska, as shown on USGS Valdez (C-1) Quadrangle Map.

LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
DATE JUL 29 1971 19____
TIME 11:10 A.M.
Requested by W. O. Holmes
Address

CHITINA
Serial No. 71-749

BOOK 9 Lodes PAGE 157
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM TRAPPERS CACHE LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

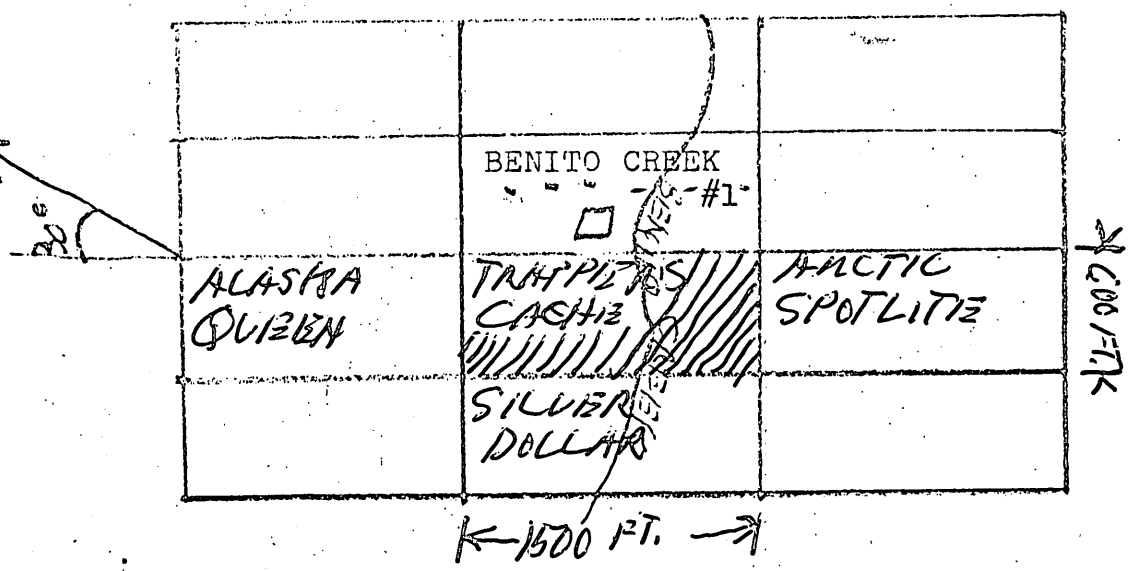
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 28 1971

DATE OF DISCOVERY: JUNE 6 1971

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



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LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
JUL 29 1971
DATE ____ 19__
TIME 11:10 AM
Requested by W. O. Holmes
Address ____

CHITINA
Serial No. 71-748

BOOK 9 Lode PAGE 152
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM ARCTIC SPOTLITE LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 28 1971

DATE OF DISCOVERY: JUNE 6 1971

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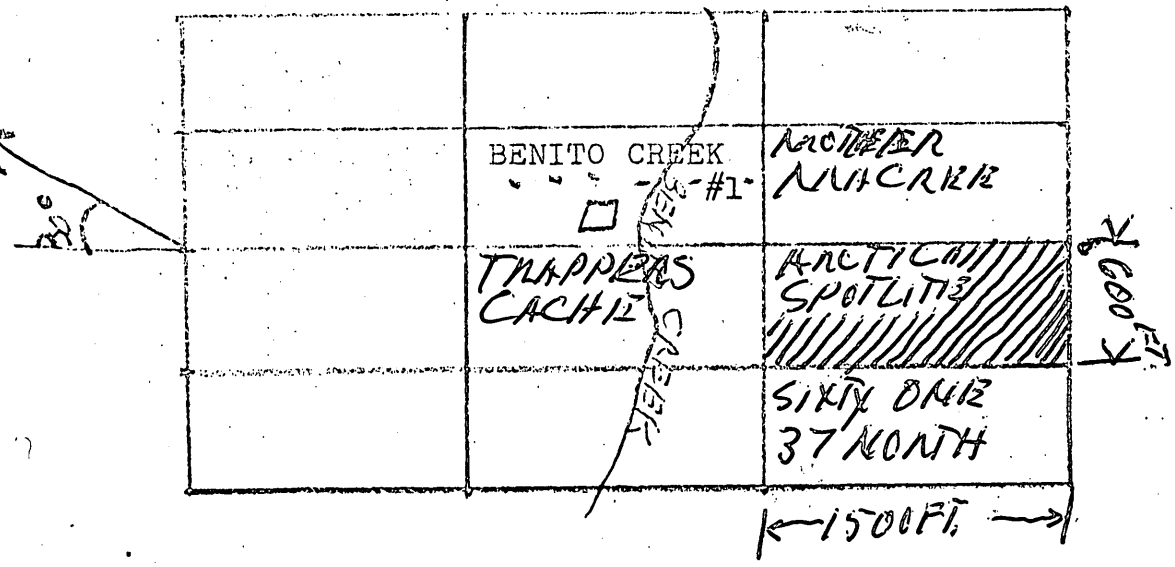

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LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
JUL 29 1971
DATE ____ 19____
TIME 11:10 AM
Requested by W. O. Holmes
Address ____

CHITINA
~~Serial No.~~ 71-751

BOOK 9 Lode PAGE 159
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM FROZEN SOURDOUGH LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

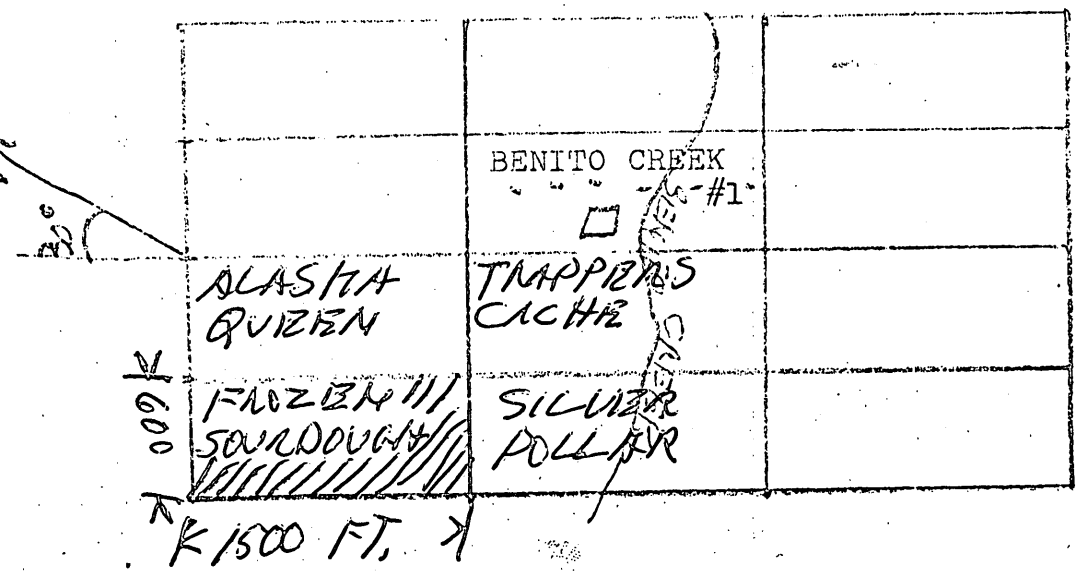
Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 27 1971

DATE OF DISCOVERY: JUNE 6 1971

This Claim is 1500 ft. long in a Northwest direction 30° and 600 ft. wide in a Northeast direction. The Discovery is ____ ft. in a ____ direction from Corner No. ____.

This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



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LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - ~~FILED~~
Chitina REC. DIST.
DATE JUL 29 1971 19__
TIME 11:10 AM
Requested by: W. O. Holmes
Address

CHITINA
Serial No. 71-750

BOOK 9 Lode PAGE 058
Chitina Recording District

MINING CLAIM LOC ION NOTICE

NAME OF CLAIM SILVER DOLLAR LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star ute A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 28 1971

DATE OF DISCOVERY: JUNE 6 1971

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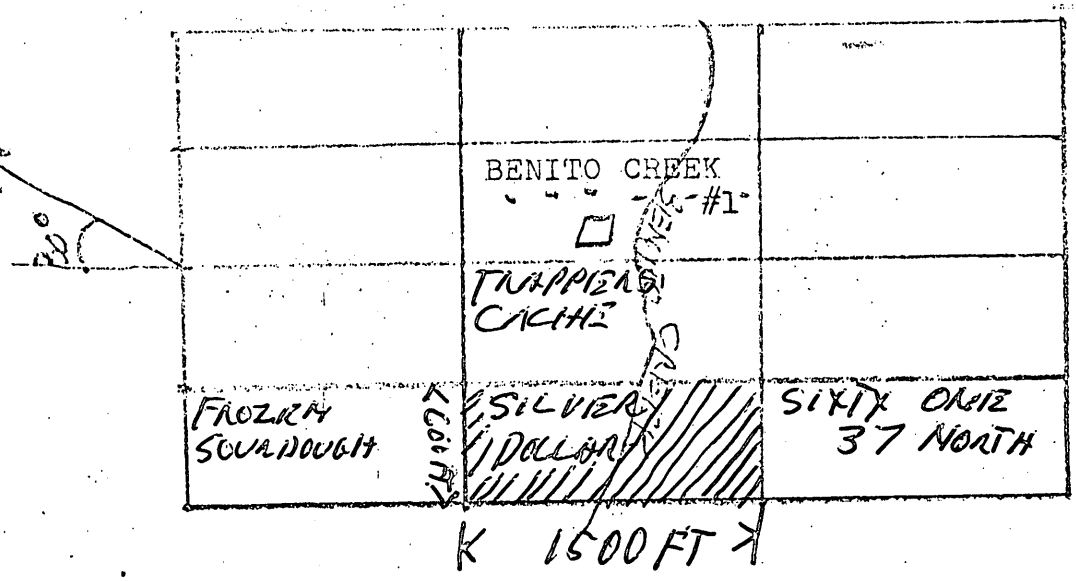
This claim and its relation to adjoining claims are shown in my sketch below: (Shaded area)



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LOCATORS SIGNATURES:

Dean Wilson
Dean Wilson

Ray Thompson
Ray Thompson

W. O. Holmes
W. O. Holmes

RECORDED - FILED
Chitina REC. DIST.
DATE JUL 29 1971 19____
TIME 11:00 A.M.
Requested by W. O. Holmes
Address ____

Serial No. 71-252

Book 9 Lode PAGE 160
Chitina Recording District

MINING CLAIM LOCATION NOTICE

NAME OF CLAIM SIXTY ONE 37 NORTH LODE X PLACER ____
(Check One)

NAMES OF LOCATORS:

Dean Wilson, Copper Center, Alaska 99573
Ray Thompson, Star Route A, Box 1507, Anchorage 99502
W. O. Holmes, P. O. Box 2455, Anchorage, Alaska 99501

DATE OF POSTING THIS NOTICE: JULY 28 1971

DATE OF DISCOVERY: JUNE 6 1971

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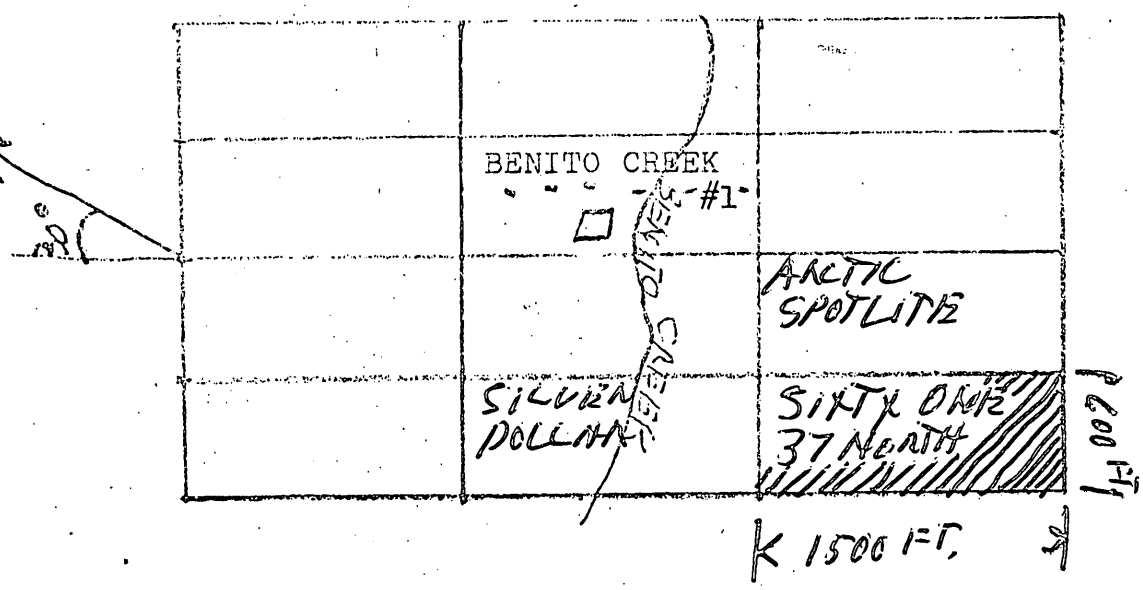

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LOCATORS SIGNATURES:

Dean Wilson

Ray Thompson

W. O. Holmes

RECORDED - ~~FILED~~
Chitina REC. DIST.
DATE JUL 29 1971 19__
TIME 11:10 A.M.
Requested by W. O. Holmes
Address

STATE OF ALASKA

WILLIAM A. EGAN, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF GEOLOGICAL SURVEY / P. O. BOX 5-300 — COLLEGE 99701

July 9, 1971

Mrs. Beth Holmes
P. O. Box 2455
Anchorage, Alaska 99501

Dear Mrs. Holmes:

Following our telephone conversation I researched the Benito Creek area and our files show no record of any claims staked after those of Mr. Canning, therefore, there should be no conflict with your claims.

If we can be of any further assistance please advise.

Sincerely

Mildred Brown
Mining Information Specialist

MB

PHYSICAL
DESCRIPTION

3. PHYSICAL DESCRIPTION

	Page No.
(a) Narrative documentation of previous exploration work on property is as follows:	
(1) USGS Bull. 622 - Mineral Resources of Alaska "Report on Progress of Investigations in 1914" P. 115	3 - 1,2
(2) USGS Bull. 714 - Mineral Resources of Alaska "Report on Progress of Investigations in 1919" P. 193-194	3 - 3,4,5
(3) USGS Bull. 755 - Mineral Resources of Alaska "Report on Progress of Investigations in 1922" P. 68-69	3 - 6,7,8
(4) USGS Bull. 745 - "The Kotsina-Kuskulana District, Alaska" 1923 Pages 81, 125, 142, 143, 146	3 - 9,10,11 12,13,14
(5) USGS Bull. 894 - "Geology of the Chitina Valley and Adjacent Area, Alaska 1938	3 - 15,16
(6) USGS Bull. 1246 - "Metalliferous Lode Deposits of Alaska" 1967 Pages 38, 39, 47	3 - 17,18,19
Maps showing location of Benito Creek Mine:	
(1) USGS Geologic Map and Sections of the Kotsina-Kuskulana District, Copper River Region, Alaska 1923	3 - 20
(2) USGS Mineral Investigations Resource Map MR-32 "Lode Gold and Silver Occurrences in Alaska" 1962	3 - 21
(3) USGS Valdez Open-File Map, "Metallic Mineral Resources Map of the Valdez Quadrangle, Alaska" 1969	3 - 22,23
(4) Map of Benito Creek No. 1 claim showing previous shallow test holes for a distance of 1120 feet that appear to have been dug by hand by the original prospectors. There are no existing mine workings.	3 - 24
Photographs showing some of the exposed portions of the vein.	3 - 25,26

(b) No members of the corporation have now, or have had in the past, any interest in the operations described in (a) above.

(c) There are no production records of this vein. (See USGS map on page 3-21.)

(d) Known ore reserve is vein 18" to 4'-5' wide. According to USGS literature in (a) above, it was once exposed for a distance of over 600 feet. Depth is unknown.

(e) Geology report by Dr. Monte Wilson, Professor of Geology Boise State College, Boise, Idaho. 3 - 27,28

(f)
(1) July 1926 Report by J. G. Shepard, USGS, MR 193.1 3 - 29
(2) 8/2/26 Report from Dept. of Commerce to Shepard 3 - 30
(3) 11/5/70 - Reed Engineering Assay 3 - 31
(4) 12/22/70 - State of Alaska Assay 3 - 32
(5) 7/22/71 -- State of Alaska Assay 3 - 33
(6) 10/5/71 -- Alaska Mineral Lab Assays (3) 3 - 34
(7) 10/6/71 -- Alaska Mineral Lab Assays (2) 3 - 35

Above assays were all taken from mineralized rock which was exposed. (See photos on 3-25,26).

Dr. Monte Wilson (see Report on 3-27,28) took his samples by chipping across width of vein.

See report by William O'Neill, Mining Engineer re assays of samples taken by him and explained in his report 3 - 36

(g) See (e) and (f) above.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

BULLETIN 622

MINERAL RESOURCES OF ALASKA

REPORT ON PROGRESS OF INVESTIGATIONS IN 1914

BY

ALFRED H. BROOKS AND OTHERS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1915

bornite, and quartz, was discovered
feet above the glacier and has been
nels and open cuts. No other ore
rrict. The proportions of the three
is the prevailing copper mineral,
equals it in amount. Quartz shows
dominate over the copper minerals
m. The mass of ore at the surface
ot yet shown its continuation below

a number of other claims east of
the Rarus claim already mentioned.
lana Glacier and on a small stream
aims, 3 miles south of Trail Creek.
started on the Berg claims, but
d in 1914 on account of financial
t work was performed.
e Rarus is the War Eagle, on the
The mineral deposit is near the
nd overlying limestone and sand-
ite, but contains iron and copper
assay are reported to contain gold

Chokosna River, where claims have
has been carried on in a small way
was not visited by the writer, but
m showed sulphides of copper and

DISTRICT.

were carried on at the Kennicott-
nes throughout the year. In win-
much delay in ore shipments from
les on the railroad, as a result of
or weeks at a time. Little delay
owever, and ore was hauled to Cor-
Most of this ore was taken from
of it was produced at the Kenni-
e from the mine to the railroad, a
January 1 to the end of Septem-
cutting, sinking, and raising was
nd nearly 3,700 feet at the Kenni-
oped at the 400-foot level of the
s being sunk to the 500-foot level.
ucted for conveying the ore to the
ore is chalcocite, like that of the

Development work was continued on the Mother Lode property, about 1¼ miles north-northeast of the Kennicott-Bonanza mine, and on the Westover claim, on Dan Creek. The Mother Lode deposit consists of chalcocite and is situated in the same shear zone as the Kennicott-Bonanza mine but is on the McCarthy Creek side of the ridge, between Kennicott Glacier and McCarthy Creek.

This property was productive in 1914. The company reports the completion up to the close of 1914 of about 1,150 feet of underground work. A tramway 7,000 feet long conveys the ore from the mine to the main camp on McCarthy Creek, from which it is hauled 13 miles on sleds to the railroad at McCarthy. Plans have been made for building a new road down McCarthy Creek in 1915 and for installing a concentrator at the main camp.

Assessment work was done by the Great Northern Development Co. on the claims between the forks of Kennicott Glacier. Such work was also done on claims on Hidden Creek and Lakina River, but details of the operations have not been received.

GOLD.

KOTSINA-KUSKULANA DISTRICT.

Interest in prospecting for gold in the Kotsina-Kuskulana district was aroused two years ago by the finding of a gold-bearing vein on Benito Creek, but although search was made for similar veins in the same neighborhood no others of promise have yet been found. The vein on Benito Creek is a short distance below timber line and consists of quartz and calcite containing chalcopyrite, bornite, pyrite, and free gold. At its outcrop in the creek it is about 2 feet thick. It strikes N. 10° W. and stands nearly vertical or with a high easterly dip. Numerous shallow shafts were sunk and a considerable surface area was ground-sluiced off with water brought by a ditch from Benito Creek, in the endeavor to discover the extent and value of the vein. No other attempt has been made to exploit the vein for the owners are unable to do so and do not care to solicit outside capital. Very beautiful specimens of free gold in quartz were produced by dissolving away the calcite with acid. Apparently the gold is not evenly distributed along the vein, for much of the rock shows no gold to the unaided eye and the specimens of gold mentioned came from only a few places.

NIZINA DISTRICT.

Gold mining in the Nizina district is restricted to the gold placers of Dan and Chititu creeks and to certain of their tributaries, Copper, Rex, and White creeks. Young Creek is not an important gold producer, although considerable ground on it is held by men who expect to prospect it with a view to installing hydraulic mining machinery.

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ion, nature and occur-
rence of ----36-38, 75-78, 83,
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ts of volcanic ash, plate
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diversion of---------- 18
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anlel J., cited--------- 12-13

DEPARTMENT OF THE INTERIOR
ALBERT B. FALL, Secretary

UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Bulletin 714

MINERAL RESOURCES OF ALASKA

REPORT ON PROGRESS OF INVESTIGATIONS IN

1919

BY

ALFRED H. BROOKS AND OTHERS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1921

where there is rusty iron-stained gouge and more or less laminated rock containing pyrite and copper-bearing pyrite or chalcopyrite. Copper staining is abundant.

The property of the Chitina-Kuskulana Copper Co. is equipped with a power plant situated on the low, timber-covered gravel bars within a short distance of Kuskulana River. This plant includes an 80-horsepower engine, a 125-horsepower wood-burning boiler, a 62½-kilowatt 3-phase alternating-current generator, and a 7½-kilowatt exciter. Current is carried to the War Eagle claim, where the company has installed a 50-horsepower 3-phase motor, an air compressor, air receivers, two piston drills, jack hammers, and other necessary equipment, including a drill sharpener. Power drills have not yet been used in the Calcite tunnel, but a 6-horsepower gasoline engine, a blower, and 600 feet of air tubing are used to provide ventilation at the tunnel face.

The bars of Kuskulana River furnish easy communication with the bridge over the river and thus with the road to Strelna, making it much easier than formerly to get supplies in summer. The Government bridge recently constructed by the Alaska Road Commission is undoubtedly of great benefit to all the property owners on the east side of Kuskulana River, for its obviates the difficulty and danger of fording that stream, which at times is practically impassable.

A separate company, named the Mount Wrangell Copper Co. but under the same management as the Chitina-Kuskulana Copper Co., controls the Copper Queen, formerly the Rarus group of claims, adjoining the War Eagle group, and also two groups of claims called the Broken Leg and the Mineral King groups on Chokosna River. It is expected that work will be done on the Broken Leg group in 1920.

Benito Creek is a small stream flowing into Kotsina River from the mountains south of Elliott Creek. It is about 9 miles north-northwest of Strelna but is reached from that place by trails considerably longer. Interest in Benito Creek lies in a gold-bearing quartz vein commonly known in the district as the Canning property, from the name of one of the owners who discovered the vein in 1913. The property consists of five recorded claims situated a short distance below timber line on Benito Creek and is owned by Jack Canning and Benito Contino.

The vein consists of quartz and calcite, with quartz predominating, and ranges from 2 to 3 feet in thickness but averages about 30 inches. It dips steeply to the east and strikes N. 70°–75° W., cutting a succession of dark-colored igneous rocks that include both dense basaltic members and coarser granular phases, with abundant horn-

3-4

blende. These rocks grade into each other without sharp boundaries. They are considerably altered and are sheared, particularly near the vein.

The vein originally appeared in the creek as a mass of pure white quartz but has now been proved by a succession of five shallow holes to extend for at least 500 feet. The deepest of these holes penetrated the vein 15 feet. Much difficulty was experienced from water, which flowed along the rock surface beneath the gravel covering, and to obviate this trouble an automatic dam was constructed on the creek and two channels ranging in depth from 2 to 20 feet were sluiced across the claims. Owing to irregularities in the bedrock surface these cuts do not expose the bedrock in many places.

The vein is mineralized with iron and copper sulphides, principally arsenopyrite, which near the surface are much oxidized and have colored the shattered quartz with rusty iron stains. In places the oxidized vein has furnished some handsome specimens of free gold. Small particles of free gold are rather common in much of the oxidized vein and contain or are accompanied by silver, as is shown by the assays.

On the left-hand side of the creek about 100 feet downstream from the vein is another quartz vein carrying arsenopyrite and a black metallic mineral, probably hematite. This vein strikes N. 10° W.

About one claim length still farther downstream is a vein of rusty shattered quartz 8 to 9 feet wide, containing pyrite and arsenopyrite. Several open cuts have been made on this vein, but no particularly encouraging results have been gained.

Benito Creek at present has no adequate means of communication with Strelna. It lies on the direct route to Elliott Creek and may be reached by any one of several trails that have been made since the railroad was constructed. The chief difficulty with all these trails, which are pack trails only, is that parts of them are wet and soft except in the driest weather or in winter, when they are not used.

KENNICOTT.

The property of the Kennecott Corporation near Kennicott now includes three working mines, for in addition to the Bonanza and Jumbo mines the corporation has acquired the Mother Lode mine, formerly operated from the McCarthy Creek side of the ridge, between Kennicott Glacier and McCarthy Creek. Formal control of the Mother Lode began on May 1, 1919, and since that time ore from the Mother Lode has been delivered to the mill at Kennicott over the Bonanza tramway. The three mines are now connected underground, so that it is possible to pass from one mine to any other, a great advantage in operation and management. The connections

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DEPARTMENT OF THE INTERIOR
HUBERT WORK, Secretary

UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Bulletin 755

MINERAL RESOURCES OF ALASKA

REPORT ON PROGRESS OF INVESTIGATIONS IN

1922

BY

A. H. BROOKS AND OTHERS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1924

3-6

The copper deposits in greenstone are believed to have undergone weathering and possibly alteration during the same period as the deposits in limestone. Like the deposits in limestone, they have not been shown by mining development to change in character as they are followed downward. No reason exists, therefore, for supposing that copper deposits exposed at the surface will become either richer or poorer below the surface. The surface exposures are dependent on the accidents of erosion, which may have progressed only so far as to expose the beginning of an ore body or which may have exposed a maximum cross section or removed all but the last traces of the body. The first two possibilities are well illustrated by the conditions at Kennicott. When the Bonanza mine was discovered a large section of the ore body was exposed at the surface, and hundreds of tons of high-grade ore that had been eroded from the exposed vein lay in the talus on each side of Bonanza Ridge. The deposit at the Jumbo mine, on the other hand, was little more than indicated by surface exposures, and not until mining had proceeded for some time was the immense size of that ore body disclosed.

GOLD.

Gold has been produced in Chitina Valley from both lode deposits and placers. The production from the lode deposits, however, is insignificant in comparison with that from the placers, and such gold as has been obtained from lodes so far has cost more than its market value.

Gold-bearing veins are known in rocks of the Strelna formation; in the Valdez group, which lies south of and adjacent to rocks that are correlated with the Strelna formation in Hanagita Valley and the mountains between Copper River and Tonsina Lake; and in the Cretaceous shales of the Nizina district.

It is believed that the gold was deposited during at least two periods, of which one was earlier than that of the Upper Jurassic (?) rocks east of Kuskulana River and the other necessarily later than that of the Upper Cretaceous shales inclosing the veins of the Nizina district. Possibly other periods are also represented. Evidence for a period of gold deposition earlier than Upper Jurassic is not complete. Possibly the gold-silver veins of Berg Creek are not connected with the contact-metamorphic copper deposits near by on MacDougall Creek but are of later age. If this is true the gold deposits may eventually prove to belong to only one period.

All the gold veins so far discovered occur in rocks that are cut by granodioritic intrusives, and although the dependence of one on the other has not been demonstrated, the association is thought to be

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[6] Mertie, J. B., The occ
regions: U. S. Geol. Surv

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significant. Mertie[6] has shown the existence of such a relation in the Yukon and Kuskokwim regions, and its existence in this district is probable.

The gold-bearing veins have not been explored sufficiently to warrant a separation into distinct types, yet differences in manner of occurrence are apparent. The silver-gold deposits of Berg Creek have been mentioned. They occur as veins of iron and copper sulphides with a little quartz and are found in a body of porphyritic granodiorite. Pyrite is the prevailing sulphide, but chalcopyrite is present and shows an iridescent stain where weathered. Mill tests have shown that the richest ore comes from oxidized parts of the veins and that silver predominates largely in quantity over the gold.

A promising gold vein on Benito Creek near the trail from Strelna to Elliott Creek consists of quartz and a subordinate quantity of coarsely crystalline calcite, with which are associated chalcopyrite, bornite, pyrite, and free gold. Stains of azurite and malachite have resulted from the oxidation of the copper sulphides. This vein is in rocks of the Strelna formation.

The gold-bearing veins of the Valdez group, such as those found along the lower Copper River and the Valdez road, consist of quartz carrying arsenopyrite and free gold. Galena is present in places. These veins cut slate and graywacke and are associated with light-colored dikes of diorite porphyry. Some of them have yielded small quantities of rich gold ore, but development work has always shown that the high-grade ore is irregularly distributed. Although such ores have furnished fine specimens, no considerable quantity of gold has yet been found, and none of the deposits have been worked profitably.

The gold-quartz veins in the Cretaceous shales of the Nizina district contain pyrite and free gold with locally some molybdenite and probably some stibnite. Galena, cinnabar, barite, and marcasite may also be present, for they are found in the creek gravels. A small vein on Rex Creek was found to consist of quartz with molybdenite and pyrite and assayed 0.18 ounce of gold and 12.80 ounces of silver to the ton. A dike rock near this vein seemed little altered and contained pyrite with traces of both gold and silver. These occurrences are cited to show the evidence for a local source of some of the gold in the creek gravels and to indicate that prospecting for gold lodes may be justified.

Gold placers in this district have been mined profitably only in the drainage basins of Dan and Chititu creeks and on a tributary to the north branch of Bremner River south of Chitina Valley.

[6] Mertie, J. B., The occurrence of metalliferous deposits in the Yukon and Kuskokwim regions: U. S. Geol. Survey Bull. 739, pp. 149–165, 1922.

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DEPARTMENT OF THE INTERIOR
HUBERT WORK, Secretary

UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

Bulletin 745

THE KOTSINA-KUSKULANA DISTRICT ALASKA

BY

FRED H. MOFFIT

AND

J. B. MERTIE, JR.

WASHINGTON
GOVERNMENT PRINTING OFFICE
1923

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tion with the quantity of unconsolidated material they contain, yet they are noticeable topographic features. Little is known of their structure except what can be seen on the surface. They contain ice that fills the spaces between rock fragments, but the source of the ice and the relative quantities of ice and rock have not been determined.

The retreat of the glaciers gave the streams an opportunity to begin the work of adjusting their channels and grades to the changed topography. In many places the headwater grades of streams were much reduced by ice erosion or the valley heads were even so greatly lowered as to form rock basins. In other places the channels were filled with gravel and morainal deposits, so that the streams were dammed and forced to find new outlets. This they did by overflowing the barriers and removing the unconsolidated deposits or by cutting into the solid rock itself. The canyons of lower Kotsina and Kuskulana rivers were formed in this way, as were also some of the canyons in the valleys of small streams. More commonly, however, the canyons of the small streams had a different origin. They were formed at the mouths of hanging valleys, where the increased grade gave the streams power to incise their channels in the rock. Such canyons are well illustrated by Fall Creek, in Kluvesna Valley; by Peacock (Pl. IX, A, p. 7), Roaring, Rock, and Copper creeks, in Kotsina Valley; and by Nugget and Slatka creeks, in Kuskulana Valley. Each of these streams flows in a deep channel between rock walls at the place where it emerges from its own valley to the main river valley. The cutting of the canyons did not begin till after the ice level of the main valley was lowered below the mouths of the hanging valleys. It is still in progress and therefore is a part of the most recent history of the district.

Glaciation is the latest great cause that gave this district its present topography. The effects of glaciation are seen in many ways, as has been pointed out, yet weathering and stream erosion have already begun to destroy the features produced by it.

MINERAL RESOURCES.

By F. H. Moffit and J. B. Mertie, Jr.

The mineral resources of the Kotsina-Kuskulana district include gold, silver, and copper. Until recently copper held first place in the consideration of prospectors and miners, although placer gold is present in small quantity on Slatka Creek, and some effort to recover it was made in former years. The gold-bearing quartz vein on Benito Creek, however, and the silver-gold deposits of the North Midas Copper Co. on Berg Creek have brought these metals into greater prominence, and they give better promise of immediate production than the copper deposits.

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separates these two formations. On the Lawton claim a fault that strikes N. 30° W. and dips 50°–60° S. is seen between the greenstone on the south and the porphyry dike on the north. The dike here shows a thickness of 30 to 35 feet. Several open cuts have been made in the greenstone and show small amounts of pyrite and chalcopyrite impregnating the rock adjacent to joint or fault planes. Green copper stain and also the copper sulphate chalcanthite were seen in a number of other places. The copper minerals where observed were all within a few feet of the porphyry dike, but any other relation between the two was not evident.

Cliff claim.—The Cliff claim is on the west side of Deception Creek. Here two open cuts have been made at an altitude of 600 feet above the mouth of this stream. The greenstone is cut by numerous fault planes, and slickensided surfaces are frequently seen, but perhaps the most prominent of the planes of movement strike nearly east and dip about 45° N. The green copper carbonate and the oxide of iron stain the greenstone. Small amounts of the copper sulphides also are exposed along joint planes, but no considerable exposure of ore has been made.

Chance claim.—The Chance is the most westerly of the patented claims and includes the prominent point of the limestone cliff which is seen on entering the valley. A small open cut only a few feet below the base of the limestone shows the green copper stain and a little bornite in the greenstone.

Other claims.—A considerable number of claims on Elliott Creek not included in those already mentioned are held by the Hubbard-Elliott Copper Co. Some of them are patented claims; others are unpatented and require assessment work each year. To a certain extent the work required on the unpatented claims has interfered with the rapid exploration of claims like the Albert Johnson and Elizabeth, for it has necessarily diverted attention from them during a large proportion of the working season. On the other hand, it is not possible to work in a place like the lower Albert Johnson tunnel early in the summer, inasmuch as the deep gulch through which Deception Creek flows is then blocked by snow and ice.

All of the Elliott Creek channel from a point somewhere below the lower camp and in addition parts of the mountain slope south of the creek are now covered by claims. The claims south of the creek, except those on the Nikolai greenstone, were staked as a result of excitement over lode gold caused by the discoveries on Benito Creek. (See p. 142.) They are mostly in the area of older rocks belonging to the Strelna formation and were not looked on as favorable for copper. Furthermore, they have not yet afforded gold-lode prospects that give promise of value.

3-11

There are in the district, however, at least two promising prospects in which gold is the most valuable or the predominant valuable metal and several prospects that contain gold in addition to copper and that have been mentioned in the description of the copper deposits.

BENITO CREEK.

Benito Creek is a small stream flowing into Kotsina River from the southwest slope of the ridge between Elliott Creek and the Chitina Valley. It is crossed by the horse trail from Strelna to Elliott Creek but at certain times of the year is difficult to reach because part of the trail is very wet and soft. The direct distance from Strelna is 9 miles; the distance by trail is between 1 and 2 miles farther. Spruce in the vicinity extends up to an altitude of 3,000 feet above the sea, or about 600 feet higher than the Benito Creek camp, and is of fair quality, so that timber suitable for most mining needs is available close at hand. Most of the creek is within the area of glacial deposits covering the floor of Chitina Valley, from which it results that outcrops of bedrock are few and are found principally along the creek bed. So far as is known, however, the country rock consists of altered igneous and sedimentary rocks belonging to the Strelna formation.

A gold-bearing vein was discovered on Benito Creek in 1913 by J. C. Canning, and at the time of the writer's last visit in 1919 it was being prospected by Mr. Canning and his partner, Benito Centino. The original exposure is a white quartz vein 3 feet thick, which crops out in the creek bed at an altitude of 2,400 feet. This exposure and others near by are now covered by five mining claims arranged in the form of a letter H, with the cross bar extending down the creek from the discovery point. The country rock inclosing the principal vein is in some places coarse diorite and in others a dense altered basalt sheared parallel to the vein, which strikes N. 30° W. and dips 70°–75° E. The vein itself is well defined for nearly 600 feet by open cuts made by sluicing away the overburden and by a line of five shallow holes which were put down to the vein and one of which penetrated it to a depth of 15 feet. Although the creek and the morainal deposits are not deep, the sinking of these holes was accomplished with some difficulty because of water, which flows along the bedrock surface. This difficulty was partly obviated by building a dam and automatic boomer on the creek above the vein and sluicing away the loose material. In this way two cuts ranging in depth from 2 to 25 feet were made. They exposed a complex of sheared and altered rocks, including fine-grained basalt intruded without distinct boundaries by dark coarse-grained diorite containing conspicuous hornblende crystals.

The gold-bearing vein is in most places about 30 inches thick but ranges from 2 to 3 feet. It consists of quartz with a subordinate

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quantity of calcite. The metallic constituents are pyrite, arsenopyrite, chalcopyrite, silver, and free gold. In most places the vein is fractured and much oxidized, yielding a rusty, cavernous quartz mass in which the free gold appears. Stains of azurite and malachite are conspicuous on fresh surfaces. Many handsome specimens of free gold in quartz from this locality were made by dissolving the calcite gangue so as to expose the gold. The largest piece of gold obtained in this way was valued at $50. Such specimen ore is now uncommon, and most of the ore shows no gold to the eye.

Nearly 100 feet downstream from the principal vein, just described, another quartz vein crops out on the left-hand side of the creek. It strikes N. 10° W. and stands vertical. This vein is also much weathered and contains arsenopyrite and a shining black metallic mineral believed to be specular hematite. Still farther downstream, on one of the claims lying across the creek, is a vein of shattered rusty quartz, 8 to 9 feet wide, containing arsenopyrite and pyrite. Several holes were sunk on it but without particularly encouraging results.

The owners of these claims have not had the means to prospect the ground on an extensive scale and have had to work elsewhere to earn the money to carry on the prospecting that has been done. It is unfortunate that the real value of the property has not yet been determined.

BERG CREEK.

The mining claims of the North Midas Copper Co. (see also p. 140) are on the southeast side of Kuskulana River and extend for nearly a mile along Berg Creek, from the mill site near the river onto the mountain slope south of the creek. They are connected with the Nugget Creek road to Strelna by a branch road which leaves the main road half a mile above Squaw Creek and crosses Kuskulana River by the new Government bridge 1 mile above the mouth of Squaw Creek. From the bridge the road follows first the foot of the bluff and next the gravel bars of the river to the mill on the low terrace overlooking the river a short distance north of the place where Berg Creek reaches the river flats. This road has been in use since 1919 for automobile travel.

The mineral holdings include 18 lode claims, 4 placer claims, and 1 power site. Ole Berg made the original lode locations about 1907 and has been connected with the property as owner or manager since that time. These first locations were on mineralized veins whose valuable content was thought to be copper, and until 1916 prospecting was done in the expectation of developing a copper mine rather than a gold or silver mine. This earlier work is described on page 140, in the section devoted to the copper prospects. In 1916 the tunnel known as No. 4 intersected a vein of sulphide ore which

3-13

into the mountain, but shows local variation from this dip. Without doubt the vein extends beyond these limits, but its surface croppings are concealed by the vegetation that covers the smooth mountain slopes, and no attempt has been made to uncover them by cross trenches or pits.

The vein has a banded structure and consists of quartz and a very subordinate amount of calcite in which are disseminated iron and copper sulphides, principally pyrite and chalcopyrite. Weathered pieces of the ore show the iridescent hues of the copper sulphides, but the quantity of copper is small. Considerable chemical alteration has taken place in the country rock adjacent to the vein filling, yet little dissemination of the metallic minerals through the country rock was noticed.

The value of the ore lies in the silver and gold accompanying the iron and copper sulphides. The silver and gold appear not to have even an approximately uniform quantitative relation to each other except that silver predominates, for different parts of the vein have shown a silver content ranging from twice to four times that of the gold. The quantity of silver and gold is greatest in the more oxidized parts of the vein, from which an assay of over $150 to the ton has been obtained. The average content of the ore, however, is much smaller than that. No studies were made to determine the form in which silver and gold are present in the vein. It is supposed that they were brought in solution with the iron and copper sulphides and were deposited with them. Chemical tests made by the engineer at the mill laboratory showed the presence of tellurium in the ore, but there is no evidence that the gold and silver formed chemical combinations with it.

OTHER VEINS.

Several other gold-bearing quartz veins have been staked in the vicinity of Benito Creek, but so far as the writer knows they have not shown so good indications of value as the Canning-Centino prospect. One such vein is on Benito Creek and is possibly the extension of the Benito Creek vein. Another is at the crossing of the old Elliott Creek trail and Loraine Creek, a little outside the mapped area. Still another is on the south side of Elliott Creek a little distance above Castle Creek, where a short tunnel was driven in the Nikolai greenstone along a quartz-calcite vein striking N. 25° W. and dipping at a high angle to the east. This vein follows a prominent fault with slickensided surfaces and horizontal striations that show the fault movement to have been in that direction. It is mineralized with pyrite and was reported to contain gold.

Assays of $2 and $3 to the ton are also reported from copper ores on a claim on Rainbow Creek, on the north side of Elliott Creek.

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UNITED STATES DEPARTMENT OF THE INTERIOR
Harold L. Ickes, Secretary
GEOLOGICAL SURVEY
W. C. Mendenhall, Director

Bulletin 894

GEOLOGY OF THE CHITINA VALLEY AND ADJACENT AREA ALASKA

BY
FRED H. MOFFIT

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1933

For sale by the Superintendent of Documents, Washington, D. C. - - - - - - - - Price $1.25

3-15

Creeks and their tributaries, in the Nizina district. Other streams that have yielded placer gold are Young and Golconda Creeks. Insignificant amounts of placer gold have been produced from Slate Creek, in the Kuskulana Basin, and from Fall Creek, near Tiekel. The gold placers of the Chisana district are outside the limits of the area considered in this paper.

One characteristic of the gold placers that have been most productive should be emphasized particularly. The richest gravel owes its richness largely to a concentration of gold that was disseminated through the deep bench gravel and was brought to its state of concentration by the erosive action of streams that sorted out and removed the lighter constituents from the bench gravel, leaving behind the heavier material, just as is done in a sluice box. Further reference is made to this fact on pages 128-129.

Auriferous veins in the bedrock furnished the gold that, through the processes of weathering and transportation by water and other means, was finally distributed in the gravel. It is proper therefore to consider the vein deposits first.

Gold-bearing veins are known in rocks of the Strelna formation and in rocks of the Chugach Mountains that have been correlated with the Strelna. The greater number of known veins, however, are in rocks of Lower Cretaceous or later age on the north side of the Chitina Valley and in that great assemblage of slate and graywacke beds in the Chugach Mountains that is believed to be largely if not wholly of Mesozoic age and to have been deposited at least in part during Cretaceous time.

It is probable that the gold was deposited during at least two periods, of which one was earlier than that of the Upper Jurassic (?) rocks east of the Kuskulana River and the other necessarily later than that of the Lower Cretaceous shales that enclose the veins of the Nizina district. Possibly other periods are also represented, but no gold-bearing veins are known in the Tertiary rocks. Evidence for a period of gold deposition earlier than Upper Jurassic is not complete. Possibly the gold-silver veins of Berg Creek are not connected with the contact-metamorphic copper deposits nearby on MacDougall Creek but are of later age. If this is true the gold deposits may eventually prove to belong to only one period.

All the gold veins so far discovered occur in rocks that are cut by granodioritic intrusives, and although the dependence of one on the other has not been demonstrated, the association is close in places and is thought to be significant. Mertie [53] has shown the existence of such a relation in the Yukon and Kuskokwim regions, and its existence in this area also is probable.

[53] Mertie, J. B., Jr., The occurrence of metalliferous deposits in the Yukon and Kuskokwim regions: U. S. Geol. Survey Bull. 739, pp. 149-165, 1922.

The gold-bearing veins have not been explored sufficiently to warrant a separation into distinct types, yet differences in manner of occurrence are apparent. The silver-gold deposits of Berg Creek occur as veins of iron and copper sulphides with a little quartz and are found in a body of porphyritic granodiorite. Pyrite is the prevailing sulphide, but chalcopyrite is present and shows an iridescent stain where weathered. Mill tests showed that the richest ore comes from oxidized parts of the veins and that silver predominates largely in quantity over the gold.

A frequently mentioned gold vein on Benito Creek near the trail from Strelna to Elliott Creek consists of quartz and a subordinate quantity of coarsely crystalline calcite, with which are associated chalcopyrite, bornite, pyrite, and free gold. Stains of azurite and malachite have resulted from the oxidation of the copper sulphides. This vein is in rocks of the Strelna formation. Although it has been known for many years and considerable work was done on it at one time, no serious attempt has been made to exploit it recently and little more is known of its possibilities.

The gold-bearing veins of the Chugach Mountain area, such as those found along the lower Copper River, near the Richardson Highway, and in other localities, consist of quartz carrying metallic sulphides and free gold. Galena is present in places, also arsenopyrite, sphalerite, pyrite, and a little chalcopyrite. These veins cut slate and graywacke and are associated with light-colored dikes of diorite and granite. Many of the veins have yielded rich samples of gold ore, and several have produced gold commercially. The largest and best known of the productive veins is at the Cliff mine of the Chugach Mines Co., on Valdez Arm, which lies outside the area under consideration. Another vein that yielded between $10,000 and $20,000 before the rich ore was exhausted is the Ellis mine, on Boulder Creek near Tiekel. This vein, like the gold-bearing veins nearby on Mill Creek and on Hurtle Creek, consists of gold-bearing quartz that was deposited in one of the systems of north-south joint planes that cut the slate and graywacke beds and are characteristic of the Tonsina district. The quartz of the north-south joint system appears to be later than the quartz veins that follow the foliation of the subschistose country rock and the equally prominent vein system that includes the multitude of thin parallel veins which are seen everywhere in that district. At least it may be said that the mineralization was associated with north-south veins. The weathering of veins of this trend probably accounts for the gold in the gravel of Fall Creek and of Quartz Creek, a stream that flows into the Tonsina River and produced a little placer gold during the gold excitement of 1898 and 1899.

At present (1935) much local interest is centered on the prospecting of gold-bearing veins at the head of Golconda Creek, a tributary of

3-16

Metalliferous Lode Deposits of Alaska

By HENRY C. BERG *and* EDWARD H. COBB

GEOLOGICAL SURVEY BULLETIN 1246

An inventory of the mines and prospects of Alaska and their geologic settings

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1967

3-17

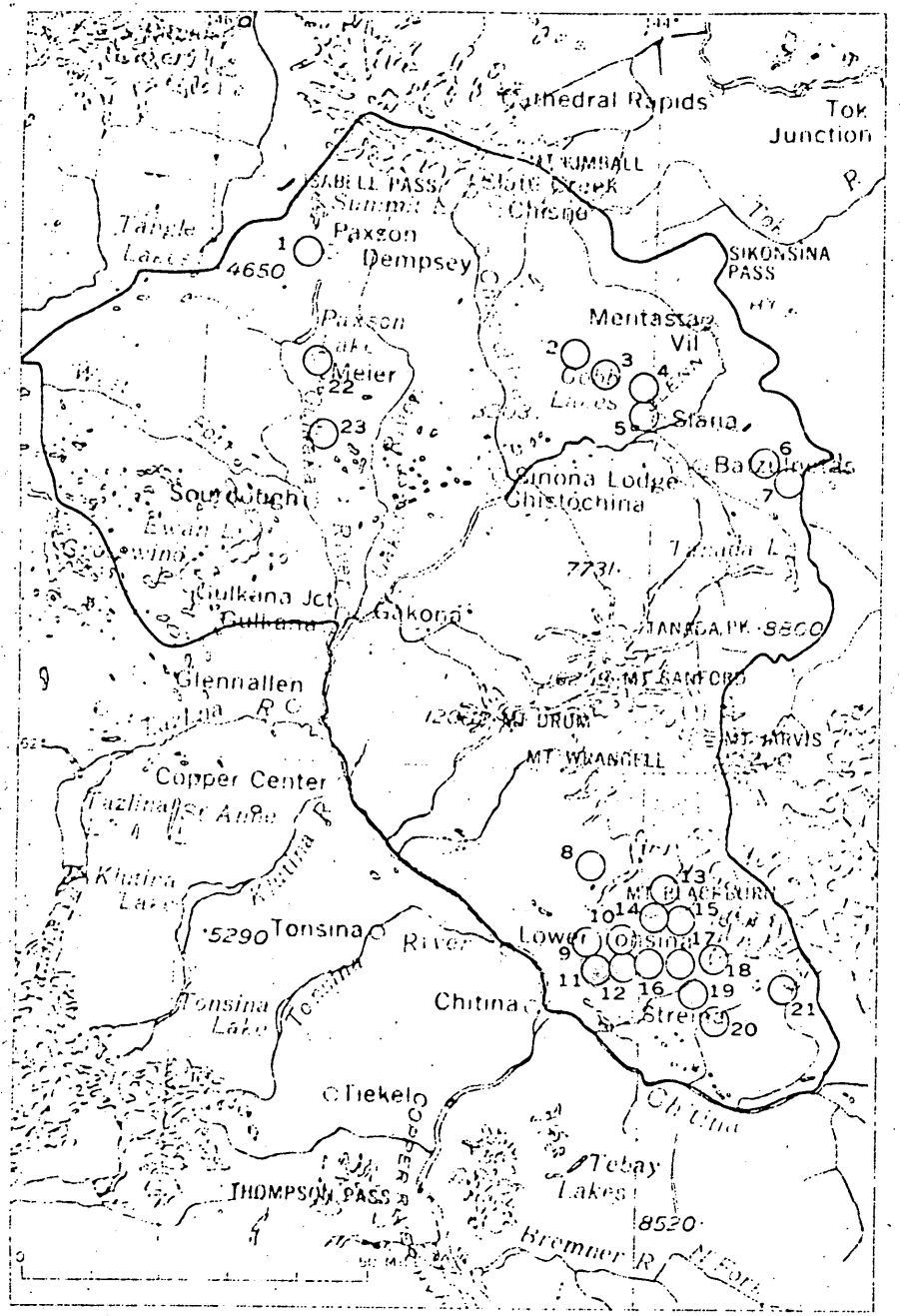


FIGURE 10.—Metalliferous lode deposits in the Chistochina district.

(Localities listed on next page.)

LOCALITIES SHOWN ON FIGURE 10

1. *Paxson Mountain

Slana area

2. *Burns
3. *Indian Creek
   Neversweat
   *The Dome
4. *Grubstake Creek
5. Bronnicke
   *Silver Creek
   Unnamed

6. *Unnamed
7. *Rock Creek
8. *Bear Creek
   *Mount Chitty

Kotsina-Kuskulana area

9. *Elliott Creek
10. Ammar
    Blue Bird
    Bunker Hill
    Cave
    *Elliott Creek
    Forget-me-not
    Mountain Boy
    Mountain Sheep
    *Mullen
    Peacock
11. *Benito Creek
12. Iron Mountain
13. Fall Creek
    Goodenough
    *Mineral Creek
14. *Larson

*Cited individually in the text.

Kotsina-Kuskulana area—Continued

(14.) *Lime Creek
*Lost Cabin
*Silver Star
*Warner
*Unnamed
15. *Amy Creek
    Copper King
    Keystone
    Kotsina River
    *Peacock Creek
    *Roaring Creek
    *Shower Gulch
    Skyscraper
    *Surprise Creek
16. Strelna Creek
17. *Clear Creek
    Porcupine Creek
18. *Big Horn
    Mayflower
    *Nugget Creek
    *Pierson
19. *Berg Creek (North Midas)
    *Calcite
    Copper Queen (Rarus)
    London and Cape
    *MacDougal Creek
    *War Eagle

20. *Kinney-Golden
21. *Lakina River
22. *Meier Lake
23. *Hogan Hill

o[illegible]ich contain sparse argentif-
ld, in tuff and mudstone 2½ miles
and brecciated, serpentinized mafic
ilver-bearing quartz veins that also
rite, galena, and pyrite, on lower

r, and lead are on a ridge east of
veins cut fractured coarse-grained
vein, which is milky white, massive,
om 18 inches to 10 feet in thickness
l feet. Several opencuts on smaller
-stained vuggy quartz containing
, and probably pyrite. Galena is
ns well-defined streaks and bunches
io of metallic minerals to quartz is
ring quartz showed a trace to 0.04
es of silver per ton, 0.47–19.92 per-
rcent copper. A similar but leaner
the Burns prospect (2), 3½ miles
ccurrence.

AREAS

chalcopyrite, bornite, and native
al Greenstone near its contact with
Creek and Mount Chitty in the
s made in 1962 of the sulfide
ths of gold and 1.5–4.52 ounces of
was recorded.

the Nikolai Greenstone have been
Lakina River (21), about 24 miles
consist of chalcocite and bornite,
s 2 inches thick and partly as veins
gangue minerals. Small veins
the greenstone near the prospects.
), about 11 miles to the southwest,
sliver of Nikolai Greenstone and
tunnel failed to disclose an ore
ned.

axson Mountain area [illegible] by the
and Minerals Rose and Saunders,
es that consist typically of chalco-
and quartz in amygdules, veins,
nally the sulfides are oxidized to

malachite and chrysocolla. Prospect pits have been dug on a few of the deposits, and a chip sample across a 10-foot mineralized zone at one locality assayed 6.9 percent copper.

In 1913, prospectors discovered auriferous quartz veins in sheared and altered igneous and sedimentary rocks on Benito Creek (11), a small tributary of the Kotsina River 12 miles northeast of Chitina. The largest vein is 2–3 feet thick and consists of free gold, pyrite, chalcopyrite, arsenopyrite, and silver in a gangue of quartz and subordinate calcite. One specimen of this vein contained a single piece of gold valued at $50. The prospect was explored by sluicing the overburden from about 600 feet of the largest vein and then sinking a few pits in it and one of the smaller veins. No production was recorded.

An unnamed gold lode (6) about 10 miles east of Batzulnetas consists of a zone 6–12 inches wide made up mainly of thin quartz and calcite stringers containing pyrite, galena, and sphalerite. The deposit probably is in an 8-foot-wide trachyte dike near its contact with diorite gneiss. The dike strikes northwest and dips northeast. The deposit was explored by a short adit, but no ore was produced. West of the adit another trachyte dike contains sparse auriferous(?) pyrite near the contact with the gneiss.

A molybdenite prospect on Rock Creek (7) was explored about 1938 by opencuts and an adit 170 feet long, but the exploration did not disclose a workable ore body. The molybdenite occurs mainly in a pegmatite dike cutting gneiss. The dike strikes northwest and dips southwest and ranges from a few inches to 2 feet thick. It was traced on the surface for about 70 feet. Most of the molybdenite forms small flakes, blebs, and veinlets that are irregularly distributed in shattered parts of the dike and nearby country rock, but small flakes are also scattered through some of the less-fractured gneiss and schist near the adit.

Magnetite and a little chalcopyrite have been found in greenschist and sheared diorite about a quarter of a mile northwest of Meier Lake (22). The metallic minerals form irregular pods up to an inch thick and a few inches long.

At Hogan Hill (23), pyrite and traces of chalcopyrite occur in fractures in granodiorite, and a few small chalcopyrite-bearing quartz veins have been found that are parallel to the foliation of amphibolite.

Additional information on this district is given in the following references: Mendenhall and Schrader (1903b); Moffit (1910, 1918, 1921, 1954a); Moffit and Maddren (1908); Moffit and Mertie (1923); Richter (1963); Rose and Saunders (1965); Thorne (1946); Van Alstine and Black (1946a).

3-19

LODE GOLD AND SILVER OCCURRENCES IN ALASKA

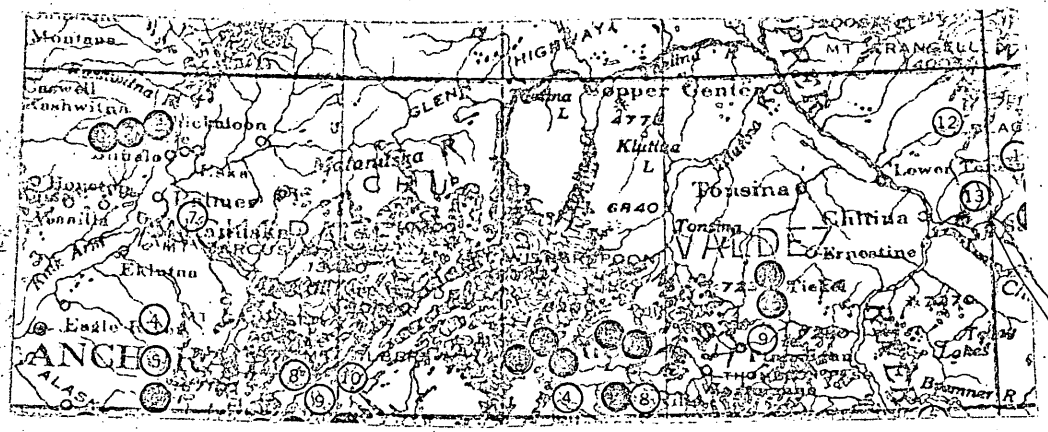
Compiled by
E. H. Cobb

SCALE 1:2 500 000

50 0 50 100 150 MILES

1962

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY



Valdez quadrangle

1. Mayfield; National . . . . . B 662, p. 185-186; B 642, p. 143, 145; B 917-A, p. 27.
2. Cameron-Johnson; Gold King; Minnie; Olson; Rambler; Rough & Tough . . . . . B 622, p. 172-174, 179-180, 183-185; B 662, p. 190, 192; B 910-A, p. 27.
3. Alaska Gold Hill; Alice; Big Four; Bluebird; Bunkerhill; Cliff; Cube; Gold Bluff; Guthrie & Belloli; Hecla; I.X.L; Owl; Palmer; Seacoast; Sealy-Davis; Silver Gem; Spanish; Thompson-Ford; Tuscarora; Whistler . . . . . B 520, p. 123-124; B 622, p. 152-153, 156, 170-172, 174-179; 181-183; B692, p. 150-151; B 792, p. 10; B 989-E, p. 304-306.
4. Curley Kidney . . . . . B 692, p. 172.
5. Alaskan; Big Four; Blue Ribbon; Chesna; Devinney & Dolan; Ethel; 45; Hercules; High Grade; July; Little Giant; Millionaire; Monte Carlo; Mountain King; Mountain View; Quitsch; Rose; Slide; Star; Sunshine; Williams-Gentzler . . . B 520, p. 125-127; B 622, p. 153, 163-169; B 692, p. 150-151; B 810, p. 16; B 836, p. 22; B 880-A, p. 20.
6. Ibex; Pinochle; Ramsay-Rutherford; Rose Johnson; Valdez; Valdez Bonanza . . . . . B 520, p. 127; B 622, p. 159-163; B 722, p. 40; B 989-E, p. 306.
7. Midas . . . . . B 622, p. 151-153, 156-157, 187-188; B 963-B, p. 51-52.
8. Addison Powell . . . . . B 642, p. 140.
9. Townsend & Holland . . . . . B 866, p. 35-36.
10. Eagle; Knowles & Backman; Portland; Reis; Ross . . . . . B 662, p. 177-178; B 866, p. 29-35.
11. Quartz Creek; Wetzler . . . . . B 662, p. 179-181; B 866, p. 27-29.
12. Mt. Chitti . . . . . P 41, p. 94.
13. Benito Creek; Elliott Creek . . . . B 745, p. 115-125, 142-143, 146.

EXPLANATION

CIRCULAR AREAS ARE 6-MILES IN DIAMETER

NUMBERS ARE KEYED TO REFERENCE LIST

Area containing one or more mineral deposits from which gold or silver has been produced

(7) Area containing one or more occurrences of gold or silver, but having no recorded production

MINERAL INVESTIGATIONS
RESOURCE MAP MR-32

Number	Name and principal reference(s)	Commodity 1/
	Copper King: Moffit and Mertie (1923), p. 122	Cu
95	Benito Creek: Moffit and Mertie (1923), p. 142-143	Cu, Au, Ag
96	Willow Mountain: Berg and Cobb (1967), p. 52	Cu, Zn
97	Blackney: Moffit (1914), p. 51-52	Cu
98	Surprise Creek: Moffit (1914), p. 52	Cu
99	Divide Creek: Moffit (1914), p. 52	Cu
100	Falls Creek: Moffit (1914), p. 52	Cu
101	Spirit Mountain: Overbeck (1920), p. 94-98: Pierce (1946), p. 2-8	Co, Cu, Ni, Ag, Zn
102	Opal: Richter (1969)	Au

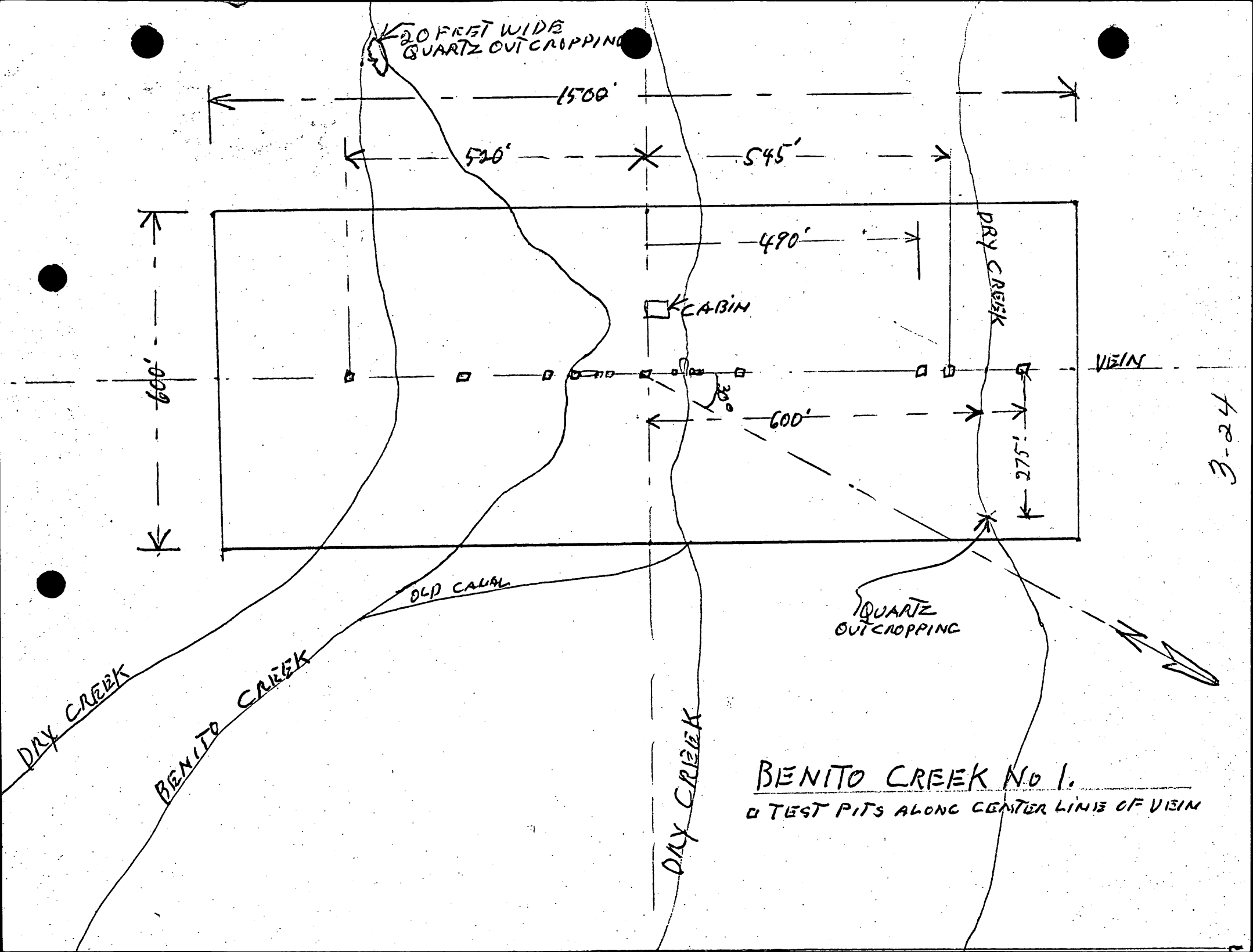
1/ Symbols: Co, cobalt: Cu, copper; Au, gold; Ni, nickel; Ag, silver; Zn, zinc.

Lode deposits not shown on map because locations could not be determined closely enough to plot:

Name and principal reference(s)	Commodity 1/, 2/
Unnamed occurrence: Johnson (1916), p. 140	Cu
Star: Smith (1937), p. 22	Au
Bluff: Brooks (1913), p. 35	Au
Ivanhoe: Johnson (1915), p. 183	Au
Bence-McDonald: Johnson (1915), p. 183	Au
McAllister Creek: Brooks (1916), p. 61	Sb
Glorious Fourth Creek: Johnson (1914), p. 237	Au
Elliott Creek: Moffit and Mertie (1923), p. 125; Moffit and Maddren (1909), p. 64, fig. 2	Cu
Unnamed occurrence: Brooks (1914), p. 61	Au

1/ Symbols: Sb, antimony; Cu, copper; Au, gold.

2/ Symbol underlined indicates recorded production.


20 FEET WIDE QUARTZ OUTCROPPING
1500'
520'
545'
490'
CABIN
DRY CREEK
VEIN
600'
30°
600'
275'
OLD CANAL
QUARTZ OUTCROPPING
DRY CREEK
BENITO CREEK
DRY CREEK
BENITO CREEK No 1.
□ TEST PITS ALONG CENTER LINE OF VEIN

3-24

GEOLOGICAL RECONNAISSANCE OF THE CANNING - BENITO MINE, CHITNA DISTRICT, ALASKA

Examined July 1971
by Monte D. Wilson

At the time this field investigation was undertaken, the Benito Creek property consisted of one lode claim jointly held by Dean Wilson, W. O. Holmes and Raymond Thompson. Eleven additional claims have been staked and filed upon by these men so that they now hold twelve claims on the southwest flank of Iron Mountain, about nine miles north of Strelna.

The original claims in this area were filed by Jack Canning in 1911 on a quartz vein which has been exposed by stream erosion at an elevation of approximately 2400 feet. Canning and Benito Centino hand worked these claims intermittently for several years.

The vein strikes about N 30° W and dips about 70° toward the east. Observed thickness of the vein varies from 16 to 44 inches but averages about 30 inches. Country rock in the area is diorite and basalt, however, in places the basalt has been altered to greenstone. Quartz is the principal constituent of the vein, but it includes minor amounts of coarsely crystalline calcite.

Metallic minerals enclosed within the quartz include chalcopyrite, pyrite, bornite and arsenopyrite. Metallic minerals enclosed within the calcite pods include chalcopyrite, pyrite, bornite and free gold. The gold found during this study was not visible in hand specimens collected from the vein, but was found in small flakes in the insoluble residue after the calcite had been dissolved in acid. It may be that minor amounts of gold and silver are in solid solution within the bornite and chalcopyrite.

Although the property has been mined, it appears that this mining activity involved no mechanization and was confined to surface exposures and shallow pits. Only a very small part of the vein has been touched by mining. There has not been enough mining or exploration to determine the real value of the property.

It is recommended that a competent consulting geologist be employed to design and supervise an exploration program for this property. Objectives of this program should include the following:

1. Determine the length of the vein.

2. Determine the depth and thickness-at-depth of the vein.

3. Determine the distribution and value of gold and silver within the vein.

4. Locate any additional economic deposits that may be in the immediate area and stake more claims if warranted.

Such a program would have to involve surface geology, core drilling and assaying. If adequate financing for an exploration program cannot be obtained, it is recommended that the twelve claims be sold to an established mining company.

REPORT NO. 193.1 - ALASKA DIVISION OF GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES

THE CANNING PROPERTY,

BENITO CREEK - STRELNA,

Chitina Precinct.

Kt 86-139

Examined July, 1926
by J. G. Shepard.

The Canning prospect is situated about 12 miles from Strelna on Benito Creek. It may be reached by following the Hubbard Elliot trail to Cow Creek and then following a branch trail used by Canning.

The showings consist of quartz veins from which the overburden has been ground sluiced away in places. The principal vein has been traced by shallow pits for a distance of 600 feet and shows an average width of 30 inches. Metalic minerals are pyrite, chalcopyrite, arsenopyrite and free gold. The vein stands vertically in country rocks of diorite and basalt.

This prospect is notable for the fact that a discovery of high grade gold ore from which an assay of $225,000 per ton was made. A few hundred pounds of this ore was taken from a shallow pit. Free gold hand specimens are not uncommon, but the gold is not evenly distributed through the quartz. Insufficient work has been done on the vein to determine its true value.

Commerce
xxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxxxxxxx

Aug. 2, 1926.

Mr. J. C. Shepard,
U. S. Geological Survey,
Valdez, Alaska.

Dear Sir;

Your samples submitted July 23 by express, contain as follows;

Sample	oz. per ton Gold	Silver	percent Copper
North Star #1	trace	3.60	trace
" " #2	trace	19.10	1.05
" " #3	trace	0.40	none
" " #4	trace	22.40	0.70
" " #5	trace	55.40	2.82
Pandora #1	trace	12.90	
" #2	trace	14.80	
" #3	trace	1.60	0.15
Canning #1	0.06	0.70	
" #2	0.02	0.90	
Iron dyke	trace	trace	

Very truly yours,

Paul Hopkins,
Analytical Chemist and Mineralogist.

Assays 0620-30

cc Mr. B. D. Stewart, Juneau.

8/21 - Received from J. A. Williams, Chief, Geology Section, Alaska Dept. of Natural Resources, Div. of Geo. Survey, College, Alaska

3-30

REED ENGINEERING
620 SOUTH INGLEWOOD AVENUE
INGLEWOOD, CALIFORNIA 90301

Assay Certificate

Date: NOV - 5 1970

The samples received from Mr. Dean Wilson assayed as follows:

Sample Identification	Gold		Silver	
	oz. per ton	value per ton	oz. per ton	value per ton
Ore	none	---	9.906	$17.70

Silver $1.79 per oz. Gold $35.00 per oz.

Assayer R. Reed

G-3

DM-11
Rev. 10/67

Report No. 2524

Date of Report December 22, 1970

STATE OF ALASKA
Department of Natural Resources
DIVISION OF MINES AND GEOLOGY
Box C, College, Alaska 99701

LABORATORY ANALYSIS REPORT

For Dean L. Wilson

Address Kenny Lake via Copper Ctr., Alaska 99573

Number of Samples 1

Date Sample Received 10/14/70

Work Done: (for Analyst see below)

A. X-ray flourescence quant. ☐ semi-quant. ☐
B. X-ray diffraction ☐
C. Spectrographic quant. ☐ semi-quant. ☐
D. Spectroscopic ☐
E. Atomic absorption quant. ☒ semi-quant. ☐
F. Fire assay ☐
G. Microscopic examination ☐
H. Other (Specify) ☐
I. Ultraviolet light ☐

LABORATORY NUMBER	SAMPLE MARKED	ANALYSIS OR IDENTIFICATION		
		E. Ounces Per Ton		E. Weight Per Cent
		Gold	Silver	Copper
39409	------	0.006	1.520	8.00

E. Accuracy of the atomic absorption analysis for gold and silver is + or - 10% of the reported value.

Accuracy of the atomic absorption analysis for copper is + or - 5% of the reported value.

E -- P.A. Garland TCM
ANALYST & WORK DONE

ANALYST & WORK DONE

ANALYST & WORK DONE

APPROVED: Thomas C. Mowatt
LABORATORY SUPERVISOR

Thomas C. Mowatt

NOTE: Samples discarded after 60 days and pulps after 6 months unless instructed otherwise.

MOORE BUSINESS FORMS, INC. M

3-32

DM-11
Rev. 10/67

Report No. 2663

STATE OF ALASKA
Department of Natural Resources
DIVISION OF MINES AND GEOLOGY
C, College, Alaska 99701

Date of Report July 22, 1971

LABORATORY ANALYSIS REPORT

For W. O. Holmes

Address Box 2455 Anchorage, Alaska 99501

Number of Samples 1

Date Sample Received 6/23/71

Work Done: (for Analyst see below)
A. X-ray flourescence quant. ☐ semi-quant. ☐
B. X-ray diffraction ☐
C. Spectrographic quant. ☐ semi-quant. ☐
D. Spectroscopic ☒
E. Atomic absorption quant. ☐ semi-quant. ☒
F. Fire assay ☐
G. Microscopic examination ☐
H. Other (Specify) ☐
I. Ultraviolet light ☐

LABORATORY NUMBER	SAMPLE MARKED	ANALYSIS OR IDENTIFICATION
39868	---	

E. Ounces Per Ton

Gold	Silver
0.64	2.60

E. Weight Per Cent

Copper	Lead	Zinc
4.0	0.019	0.015

D. Spectroscopic Examination

Major	Minor	Trace
Silicon	Copper Iron Sodium	Calcium Lithium Zinc

E. Accuracy of the atomic absorption analysis for gold and silver is ±10% of the reported value.

Accuracy of the atomic absorption analysis for copper, lead, and zinc is ±5% of the reported value.

D. Major - over 10%
Minor - 1 to 10%
Trace - under 1%

Your sample(s) was tested for radioactivity; no significant radioactivity was detected.

D.E. Donald R. Stein *Donald R. Stein*
ANALYST & WORK DONE

ANALYST & WORK DONE

ANALYST & WORK DONE

APPROVED: *Thomas C. Mowatt*
LABORATORY SUPERVISOR

Thomas C. Mowatt

NOTE: Samples discarded after 60 days and pulps after 6 months unless instructed otherwise.

MOORE BUSINESS FORMS, INC. M

3-33

ALASKA
MINERAL LAB
2229 SPENARD ROAD
ANCHORAGE, ALASKA 99503
PHONE 272-2716

REPORT OF ANALYSIS

FOR Benito Creek Mine
P. O. Box 2455
Anchorage, Alaska 99510

DATE Oct. 5, 1971

LAB. NO.	IDENT. NO.	DESCRIPTION	ELEMENT		UNIT	
1552		Discovery Pit	Ag	0.09	oz/ton	
		Chalcopyrite w/bornite in	Au	0.007	oz/ton	
		quartz	Cu	2.95	%	
1553	A-2	Chalcopyrite and pyrite in	Ag	2.15	oz/ton	
		quartz	Au	0.034	oz/ton	
			Cu	9.78	%	
1554	D-1	Chalcopyrite w/pyrite	Ag	0.07	oz/ton	
		and spalerite (?) in	Au	0.714	oz/ton	
		quartz	Cu	2.87	%	
			Zn	0.004	%	

COMMENTS:

BY G. R. Fonselius, P.E.
TITLE Owner

3-34

ALASKA
MINERAL LAB
2229 SPENARD ROAD
ANCHORAGE, ALASKA 99503
PHONE 272-2716

REPORT OF ANALYSIS

FOR Benito Creek Mine
P.O. Box 2455
Anchorage, Alaska 99510

DATE Oct. 6, 1971

LAB. NO.	IDENT. NO.	DESCRIPTION	ELEMENT / UNIT					
1665	Deans A-1	Rock sample			Ag	2.008	oz/ton	
					Au	0.098	oz/ton	
					Cu	9.48	%	
1666	Deans A-2	"			Ag	0.146	oz/ton	
					Au	0.022	oz/ton	
					Cu	9.30	%	

COMMENTS:

BY Susan A. Dechaert
TITLE ~~Owner~~ Lab Manager

3-35

MINING ENGINEER'S REPORT OF SAMPLES TAKEN FROM THE VEIN

The following information is quoted from the report by William A. O'Neill, Registered Consulting Mining Engineer, Anchorage, Alaska which is attached and made a part of this application.

"The present investigation was very surficial as only two minimal vein exposures (Picture #3) were available for inspection in a couple of the old pits that had not completely sloughed in.

"Copies of the results of various samples taken by the owners and for this investigation are submitted as Exhibit 1 herewith. Due to the present limited showing of the vein for sampling, they cannot be considered much indication of the overall vein as must have been previously exposed about 1923. These results show a range of: Gold .002 to .714 oz/ton; Silver .09 to 2.60 oz/ton; Copper .05% to 9.78% per ton.

ACCESSIBILITY
OF PROPERTY

4. ACCESSIBILITY OF PROPERTY

Page No.

(a) Any OME Representative who may wish to examine the property should contact:

Dean Wilson
Copper Center, Alaska 99573
Telephone: Copper Center 822-3852

USGS Valdez C-1 Alaska Map with route marked 4 - 1

The new Copper River Bridge at Chitina (completed in July 1971) makes the mine completely accessible for the first time since it was discovered. 4 - 2

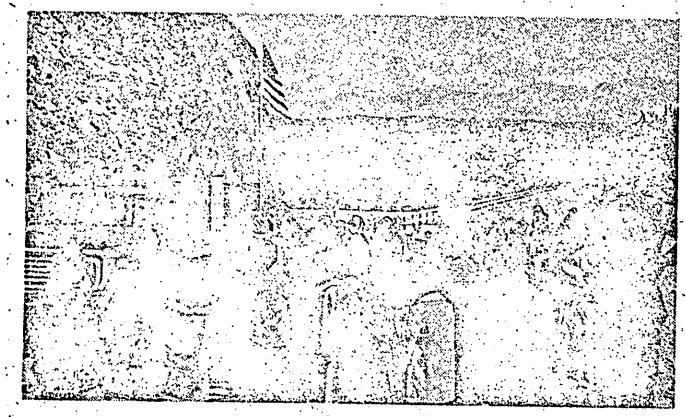
The Benito Creek mine is reached by a secondary road that turns north from the center of the Strelna airstrip. The distance from Strelna to the claims is approximately 9 miles. (Photographs are of the secondary road.) 4 - 3

(b) Main shipping point and Post Office is at Chitina, Alaska, 20 miles from the mine. Nearest ocean-going port is Valdez, Alaska, 145 miles. Nearest airstrip at present is at Strelna, 9 miles; however, there is a flat area adjacent to the claims which can be cleared to provide airstrip and there is a cleared area on the Benito Creek claims property large enough to accommodate a helicopter.

Note: The present secondary road, completed some years ago by the State, is usable, as is, except during the wet summer season, and then there are only about three short places too soft for year-round use. These could easily be repaired.

Alaska's Road Travel Broadens With New Bridge To East Bank

The new Copper River bridge at Chitina is officially open, following a ribbon cutting at the bridge site by Governor William A. Egan.



Governor Egan Hails New Bridge

Over 125 persons from Valdez, Fairbanks, and Anchorage, as well as the Copper River Basin area, attended the August 27 ceremonies marking the reestablishment of an access across the Copper River into the mineral-rich McCarthy-Kennecott area.

The completion of the $3.5 million 1,378-foot steel girder bridge opens to vehicle access, for the first time, the area east of the Copper River.

Travel east of the Copper River has not been realized since 1938 when the famous Copper River and Northwestern Railroad ceased operations.

The railroad originally started operation in 1911, reaching from Cordova to the rich copper ore deposits at McCarthy, and continued to operate for some 28 years.

Three more phases of road construction are planned in the near future to eventually connect Chitina with the community of McCarthy, with phase one to begin next summer.

In his dedication remarks Governor Egan traced the history of the initial railroad building effort in south central Alaska.

"Initial plans for the construction of a railroad to the interior called for the construction from Valdez through Keystone Canyon to the interior area of Alaska with a spur to Chitina.

A local group of Alaskans formed a rival railroad company at Valdez and started building on the same alignment as proposed by the Guggenheim group.

They met in Keystone Canyon and the ensuing gun battle caused abandonment of the construction in this location and the moving of the railroad to the Copper River area," the Governor recalled.

After the dedication a picnic was held in the new rest area which was constructed by the Highway Department in conjunction with the bridge on the east side of the Copper River.

The crossing of this major topographical barrier with a year-round bridge is a major step forward in the opening of new areas for exploration and future planned development of Alaska's natural resources.

August 1971

4-2

EXPLORATION
WORK

5. EXPLORATION WORK

Page No.

(a) Description of proposed exploration work - Report by William A. O'Neill, Registered Consulting Mining Engineer, Anchorage, Alaska — 5 - 1

(b) The present secondary road (as shown in Section 4) was completed some years ago by the State and is usable, as is, except during the wet summer season, and then there are only about three or four short places which are too soft for year-round use. These can be repaired by applying a few inches of gravel that is readily available from the immediate vicinity with equipment which is already itemized in the budget.

(c) Work on the project could be started by June 1, 1972. The budget has been based on a four-month summer season which is a good estimate of the snow-free period for this area of Alaska. An anticipated average daily or monthly rate of progress for this phase of the work cannot be definitely pinpointed due to the various depths of the overburden; however, a probable estimate would be:

1. Repair of cabin - 3 men working - 1 week

2. Repair of road - 3 men working - 2 weeks

3. Clearing of overburden from vein and obtaining adequate samples for assays ---- 13 weeks

WILLIAM A. O'NEILL — REGISTERED CONSULTING MINING ENGINEER
ANCHORAGE, ALASKA

INVESTIGATION

BENITO CREEK, GOLD LODE
for

MRS. BETH HOLMES
ANCHORAGE, ALASKA

INTRODUCTION

The Benito Creek Cold Lode prospect, consisting of twelve claims, was staked by Mrs. Beth Holmes and Associates during 1971. The last activity on this property was in the early 1920's, when it was abandoned by the original prospectors and owners.

LOCATION

This prospect is located nine miles northwest of the old settlement of Strelna, Alaska, which in turn is some fourteen miles from Chitina, (plate 1). Strelna was a focal point for considerable prospecting and exploration for both gold and copper during the years of much activity in the Copper River Area, serviced by the Copper River and Northwestern Railroad, until 1939.

The property is located at the comparatively low elevation of 2600 feet above sea level. It is on the western flank of Iron Mountain, which has an elevation of 6652 feet. This favorable elevation would contribute to easy year round operation if exploration and development should prove a mine.

TRANSPORTATION

Late in 1971, a new concrete bridge was completed, spanning the Copper River at Chitina, (picture #1). This bridge makes this interior area easily accessible for exploration and development. A fair gravel road extends from the bridge to Strelna and beyond. It follows the road bed of the old railroad and can be traversed by four wheel drive vehicles almost to the old town of McCarthy.

The present dirt road(Picture #2) from Strelna follows the old trail to the Benito claims and is readily traveled by four wheel drive machines. Except for three or four bad sections, it could be traveled by pickups. These bad sections can be easily repaired. Thus, access to the property is no problem.

HISTORY

From the records available, this property was

first staked about 1911 under the names of the stakers or the Creek itself. It was successfully known as the Benito Creek, Canning property and the Canning-Contino. The last recorded proof of labor found was for the year 1920.

The renewed interest in this property has come about by Mrs. Holmes and her interest in researching the past records and from personal interviews with old timers, who had some knowledge of the original stakers and work accomplished before 1920.

GEOLOGY - EXPLORATION

The early history, geology and exploration is best presented by excerpts from information contained in the U.S. Geological reports of the time, when the property was visited by U.S.G.S. personel. This was at a time when several sections of the vein was exposed by pits and a short, shallow tunnel, which are now all sloughed in.

U.S.G.S. Bulletin 714-1919:-

"Benito Creek is a small stream flowing into Kotsina River from the mountains south of Elliott Creek. It is about 9 miles north-northwest of Strelna but is reached from that place by trails considerably longer. Interest in Benito Creek lies in a gold-bearing quartz

vein commonly known in the district as the Canning property, from the name of one of the owners who discovered the vein in 1913. The property consists of five recorded claims situated a short distance below timber line on Benito Creek and is owned by Jack Canning and Benito Contino.

The vein consists of quartz and calcite, with quartz predominating, and ranges from 2 to 3 feet in thickness but averages about 30 inches. It dips steeply to the east and strikes N. 70°-75°W., cutting a succession of dark-colored igneous rocks that include both dense basaltic members and coarser granular phases, with abundant hornblende. These rocks grade into each other without sharp boundaries. They are considerably altered and are sheared, particularly near the vein.

The vein originally appeared in the creek as a mass of pure white quartz but has now been proved by a succession of five shallow holes to extend for at least 500 feet. The deepest of these holes penetrated the vein 15 feet. Much difficulty was experienced from water, which flowed along the rock surface beneath the gravel covering, and to obviate this trouble an automatic dam was constructed on the creek and two channels ranging in depth from 2 to 20 feet were sluiced across the claims. Owing to irregularities in the bedrock surface these cuts

do not expose the bedrock in many places.

The vein is mineralized with iron and copper sulphides, principally arsenopyrite, which near the surface are much oxidized and have colored the shattered quartz with rusty iron stains. In places the oxidized vein has furnished some handsome specimens of free gold. Small particles of free gold are rather common in much of the oxidized vein and contain or are accompanied by silver, as is shown by the assays.

On the left-hand side of the creek about 100 feet downstream from the vein is another quartz vein carrying arsenopyrite and a black metallic mineral, probably hematite. This vein strikes N.10°W.

About one claim length still farther downstream is a vein of rusty shattered quartz 8 to 9 feet wide, containing pyrite and arsenopyrite. Several open cuts have been made on this vein, but no particularly encouraging results have been gained.

Benito Creek at present has no adequate means of communication with Strelna. It lies on the direct route to Elliott Creek and may be reached by any one of several trails that have been made since the railroad was constructed. The chief difficulty with all these trails, which are pack trails only, is that parts of them are wet and soft except in the driest weather or in winter, when they are not used."

U.S.G.S. Bulletin 142-1923:

"Benito Creek is a small stream flowing into Kotsina River from the southwest slope of the ridge between Elliott Creek and the Chitina Valley. It is crossed by the horse trail from Strelna to Elliott Creek but at certain times of the year is difficult to reach because part of the trail is very wet and soft. The direct distance from Strelna is 9 miles; the distance by trail is between 1 and 2 miles farther. Spruce in the vicinity extends up to an altitude of 3,000 feet above the sea, or about 600 feet higher than the Benito Creek camp, and is of fair quality, so that timber suitable for most mining needs is available close at hand. Most of the creek is within the area of glacial deposits covering the floor of Chitina Valley, from which it results that outcrops of bedrock are few and are found principally along the creek bed. So far as is known, however, the country rock consists of altered igneous and sedimentary rocks belonging to the Strelna formation.

A gold-bearing vein was discovered on Benito Creek in 1913 by J.C. Canning, and at the time of the writer's last visit in 1919 it was being prospected by Mr. Canning and his partner, Benito Centino. The original exposure is a white quartz vein 3 feet thick, which crops out in the creek bed at an altitude of 2,400

feet. This exposure and others near by are now covered by five mining claims arranged in the form of a letter H, with the cross bar extending down the creek from the discovery point. The country rock inclosing the principal vein is in some places coarse diorite and in others a dense altered basalt sheared parallel to the vein, which strikes N.30°W. and dips 70°-75°E. The vein itself is well defined for nearly 600 feet by open cuts made by sluicing away the overburden and by a line of five shallow holes which were put down to the vein and one of which penetrated it to a depth of 15 feet. Although the creek and the morainal deposits are not deep, the sinking of these holes was accomplished with some difficulty because of water, which flows along the bedrock surface, This difficulty was partly obviated by building a dam and automatic boomer on the creek above the vein and sluicing away the loose material. In this way two cuts ranging in depth from 2 to 25 feet were made. They exposed a complex of sheared and altered rocks, including fine-grained basalt intruded without distinct boundaries by dark coarse-grained diorite containing conspicuous hornblende crystals.

The gold-bearing vein is in most places about 30 inches thick but ranges from 2 to 3 feet. It consists of quartz with a subordinate quantity of calcite. The metallic constituents are pyrite, arsenopyrite,

chalcopyrite, silver, and free gold. In most places the vein is fractured and much oxidized, yielding a rusty, cavernous quartz mass in which the free gold appears. Stains of azurite and malachite are conspicuous on fresh surfaces. Many handsome specimens of free gold in quartz from this locality were made by dissolving the calcite gangue so as to expose the gold. The largest piece of gold obtained in this way was valued at $50. Such specimen ore is now uncommon, and most of the ore shows no gold to the eye.

Nearly 100 feet downstream from the principal vein, just described, another quartz vein crops out on the left-hand side of the creek. It strikes N.10°W. and stands vertical. This vein is also much weathered and contains arsenopyrite and a shining black metallic mineral believed to be specular hematite. Still farther downstream, on one of the claims lying across the creek, is a vein of shattered rusty quartz, 8 to 9 feet wide, containing arsenopyrite and pyrite. Several holes were sunk on it but without particularly encouraging results.

The owners of these claims have not had the means to prospect the ground on an extensive scale and have had to work elsewhere to earn the money to carry on the prospecting that has been done. It is unfortunate that the real value of the property has not yet been determined."

In July 1926, Mr. J.G. Shepard of the Alaska Division of MInes reported on this property. Excerpts of his Report No. 193.1 is quoted:

"The Canning prospect is situated about 12 miles from Strelna on Benito Creek. It may be reached by following the Hubbard Elliot trail to Cow Creek and then following a branch trail used by Canning.

The showings consist of quartz veins from which the overburden has been ground sluiced away in places. The principal vein has been traced by shallow pits for a distance of 600 feet and shows an average width of 30 inches. Metalic minerals are pyrite, chalcopyrite, arsenopyrite and free gold. The vein stands vertically in country rocks of diorite and basalt.

This prospect is notable for the fact that a discovery of high grade gold ore from which an assay of $225,000 per ton was made. A few hundred pounds of this ore was taken from a shallow pit. Free gold hand specimens are not uncommon, but the gold is not evenly distributed through the quartz. Insufficient work has been done on the vein to determine its true value."

Very rich or high grade specimens of ore are not uncommon from quartz veins from various sections of Alaska, including the gold lodes of the Fairbanks district, Willow Creek area, Kenai Peninsula-Moose Pass,

and southeast Alaska.

Apparently, some ore was mined from the early Benito Creek claim and from the vein now under claim by the present owners. From surface indications at this late date, the amount was small and for many possible reasons, the claims were abandoned.

The present investigation was very surficial as only two minimal vein exposures (Picture #3) were available for inspection in a couple of the old pits that had not completely sloughed in.

Copies of the results of various samples taken by the owners and for this investigation are submitted as Exhibit 1 herewith, Due to the present limited showing of the vein for sampling, they cannot be considered much indication of the overall vein as must have been previously exposed about 1923. These results show a range of: Gold .002 to .714 oz/ton; Silver .09 to 2.60 oz/ton; Copper .05% to 9.78% per ton.

PRESENT SITUATION

The present owners have staked twelve claims, (Plate -II) running parallel to the principal vein on Benito Claim No. 1 (Plate-III). These twelve claims also cover associated nearby unexplored veings. The vein of interest and immediate attention is the Benito

No. 1 and adjoining claims to the north and south. It is on these three claims that additional work is proposed to be accomplished.

It is not known if the vein was encountered in all the pits that were dug in the early days in an attempt to trace the vein along it's projected strike. The depth of the overburden covering the vein, as far as present observation could be made, is perhaps within ten feet. The pit shown in Picture No. 3 has only a two to three foot cover.

CONCLUSIONS

Even though the present assay values are very low, they are from only one or two scant showings at this time. In themselves, they are not too encouraging. The past history, geological and physical setting, all indicate that additional work should be accomplished, or rather, the vein should be further exposed for investigation.

RECOMMENDATIONS

Sufficient work is recommended to uncover the vein at various locations by reopening the pits or extending the present discovery pit to the north and south on the other side of Benito Creek.

This work can be accomplished over a period of time, of several summer seasons, by hand methods performed by the owners in their spare time. By the use of modern equipment and facilities, a greater amount of work can be accomplished in one season and a greater length of the vein strike can be uncovered for investigation and sampling. This latter method, if money is available, is the best approach. This will include the following items of equipment, supplies and estimated expenditures:

1. One or two bedroom trailer (used) purchase. Also the old log cabin (Picture #5) can be repaired for storage of tools etc. plus additional sleeping quarters	$ 4,000.00
2. Lumber and supplies for cabin repairs	1,5000.00
3. 450 Case Tractor-Front End Loader Back-Hoe Combination 6 month rental @ 2700 per month 90% of rental can be applied on future purchase price of $28,000.	16,200.00
4. Freight, tools, oil grease	2,500.00

5. 2" pump with 400'plastic pipe and fittings	600.00
6. 2000 Watt light plant	400.00
7. 4 wheel drive vehicle(Carryall) @ $400 per month rent @ 6 months	2,400.00
8. Chain saw, cots and other tools, gas, etc.	2,500.00
9. 2 men @ $1,500 month - 6 months	18,000.00
10. Food, kitchen equipment and supplies @ $300 month per man for 6 months	3,600.00
11. Misc. and Engineering	3,500.00
	$55,000.00

The tractor front end loader - backhoe combination is a very versatile machine and should work well uncovering this shallow buried vein and can also be used for road repair.

The trailer for housing is relatively inexpensive and time saving so that maximum effort can be spent exposing as much vein as possible in one season.

There are enough funds built into the general tool item to afford the rental of a gas or electric jack hammer and powder for shallow penetration of the vein.

The program and means to accomplish it as outlined, should only be considered the first phase and as previously stated, only to expose and trace as much of the vein as possible. Future work will depend upon further investigations and sampling of the exposed vein.

William A. O'Neill
William A. O'Neill P.E.

MATANUSKA VALLEY BANK

12 SOONER OR LATER 6 9 3

MATANUSKA
VALLEY BANK

PERRY E. DOWD
VICE PRESIDENT

POUCH 7012

MAIN OFFICE
ANCHORAGE, ALASKA 99501

October 27, 1971

Benito Creek Mining Company, Inc.
P. O. Box 2455
Anchorage Alaska 99510

Att: Mrs. Beth R. Holmes

Reference is made to your letter of application of approximately $80,000.00 to be used in exploration work in connection with your mining claims now held near Chitina Alaska. We regret that we will be unable to assist you in financing this project in as much as it does not meet the requirements of our present loan policy.

Very truly yours;

Perry E. Dowd
Vice President

PED/mcm

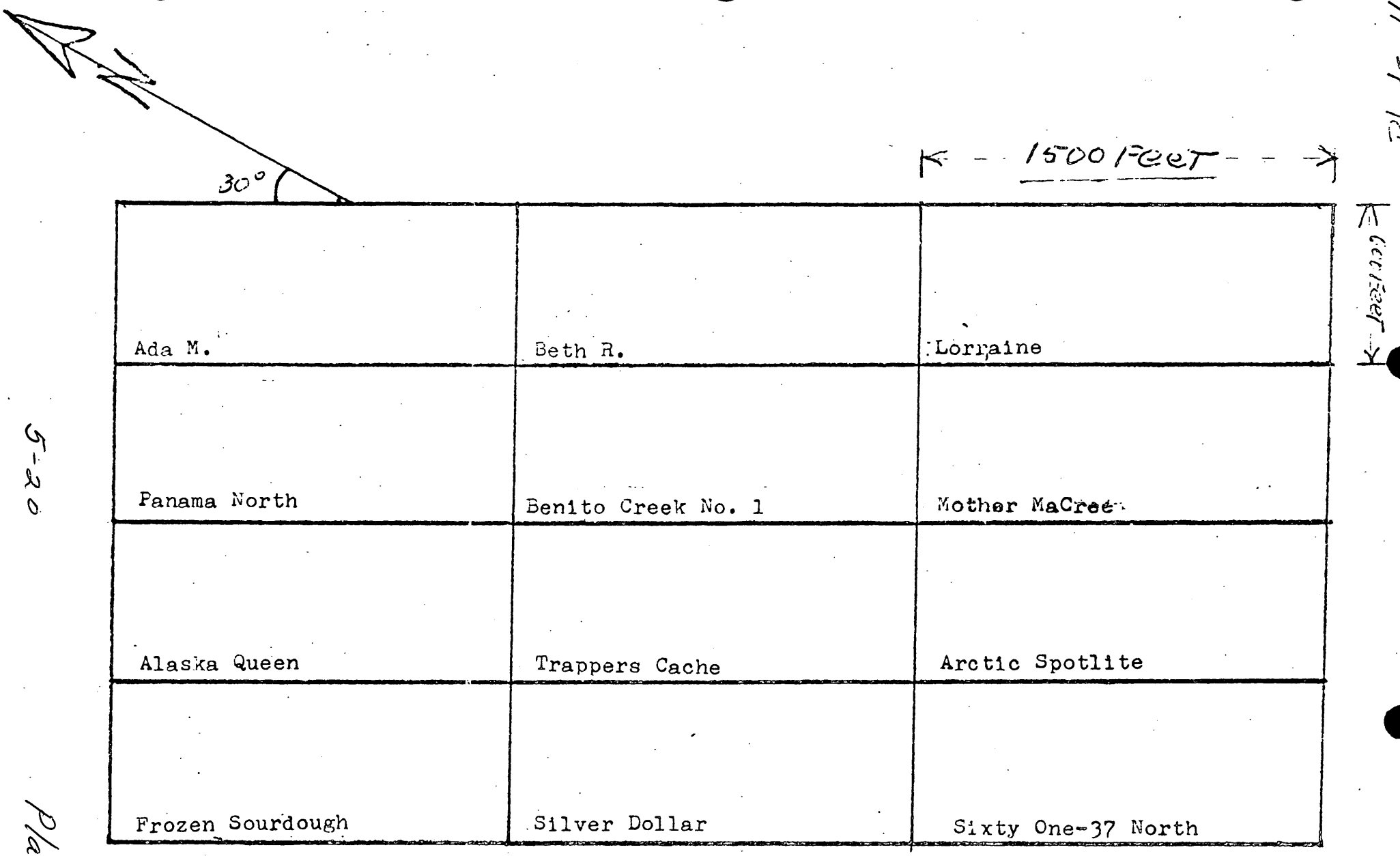
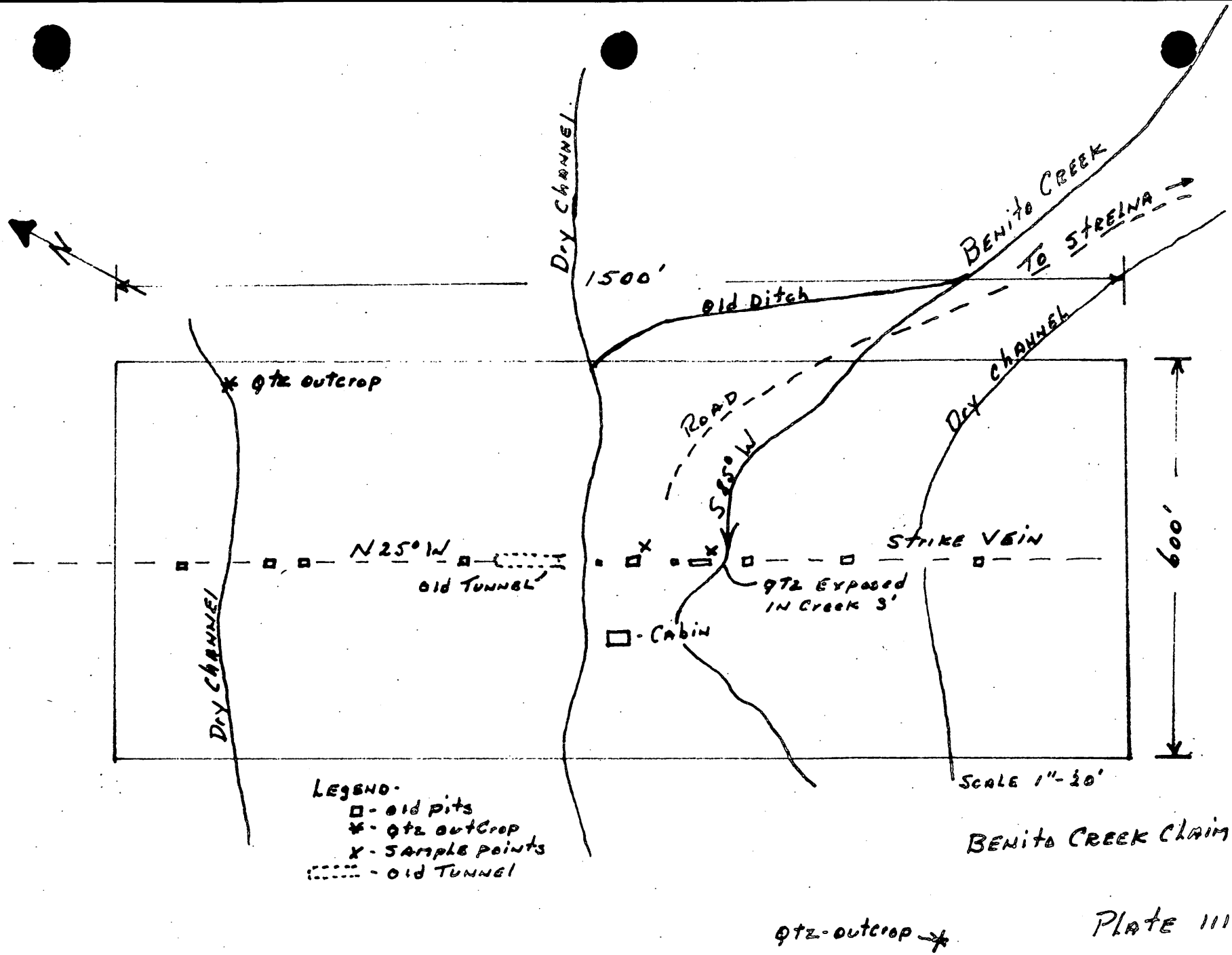


Plate - 11

5-20

5-20

Plate 11



Benito Creek Claim No. 1

Plate 111

Plate 110

5-21

ALASKA

MINERAL LAB

2229 SPENARD ROAD
ANCHORAGE, ALASKA 99503
PHONE 272-2716

REPORT OF ANALYSIS

FOR Bill O'Neill DATE Nov. 3, 1971
3213 Wentwood Street
Anchorage, Alaska 99504

LAB. NO.	IDENT NO.	DESCRIPTION	ELEMENT / UNIT					
2460	A	Rock samples		Au	0.002	oz/ton		
				Ag	0.036	oz/ton		
				Cu	0.058	%		
2461	B			Au	0.201	oz/ton		
				Ag	0.236	oz/ton		
				Cu	0.571	%		

COMMENTS:

BY Thom R. Kerschaft P.E.
TITLE Owner

Exhibit-1

5-22

ALASKA MINERAL LAB

[illegible]

ANCHORAGE, ALASKA [illegible]

PHONE 272-2718

REPORT OF ANALYSIS

FOR Benito Creek Mine DATE Oct. 6, 1971

P.O. Box 2455

Anchorage, Alaska 99510

SAM. NO.	IDENT. NO.	DESCRIPTION	ELEMENT SYM.				
[illegible]5	Deans A-1	Rock sample		Ag	2.008	oz/ton	
				Au	0.098	oz/ton	
				Cu	9.48	%	
[illegible]6	Deans A-2	" "		Ag	0.346	oz/ton	
				Au	0.022	oz/ton	
				Cu	9.30	%	

COMMENTS:

BY [illegible]

TITLE Chemist Lab Manager

5-23

Exhibit-1

ALASKA
MINERAL LAB
2229 SPENARD ROAD
ANCHORAGE, ALASKA 99503
PHONE 272-2716

REPORT OF ANALYSIS

FOR Benito Creek Mine
P. O. Box 2455
Anchorage, Alaska 99510

DATE Oct. 5, 1971

LAB. NO.	IDENT. NO.	DESCRIPTION	ELEMENT / UNIT			
1552		Discovery Pit	Ag	0.09	oz/ton	
		Chalcopyrite w/bornite in	Au	0.007	oz/ton	
		quartz	Cu	2.95	%	
1553	A-2	Chalcopyrite and pyrite in	Ag	2.15	oz/ton	
		quartz	Au	0.034	oz/ton	
			Cu	9.78	%	
1554	D-1	Chalcopyrite w/pyrite	Ag	0.07	oz/ton	
		and spalerite (?) in	Au	0.714	oz/ton	
		quartz	Cu	2.87	%	
			Zn	0.004	%	

COMMENTS:

BY G. R. Kendall Jr. P.E.

TITLE Owner

5-24

Exhibit-1

A-4
Rev. 10/67

STATE OF ALASKA
Department of Natural Resources
DIVISION OF MINES AND GEOLOGY
College, Alaska 99701

Report No. 2663

Date of Report July 22, 1971

LABORATORY ANALYSIS REPORT

For W. O. Holmes

Address Box 2455 Anchorage, Alaska 99501

Number of Samples 1

Date Sample Received 6/23/71

Work Done: (For Analyst see below)
A. X-ray flourescence quant. ☐ semi-quant. ☐
B. X-ray diffraction ☐
C. Spectrographic quant. ☐ semi-quant. ☐
D. Spectroscopic ☒
E. Atomic absorption quant. ☐ semi-quant. ☒
F. Fire assay ☐
G. Microscopic examination ☐
H. Other (Specify) ☐
I. Ultraviolet light ☐

LABORATORY NUMBER	SAMPLE MARKED	ANALYSIS OR IDENTIFICATION
39868	---	E. Ounces Per Ton Gold: 0.64 Silver: 2.60 E. Weight Per Cent Copper: 4.0 Lead: 0.019 Zinc: 0.015 D. Spectroscopic Examination Major: Silicon Minor: Copper, Iron, Sodium Trace: Calcium, Lithium, Zinc

E. Accuracy of the atomic absorption analysis for gold and silver is ±10% of the reported value.

Accuracy of the atomic absorption analysis for copper, lead, and zinc is ±5% of the reported value.

D. Major - over 10%
Minor - 1 to 10%
Trace - under 1%

Your sample(s) was tested for radioactivity; no significant radioactivity was detected.

Exhibit-1

D.E. Donald R. Stein *Donald R. Stein*
ANALYST & WORK DONE

ANALYST & WORK DONE

ANALYST & WORK DONE

APPROVED *Thomas C. Mowatt*
LABORATORY SUPERVISOR

Thomas C. Mowatt

5-25

NOTE: Samples discarded after 60 days and pulps after 6 months unless instructed otherwise.

EXPERIENCE

6. EXPERIENCE

Page No.

The exploration operation would be under the guidance and supervision of William O'Neill, Mining Engineer. His program is listed under No. 5 - Exploration Work.

(1)	Resume of William O'Neill	6 - 1
(2)	Resume of William O. Holmes	6 - 2
(3)	Resume of Dean Wilson	6 - 3
(4)	Resume of Ray W. Thompson	6 - 4

RESUME OF WILLIAM A. O'NEILL

William O'Neill has been a Consulting Mining Engineer from 1948 until the present, with offices in Anchorage, Alaska.

For twelve years he was Exploration Engineer and Canadian Manager of operations in Canada for the McRae-Patty organization.

While going to college, he was Foreman of a Hydraulic Mine for several years.

RESUME OF WILLIAM O. HOLMES

W. O. Holmes, age 57. Worked in coal mines in Montana as a youth. He has been journeyman member of the Shipfitters Union, Machinest Union #68 of San Francisco, and the Ironworkers Union #377, San Francisco.

He studied civil and mechanical engineering in San Francisco and has a certificate of engineering mathematics from Stanford University.

He has worked in heavy construction for years and is a qualified welder and rigger and has worked on many underground construction jobs such as the San Francisco Subway System and, most recently, the below-river bed pier foundations of the new Copper River Bridge at Chitina, Alaska.

He is in excellent health and presently working at ironwork.

RESUME OF DEAN WILSON

Dean L. Wilson is 30 years old and in perfect physical condition.

He has worked at several different occupations including mechanics, operator, carpenter, driller, and the last few years as a laborer in road surveying and grade work. His summers are always spent on road construction jobs and his winters are spent trapping.

Much of his free time is spent prospecting.

RESUME OF RAY W. THOMPSON

Ray W. Thompson is 50 years old and in good physical condition. His entire adult life has been spent in the field of operating equipment.

In Florida, as a young man, he worked in open pit mines, and later followed the construction trade North. He has operated virtually all types of equipment including cranes, backhoes, draglines, shovels, pumps, rollers, and loaders.

He has been a member of International Union of Operating Engineers for the past nine years and is presently employed as a crane operator in Valdez, Alaska.

ESTIMATE OF
COSTS

7. ESTIMATE OF COSTS

This past winter has been unduly heavy in the area of the Benito Creek claims and the working season will therefore be shortened. To take advantage of the time available, the following budget has been based on a 3-man, 4 month season rather than the 2-man, 6 month season estimated by the Mining Engineer. This results in higher salary costs but lower rental costs of equipment.

There is a further variance from the Engineer's estimate in that he overlooked costs for assays, workmen's compensation, social security, and unemployment insurance.

All of the men (Wilson, Holmes, and Thompson) are mechanics who have lived several years in bush country in Alaska and they can do their own field maintenance and repair of equipment. At this time it seems unlikely that purchase of any new hand tools for this repair work would be necessary.

The repair of the cabin would take the three men approximately one week. The necessary repairs to the road leading from Strelna to Benito Creek would take approximately 2 weeks and the balance of the time would be used in clearing the overburden and taking the assays for determination of the value of the lode vein.

7. ESTIMATE OF COSTS

	Per Month	4 Month Total
(a) Independent contracts - None	----	----
(b) Personal services - All types listed are available:		
Consulting Mining Engineer (O'Neill)	$ 750.00	$ 3,000.00
Operating Engineer (Thompson) $592.20/wk.	2,368.80*	9,475.20*
Excavater, Roadbuilder, Explosives Tech. (Wilson)** 592.20/wk.	2,368.80*	9,475.20*
Rigger, Welder, Miner, ConstructionWorker (Holmes)** 592.20/wk.	2,368.80*	9,475.20*

* This figure is taken from the Alaska Master Labor Agreement for Miners dated 1969-1972. (Usual work week in Alaska on jobs in the bush country, away from the place of residence, is either 9 or 10 hours a day, six days a week, with time and a half for all over 40 hours. The above was figured on the basis of 6 10-hour days. The residences of all these men are beyond the subsistence area so board and room must also be furnished in the agreement.

** Hold Red Cross First Aid to the Injured Certification.

(c) Operating materials and supplies:

Water - There is an adequate supply of water on the claims. Benito Creek crosses the center of the property. Water flow in September last year showed no seasonal decrease. It will be necessary to purchase a 2" pump with 400' plastic pipe and fittings	150.00	600.00
Power - 2000 watt Light Plant	100.00	400.00
Fuel - This figure is included together with Freight, Tools, Oil and Grease in the cost submitted by the Mining Engineer	500.00	2,000.00
Food, kitchen supplies, etc. @ $100/man/mo.	300.00	1,200.00

	Per Month	4 Month Total
(d) Operating equipment:		
Rental of 450 Case Tractor-Front End Loader Back-Hoe Combination - 90% of rental can be applied on future purchase price of $28,000	$ 2,700.00	$10,800.00
4 wheel drive vehicle (Carryall) Rental	400.00	1,600.00
Chain saw, cots and other tools These costs were furnished by the Mining Engineer - Purchase	625.00	2,500.00
(e) Initial rehabilitation and repairs:		
Repair of existing cabin - New roof, floor, door, windows, etc. Work to be done by Wilson, Holmes, Thompson	250.00	1,000.00
Log stove for cabin - Purchase	12.50	50.00
(f) New buildings, fixtures, installations:		
One or two-bedroom trailer (used) to be purchased to be used as kitchen, bath, and sleeping quarters for men working at mine	1,000.00	4,000.00
(g) Miscellaneous:		
Assays - One every 5 ft. plus extras as needed @ $3.00 each	250.00	1,000.00
Workmen's Compensation & Liability Insurance (Quoted by an Alaska insurance company	125.00	500.00
FICA (Social Security) 5.2% of Payroll	369.53	1,478.13
Unemployment Insurance - 3.4% of Payroll	241.62	966.47
Misc. Administrative and Mailing costs for assays, etc.	200.00	800.00
Total Budget	$15,080.05	$60,320.20

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11-7	Weeks	

NOV 7 1972

Benito Creek Mining Company Inc.
Attention Mrs. Beth R. Holmes
8652 E. Onyx Drive, S. W.
Tacoma, Washington 98498

Re: OME-6372 (Gold-Silver)
Benito Creek Mining Company Inc.
Benito Creek Property
Chitina Recording District, Alaska

Gentlemen:

Careful study of your application for financial assistance in exploring the Benito Creek property and of other information available to us indicates the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation in the proposed exploration. Accordingly, we regret to inform you that your application is denied.

We wish to thank you for your interest in the minerals exploration program.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

copy of letter to:
Benito Creek Mining Co. Inc.
P. O. Box 2455
Anchorage, Alaska 99510

cc: Director's reading file
Mineral resources
OME reading file
Region II
Mr. Weeks
130

RWeeks:11/7/72

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11-6	Weeks	
11/7/72	Kirbens	

November 6, 1972

Memorandum

To: The Files

From: Robert A. Weeks

Subject: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

Justification for Denial of Application

The Applicant proposed to explore a narrow quartz vein carrying some gold, silver and copper values in an area about 20 miles removed from Chitina, Alaska. Estimated cost of the project as requested by the applicant amounted to $60,000.00.

The property was examined and sampled by B. L. Reed, U. S. Geological Survey, who concluded that the extent of the observable and reported vein, both as to thickness, and length, and the relatively low metal content of the samples did not provide an economic incentive for the work proposed. His sampling program included both soil and stream sediment samples, and yielded essentially background values over most of the likely target area. Assay results on samples collected by Reed tend to confirm the applicant's own sample results, and do not indicate that the vein will become wider or become richer away from present exposures.

The Field Officer concurs with Reed's recommendation that the application be denied. I also concur.

Robert A. Weeks

Robert A. Weeks

cc: Director's reading file
Mineral Resources
OME reading file
Mr. Weeks

RWeeks:cac 11/6/72

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Branch of Alaskan Geology
1209 Orca Street, Anchorage, Alaska 99501

October 26, 1972

H. K. Stager
U.S. Geological Survey
Office of Mineral Exploration
345 Middlefield Rd.
Menlo Park, CA 94025

Dear Hal:

Enclosed is a report and my recommendations on the Benito Creek property.

The report is short, and rather uninteresting (sort of blah), but you really can't get much from three holes in the ground that have a total exposure of less than 15 square feet. There is not much to discuss in the way of analytical results--the samples simply have a very low metal content.

If you want complete descriptions on the petrology of the metasedimentary wallrocks and the mineralogy of the quartz vein (if I can find a piece with sulfide minerals in it) I will get thin and polished sections on the samples collected and give you the data.

Sincerely,

Bruce L. Reed
Geologist

Enclosures

RECEIVED
OCT 30 1972
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

November 2, 1972

OFFICIAL
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gla | 130
HK | 120
BW

Memorandum

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

From: Field Officer
Region II

Subject: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

Enclosed is a report on the subject property by Bruce L. Reed, Branch of Alaskan Geology, recommending denial of the application. I concur in the recommendation.

H. K. Stager

Enclosure

Field Ex.
Report

REPORT ON BENITO CREEK PROPERTY

by

Bruce L. Reed

Summary

The Benito Creek property, a gold-bearing quartz vein, was examined on June 15, 1972. Only three exposures of the vein along a strike distance of 150 feet could be found. Two of these exposures are in old prospect pits that have not completely sloughed in, the third is along a stream cut bank. The vein, as seen in these exposures is between 12 and 30 inches wide. Three chip samples taken across the vein have an average content of .0365 oz. per ton Au, .135 oz. per ton Ag, and .27 percent Cu. Lead and zinc were below the limit of detection (0.3 percent and 6.0 percent respectively) of the semiquantitative spectrographic method of analyses. Soil samples taken at 75-foot intervals for a distance of 700 feet down slope from the suspected continuation of the vein are not significantly enriched in their metal content. Stream sediment samples collected along Benito Creek do not contain anomalous metal contents.

Recommendation

Because the exposures examined have a low metal content of the commodities (gold and silver) for which the application for financial assistance was made and show little evidence of encouraging mineralization of other metals, it is recommended that the application be denied.

Geology

The vein crops out in the SE 1/4 of sec. 9, T. 3 S., R. 7 E., Valdez C-1 (1:63, 360) quadrangle. It lies below timber line and virtually 99 percent of the area is covered by a growth of spruce, cottonwood, dwarf birch and alder. The thickness of the overburden is estimated to be less than 10 feet. The vein, where examined, consists of more than 95 percent white "bull" quartz and contains minor amounts of pyrite, chalcopyrite, bornite and inclusions of wallrock. The vein is between 12 and 30 inches wide, strikes N 25° W, and dips between 60° and 80° northeast. It cuts the low-grade metamorphic rocks of the Strelna Formation (Moffit and Mertie, 1923), which consists of fractured and sheared dark greenish-gray to gray phyllite, metagraywacke, argillite and tuffs(?). The trend of the country rock is subparallel to the vein. The wallrock appears to be more silicified near the vein. Greenstone crops out ~~along~~ approximately 600 feet downstream from the vein on Benito Creek. In most cases examination with a hand lens reveals disseminated specks of pyrite in the country rock. The above mentioned rock types are identified by megascopic examination only. For additional information selected references are cited at the end of the report.

Examination of dump material from prospect pits indicates that the vein locally contained abundant calcite. Stains of azurite and malachite resulting from the oxidation of the copper sulfides were also noted in the dump material. Moffit and Mertie (1923, p. 143) stated that "Many handsome specimens of free gold in quartz from this locality were made by dissolving the calcite gangue so as to expose the gold." Apparently the calcite and the free gold are not evenly

distributed along the vein as calcite was not present in the exposures examined and the gold content of the samples analyzed is low.

Gouge is present along both sides of the vein and fracturing of the wallrock is more pronounced towards the vein. The gouge zone consists of finely-ground wallrock. The zone is 2 to 5 inches wide on the hanging (northeast) wall of the vein and 1/2 to 3 inches wide on the foot wall. The vein appears to be localized along a shear zone. Post-vein movement is indicated by fracturing of the vein and there have been at least two periods of mineralization. Fractures occur at all orientations with respect to the vein - but fractures parallel to the vein predominate. In one exposure (No. 2) the vein was intensely fractured for a distance of 5 inches away from the foot wall. These fractures are locally filled with sulfide minerals which locally comprise up to 20 percent of the rock. Pyrite and chalcopyrite predominate, but minor amounts of other sulfide minerals are present. Although some mineralization took place subsequent to vein intrusion, material in prospect hole dumps contains quartz and minor amounts of disseminated pyrite, chalcopyrite, and bornite which, megascopically, are not related to fractures.

The three exposures examined are shown on figure 1 as No. 1, No. 2 and No. 3. These exposures occur along a 150-foot strike length of the vein. Moffit and Mertie (1923, p. 142) report that "The vein itself is well defined for nearly 600 feet by open cuts made by sluicing away the overburden and by a line of 5 shallow holes which were put down on the vein...." At the time to the writer's examination all of these holes (with the exception of exposures No.1 and No. 2) had completely sloughed in. An exposure of white vein

quartz in greenstone crops out on Benito Creek about 600 feet downstream from the vein.

Figures 2, 3 and 4 are sketch maps of exposures 1, 2 and 3 respectively. The location, description, and the gold, silver and copper content of the samples collected at each exposure are given in figures 2-4. Semiquantitative analyses of these bedrock samples are given in table 1.

Analyses of two grab samples of white vein quartz (samples 14 and 15) from the exposure on Benito Creek about 600 feet downstream from the vein (fig. 1) are given in table 1. Neither gold or silver was detected in these samples but they may not be representative because, owing to the high water and snow conditions, the vein could not be closely examined and its configuration is uncertain. The wallrock is greenstone and although the vein crops out for about 20 feet along the stream, this length is thought to be approximately parallel to the strike rather than representative of the width of the vein.

Soil samples

Soil samples were taken at 75-foot intervals for 700 feet along a line parallel to and about 50 feet down slope from the suspected continuation of the vein (fig. 1). Although the area has been glaciated, the depth to bedrock near the vein probably does not exceed 10 feet. If the vein continues along the strike, as reported, and is significantly mineralized then soil samples should contain an anomalous metal content due to down slope creep of metal-rich soil and detritus. In some cases only the A soil horizon could be collected because the ground was frozen, and the maximum depth for any sample

was only 12 inches. The A horizon is generally 2 to 6 inches thick, black, and rich in humic materials. The B horizon has a noticeable change in color or texture. It is generally orange-brown to brown. Analyses of soil samples are given in table 2.

The metal content of the soils is generally low. Sampling is not yet sufficient to determine a background for the area, but copper contents of 100 ppm or more may reflect copper enrichment in the vein upslope from the samples.

Owing to its particulate nature, the distribution of gold in soil is generally erratic. Ideally soil samples should be collected within a few inches of bedrock, but this was not possible at the time the property was visited. Soil sampling has proved to be effective in prospecting for gold lodes as shown by the recent geochemical soil study at the Nixon Fork Mines in Alaska (Reed, 1971). At Nixon Fork, soil down slope from gold lodes contained anomalous amounts of gold; the gold content of Benito Creek sample 29B (table 2, 0.15ppm) is thought to be due to downslope creep of small clastic gold fragments which came from the vein about 50 feet up slope from the sample. Thus soil sampling appears to be an effective method of geochemical prospecting at the Benito Creek. The distribution of gold in the vein is thought to be erratic and if additional soil sampling is done, the samples should be collected as close to bedrock as possible and on a sampling grid of no greater than 30-foot intervals. The A horizon should also be sampled because silver is enriched there, and the content of many metals in A horizon soils reflects, in a general way, the metal amounts more emphatically shown in deeper horizons.

Stream sediment samples

Nine stream sediment samples were collected along Benito Creek. The location of these samples is shown in figure 1 and their semi-quantitative spectrographic analyses are given in table 3. The copper and silver (considered to be good pathfinder elements for gold deposits of this type) contents of the samples are low; silver was not detected in any of the samples (lower limit of determination 0.5 ppm). The copper content of 70 to 100 ppm is considered by the writer to be close to what would be the average background for stream sediments draining rocks of the Strelna Formation (metabasalts, tuffs and argillaceous sediments of the greenschist facies). Furthermore the copper content of the samples does not increase as the vein is approached, nor does it decrease upstream away from the vein. Apparently the metal content of the vein is not sufficient to contribute anomalous amounts of metal to the stream - a conclusion supported by the generally low metal content of the samples collected from the vein. Because of the suspected erratic distribution of gold in the vein and its generally low metal content, stream sediment sampling is probably not as an effective method as soil sampling for localized prospecting for similar veins in this area.

Dump samples

Four samples (16-19, table 1) collected from the dump near the No. 1 exposure are described below:

Sample 16 Grab sample; quartz and calcite in about equal amounts.

Sample 17 Selected sample; white quartz containing 3-5 percent disseminated pyrite, chalcopyrite and minor bornite.

Sample 18 Grab sample; white quartz containing less than 2 percent chalcopyrite and pyrite localized along fractures.

Sample 19 Selected sample; fractured white quartz containing about 25 percent chalcopyrite, pyrite and minor arsenopyrite (?); sample approximately 4 inches in maximum dimension.

Free gold is not visible in sample 19 and its high gold content (5.4 oz. per ton) suggests that the sulfide minerals may be auriferous. The Bi (1000 ppm) and Ag (4.5 oz. per ton) contents indicate that other unidentified sulfide minerals are also present in the sample.

Selected References

Moffit, Fred H., 1915, Mineral Deposits of the Kotsina-Kuskulana districts, with notes on mining in Chitna Valley, Alaska: U.S. Geol. Survey Bull. 622, p. 103-117.

_____, 1921, Mining in the Chitna Valley, Alaska: U.S. Geol. Survey Bull. 714, p. 89-196.

_____, 1923, The metalliferous deposits of Chitna Valley, Alaska: U.S. Geol. Survey Bull. 755-B, p. 57-72.

_____and Mertie, J. B., Jr., 1923, The Kotsina-Kuskulana District, Alaska: U.S. Geol. Survey Bull. 745, 149 p.

Reed, B. L. and Miller, R. L., 1971, Orientation geochemical soil survey at the Nixon Fork Mines, Medfra Quadrangle, Alaska: U.S. Geol. Survey Bull. 1312-K, 21 p.

Table 1. Analyses of rock samples from Benito Creek gold-bearing quartz vein.

[Symbols used: > , greater than: N, not detected; L, present, but below determination limit. In addition to the elements listed Be(1), Cd(20), La(20), Mo(5), Nb(20), Sb(100), Sn(10), W(50), and Zn(200) were looked for but not found. The numbers in parenthesis following these elements are their lower limits of determination.]

Sample No.	Field No.	Ag (oz.per ton)	Au 1/ (oz.per ton)	As	B	Ba	Bi	Co	Cr	Cu	Mn	Ni	Pb	Sc	Sr	V	Y	Zr	Remarks
									(parts per million)										
1	72AR3	.15	.096	N	150	100	10	20	10	3000	5000	100	N	15	L	70	30	N	For description
2	4	.09	.021	500	150	1000	N	100	70	700	2000	70	N	30	L	500	30	70	of samples see
3	5	N	N	N	L	30	N	30	700	100	1500	150	N	70	200	300	30	70	Figure 2.
4	72AR20	.045	.009	N	L	20	N	L	N	2000	15	10	N	N	N	L	N	N	
5	23	.03	N	N	30	30	N	N	N	300	150	15	N	N	N	10	N	N	For description
6	21	4.5	.084	300	L	50	30	30	N	>20000	20	150	N	N	N	15	N	N	of samples see
7	24	.045	.0015	N	30	300	N	150	200	1500	2000	150	N	70	N	300	70	70	Figure 3.
8	25A	N	N	N	L	70	N	50	150	300	3000	70	N	70	100	700	70	200	
9	25B	N	N	N	L	70	N	30	300	70	3000	70	N	50	200	300	70	300	
10	26	N	N	N	30	300	N	70	700	150	3000	150	N	70	L	300	30	70	
11	72AR28F	N	N	N	L	30	L	N	L	700	30	7	N	N	N	10	N	N	For description
12	28H	.21	.0015	L	N	L	N	15	L	7000	30	70	N	N	N	L	N	N	of samples see
13	28C	.21	.003	L	L	50	30	5	L	1500	100	15	N	N	N	L	N	N	Figure 4.
14	72AR6	N	N	N	N	70	N	N	L	200	100	N	N	N	N	L	N	N	Grab samples
15	7	N	N	N	L	70	N	L	70	50	500	20	N	15	N	150	10	50	of white vein quartz.
16	72AR1	N	N	N	N	1500	N	N	L	30	300	30	N	15	200	50	50	N	
17	2	.21	.0015	N	N	30	N	N	L	7000	>5000	150	N	N	N	15	N	N	For description
18	38	N	N	N	L	L	N	L	L	700	1000	15	N	N	N	10	N	N	of samples see
19	39	4.5	5.4	700	70	30	>1000	70	L	>20,000	1500	300	30	N	N	30	N	N	Text p. 6 .
Lower limit of determination (ppm)		.5	.05	200	10	20	10	5	10	5	10	5	5	100	10	10	0	10	

Au: HBr digestion; M.I.B.K. extraction; determination by atomic absorption; R. L. Miller, A. L. Meier and D. G. Miller, analysts. All other elements determined by the 6-step semiquantitative methods; K. J. Curry, analyst. Results are reported to the nearest number in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1 etc. The precision of the reported figure is approximately plus 100 percent or minus 50 percent.

1/Ag and Au were reported in parts per million and converted to ounces per ton (1 ppm = .03 oz.per ton)

Table 2. Analyses of soil samples from Benito Creek area.

[Symbols used: N, not detected, L, present but below determination limit. In addition to the elements listed Ag(.5), As(200), Cd(20), Mo(5), Sb(100), Sn(10), W(50) and Zn(200) were looked for but not found. The numbers in parenthesis following these elements are their lower limits of determination.]

Sample No.	Field No.	Au	B	Ba	Be	Co	Cr	Cu	La	Mn	Nb	Ni	Pb	Sc	Sr	V	Y	Zr	Ca	Fe	Ms	Ti	Soil Horizon	Depth (inches)
		(parts per million)																	(percent)					
29A	72AR37A	N	15	300	L	7	70	30	L	300	L	15	L	15	300	150	15	70	3	1.5	.7	.3	A	3
29B	37B	.15	15	700	1.5	20	150	150	L	1000	10	30	30	30	300	150	30	100	3	5.	2.	.7	B	12
30A	72AR29A	N	15	300	1	L	70	20	L	500	N	15	L	15	300	150	15	70	2	1.5	.7	.3	A	3
30B	29B	N	15	500	L	20	150	100	N	700	N	50	20	30	300	200	20	150	3	5.	2.	.7	B	9
31A	72AR30A	N	15	700	1	15	150	100	N	1000	N	30	20	20	500	150	20	150	3	5.	2.	.5	A	3
32A	72AR31A	N	15	700	1	15	150	70	L	700	N	30	20	20	500	150	20	150	3	5.	2.	.7	A	3
32B	31B	N	20	700	1	20	200	150	L	1500	N	70	20	30	300	200	20	200	3	7.	3.	.7	B	9
33A	72AR32A	N	20	700	L	20	150	70	L	1000	N	50	20	30	300	300	20	200	3	7.	2.	.7	A	3
33B	32B	N	15	500	1	10	150	50	L	500	N	30	15	20	300	150	20	150	3	3.	1.5	.5	B	8
34A	72AR33A	N	15	700	1	15	150	50	L	700	N	30	15	20	500	200	20	200	3	3.	1.5	.5	A	4
34B	33B	N	15	500	1	15	150	100	L	1500	N	30	15	30	500	300	20	200	3	5.	2.	.7	B	7
35A	72AR34A	N	15	500	1	15	70	70	L	1000	N	30	15	20	500	200	20	150	3	3.	2.	.5	A	4
36A	72AR35A	N	15	300	1	10	100	70	20	700	10	30	10	20	300	150	20	70	3	3.	1.5	.3	A	4
36B	35B	N	15	500	1	10	100	70	L	500	L	30	10	20	300	150	20	70	3	3.	2.	.5	B	10
37A	72AR36A	N	10	300	1	L	70	30	N	300	L	15	L	15	200	150	15	70	2	1.5	.7	.3	A	2
37B	36B	N	15	300	1	10	150	70	L	500	L	30	L	15	300	150	20	100	3	3	1.5	.3	B	10
Lower limit of determination (ppm)		.05	10	20	1	5	10	5	0	10	20	5	10	5	100	10	10	10	.05	.05	.02	.002		

Au: HBr digestion; M.I.B.K. extraction; determination by atomic absorption; R. L. Miller, A. L. Meier and D. G. Miller, analysts. All other elements determined by the 6-step semiquantitative method; K. J. Curry, analyst. Results are reported to the nearest number in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1 etc. The precision of the reported figure is approximately plus 100 percent or minus 50 percent.

Table 3. Analyses of stream sediment samples from Benito Creek.

[Symbols used: L, present, but below determination limit. In addition to the elements listed Ag(.5), Au(.05), As(200), Cd(20), La(20), Mo(5), Nb(20), Sb(100), Sn(10), W(50) and Zn(200) were looked for but not found. The numbers in parenthesis following these elements are their lower limit of determination.]

Sample No.	Field No.	B	Ba	Be	Co	Cr	Cu	Mn	Ni	Pb	Sc	Sr	V	Y	Zr	Ca	Fe	Mg	Ti
		(parts per million)														(percent)			
20	72AR11	20	700	1	30	150	100	1500	50	20	30	500	200	30	100	3	7	3	0.5
21	12	20	700	L	30	150	100	1500	50	20	30	300	300	30	150	3	7	3	0.5
22	13	20	700	L	20	150	100	1500	50	20	30	300	300	30	100	3	5	3	0.5
23	14	15	700	L	15	150	70	1500	30	15	30	300	200	30	100	3	5	3	0.5
24	15	30	700	1	20	150	100	1500	50	20	30	300	200	30	150	3	5	2	0.5
25	16	30	700	L	20	150	100	1500	50	20	30	300	200	30	150	3	7	3	0.5
26	17	15	700	L	15	100	100	1500	30	15	30	300	200	20	100	3	5	2	0.7
27	18	15	700	L	15	100	70	1500	30	15	30	300	200	20	100	3	5	2	0.5
28	19	20	700	L	30	150	100	1500	70	20	30	300	300	30	150	3	10	3	1.0
Lower limit of determination (ppm)		10	20	1	5	10	5	10	5	10	5	100	10	10	10	.05	.05	.02	.002

Au: HBr digestion; M.I.B.K. extraction; determination by atomic absorption; R. L. Miller, A. L. Meier and D. G. Miller, analysts. All other elements determined by the 6-step semiquantitative method; K. J. Curry, analyst. Results are reported to the nearest number in the series 1, 0.7, 0.5, 0.3 0.2, 0.15, 0.1 etc. The precision of the reported figure is approximately plus 100 percent or minus 50 percent.

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

September 28, 1972

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O. M. E.
RECEIVED
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INITIALS	CODE
Cac	120 m
	~~130~~
HK	~~120~~
	RAW

Mrs. Beth R. Holmes
8652 E. Onyx Drive, S.W.
Tacoma, Washington 98498

Re: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

Dear Mrs. Holmes:

I must apologize for the long delay in giving you any additional information concerning the subject application, but I have been unable to obtain a report from Mr. Reed on the results of his examination of June 15 and 16. He has been involved in other priority work and has not been able to complete his report on the property. However, as I told you when you visited this office several months ago, the results of his examination and assays of the samples he took were not favorable and OME will have no choice but to deny the application. I talked to Mr. Reed by telephone again this morning, and he informed me that he now has all of the assays from his samples and none indicate significant mineralization. He took about 50 samples on the property, about 20 chip and grab samples of all accessible exposures and dumps, and about 30 soil samples along the strike of the vein.

Hopefully Mr. Reed's report will reach me sometime within the next two weeks and you will receive official notice from OME in Washington, D.C., concerning their decision soon after.

I trust you will soon be back on your feet and that your broken foot is completely recovered. Please stop by this office when you again visit Menlo Park and we can talk at greater length on what additional work you might do at Benito Creek.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: DRF
OME, Wash., D.C.
ACG RF
MP RF
Docket

HKStager:mkh

Office of Minerals Exploration
345 Middlefield Road
Menlo Park, California 94025

May 30, 1972

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INITIALS	CODE
Cal	120
	~~130~~
HK	~~120~~
Raw	Bwalks

Memorandum

To: Bruce L. Reed
Alaskan Mineral Resources Branch
Anchorage, Alaska

From: H. K. Stager, Field Officer
OME, Region II, Menlo Park, California

Subject: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

Enclosed is a copy of the subject application that we discussed by telephone, and when you were last here in Menlo Park. Will you please contact Dean Wilson, Copper Center, telephone 822-3852, and arrange for a field examination of the property when snow conditions permit. Charge any field costs to OME, Project No. 2-937012. After you have examined the property, give us a short report on your findings and a recommendation on approval or denial of the proposed work.

If convenient, call me when you set up the date for examination, or when you have visited the property.

H. K. Stager

Enclosure

cc: OME, Wash., D.C.
DRF
ACG RF
MP RF
Docket

HKStager:mkh

April 7, 1972

OME-6872

Mr. H. K. Stager
Field Officer
Office of Minerals Exploration
345 Middlefield Road
Menlo Park, Calif. 94025

Dear Mr. Stager:

Attached are two copies of our completed application for financial assistance in minerals exploration.

Although the company address is P. O. Box 2455, Anchorage, Alaska, my husband and I will be staying here in the Bay Area for approximately five or six more weeks. Therefore, if you have need to contact me, please use the address and telephone number shown below.

We sincerely hope this application receives your favorable attention.

Sincerely,

BENITO CREEK MINING
COMPANY, INC.

By Beth R. Holmes
Beth R. Holmes
1221 El Camino
Apt. 308
San Mateo, Ca. 94402
(415) 341-1596

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 8 1972

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Cal	120
gla	120
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OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

USE THIS ADDRESS UNTIL ABOUT JUNE 1, 1972

OME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Weeks	RWeeks

APR 25 1972

Resent to following address:
5/4/72
Mrs. Beth R. Holmes
1221 El Camino, Apt. 308
San Mateo, Calif. 94402
(will be there until June 1)

Airmail

Benito Creek Mining Company, Inc.
Post Office Box 2455
Anchorage, Alaska 99510

Subject: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

Gentlemen:

Your application for exploration assistance, dated April 17, 1972, has been assigned Docket No. OME-6872. Please identify all future correspondence by this docket number.

We enclose for your information a copy of Exhibit A, entitled "Notice to Prospective Federally Assisted Construction Contractors", which describes certain recent additional regulations and requirements. This should be filed with your copy of the application.

The application has been reviewed by the Washington office, and has been referred to Mr. H. K. Stager, Field Officer, Region II, Office of Minerals Exploration, U. S. Geological Survey, Building 2, 345 Middlefield Road, Menlo Park, California 94025.

Mr. Stager will contact you if additional information concerning the application is needed.

Sincerely yours,

Harold Kirkemo
Chief, Office of
Minerals Exploration

cc: Director's reading file
Mineral Resources
OME reading file
Region II
Mr. Kirkemo
Mr. Weeks

RWeeks:cac 4/25/72

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4-25	[illegible]	R Weeks

APR 25 1972

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6872 (Gold-Silver)
Benito Creek Mining Company, Inc.
Benito Creek Property
Chitina Recording District, Alaska

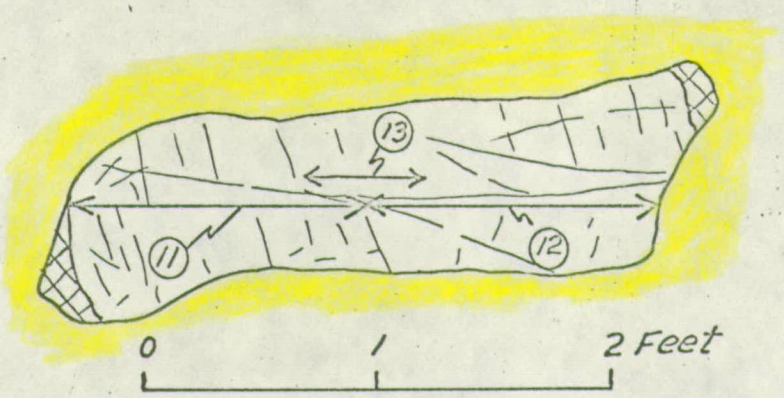
The subject application is referred to you for further study and your recommendations.

The several pieces of information missing from the application as identified in your memorandum of April 12, can be obtained if a favorable recommendation is made.

Harold Kirkemo

cc: Director's reading file
Mineral Resources
OME reading file
Mr. Kirkemo
Mr. Weeks
130

RWeeks:cac 4/25/72



Approximate scale

EXPLANATION

Surficial deposits

Quartz vein (lines are small fractures)

Sample locality Number corresponds to sample numbers given below and in Table 1.

Metamorphic rocks (chiefly phyllite and metagraywacke)

ANALYSES

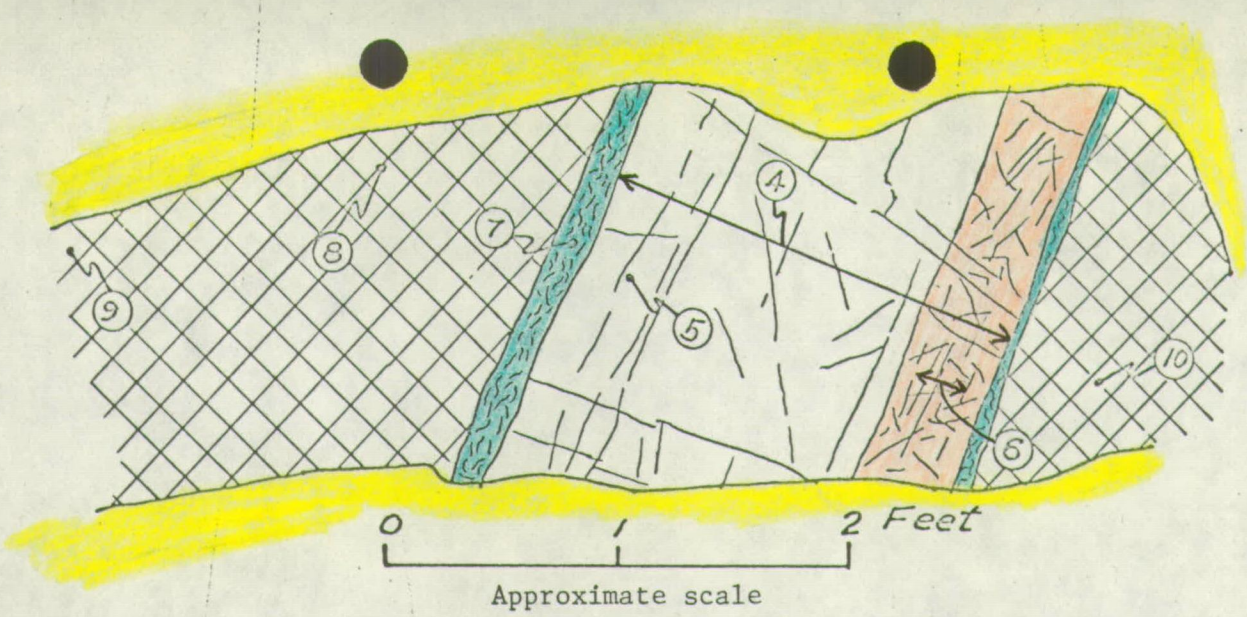
Sample No.	Au (oz.per ton)	Ag (oz.per ton)	Cu (percent)
11	N	N	0.07
12	0.0015	0.21	.7
13	.003	.21	.15

[N = not detected; sensitivity: Au = .05 ppm (.0015 oz. per ton); Ag = .5 ppm (.015 oz. per ton)]

DESCRIPTION OF SAMPLES

Sample 11 15 inch chip sample; chip interval = 2 inches.
Sample 12 15 inch chip sample; chip interval = 2 inches.
Sample 13 6 inch chip sample; chip interval = 1 inch.

Figure 4.-Geologic sketch map of exposure No. 1 giving location, gold, silver and copper content, and description of samples. View N 25° W.



Approximate scale

EXPLANATION

Surficial deposits

Quartz vein (lines are small fractures)

Intensely fractured quartz vein Fractures locally contain sulfide minerals, chiefly pyrite and chalcopyrite.

Gouge in wallrock

Metamorphic rocks Chiefly phyllite and metagraywacke

(5) Sample locality Number corresponds to sample numbers given below and in table 1.

ANALYSES

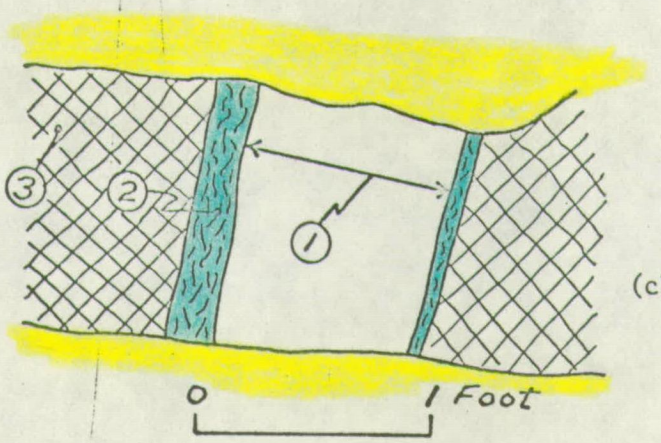
Sample No.	Au (oz.per ton)	Ag (oz.per ton)	Cu (percent)
4	0.009	0.045	0.2
5	N	.03	.03
6	.084	4.5	>2.0
7	.0015	.045	.15
8	N	N	.03
9	N	N	.007
10	N	N	.015

[N = not detected, > = greater than. Sensitivity: Au = .05 ppm (.0015 oz. per ton); Ag = .5 ppm (.015 oz. per ton)]

DESCRIPTION OF SAMPLES

Sample 4 Chip sample across 22-inch wide quartz vein; chip interval = 1-2 inches.
Sample 5 Bull quartz 3 inches from hanging wall.
Sample 6 Selected composite sample of 5-inch wide fractured footwall of quartz vein that contains 15-30 percent chalcopyrite, pyrite and minor amounts of other sulfide minerals.
Sample 7 Gouge zone of finely crushed wallrock.
Sample 8 Metagraywacke(?) 10 inches from hanging wall.
Sample 9 Phyllite 2 feet from hanging wall.
Sample 10 Phyllite containing discontinuous veinlets of quartz 5 inches from footwall.

Figure 3.--Geologic sketch map of exposure No.2 giving location, gold, silver and copper content, and description of samples. View S 25° E.



Approximate scale

EXPLANATION

Surficial deposits

Quartz vein

Metamorphic rocks
(chiefly phyllite and metagraywacke)

Gouge in wallrock

1

Sample locality
Number corresponds to sample numbers given below and in table 1.

ANALYSES

Sample No.	Au (oz.per ton)	Ag (oz.per ton)	Cu (percent)
1	0.096	0.15	0.3
2	.021	.09	.07
3	N	N	.01

[N = not detected. Sensitivity: Au = .05 ppm (.0015 oz. per ton); Ag = .5 ppm (.015 oz. per ton)]

DESCRIPTION OF SAMPLES

Sample 1 Chip sample across 12-inch wide quartz vein; chip interval = 1-2 inches.
Sample 2 Gouge zone in wallrock.
Sample 3 Fractured metagraywacke containing calcite veinlets; 1 foot from quartz vein.

Figure 2.-Geologic sketch map of exposure No. 1 giving location, gold, silver and copper content, and description of samples. View S 25° E.

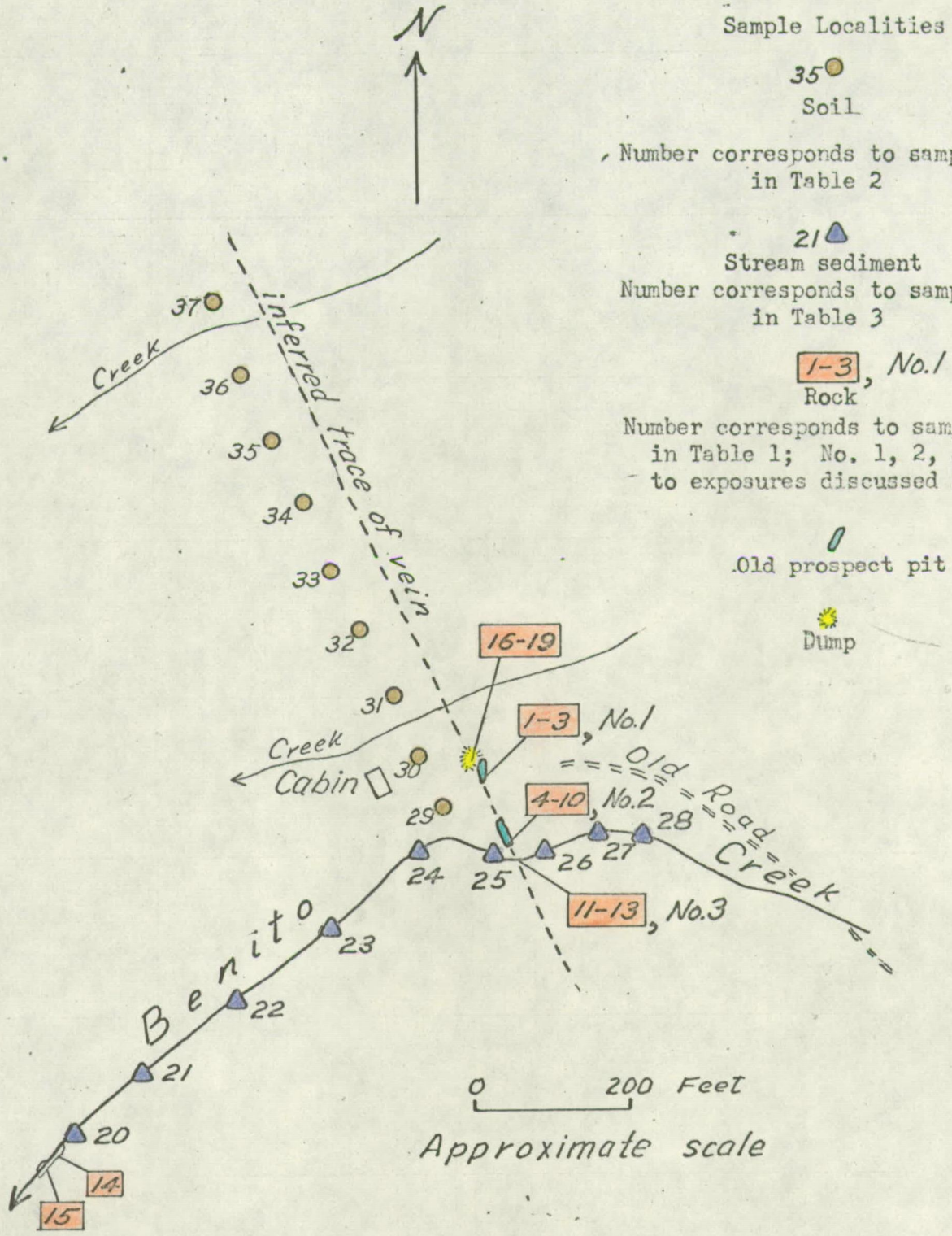


Figure 1.--Sketch map showing inferred trace of gold-bearing quartz vein at Benito Creek and the location of rock, soil and stream sediment samples. Geologic sketch maps of exposures No. 1, 2, and 3 are given in figures 2, 3, and 4 respectively.