MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE

Contract No. 14-23-_____ Docket No. MME- 6546

Application
- [ ] 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- [ ] Withdrawn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

52615

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

	OFFICE	DATE	INITIALS
TO: Chief, OME		3/17/66	
1.			
Re: Transmittal of Application	O. M. E.		
2. Kirk W. Stanley (Silver)	RECEIVED		
Silver Creek Claims	MAR 21 1966		
3. Slana District, Alaska			
	INTERIOR		
4.			
D. R. MacLaren			
5.			
FROM: Fld. Officer, Reg. I			

FOR: Check items for action desired

X Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS: The second copy is being forwarded to Stager, Region II, at Menlo Park.

INT.-DUP. SEC., WASH., D.C. M56300-62

MME Form 40
Jan. 65

RECEIVED
MAR 16 1966

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 21 1966
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.)*

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6546

DATE RECEIVED: 3-21-66

REGION: II

DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

INDIVIDUAL	X
CORPORATION	
PARTNERSHIP	
OTHER *(Specify)*	

STATE IN WHICH FIRM IS ORGANIZED:

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE

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

ESTIMATED COST OF PROJECT: $ $28,987.00

PROPERTY NAME	LOCATION COUNTY	STATE
Silver Creek	Slana District	Alaska

GENERAL INSTRUCTIONS

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

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

March 12, 1966
DATED

Kirk W. Stanley
BY *(Signature)*

TITLE

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

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

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

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

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

2. Applicant's Rights in Land:

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

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

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

3. Physical Description:

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

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

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

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

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

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

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

4. Accessibility of Property:

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

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

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *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 also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

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

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

6. Experience:

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

7. Estimate of Costs:

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

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

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

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

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

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

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

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

IN[illegible] DUP. SEC., WASH., D.C

[illegible] Mink Place
[illegible]orage, Alaska

[illegible] 1966

OMI [illegible]
Region 1
South [illegible] Howard [illegible]
Spokane, Washin[illegible]

Dear [illegible]

Sub[illegible]

Enclose[illegible] my appl[illegible] necessary supp[illegible] matter[illegible]

If you have questions, or if [illegible]rial or information is necessary, please do not hesita[illegible]

Yours [illegible]

Kirk W. [illegible]

KWS:ya

7003 Mink Place
Anchorage, Alaska

March 12, 1966

OME Field Officer
Region I
South 157 Howard Street
Spokane, Washington 99204

Dear Sir:

Subj: Application for OME Loan

Enclosed is my application in duplicate and the necessary supporting material for an OME loan.

If you have questions, or if additional material or information is necessary, please do not hesitate to write.

Yours very truly,

Kirk W. Stanley

Kirk W. Stanley

KWS:ya

SUMMARY OF COST FOR EXPLORING
the
SILVER CREEK DEPOSIT, ALASKA

(a)	Independent Contracts		$ 3,025.00
(b)	Personnel		12,320.00
(c)	Operating Material and Supplies		
	Fuel	$1,562.00	
	Equipment	460.00	
			2,022.00
(d)	Operating Equipment		
	Purchase	$2,011.00	
	Rental	3,600.00	
			5,611.00
(e)	None		
(f)	New Buildings (camp)		801.00
(g)	Miscellaneous		
	Assays	$2,744.00	
	Accounting and Insurance	2,464.00	
			5,208.00
Total Estimated Cost			$28,987.00

$ 24.16 per ft.
1200) 28,987

SECTION 1

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) Evidence of Efforts to Obtain Credit

Copies of letters by the applicant to the Matanuska Valley Bank and the First National Bank of Anchorage, Alaska, requesting a loan to carry out the exploration work are attached.

Letters in reply from both banks are attached stating that a loan in the sum of the amount requested is not available.

(b) Not Applicable

(c) Applicant's Share of the Exploration Cost

If the application is approved, applicant will sell 49% of property to raise his share of the cost of exploration work. At that time the proper Lien and Subordination Agreements on Form MME 52 as set forth in Section 2(c) will be forwarded to OME.

is it satisfactory?

Applicant should be given assurance that his share of work before a [illegible] can be approved

7003 Mink Place
Anchorage, Alaska

March 10, 1966

The First National Bank of Anchorage
646 Fourth Avenue
Anchorage, Alaska

Gentlemen:

Recently we discussed my proposed exploration of a mineral deposit situated within the mining claims known as Silver Creek No's 1, 2, 3, and 4.

The estimated cost of exploring this deposit, excluding the cost of a diamond drill, is $29,000. I am therefore requesting a loan for this sum. The loan would be repaid over a period of 10 years at an interest rate of 8%.

The funds will be used to conduct a diamond drilling program directed toward determining the extent of mineralization present at the deposit located within the above mining claims.

I would appreciate your consideration of my request for this loan and your early reply.

Yours very truly,

Kirk W. Stanley

Kirk W. Stanley

KWS:ya

THE FIRST NATIONAL BANK OF ANCHORAGE

P. O. BOX 720, ANCHORAGE, ALASKA

Main Office

March 11, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Dear Mr. Stanley:

This letter is in reference to your application to our bank for a loan in the amount of $29,000, repayable over a period of 10 years. It is our understanding that the moneys are to be used in the exploration of a mineral deposit situated within the mining claims known as Silver Creek Nos. 1, 2, 3 and 4.

While we certainly are in sympathy with your purpose in conducting the program, we do not have the funds available to make such a loan at this time, nor could we make it over the requested period. I regret, therefore, that we must reject your loan application, but certainly do not want this to be construed in any way as a reflection against your credit.

Sincerely

W. M. MURRAY
Vice President

WMM/mmh

7003 Mink Place
Anchorage, Alaska

March 10, 1966

The Matanuska Valley Bank
704 Fourth Avenue
Anchorage, Alaska

Gentlemen:

Reference is made to our recent discussion regarding the exploration of a mineral deposit located within the mining claim described as Silver Creek No's 1, 2, 3, and 4. This letter is to formalize that discussion.

The total estimated cost of exploring the deposit (excluding the cost of the diamond drill) is $29,000. I am therefore requesting a loan for this sum.

The loan would be repaid over a period of 10 years at an interest rate of 8%.

As we discussed earlier, the funds will be used to conduct a diamond drilling program to determine the presence or absence of additional mineralization.

I would appreciate your consideration of the request for this loan at your earliest convenience.

Yours very truly,

Kirk W. Stanley

KWS:ya

MATANUSKA VALLEY BANK

12 SOONER OR LATER 9 3 6

MATANUSKA
VALLEY BANK
POUCH 7012 ANCHORAGE, ALASKA

ROBERT A. SHEFFIELD
VICE PRESIDENT

March 11, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Dear Mr. Stanley:

We have reviewed your proposal for a diamond drilling program on a mining claim with a great deal of interest.

Unfortunately, however, we do not have funds available for a loan of $29,000 for the term required for this project.

We appreciate your contacting us and trust that financial arrangements can be worked out.

Very truly yours,

R. A. Sheffield

R. A. Sheffield
Vice President

RAS:mb

SECTION 2

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) Interest in Land and Mineral Rights

Applicant is owner of 4 unpatented lode claims described as: Silver Creek No's 1, 2, 3, and 4. No liens, mortgages, or other encumbrances are on mining claims.

SECTION 2

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) Legal Description of Land

The general location of the area is shown on plat 1 and the locations of the lode claims described below are shown graphically on plat 3.

The Deposit has no other known name than the "Silver Creek Deposit", or "Prospect".

SILVER CREEK NO. 2 (Lode Claim)

Recorded: Deputy Magistrate Office
Chitina Recording Precinct
Serial No. 66-55
Book No. 3, Lode Page 88

Starting at the discovery point, the location of which is approximately 144°3'24"W and 62°44'7"N, thence NE 5' to #1 center post, the point of beginning; thence by metes and bounds: SE 300' to Corner #1, SW 1500' to Corner #2, NW 300' to #2 center, NW 300' to Cor #3, SE 300' to #1 center, the point of beginning.

SILVER CREEK NO. 3 (Lode Claim)

Recorded: Deputy Magistrate Office
Chitina Recording Precinct
Serial No. 66-55
Book No. 3, Lode Page 88

Starting at the discovery point, which is located 10' NE of the discovery point Silver Creek #2, lode claim, thence SW 5' to #1 center post, the point of beginning, thence by metes and bounds: NW 300' to Cor #1, NE 1500' to Cor #2, SE 300' to #2 center, SE 300' to Cor #3, SW 1500' to Cor #4, NW 300' to #1 center post, the point of beginning.

SILVER CREEK NO. 4 (Lode Claim)

Recorded: Deputy Magistrate Office
Chitina Recording Precinct
Serial No. 66-67
Bood #3, Lode Page 90

Starting at the discovery point which bears approximately N14°W 980' from the discovery point of Silver Creek #3, thence 750' SW to the #1 center post the point of beginning, thence by metes and bounds: NW 300' to Cor #1, NE 1500' to Cor #2, SE 300' to #2 center post, SE 300' to Cor #3, SW 1500' to Cor #4, NE 300' to #1 center post, the point of beginning.

SECTION 2

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) continued. . .

SILVER CREEK NO. 1 (Lode Claim)

Recorded: Deputy Magistrate Office
Chitina Recording Office
Serial No. 61-175
Book 19, Lode Page 134

Starting at the discovery point which bears NE 10' from the discovery point of Silver Creek #3, thence NW 750' to #1 center post, the point of beginning, thence by metes and bounds: SW 300' to Cor #1, SE 1500' to Cor #2, NE 300' to #2 center post, NE 300' to Cor #3, NW 1500' to Cor #4, SW 300' to #1 center post, the point of beginning.

SECTION 2

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(c) Lien and Subordination Agreements

There are no liens or encumbrances on mining claims described above.

If application is approved, applicant will sell 49% interest in claims to parties who will finance applicant's share of exploration costs. Five copies of Lien and Subordination Agreement, MME Form 52 will be submitted.

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) History of Past Exploration

The latest exploratory work at the deposit was trenching by bulldozer in July of 1963 (see plat 2). The trench was laid out perpendicular to the strike of the fault and approximately 300 ft NE of Silver Creek. The purpose was to strip the overburden and expose the fault, but during the course of the work permafrost was encountered at a depth of approximately 4 ft and the D-7 cat could not break through the frozen ground. The trench as completed is approximately 150 ft long and 15 ft wide. The depth of overburden at the site of the trench is estimated to be at least 15 ft.

Along the steep north bank of Silver Creek whereat silver bearing veins outcrop, evidence of past trenching is found. The trenches and at least one short adit were probably made in the late 1920's or early 1930's. All are now caved and sluffed and have been so for many years. To the applicant's knowledge no other work was done on the deposit until the trenching in 1963.

(b) Applicant's Interest in 3(a)

The trenching accomplished in 1963 was carried out under the applicant's supervision and direction.

(c) Production

There has been no production to the applicant's knowledge from the Silver Creek deposit.

(d) Known Ore Reserves

There are no known reserves in the true meaning of that term; however, mineralized veins occur and rather than cite assay values of such veins in this sub-section, they are set forth in Section 3(f).

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(e) Geologic Features of Property

General Geology

The Silver Creek deposit, valued chiefly for silver, is situated along the SE border of a major batholith that dominates the western Ahtell Mountains (see insert, plat 3). The batholith is composite in character (Stanley, 1957)[1] and includes quartz-monzonite and other related facies. The batholith is considered Jurrasic in age and has intruded a thick series of bedded rocks provincially considered Permo-Triassic in age (Moffitt, 1954).

In the Silver Creek region (plat 3) overburden covers most of the area and bedrock exposures are few. But outcrops that do occur indicate bedrock west of the Silver Creek deposit is chiefly diorite whereas bedded rocks occur to the east. The diorite is light grey, medium grained, and moderately sericitized, but near the deposit it is darker and more extensively altered.

The bedded rocks consist of dark, fine grained sediments and thinly bedded basaltic flows and tuffaceous beds; all of which are randomly intruded by dark, basaltic dikes. The bedded rocks trend S30-40°W and dip moderately SE. All are fractured but not obviously folded. The contact of diorite and bedded rocks is largely inferred and the approximate location is shown on plat 3. However, Richter (p. 9, 1964) considers that near Silver Creek a fault serves as the contact between the two rock types. The fault is, in this report, described as the Silver Creek fault and is exposed where it crosses Silver Creek and is there mineralized by silver bearing quartz veins.

Silver Creek Deposit

The Silver Creek deposit consists of a number of silver bearing quartz-carbonate veins localized within the Silver Creek fault (see plat 2). At the deposit, Silver Creek has formed a gorge 100' to 150' wide and the face of the fault is exposed on the steep north bank of the stream (see plat 2). The general setting of the deposit is illustrated by figure 1. The light colored stained area in the middle foreground is the face of the Silver Creek fault and the site of the mineralization. Bedrock with the exception of a few scattered outcrops is in the general vicinity of the deposit concealed by overburden and vegetation. Additional views of the general setting are given by figures 2 and 3.

1. References are found at the end of report.

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(e) continued. . .

Silver Creek Fault

The Silver Creek fault strikes N10°-30°E and dips steeply NW. At the deposit the fault is at least 130 ft wide and the face is exposed vertically for nearly 200 ft.

Moffitt (p. 210, 1954) considered the fault to strike N45°-70°W. This is also the strike of the veins and apparently he considered the veins to be parallel to the fault. Later, Thorne (p. 8, 1946) stated the fault also trended NW, but his interpretation may have been influenced by Moffitt's earlier description.

Silver Creek apparently follows the SW extension of the fault for several hundred feet but as shown by plat 2, the course of the stream alters abruptly and leaves the fault at the location where the veins are exposed. A view looking down Silver Creek and along the SW extension of the fault is shown by figure 4. Along the NE projected extension (figure 5), evidence of the fault is obscured by overburden. However, some topographic evidence suggests the fault may continue toward the NE for as far as 2000 ft.

The rock within the fault is fractured and broken and consists of a dense, yellowish stained, silicified and pyritized rock. In the few exposures present the rock was observed to be criss-crossed by crusty limonite filled fractures and/or iron stained calcite or ankerite veins. Clay alteration was noted in some of the talus but how extensive the alteration is, is not known. Near the veins the rock is commonly carbonatized and limonite stained. Gouge seams several inches wide were noted along several of the veins.

Veins and Mineralization

Silver is associated with copper, lead, and zinc minerals and occurs within and along the quartz-carbonate veins. The approximate location of the larger veins is shown by plat 2.

The major veins strike N45 to 70°W and dip steeply SW, and apparently occupy cross or tension fractures within the fault zone. The NW orientation of the veins results in their trending perpendicular, or nearly so, to the fault.

The veins range up to 6 ft in width but none are sufficiently exposed whereby actual widths can be determined. Although none of the veins are exposed laterally for more than 6 ft, veins No. 1 and 5 (see plat 2)

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(e) continued. . .

looks illogical

probably represent the same vein. The other veins probably have greater continuity along the strike than their outcrop reveals. To what extent mineralization occurs between the exposed veins is unknown because of talus. The extent to which the face of the fault is concealed by talus of altered rock is afforded by figure 6.

At least 2 periods of mineralization occurred. The first was characterized by the introduction of vein material along sheared zones giving rise to sheeted quartz and/or carbonate stringers. Following this was the introduction of larger veins that in some instances became superimposed upon the earlier ones. Intra-mineral fracturing occurred and the earlier veins were broken and crushed and gouge developed. In some instances the silicified gouge contains broken sulphides or limonite cast of sulphides.

The principal sulphides are pyrite, tetrahedrite, galena, sphalerite, and chalopyrite. Silver is known only by assays but it is considered associated with tetrahedrite and galena. Gold, also known only by assay, is probably associated with the same minerals, as well as pyrite. Oxidation was in some sections of the veins severe and only relics of sulphides remain. In such areas minor anglesite occurs; limonite is particularly abundant, and minor copper-carbonate staining is present. The wallrock along the veins is generally carbonized and limonite stained. The carbonate consists chiefly of calcite and ankerite.

The sulphides occur as bunches, scattered grains, stringers, and lenses within and along the veins. To what extent mineralization occurred in the wallrock within the fault is not known. However, the scattered grains or fragments of sulphide within the wall rock adjacent to the veins, suggests mineralization did to some extent occur in the wallrock.

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(f) Reasons for Expecting to Find Ore

The mineralized quartz veins as well as the rock alteration, i.e., silicification and pyritization, exposed at the surface of the fault is the product of hydrothermal processes. While the mineralization at the face of the fault does not prove mineralization occurred elsewhere within the fault, there is no evidence to indicate that it did not. Within 10 miles of the Silver Creek deposit at least 8 occurrences of lead-silver mineralization are known (see insert, plat 3). While the occurrences have no direct relationship to the Silver Creek deposit, they do indicate lead-silver mineralization occurred on a regional scale. The Silver Creek fault under such conditions would have been a favorable loci of deposition for solutions originating and migrating outward from some concealed source.

Target?

To assume therefore that the mineralization exposed at the surface of the fault represents the only section of the fault so effected would not be consistent with geologic theory. More reasonable would be the assumption that the exposed veins represent merely one area of a greater area along the fault that was mineralized. The mineralized veins exposed at the face of the fault are not considered an example of fortuitous emplacement restricted to one area, but rather the result of a favorable chemical and structural environment provided by the fault. Therefore, there is reason to believe that similar and additional mineralization will be present along the concealed sections of the fault for an unknown distance beyond the known site of mineralization. The proposed drilling program is therefore directed toward determining the extent and character of the concealed mineralization.

Sampling and Assays

The veins were sampled by chip sampling method and Table 1 shows the assays of samples collected by the applicant as well as those collected by R. L. Thorne (p. 8, 1946). The vein number in Table 1 corresponds to the vein of the same number on plat 2.

Thorne apparently sampled only veins designated 1 and 3. The applicant sampled all but vein 5 shown on plat 2. No samples were taken by the applicant in the area between the veins and there is no indication that Thorne took any. The reason the applicant did not secure samples from that area is by virtue of the fact that bedrock is concealed by talus.

The samples should not at this stage be considered to denote an "average" grade. Instead the samples should serve only as an indication that silver mineralization did occur.

SECTION 3

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(f) continued. . .

TABLE I

R. L. Thorne - Bureau of Mines

Vein No.	Thorne Sample No.	Width	Ounces Au	Ounces Ag	Per cent of Pb	Per cent of Cu
1	1	42"	nil	tr	0.66	tr
1	2	18"	0.02	7.46	0.17	0.88
1	3	12"	tr	17.50	0.12	1.59
3	4	24"	0.04	tr	0.10	tr
1	5	12"	tr	4.36	0.15	0.34

K. W. Stanley

Vein No.	Stanley Sample No.	Width	Ounces Au	Ounces Ag	Per cent of Pb	Per cent of Cu
1	3 SS	24"	0.01	9.50	nil	nil
2	1 SS	24"	0.02	75.95	6.20	nil
3	2 SS	24"	tr	1.02	1.08	1.08
4	4 SS	20"	0.03	1.42	--	--

SECTION 3

Kirk W. Stanley
7003 Mink Place
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(f) continued. . .

Economic Potential

The Silver Creek deposit will lend itself to open pit mining and is economically promising even if the grade averages less than 15 ounces of silver per ton. Table II illustrates that mining and milling cost could be as high as $11.77 per ton and the deposit still return an interest of 20% on the investment.

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Table II

THE MAXIMUM COST OF MINING AND MILLING THE SILVER CREEK DEPOSIT TO GIVE 20% RETURN ON EQUITY CAPITAL

Grade of Ore and Value

Silver	12oz/ton	$ 1.25/oz	$ 15.00
Lead	0.3%/ton = 6 lb/ton	0.12/lb	0.72
Copper	0.3%/ton = 6 lb/ton	0.30/lb	1.80
	Total Value/Ton		$17.52

Total Weight of Concentrate

Mineral	20 lb
Waste	15 lb
Total Weight	35 lb

Milling Rate per Day 400 tons (short)

Tons of Concentrate Produced/Day 7 tons

(For calculations assume 100% recovery)

Value/Ton Concentrate $1,001.00

Value of Total Concentrates Produced/Day $7,007.00

Value of Concentrates Produced/Year

7,007 x 350 day/yr = $2,452,800.00

Freight and Smelter Charges

Freight Slana-Valdez (180 mi.)	8¢ mile	14.40
Freight Valdez-Seattle - barge		50.00
Longshore Valdez and Seattle		6.00
Freight Seattle-Tacoma		3.00
Smelter Charge (10% gross value)		100.00
Total		$173.40
	say. .	$174.00

Value/Ton Concentrate FOB Silver Creek Mine $827.00

$1001.00 - $174.00

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Table II

1. Annual Sales Income	$ 2,026,150.00
$827/ton x 7/ton day x 350 days	
2. Capital Cost	
$10/annual ton of ore milled	
136,000 tons x 10 = $1,360,000.00	
*Assume that a 20% return on investment is required net profit after taxes must be 20% x $1,360,000	$ 272,000.00
3. Depletion Allowance	$ 176,860.00
50% of profit before taxes or 15% of annual sales, whichever is less	
4. Taxable Income	
No. 2 - No. 3	$ 95,140.00
5. Income Taxes	
No. 4 x 0.56%	$ 53,278.00
6. Profit before Taxes	
No. 3 + No. 4 + No. 5	$ 275,278.00
7. Sales and Administrative Expense	
2% x Income	$ 40,523.00
8. Interest on Capital	
8% x $1,360,000	$ 108,800.00
9. Gross Profit	
No. 6 + No. 7 + No. 8	$ 424,601.00
10. Maximum Permissible Cost Mining and Milling	
No. 1 - No. 9	$ 1,601,549.00
11. Maximum Cost/Ton of Feed	$ 11.77

*28% return including interest on capital payment

SECTION 3

Kirk W. Stanley
7003 Mink Place
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(g) Copies of Geologic Reports Supplied

Attached are two copies of each of the following reports. Please return originals.

1) Geology and Mineral Deposits, Ahtell Creek Report #6

2) U. S. Bureau of Mines, RI 3940, pages 7 and 8

3) U. S. Geological Bulletin, 989-D, pages 210-211

SECTION 4

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) OME Representative Assistance

The applicant, Kirk W. Stanley, 7003 Mink Place, Anchorage, Alaska, will meet OME representative and answer all questions and/or take the representative to the property.

(b) Shipping and Supply Points

Anchorage, Alaska, will serve as the shipping and supply point and is 260 miles from the property.

Valdez, Alaska, will also serve as shipping and supply point, and is 186 miles from the property.

SECTION 5

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Rock is fractured, broken, silicified, pyritized

(a) Exploration Work

Explanation. The proposed exploration work will be directed toward exploring the concealed sections of the fault by diamond drilling. AX size drilling equipment will be used.

Description of Proposed Exploration Work

Total 1200'

Four diamond drill holes are proposed and the location of each is shown on plat 4.

DDH 1 and 2 will be collared at the face of the fault and will be drilled horizontally NE 300 ft along and parallel to the fault. The exposed veins trend nearly perpendicular to the fault, therefore the drill holes will be optionally oriented to intersect any concealed veins of that habit. In addition to determining the presence of concealed veins, the character of the mineralization between veins will be determined.

The two holes drilled into the face will allow a comparison to be made of the nature and habit of the mineralization, alteration, and structure. One hole could not provide this information. Particularly important during this preliminary exploration stage is acquiring a fundamental understanding of the structure. From evidence observed at the surface exposures, the problem of structure control is one of importance.

DDH 3 and 4 will be collared along the NE projection of the fault at a point approximately 600 ft from the collar of DDH 1 (see plat 4). Holes 3 and 4 will explore a lateral distance along the fault for about 600 ft beyond the area explored by DDH 1 and 2.

The actual location and orientation of DDH 3 and 4 will, however, depend upon information developed by DDH 1 and 2. Tentatively the holes will be collared near the footwall side of the fault and drilled down and at an angle from the horizontal. The holes will also be drilled at an angle to the strike of the fault and will provide for the intersection of veins that may trend parallel to the fault.

Because of the altered and fractured nature of the ground and the difference in hardness between the veins and the country rock, 10 ft double tube AX size core barrels will be used.

Core will be taken the full length of all holes to determine the character of mineralization in the veins as well as that that may occur between veins. Sludge, in addition to core, will be collected if core recovery is poor.

SECTION 5

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) continued. . .

The core will be logged and thereafter each 10 ft length of the core will be crushed and reduced to one 3 lb sample. All samples will be air-freighted to a commercial assayer in Seattle.

DDH 1

DDH 1 will be collared approximately 10 ft above the stream and 30 ft west of the footwall. Casing should not be necessary. The hole will be drilled flat and parallel to the strike of the fault and will be 300 ft in length. Core will be taken the full distance (see plat 4).

DDH 2

DDH 2 will be collared approximately 75 ft above the stream and approximately 30 ft from the hanging wall. Casing may be necessary for the first 10 ft. The hole will be drilled flat and parallel to the strike of the fault. The hole will have a length of 300 ft (see plat 4).

DDH 3

DDH 3 will be collared approximately 620 ft NE and 150 ft above DDH 1. Because of overburden the first 15 ft of hole will require casing. The hole will be drilled SW toward DDH 2 and will be angled down 30° from the horizontal. The hole will be 300 ft long and will explore the area to within 100 ft of DDH 2 (see plat 4).

DDH 4

To save set-up time, DDH 4 will be collared from the same set-up as DDH 3. However, DDH 4 will be drilled NE to explore the area further along the fault. The hole will be drilled at an angle of 30° down from the horizontal and will be 300 ft in length (see plat 4).

SECTION 5

Kirk W. Stanley
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Anchorage, Alaska

(b) Access Road

An access road is not necessary. There is a trail to the property which is sufficient for the proposed work.

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(c) Duration of Work

Work can begin by May 15, 1966. Four months will be required to complete program.

Diamond drilling is estimated to proceed at the rate of 17 ft per day, allowing a monthly average of about 300 ft.

SECTION 6

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Experience and Background of Applicant

Applicant received B.Sc. degree in geology from the School of Mines, University of Alaska, College, Alaska; and the M.Sc. degree in geology from Montana School of Mines, Butte, Montana.

Applicant has worked as diamond core driller for Arctic Contractors, Point Barrow, Alaska, and for the Anaconda Company, Butte, Montana. Applicant has worked as exploration geologist in Alaska and Canada for Mineral Development and Exploration Company, American Metal Company, and Exploration Ventures, Inc.

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) Independent contracts

Explanation. All fuel, material, equipment, and supplies will be assembled at Gakona. Mr. Arnie Sundt of Gakona will freight all material by truck to Slana. A sledge will be constructed and all equipment and supplies will be freighted into the deposit by a D-8 cat owned by Sundt. Sundt has the only working D-8 cat in the region. A smaller cat could not handle the initial freighting.

1. Freighting drill and equipment from Anchorage to Gakona	$400.00
2. Freighting all equipment, material, fuel, and supplies from Gakona to Slana	$300.00
3. Sledge construction	$300.00
4. Transportation of D-8 cat (low-boy) from Gakona to Slana, Bailies Bros., Copper Center - $25/hr 4 hr round trip 2 round trips required	$200.00
5. Freighting by D-8 cat from highway (Slana) to deposit - $60/hr - 20 hrs required	$1200.00
6. Moving drill from DDH 2 to DDH 3 will require cat. D-4 cat available from Bud Conkle, Slana. $25/hr - 10 hrs required	$250.00
7. Move out drill, if necessary, at end of program - D-4 cat (Bud Conkle) $25/hr - 15 hrs required	$375.00
Estimated Total Freighting Cost	$3025.00

SECTION 7

Kirk W. Stanley
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(b) Personal Services

The applicant will be responsible for, will supervise, and will serve as the geologist-driller for the exploration program.

Personnel	Rate of Pay	Duration (days)	Total
Supervisor (geologist-driller)	$ 50/day*	112	$ 5,600
Drill-helper	30/day	112	3,360
Laborer	30/day	112	3,360
Estimated total labor			$12,320

*1 day = 10 hr

10.27/yr

Estimate of Labor Cost per DDH

DDH #1

Total feet drilled	300'	
Advance/day (10 hr)	17'	
Total drilling time	180 hr	18 days
Down-time	40 hr	4 days
Set-up	20 hr	2 days
Survey	10 hr	1 day
Total days		25 days
Labor cost geologist/driller		$ 1,250
Driller-helper		750
Laborer		750
Total Estimated Labor		$ 2,750

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) continued. . .

DDH #2

Total feet drilled	300'	
Advance/day	17'	
Total drilling time	180 hr	18 days
Down-time	40 hr	4 days
Set-up	20 hr	2 days
Survey	10 hr	1 day
Casing	10 hr	1 day
Total days		26 days
Labor cost geologist/driller		$1,300
Driller-helper		780
Laborer		780
Total Estimated Labor		$2,860

DDH #3

Total feet drilled	300'	
Advance/day	17'	
Total drilling time	180 hr	18 days
Down-time	30 hr	3 days
Set-up	40 hr	4 days
Survey	20 hr	2 days
Casing	30 hr	3 days
Total days		30 days
Labor cost geologist/driller		$1,500
Driller-helper		900
Laborer		900
Total Estimated Labor		$3,300

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) continued. . .

DDH #4

Total feet drilled	300'	
Advance/day	17'	
Total drilling time	180 hr	18 days
Down-time	30 hr	3 days
Set-up	10 hr	1 day
Survey	--	--
Casing	30 hr	3 days
Total days		25 days
Labor cost geologist/driller		$1,250
Driller-helper		750
Laborer		750
Total Estimated Labor		$2,750

Move In To Deposit

Geologist/driller	3 days
Driller-helper	3 days
Laborer	3 days
Total days	9 man/days

Move Out From Deposit

Geologist/driller		3 days
Driller-helper		3 days
Laborer		3 days
Total days		9 man/days
Geologist/driller	6 days-$50/day	$ 300
Driller-helper	6 days-$30/day	180
Laborer	6 days-$30/day	180
Total Estimated Labor		$ 660

Total Estimated Days and Labor Cost

(labor cost/day = $110) 17 $6.47/hr

	Days	Labor Cost
Drilling	79	$ 8,690
Down-time	14	1,540
Set-up	9	990
Survey	4	440
Move	6	660
Total	112	$12,320

SECTION 7

Kirk W. Stanley
7003 Mink Place
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(c) Operating Materials and Supplies

Fuel and Oil Estimates

Gas ($25 bbl - Glennallen)

Diamond Drilling (2 gal/hr)

	Opr Hrs	Gals		
DDH #1	180	360		
DDH #2	190	380		
DDH #3	210	420		
DDH #4	210	420		
Total gals gas		1,580		
Total bbls gas		29		
Total cost			$725.00	

Water Pump (est consumption 1/2 gal/hr)

DDH #1	180	90		
DDH #2	190	90.5		
DDH #3	210	105		
DDH #4	210	105		
Total gals gas		390.5		
Total bbls gas		7		
Total cost			$175.00	

Pick-up Truck (8 trips to Anchorage)

4800 miles

Total gals gas		480		
Total bbls gas		9		
Total cost			$270.00	
Total gasoline cost				$1,170.00

Motor Oil ($12/case)

Drill - 4 cases	$ 48.00	
Pump - 1 case	12.00	
Pick-up 2 cases	24.00	
Total motor oil		$ 84.00

Lubrication Oil ($0.75/lb)

Total for all operating equipment = 50 lbs	$ 37.50	
Total lubrication oil		$ 38.00

SECTION 7

Kirk W. Stanley
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(c) continued. . .

White Gas ($0.75/gal)

3 gal/day for cooking and heating	360 gals		
Total white gas		$270.00	
Total Fuel and Oil			$1,562.00

Items Costing Less Than $50.00 each

10 carbide insert core bits $12.50 each	$125.00	
Camp equipment		
4 single cots $10 each	$40.00	
1 3-burner gas stove with oven	60.00	
1 kerosene heater	40.00	
3 gas lanterns $15 each	45.00	
Assorted cooking and eating equipment	150.00	
Total items costing less than $50		$ 460.00

Total Cost of All Items in Section 7(c)	$2,002.00

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SECTION 7

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(d) Operating Equipment

1.	900' 1" OD iron pipe - pipe will be necessary to transport drilling water to DDH #3 and #4. 900' x $0.75/ft	$675.00
2.	8 size AX Bortz diamond core bits Grade AA std matrix. Bit life est. to be 150' of drilling - $112.00/bit	$896.00
3.	8 size AX diamond strip type reaming shells, Grade AA std. Matrix for double core barrel. Est. life 150' $ 55.00/shell	$440.00
	Total to be Purchased	$2,011.00

1.88

TO BE RENTED TO PROGRAM

Explanation. Applicant will purchase new diamond core drill, pump, and necessary items to make drill a complete operating unit. The total drilling unit, minus bits and reaming shells, will cost $6,657.35, plus freight of $500.00 = $7,157.35. Complete unit will be rented to program at suggested rental of $900.00 per month. Following is breakdown of all equipment to be included in this $900 monthly rental.

1.	1 diamond core drill, new, Sprague and Henwood Model No. 35-H capacity 600' AX Gas 17.5 h.p., Cathead, hoisting drum and retracting cylinder. Price new FOB Scranton, Pennsylvania	$4,320.00
2.	1 water pump, new, Sprague and Henwood Model 20 B1230 pumping unit consisting of John Bean 420 triplex pump. Driven by air cooled gas engine. Skid mounted price FOB Scranton	$1,075.00
3.	1 hoisting type water swivel	$ 177.65
4.	1 lowering iron	$ 55.20
5.	1 Wommer safety clamp	$ 90.60
6.	1 sheave wheel, complete	$ 83.05

SECTION 7

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(d) continued. . .

	7.	1 300 lb drive weight with chain sling	$ 120.00
Drilling Tools	8.	1 25' length, 1" water swivel hose with fittings	42.50
	9.	1 20' length, 1-1/2" suction hose with foot valve and strainer (ac)	41.15
	10.	1 open holding iron (ac)	14.45
	11.	5 drill rods with couplings 2' long - $11.55 each	57.75
	12.	4 drill rods with couplings 5' long - $13.75 each	55.00
	13.	32 drill rods with couplings 10' long - $18.05 each	577.60
	14.	10 extra, drill rod couplings $ 3.60 each	36.00
Recovery Tools	15.	1 male recovery tap	27.25
	16.	1 female recovery tap	35.40
Tools for Casing Overburden	17.	1 2-1/2" pipe drivehead	37.45
	18.	1 2-1/2" pipe drive shoe	14.05
	19.	1 36" long guide	12.75
	20.	1 36" long pull piece	15.10
	21.	2 3' lengths 2-1/2" drive pipe with coupling $10.30 each	20.60
	22.	5 5' lengths drive pipe with coupling $12.35 each	61.65
	23.	1 2-1/8" wide straight chopping bit	23.60
Overburden Tools	24.	1 2-1/8" wide cross chopping bit	24.75
	25.	1 boulder buster bit	24.65
	26.	3 2-1/8" wide, 3-wing fishtail bit and rod connection	104.85

SECTION 7

Kirk W. Stanley
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(d) continued. . .

Coreing Equipment	27.	1 size AX ball bearing double tube core barrel, 5' long	$ 91.00	
	28.	1 size AX ball bearing double tube core barrel, 10' long	102.30	
	29.	10 Core lifters, $2.80 each	28.00	
Miscellaneous Tools	30.	1 50' length 1" manila rope	12.00	ex
	31.	20 wooden core boxes, $8.00 each	160.00	ex
	32.	1 set, hand tools 2 24" Stillson wrenches 1 12" adj. wrench 1 ballpeen hammer 1 hand oiler 1 grease gun 1 set small tools	50.00	ex
	33.	2 chain tongs for 2-1/2" pipe $33.00 each	66.00	
60) 6657 = 110.95		Total To Be Purchased by Applicant and Rented to Program	$6,657.35	
		Freight	500.00	
			$7,157.35	

Total to be Purchased	$2,011.00	
Total to be Rented ($900/month for 4 months)	$3,600.00	3,600
Total Cost Section 7(d)	$5,611.00	

Kirk W. Stanley
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(e) Initial Rehabilitation and Repairs

None required.

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(f) New Buildings, Fixtures, Installations.

Explanation. Two 12 x 14 framed-in tents will serve as living quarters. One tent will provide sleeping and the other utilized for cooking, eating, and as an office.

	Tents	
2	12 x 14 tents - $200 each	$400.00
2	12 x 14 waterproof tarps - $40 each	80.00
	Flooring and Framing	
12	sheets 1"x4'x8' plywood - $10 each	120.00
16	sheets 3/8"x4'x8' plywood -$6 each	96.00
18	2"x8"x12'	60.00
30	2"x4"x14'	40.00
	nails	5.00
	(Labor included in move-in)	
	Total Cost Section 7(f)	$801.00

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(g) Miscellaneous

Analytical Costs

Each 10' of core will represent 1 sample and samples will be assayed for gold, silver, copper, and lead.

Total possible core recovery = 1200'
Total number of samples = 120

Assay cost = $20.00 per sample	$2,400.00
Sample weight = 3 lbs	
Freight to Anchorage	200.00
Air Freight to Seattle - $0.20/lb	144.00
Total Assay Cost	$2,744.00

Accounting, Insurance and Payroll Costs

20% of $12,320 (total payroll)	$2,464.00

Total Cost Section 7(g) $5,208.00

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

REFERENCES CITED

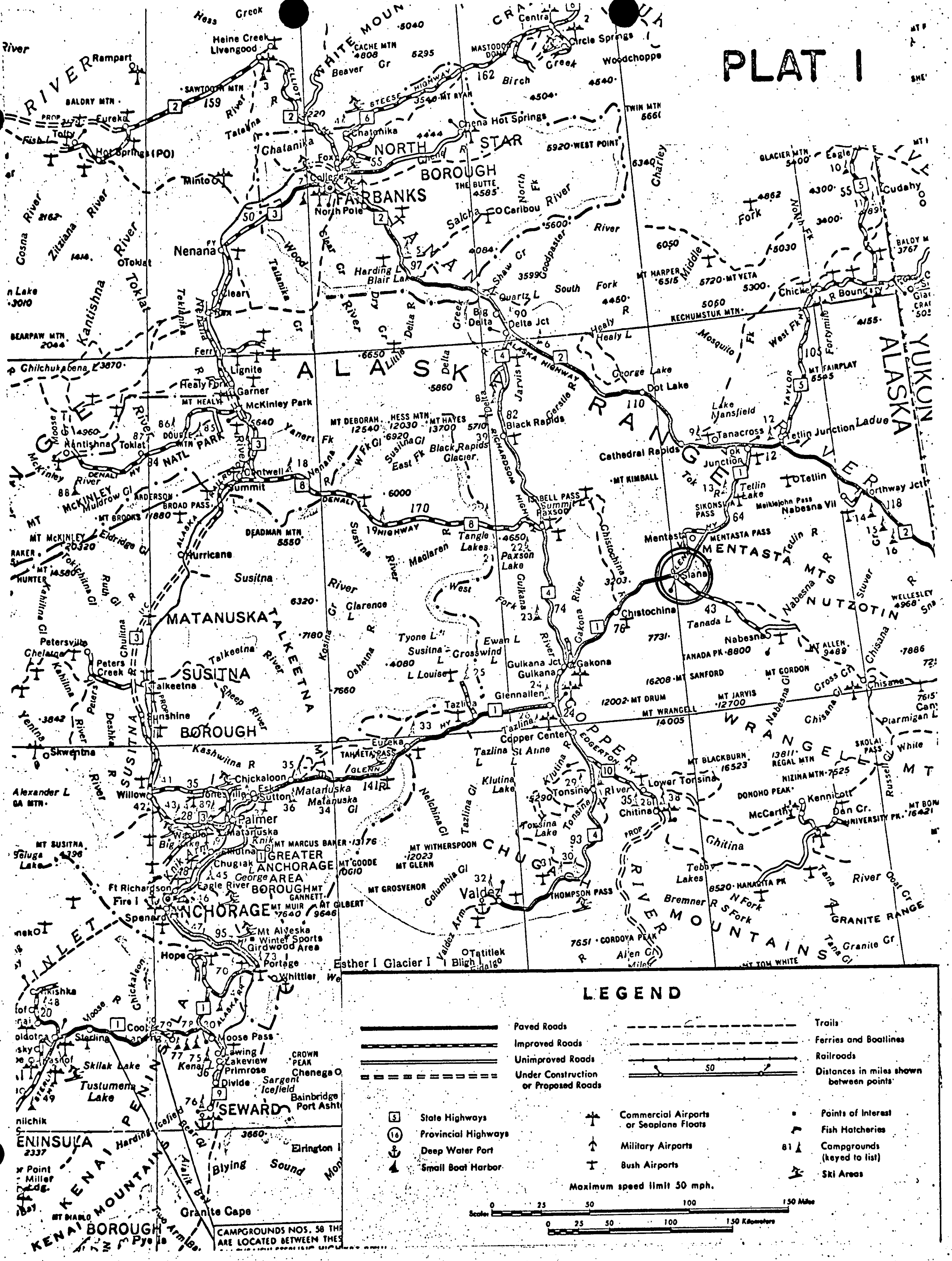
Stanley, Kirk W., 1957, Economic Geology of the Ahtell-Slana District: Unpublished M.Sc. Thesis, Montana School of Mines (Only one copy of thesis exists and it is on file at the School of Mines---the text, however, does cover the Silver Creek deposit.)

Moffit, Fred H., 1954, Geology of the Eastern Part of the Alaska Range and Adjacent Area: U. S. Geological Survey Bulletin 989-D (Moffit's description of the Silver Creek deposit in this bulletin is taken from his earlier bulletin of 1931 and 1938.)

Richter, Donald H., 1964, Geology and Mineral Deposits of the Ahtell Creek Area, Slana District, Southcentral Alaska: Alaska Department of Natural Resources Geologic Report No. 6

Thorne, Robert L., 1946, Exploration of Agentiferous Lead-Copper Deposits of the Slana District, Alaska: U. S. Bureau of Mines RI 3940

PLAT I



LEGEND
Paved Roads
Improved Roads
Unimproved Roads
Under Construction or Proposed Roads
Trails
Ferries and Boatlines
Railroads
Distances in miles shown between points
State Highways
Provincial Highways
Deep Water Port
Small Boat Harbor
Commercial Airports or Seaplane Floats
Military Airports
Bush Airports
Points of Interest
Fish Hatcheries
Campgrounds (keyed to list)
Ski Areas
Maximum speed limit 50 mph.
Scale: 0 25 50 100 150 Miles
0 25 50 100 150 Kilometers
CAMPGROUNDS NOS. 58 THR
ARE LOCATED BETWEEN THES
FAIRBANKS
NORTH STAR BOROUGH
ALASKA RANGE
MATANUSKA SUSITNA BOROUGH
TALKEETNA
GREATER ANCHORAGE AREA BOROUGH
ANCHORAGE
KENAI PENINSULA BOROUGH
KENAI MOUNTAINS
CHUGACH MOUNTAINS
WRANGELL MTS
MENTASTA MTS
NUTZOTIN
COPPER RIVER
YUKON
ALASKA
Livengood
Rampart
Eureka
Minto
Nenana
Chena Hot Springs
Circle Springs
Central
College
Fox
North Pole
Delta Jct
Big Delta
Dot Lake
Tanacross
Tok Junction
Tetlin Junction
Eagle
Chicken
Northway Jct
Healy
Lignite
McKinley Park
Cantwell
Summit
Paxson
Gulkana
Gakona
Glennallen
Copper Center
Chitina
McCarthy
Valdez
Thompson Pass
Talkeetna
Willow
Palmer
Chickaloon
Sutton
Eagle River
Ft Richardson
Spenard
Girdwood
Portage
Whittier
Hope
Cooper Landing
Moose Pass
Seward
Sterling
Soldotna
Kenai
Slana
Nabesna
Chistochina
MT McKINLEY 20320
MT SANFORD 16208
MT WRANGELL 14005
MT BLACKBURN 16523
MT HAYES 13700
MT DEBORAH 12540

Kirk W. Stanley
2003 Mink Pl.
Anchorage, Alaska

Geology of the Eastern Part of the Alaska Range and Adjacent Area

By FRED H. MOFFIT

A CONTRIBUTION TO ALASKAN GEOLOGY

GEOLOGICAL SURVEY BULLETIN 989-D

A summation of geological knowledge of the region, gained in more than forty years of exploration and investigation

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1954

Flakes of molybdenite were found in places in the syenite and the biotite schist.

Samples of the molybdenum-bearing pegmatite, taken from the discovery outcrop by a representative of the Kennecott Copper Corporation, indicated a deposit of commercial value if the size of the ore body were sufficient to justify the expense of opening it up. The company undertook the exploratory work and drove an adit nearly 170 feet long in the ridge 100 feet below the discovery outcrop and opencut. This adit failed to uncover molybdenite in sufficient quantity, and exploration was stopped.

OTHER PROSPECTS

A few other prospects are known that are of interest because of their mineral associations, their possible value, or because more than superficial exploratory work has been done on them.

A deposit of lead and zinc minerals is reported to be exposed in a gulch on the north side of Cross Creek, a western tributary of the Chisana River, near the lower end of the glacier. This deposit has not been fully investigated. Although sphalerite is present in a good many vein deposits of the district it is not known in large amount and had not been regarded with interest until a sharply increased demand for zinc supplies during World War II stimulated a search for zinc deposits not previously exploited.

The group of mountains between the Copper and Slana Rivers, drained in large part by Ahtell and Indian Creeks, shows mineralized zones in which galena is prominent (Moffit, 1931, p. 121–124; 1938, p. 45–48). The area was one of the first to be prospected in the Copper River basin, and a number of its mineral deposits were discovered as early as 1898 or 1899.

Silver Creek, as it is called locally, is a small southern tributary which joins Ahtell Creek about one mile below Flat Creek. The stream is in an area of undifferentiated igneous rocks, which at the prospect are mainly medium-grained diorite and a dark basaltic-looking rock that was not definitely identified. About one mile from its mouth Silver Creek is crossed by a fault zone at least 30 feet wide made up of steeply dipping minor faults, most of which range in strike from N. 45° to 70° W.

The fault zone includes many veins of mineralized quartz that were exposed by opencuts, shafts, and an adit. The adit, which is near the north side of the creek, was driven in a crushed vein that shows quartz stained with copper and contains sphalerite, a little pyrite or chalcopyrite, and galena. A shallow inclined shaft, 100 feet higher on the hillside, was sunk in a zone of crushed vein matter that is about 4 feet thick and is highly stained with iron oxide. Veins and knots of quartz containing granular tetrahedrite, sphalerite, and pyrite or chalcopyrite are stained with a conspicuous blue copper stain. Similar mineral assemblages are seen in an opencut 25 feet northeast of the shaft and in the material on the dump of a caved shaft 50 feet to the southwest. The silver contained in the ore is probably carried by the tetrahedrite.

A mineralized vein containing quartz and metallic sulfides was found on the west branch of Ahtell Creek, 1½ miles from the mouth (Moffit, 1938, p. 47). It crops out on the north side of the valley on an open hillside 100 feet higher than the creek and was explored by a short adit. The country rock of the locality is diorite that is somewhat altered and much fractured. The ore minerals were deposited in a shear zone in a fine-grained phase of the diorite. The shear zone, which has a maximum width of 8 feet at the tunnel, strikes N. 30° E. and dips steeply west. The fractured country rock is cut by veins of quartz up to 8 inches in thickness, containing galena and iron sulfides, and has a surface staining of blue and green copper oxidation products.

Indian Creek has two principal branches which unite 5½ miles north of the Slana-Tok highway and drain an area west of Ahtell Creek occupied almost wholly by igneous rocks of various kinds, both intrusive and extrusive (Moffit, 1931, p. 122–124). The high mountain ridge between the east branch of Indian Creek and a small lake that drains into the west branch of Ahtell Creek is crossed by a series of vertical, east-west fracture planes distributed over a distance of 100 to 200 feet from north to south. This locality is 9 miles northeast of the forks of Indian Creek, at the head of a small stream draining into Indian Creek, and is 1,800 feet higher than the mouth of the creek. The country rock is a dark greenish, coarse-grained, porphyritic variant of the granodiorite-diorite group of igneous rocks of the district. Most of the exposures of vein quartz and ore minerals are on the Indian Creek side and slightly below the crest of the ridge.

The largest exposure of quartz is a milky white vein at least 10 feet wide that stands 6 feet above the adjacent hillside and can be traced several hundred feet down the mountain slope. Where it crosses the ridge 75 feet higher toward the east the width is reduced to 18 inches. Several opencuts on other veins exposed cavernous quartz containing galena, chalcopyrite, and probably pyrite. The quartz is stained with iron oxide and copper. Galena is by far the most abundant sulfide and occurs as well-defined veins in the quartz and as bunches with angular outlines distributed irregularly through the quartz. The proportion of sulfide minerals to quartz is small.

Kirk A. Stanley
7003 Mink St.
Anchorage Alaska

R. I. 3940,
November 1946.

REPORT OF INVESTIGATIONS

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

EXPLORATION OF ARGENTIFEROUS LEAD-COPPER DEPOSITS OF THE SLANA DISTRICT, ALASKA[1]

By Robert L. Thorne[2]

Slana area - Alaska

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INTRODUCTION

As an integral part of the investigation of critical and essential minerals in Alaska, the Bureau of Mines examined the lead deposits in the Slana area. Four examinations were made during June, July, and August 1945 in the 200-square-mile area immediately northwest of Slana. The settlement of Slana lies near the conflux of the small Slana River with the mighty Copper River less than 60 miles southwest of Tok Junction on the Alaska Highway.

Travel through the area and the examination of the properties were conducted by a three-man crew consisting of the author, a caterpillar operator, and a laborer. An RD6 caterpillar, equipped with blade and winch, was used in breaking trail and freighting through the country. Supplies and equipment were loaded on a 7- by 14-foot, double-end, go-devil, which was hauled by the tractor.

1/ The Bureau of Mines will welcome reprinting of this paper provided the following footnote acknowledgment is used: "Reprinted from Bureau of Mines Report of Investigations 3940".

2/ Mining engineer, Bureau of Mines, Juneau, Alaska.

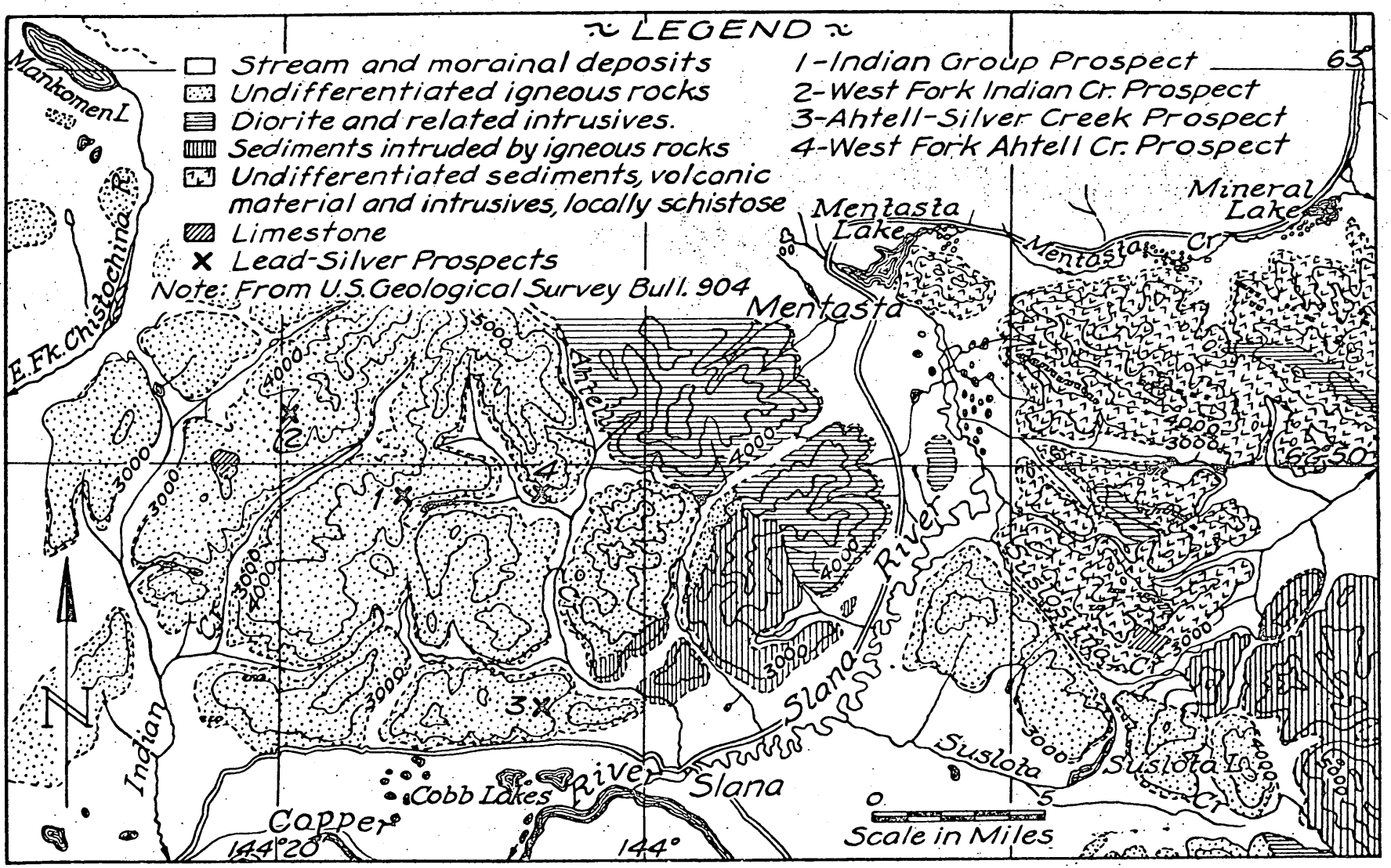


FIGURE 1.- Geologic map of Slana area, Alaska, showing location of lead-silver prospects.

TABLE 3. - West Fork Ahtell Creek prospect samples

Sample	Width, inches	Oz. per ton		Percent	
		Gold	Silver	Lead	copper
1	42	0.01	Trace	6.58	0.19
2	40	Trace	Trace	1.48	.31

Much of the mineralization indicates open fracture deposition with galena and a limited amount of chalcopyrite deposited between quartz crystals up to ½ inch in diameter. In the fracture zone, some evidence of oxidization is exposed by stains of malachite, chrysocolla, and limonite as far as the face.

The area in which the two tunnels are located is covered with dense brush and heavy overburden which would make surface exploration difficult.

About 3/8 mile northeast of the upper tunnel, a creek has cut a deep wash into the mountain and exposed an excellent place for prospecting along the strike. A mile southeast of the prospect and in line with the general strike of the shear zone, ore similar to that found at the upper tunnel was reported.

SILVER CREEK PROSPECT

The Silver Creek prospect is on the north side of Silver Creek, slightly more than a mile above the point where it flows into Ahtell Creek. The distance from the highway at 59 Mile is slightly more than a mile, and a road or trail to the property need be no more than 1½ miles in length. The prospect is at an elevation of 2,900 feet, and a road to the prospect could be constructed which would lie between elevations of 2,800 feet and 3,000 feet.

A stand of large spruce trees grows near the creek between its junction with Ahtell Creek and a point ¼ mile upstream from the prospect. In the section of the creek valley occupied by the prospect, a spur ridge south of and 80 feet above the creek has caused a short, narrow canyon to be formed.

A fault zone 100 feet or more in width crosses the canyon in a northwest direction. Exploration was started by prospectors years ago on three quartz veins in this zone. Other veins may be present.

Two adits, now caved, had been driven on the western quartz vein. The adit portals are 61 feet apart horizontally and 39 feet vertically. At the upper portal a vein outcrops for 20 feet. Above the portal the vein is 3 feet wide, and a secondary fracture 1 inch in width contains galena. The adit at the outcrop was driven in the footwall adjacent to the quartz vein where there may have been additional mineralization. No samples were taken on this vein.

The centrally located quartz vein is exposed for 15 feet vertically by an open-cut and for an additional 15 feet by an inclined shaft. The quartz vein, which occupies a zone of heavy shearing, increases in width from 1 foot near

SAMPLE	WIDTH INCHES	OZ. AU	OZ. AG	PERCENT PB	PERCENT CU
1	42	NIL	TRACE	0.66	TRACE
2	18	0.02	7.46	.17	0.88
3	12	TRACE	17.50	.12	1.59
4	24	.04	TRACE	.10	TRACE
5	12	TRACE	4.36	.15	.34

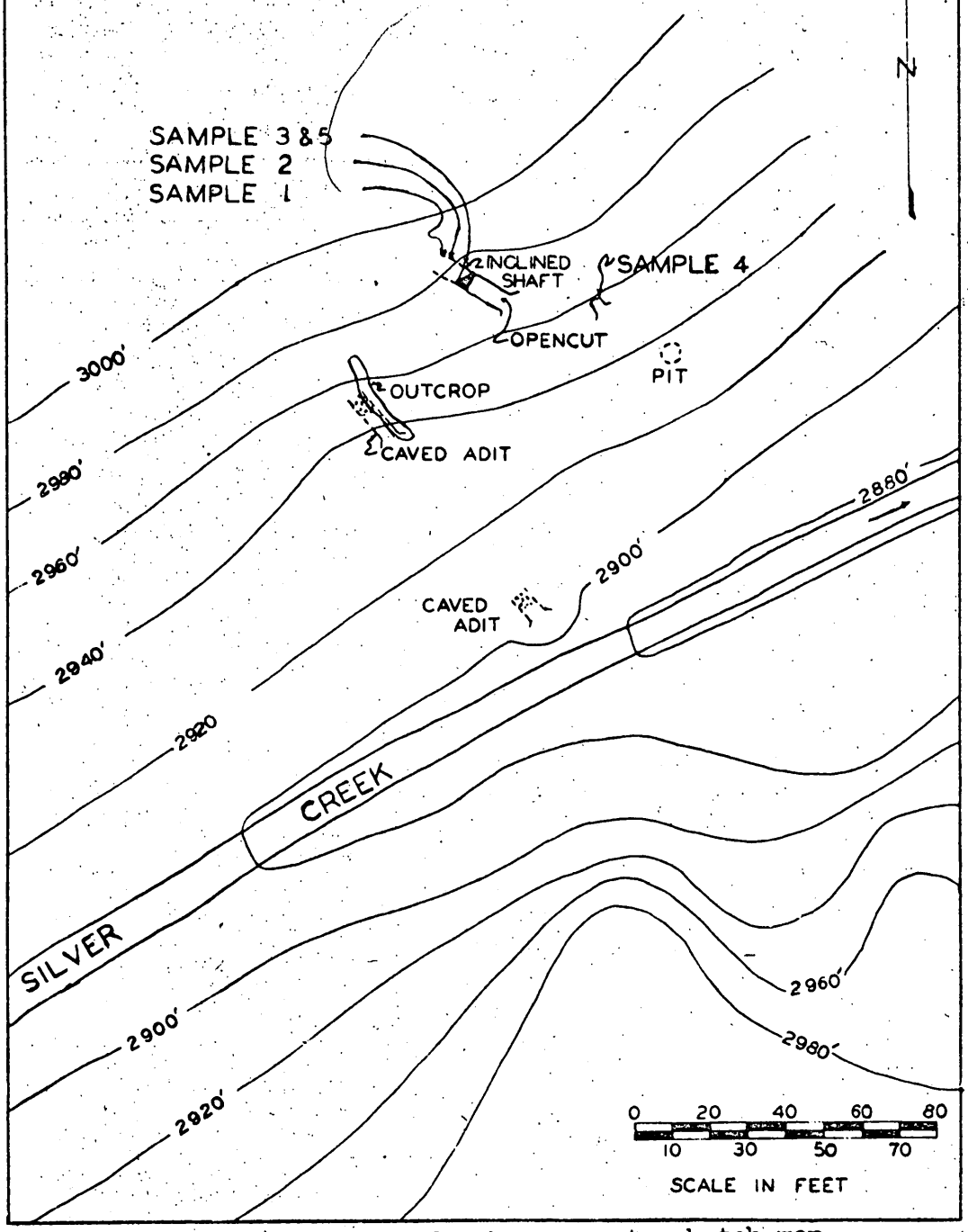


FIGURE 4.- Silver Creek prospect, sketch map.

the surface to 3.5 feet at a point 10 feet down the shaft. The vein is vertical and the shaft was sunk at a 50° angle to the northwest. The vein strikes N. 60° W. Sample 1 was cut 10 feet below the collar of the shaft; sample 2, 5 feet below the collar; sample 3, at the collar; and sample 5 on the footwall 5 feet above the collar. The vein is sparsely mineralized with tetrahedrite and galena in a quartz gangue.

The easterly vein was exposed 35 feet southeast of the shaft by an open-cut. About 25 feet down the strike from this cut is an old caved cut. In the upper cut, sample 4 was taken over a 2-foot width of hard quartz carrying minerals similar to those in the shaft.

The country rock in the area outside the fault zone is an unaltered, dark gray, hard, moderately coarse grained, hornblende diorite. The rock in the fault zone has been altered to a white, soft material containing highly altered feldspars and fresh pyrite. No hornblende was found in the subsurface rock and on the surface the pyrite has been altered to red ferric oxide. Sample analyses are shown in table 4 and in figure 4.

TABLE 4. - Silver Creek prospect

Sample	Width, inches	Oz. per ton		Percent	
		Gold	Silver	Lead	Copper
1	42	Nil	Trace	0.66	Trace
2	18	0.02	7.46	.17	.88
3	12	Trace	17.50	.12	1.59
4	24	.04	Trace	.10	Trace
5	12	Trace	4.36	0.15	.34

MINERAL POINT PROSPECT

At 37 Mile, a point on the Tok road 37 miles northeast of Slana, a mineral discovery was reported by Fred Bronniche as possibly a nickel occurence. Monuments were seen, which showed that the property had been located, but the discovery notice was not found.

The mountain on which the mineralization was discovered lies north of the road and can be identified by two peaks of white limestone separated by a saddle of reddish rocks. East of the western peak, argillitic rocks are exposed for several hundred feet. The argillite gives way to a granitic dike nearly 100 feet wide, which abuts the limestone of the eastern peak.

At the top of a talus deposit, a shear zone 6 feet in width traverses the argillite in a N. 65° W. direction toward the limestone at the summit. Much of the rock in the shear zone has been altered to a reddish-yellow material that continues to some depth. Sample 1 was cut through an unaltered section containing a fine-grained, steel-gray mineral abundantly disseminated through a fine-grained quartz. On pounding, the mineral gave off the garlic odor characteristic of arsenic and physically resembled arsenopyrite; however, the same

Extra copy

MME Form 51
July 1965

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
U. S. Geological Survey

EXPLORATION CONTRACT
(Short Form)

Docket	Commodity	Contract No.	County	State
OME [redacted]	[redacted]	2224	[redacted]	[redacted]

It is agreed AUG 1 1966 (Date), between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and

[redacted],

whose mailing address is [redacted] 99504, hereinafter called the "Operator," as follows:

ARTICLE I. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before _____ (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within [redacted] months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in [redacted] Exhibit A. The estimated total cost of the work is [redacted]. The Government will contribute 50 percent of the total fixed unit costs of the work performed, not in excess of [redacted] in accordance with the provisions of Articles 4 and 5.

(c) Interest computation.--Simple interest at the rate of 7 percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a)The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

[redacted]

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Lien Agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

[redacted]

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.--The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Repayment by Operator.--(a) Certification.--If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retain his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certification of possible production--from the date of the contract until the lapse of the time within which the Government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 6(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. Termination of the Government's Obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to pay on account of units of work not then performed; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 11.

ARTICLE 8. Notices to be given by the Government may be delivered to the Operator or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. Nondiscrimination in Employment.--The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961, as amended and supplemented, are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, U. S. Geological Survey, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, U. S. Geological Survey, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, U. S. Geological Survey, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, U. S. Geological Survey," as used herein includes his duly authorized representative.

ARTICLE 12. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The U. S. Geological Survey may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 13. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

(Operator)

By Kirk W. Stanley

Title

By Arthur A. Baker

Acting Director, U.S. Geological Survey

I, _____ (Name), certify that I am the _____ secretary of the corporation named as Operator herein; that _____ (Name), who signed this contract on behalf of the Operator, was then _____ (Title) of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

EXPLORATION CONTRACT
KIRK W. STANLEY
OMS-6546

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of four (4) unpatented lode mining claims located between Silver Creek and Ahtell Creek in the Ahtell Creek area, Slana district, Chitina Precinct, Alaska.

The claims are shown on Figure 1, entitled "Map Showing Silver Creek Nos. 1-4 claims, Silver Creek Prospect, Ahtell Creek Area, Alaska," which is attached and made a part hereof.

The claims are recorded in the Office of the Deputy Magistrate, Chitina Recording Office, Glennallen, Alaska, as follows:

Claim	Serial No.	Book	Page
Silver Creek No. 1	61-175	19	134
" " " 2	66-55	3	88
" " " 3	66-55	3	88
" " " 4	66-67	3	90

The Operator is the owner of the above listed claims.

EXPLORATION CONTRACT
KIRK W. STANLEY
ONR-6516

EXHIBIT A

The purpose of this project is to explore by core drilling from surface drill sites for silver-bearing veins occurring in the Silver Creek fault zone.

General Provisions

All drill holes shall be cased through overburden and completed with AX core size (core diameter approximately 1-1/8") or equivalent wire line size equipment.

The diamond drill core shall be stored in boxes identified as to hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core from hole intervals not exceeding 5 feet each shall be split and one split assayed for silver and gold. Assays for lead and copper shall be made if samples indicate significant lead and copper mineralization. Wherever the core recovery is less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in proper sequence with the unsampled core, and the remaining sludge shall be stored in suitable containers properly identified as to source and location. The stored core and sludge samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored core and samples.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing geology and assays shall be furnished monthly to the Government. Such logs shall be accompanied by true copies of assay certificates for all samples.

Facilities shall be provided for recovering diamond drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground and identified as to hole number and depths represented.

The Operator shall provide such supervision, labor, and technical services as may be required to complete the work in a satisfactory manner.

The location, direction, and extent of each work item shall be subject to Government approval.

The Government will not participate in the costs incurred for incomplete drill holes.

Drill holes shall be not less than 100 feet from the outer boundary of the claim group shown on Figure 1 previously referred to in AnnexII.

Description of the Work

The work shall consist of drilling not more than 1,200 feet on a two stage program.

Stage I

Proposed Holes 1 and 2 in Stage I shall be drilled from the Silver Creek No. 2 claim approximately as shown on Figure 2, entitled "Map Showing Proposed Holes 1 and 2, Silver Creek Prospect, Ahtell Creek Area, Alaska," which is attached and made a part hereof.

The drill hole data are as follows:

Hole No.	Bearing	Inclination degrees	Length feet
1	Due North	-20°	300
2	N. 26° E.	Horizontal	300

Stage II

The number, location, bearing, inclination, and length of drill holes in Stage II shall be contingent upon the results obtained from proposed Holes 1 and 2, and shall have the prior approval of the Government confirmed in writing.

Estimated Costs of the Project

Stage I

Fixed Unit Costs 1/

Mobilization and demobilization, one surface drill unit	$500.00

Freight of materials and supplies	450.00	
New buildings, 2 framed-in tents, 12 by 14 feet	800.00	
Diamond core drilling, 600 feet @ $9.42/ft. (rounded)	5,650.00	
Sample sacks, 60 @ $0.15/each	9.00	
Transportation of samples	91.00	
Assaying, 60 samples @ $8.00/each Silver and gold @ $4.00/sample Lead and copper @ $4.00/sample	480.00	
Accounting, 2 months @ $50.00 month	100.00	
Insurance, F.I.C.A., payroll taxes, etc.	600.00	
Total Stage I		$8,680.00

Stage II

Fixed Unit Costs 1/

Freight, materials and supplies	450.00	
Move drill rig to site of first hole on Stage II	250.00	
Diamond core drilling, 600 feet @ $9.42/ft. (rounded)	5,650.00	
Sample sacks, 60 @ $0.15/each	9.00	
Transportation of samples	91.00	
Assaying, 60 samples @ $8.00/each Silver and gold @ $4.00/sample, Lead and copper @ $4.00/sample	480.00	
Insurance, F.I.C.A., payroll taxes, etc.	600.00	
Accounting, 2 months @ $50.00/month	100.00	
Total Stage II (rounded)		$7,620.00
Total Estimated Costs of the Project		$16,300.00
Government Participation @ 75%		$12,225.00

1/ Includes all costs whatsoever.

EXHIBIT B

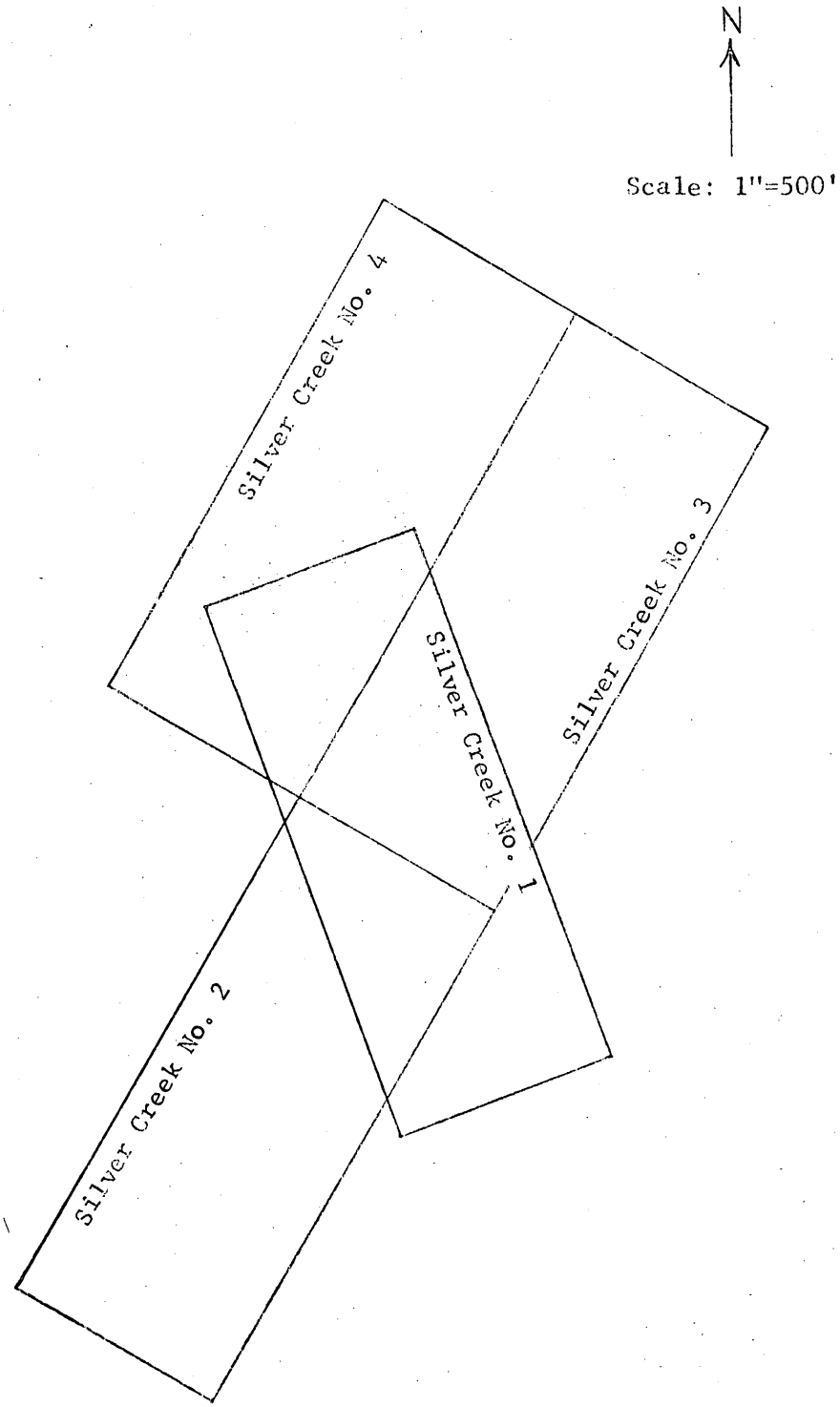
NONDISCRIMINATION IN EMPLOYMENT

(Section 202, Executive Order 11246, September 24, 1965)

"During the performance of this contract, the contractor agrees as follows:

'(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
'(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
'(4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
'(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
'(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
'(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.'"

Kirk W. Stanley

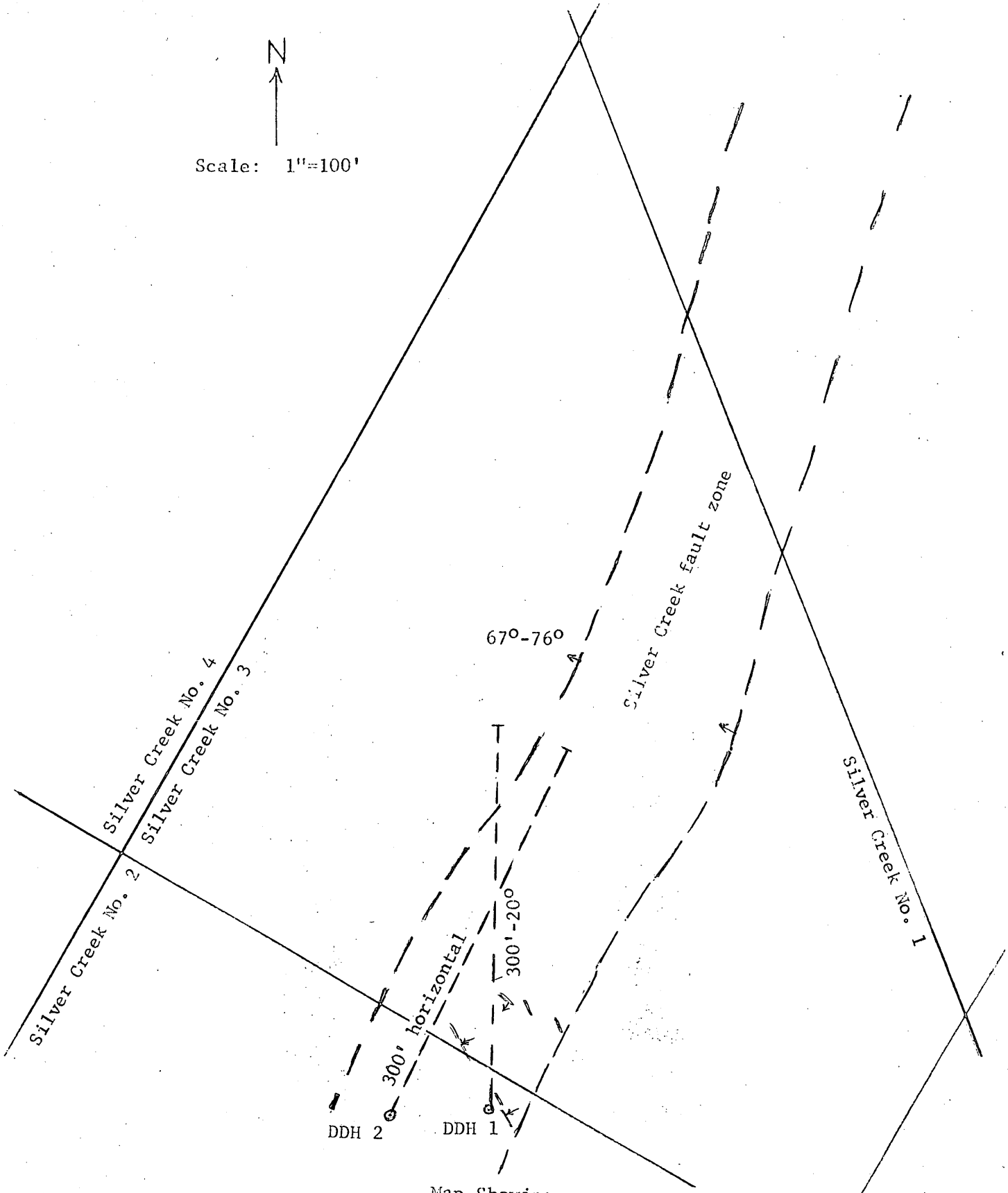


Map Showing
Silver Creek Nos. 1-4 claims
Silver Creek Prospect, Ahtell Creek Area, Alaska

Figure 1

U. S. Geological Survey
Office of Minerals Exploration

OME-6546
Kirk W. Stanley



Map Showing
Proposed Holes 1 and 2, Silver Creek Prospect
Ahtell Creek Area, Alaska

Figure 2

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 21 1967
INITIALS | CODE
120
170
HK
220

P. O. Box 3-3956
Anchorage, Alaska

April 19, 1967

Mr. Frank E. Johnson, Chief
Office of Minerals Exploration
U. S. Geological Survey
Department of the Interior
Washington, D. C. 20242

Dear Mr. Johnson:

I shall endeavor to answer your letter of March 2, 1967 regarding my acceptance of the OME contract (OME-6546, Silver).

My application for Government assistance was dated March 12, 1966. I had hoped that there would be a decision by your office within a two, or at the most, three month period. The opportunity for field investigation in Alaska is very short and if one is to accomplish anything he must be fully equipped and in the field as soon as the snow melts. When I had not heard as to the status of my application in middle June, I made other arrangements.

I feel that there is a real need for the Government to participate and thereby encourage mineral development in Alaska but this will only be done through Government understanding of the various physical and economic inequities which exist in this state as opposed to other states having a similar mineral potential.

Yours very truly,

Kirk W. Stanley

Kirk W. Stanley

ya

ME Form 7
/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/1/67	Kirkemo	120
		110
		220

AIRMAIL

MAR 2 1967

Mr. Kirk W. Stanley
P. O. Box 3-3956
Anchorage, Alaska 99501

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Dear Mr. Stanley:

With reference to your letter dated February 10, 1967, the proposed contract mailed to you from our Menlo Park, California, office on August 5, 1966, and subsequently considered by you, has not been received in either that office or this office. We assume, therefore, that the document is lost, and since you express no interest in approving and signing the proposed contract, we must consider your application for exploration assistance as being withdrawn.

We would appreciate knowing why the proposed contract was not satisfactory to you. In preparing an OME contract, every effort is made to write the specifications and to estimate the costs as carefully as the information available to us and the regulations permit. Your proposed contract was no exception to this practice, and we are at a loss to know what was unacceptable to you.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Region II (Airmail)
Leo H. Saarela, Anchorage, Alaska (Airmail)
OME Reading File
Mr. Kirkemo
120M

HKirkemo/gla 3-1-67

23263

P. O. Box 3-3956
Anchorage, Alaska

February 10, 1967

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 15 1967

INITIALS	CODE
	120 M
JJ	110
RMS	120
Jack Kirk	

Mr. Frank E. Johnson
Chief, Office of Minerals Exploration
U. S. Department of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

I recently received your letter of January 26, 1967, requesting return of the OME contract, No. 6546.

To my personal knowledge, the unsigned contract was returned in the same envelope in which it was sent. It was sent to the return address on the outside of the envelope several days after it was received, which was in late September 1966.

If it is required by your office that I sign some sort of form setting forth that I have no interest in the contract, please send the form to me and I will gladly sign it. Please, address any correspondence to P. O. Box 3-3956, Anchorage.

I trust that this misunderstanding can now be satisfactorily resolved.

Yours very truly,

K. W. Stanley

K. W. Stanley

KS:ya

Region I has been notified of this lost contract in case it was inadvertantly mailed to Spokane.

R-II
2/20/67
JM

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Anchorage, Alaska
Box 259

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 1 1967

January 30, 1967

Memorandum

To: Chief, Office of Minerals Exploration

From: Regional Mining Supervisor, Anchorage, Alaska

Subject: OME-6546 (Silver), Kirk W. Stanley, Silver Creek Prospect
Chitina Precinct, Alaska

In reference to your letter to Mr. Stanley regarding his proposed contract. Bob Chapman sent me a copy of the letter to Mr. Stanley which was received January 9, 1967, and I phoned Stanley asking him about it. He stated emphatically that the contract had been sent back to the office of origin, although he could not remember if it was Spokane, Menlo Park, or Washington. It might be that the contract is somewhere in the official files. I also requested Mr. Stanley to write you and he promised to do so. Upon receipt of your latest letter I unsuccessfully attempted to make contact by telephone. I will continue to try and will again request that he write you directly by registered mail.

We had a visit from Mrs. Sumner of the Metal Creek application on the afternoon of January 23, within hours of receiving the copy of the notification of approval. She requested information on how to sign and I told her to have both partners sign and notarize in the usual manner.

L. H. Saarela

L. H. Saarela

Copy to R. II
2/1/67
m
Send a copy to R. I

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : Hal. R. [illegible], [illegible], [illegible]

DATE : [illegible]ry 30, 1967

FROM : Robert M. [illegible], [illegible], Alaska

SUBJECT: Busty [illegible], [illegible], and Silver [illegible]

By Work [illegible] Brian Thomas' map of [illegible] veins, [illegible], on the Busty [illegible] map. Bruce [illegible] has not been able to [illegible] copy of the [illegible]. He does have a [illegible] that [illegible] in his office. [illegible] that the 30-[illegible] is not prospectable, [illegible] east of [illegible]. The strike of the [illegible] is [illegible], [illegible] is apparently vertical or [illegible] to the south. This [illegible] to be a logical explanation, [illegible] outlined in their [illegible]. I [illegible] to extend the present [illegible] farther, but [illegible] to have more southerly [illegible] advantage of [illegible]. The regional strikes that [illegible] are mostly east. I [illegible] precise measurement from the Burns's map, I think that [illegible] of crosscut to the north, and the remaining foot [illegible] would reasonably [illegible] the proposed [illegible], [illegible] simply south to vertical. On the basis [illegible] showing [illegible], I have [illegible] that the [illegible] is in well-defined and persistent veins. I will [illegible] of the new map as soon as I can get it, and outline these [illegible] on it.

For your information on the Silver Dr. [illegible] and Kirk A. Stanley, I talked with Leo [illegible] several weeks ago, and he told me that Kirk Stanley told him that he had returned the copies of the [illegible] about several months ago. He had forgotten now just exactly to [illegible] returned them. I am very surprised that Stanley has not replied to the copies of later letters, however. I contacted [illegible] today, which is replying to the letter of January [illegible] from Frank Johnson to Stanley, [illegible] will also get in touch with Stanley.

R. G.

[illegible]

[illegible]

[illegible] G.
[illegible]

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
1/26/67	Kirkemo	120
		110
		220
		120M

AIRMAIL
REGISTERED MAIL
RETURN RECEIPT REQUESTED

JAN 26 1967

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska 99504

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Dear Mr. Stanley:

We do not understand why you have not returned the four copies of the proposed OME contract sent you on August 5, 1966. Since then we have tried repeatedly by letter and by conversation with you to elicit a reply from you concerning the contract, but without success.

Laura S. Stanley, on January 5, 1967, acknowledged receipt of our letter dated December 29, 1966, requesting return of the proposed contract. We have received nothing from you since then.

As stated previously, the proposed contract has no legal status, and is of no value to you. By failing to respond to our repeated inquiries, you have proved conclusively that you have no interest in an OME contract. We must close our files on this application and the proposed contract and three copies must be returned immediately. If the document is lost or was destroyed, please so advise us in writing.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
OME Region II

Robert M. Chapman (Airmail)
Leo H. Saarela (Airmail) w/cy ourletr.12/29/66
Mr. Kirkemo

HKirkemo/gla 1-26-67

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/28	Kirkemo	120
		110
12/29	cal	220
		120M

AIRMAIL
REGISTERED MAIL
RETURN RECEIPT REQUESTED

DEC 2 9 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska 99504

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Dear Mr. Stanley:

This is to request immediate return of the original and three copies of a proposed OME contract to explore the Silver Creek Prospect which Mr. H. K. Stager, OME Field Officer, Region II, sent you on August 5, 1966. You were to consider the proposed contract and, if satisfactory, to sign it, or, if unsatisfactory, to return the documents together with your reasons for not signing. To date, we have not received any written communication from you concerning the proposed contract, or the documents themselves.

In order to determine the reason for the delay in returning the proposed contract, Mr. Stager wrote you on September 2 and November 1, 1966, and Mr. Robert M. Chapman, USGS, contacted you in Anchorage in late August or early September and wrote you on October 12, 1966. You have not returned the proposed contract despite these inquiries. You have had ample time to consider the terms and program proposed.

We understand from Mr. Chapman that you have undertaken exploration drilling on your own account, so the program described in the proposed contract is not applicable to present conditions at the property.

The proposed contract has no legal status and is of no use to you. We wish to close our files on this application, and we request, therefore, that you return the proposed contract and three copies at once.

HKirkemo/gla 12-28-66

cc: Director's Reading File
Division File
Econ. Geology File
OME Docket
OME Region II
Robert M. Chapman(Airmail)
OME Reading File
Mr. Kirkemo

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

23263

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

November 1, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska 99504

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Dear Mr. Stanley:

I understand that you have undertaken the exploration of your Silver Creek Prospect on your own account and do not intend to utilize the proposed OME contract sent to you on August 5, 1966. Inasmuch as the contract is now void and of no value to you will you please return it to this office.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: Chief, OME, WDC
RMChapman - College, Alaska
D RF
ACG RF
File 6546
MP RF
HKStager:mlb

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

INITIALS	CODE
gla	120
~~gld~~	~~110~~
RMG	120

G-ALAS-RSC

m

S

OME-6546

ALASKAN GEOLOGY BRANCH
BOX 583
COLLEGE, ALASKA 99735

October 12, 1966

Mr. Kirk Stanley
7003 Mink Place
Anchorage, Alaska

Dear Kirk:

Recently when I talked with H. K. Stager, he mentioned that they had had no word from you about the O.M.E. contract that was approved for the Silver Creek prospect. He would appreciate hearing from you as to whether or not you plan to do any work under this proposal.

I am sorry that I was not able to get down to Silver Creek while you were drilling. How did things shape up? I assume that by now the weather has forced you to quit. Our mild fall weather has been a big help to all late season outdoor work, and I hope you had the same break down there.

Sincerely,

Robert M. Chapman
Geologist-in-charge
College office

cc:
Director's RF
Division
Gryc
H. K. Stager

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

UNITED STATES GOVERNMENT

Memorandum

TO : H. K. Stager
OME, Menlo Park

DATE: October 12, 1966

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

SUBJECT: Information on current OME projects and applications.

OME-6553

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

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

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

OME-6534

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

OME-6546

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

Bob

RECEIVED

OCT 17 1966

OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY

As a result of a conference - Johnson and Kirkham on Sept. 13, 1966 it was decided to

defer writing to Mr. Stanley until about October 1 when he will be finished with this reservoir work.

Harold Kirkham

OME-6546

George Gryc
Alaskan Geology Branch, Menlo Park

September 6, 1966

Robert M. Chapman
Alaskan Geology Branch, College

Silver Creek prospect near Slana

I contacted Kirk Stanley while in Anchorage to inquire about his progress on drilling his Silver Creek property. As we had heard, he is currently drilling it with his own drill and to date has made about 300 feet of hole in, I believe, 3 holes. Only 2 of the holes are of significant length, as he had to abandon one due to drilling difficulties.

He has had rather encouraging results so far. He penetrated a galena vein about 1 foot thick at an approximate depth of 100 feet down dip from the surface exposures. The rock is highly fractured and does not drill easily, and the fractures give a rather high water loss.

He intends to continue drilling until cold weather or lack of water force him to close down. This will be about the end of September. He will no doubt be sending along some word soon on what he wants to do about the O.M.E. contract. Unofficially, it is my understanding that he will not go ahead with the proposed contract work under O.M.E.

cc:
Director's RF
Division
H. K. Stager

OFFICIAL COPY
O. M. E.
SEP 12 1966

OME - 6546

~~120 M~~
JED ~~110~~
HK ~~120~~

RECEIVED
SEP 8 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

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

September 2, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

on lease ~~120 AK~~ 110
HK ~~120 K~~

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska
Contract No. 2224

Dear Mr. Stanley:

On August 5, 1966, we sent you the original and three copies of a proposed exploration contract for your approval and signature. To date we have not received the signed contract or any word from you regarding it. If the proposed contract meets with your approval please sign all copies and return the Government's, Budget and Finance's, and Field Office's Copy to this office. If any part of the contract does not meet with your approval, all copies should be returned to this office together with your changes for consideration.

May we please have your immediate reply.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

cc: Chief, OME, WDC
cc: D RF
ACG RF
MP RF
File 6546
HKStager:mlb

AIR MAIL

OFFICIAL COPY

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

August 5, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

gla 120 m
JK 110
(1205)
HK ~~120K~~

Re: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska
Contract No. 2224

Dear Mr. Stanley:

Enclosed are the original and three copies of a proposed contract for the subject property, signed by the Director for the Government.

The contract consists of MME Form 51 (5 pages), Annex I (1 page), Exhibit A (3 pages), Exhibit B (1 page), and two maps (Figs. 1 and 2).

If the proposed contract meets with your approval, all four copies should be signed by you and the following copies returned to this office:

Government's Copy
Budget and Finance's Copy
Field Office's Copy

The Operator's Copy should be retained for your files.

If any part of the proposed contract does not meet with your approval, the original and all copies should be returned to this office together with your changes for consideration.

Please note that the 7 percent interest accrues from the dates on which individual payments are made by the Government and, like the principal, is repayable from royalty on production.

Also note that proposed Hole No. 1 bears approximately due north and is inclined at -20° in order to remain within the Silver Creek fault zone, and to explore the zone to a greater depth than you had planned. If Stage II is justified by the results of Stage I, the drilling of Holes 3 and 4, together with the sites, bearings, inclinations, and depths, will be determined accordingly.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures

cc: Chief, OME, WDC
Dir RF
ACG RF
MP RF
Docket 6546
HKStager:mlb

INSTRUCTIONS TO DELIVERING EMPLOYEE

☐ Deliver *ONLY* to addressee

☐ Show address where delivered

(Additional charges required for these services)

RECEIPT

Received the numbered article described on other side.

SIGNATURE OR NAME OF ADDRESSEE *(must always be filled in)*

X Kirk A. Stanley

SIGNATURE OF ADDRESSEE'S AGENT, IF ANY

X Laura L. Stanley

DATE DELIVERED	SHOW WHERE DELIVERED *(only if requested)*
1-5-67	

C55—16—71548-5—F GPO

POST OFFICE DEPARTMENT
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

ANCHORAGE JAN 5 PM 1967 ALASKA

ALWAYS USE ZIP CODE

POSTMARK OF DELIVERING OFFICE

INSTRUCTIONS: Fill in items below and complete instructions on other side, if applicable. Moisten gummed ends, attach and hold firmly to back of article. Print on front of article RETURN RECEIPT REQUESTED.

RETURN TO

REGISTERED NO. 500488	NAME OF SENDER Office of Minerals Exploration, U.S.Geological Survey
CERTIFIED NO.	STREET AND NO. OR P. O. BOX Dept. of the Interior Building
INSURED NO.	CITY, STATE, AND ZIP CODE Washington, D. C. 20242

C55—16—71548-6—F

POD Form 3811 Sep. 1963

OME-6546

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
7/27	Kirkness	120
"	Johnson	110
7-26	Weeks	220
7/29	Lucetto	
7/29	Bailey	
		110
8/3	Cal	220
		120M

AUG 3 1966

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Enclosed are the original and three copies of a proposed contract for the subject property. The contract consists of MMR Form 51, (five pages), Annex I (one page), Exhibit A (three pages), Exhibit B (one page), and two maps (Figures 1 and 2). All copies of the contract have been signed for the Government. You should insert the date for commencement of the work. Also enclosed is an extra copy of the contract for field use.

If the proposed contract is satisfactory to you and the Applicant, all four copies should be signed by Mr. Stanley. Thereafter, please distribute the copies in the usual manner.

Please advise the Applicant that the ~~6-3/4~~ 7 percent interest accrues from the dates on which individual payments are made by the Government and like the principal is repayable from royalty on production.

If any part of the proposed contract does not have your approval or that of the Applicant, the original and all copies should be returned to this office together with the proposed changes for consideration.

Please note that proposed Hole No. 1 bears approximately due north and is inclined at -20° in order to remain within the Silver Creek fault zone, and to explore the zone to a greater depth than the Applicant had planned.

Although the Applicant showed tentative locations for Holes 3 and 4 (Stage II), the contract does not describe or show these holes because the results of Stage II will determine whether Stage II is warranted, and the sites, bearings, inclinations, and depths of holes will be determined accordingly.

23263

The use of core boxes is specified under General Provisions, but a cost allowance for core boxes is not shown under Estimated Costs of the Project because the Applicant included this expense in the cost estimate for drilling.

The Applicant intended to log the core, to crush each 10-foot length of core, and to prepare a 3-pound sample which would be air-freighted to Seattle for assay. The contract specifies the standard practice concerning logging, splitting, storing, and assaying of drill core samples.

FRANK E. JOHNSON

Frank E. Johnson

Enclosures

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

HKirkemo/gla 7-27-66

DRAFT
HKirkemo/mm /gla
7/18/66 7/20/66

Docket
HK
Reg

MME Form 51
July 1965

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
U. S. Geological Survey

EXPLORATION CONTRACT
(Short Form)

Docket	Commodity	Contract No.	County	State
OME -6546	Silver		Chitina Precinct	Alaska

It is agreed _____ (Date), between the United States of America, acting through the Department of the Interior, U. S. Geological Survey, hereinafter called the "Government," and

Kirk W. Stanley, an individual

_____,

whose mailing address is 7003 Mink Place, Anchorage, Alaska, hereinafter called the "Operator," as follows:

ARTICLE I. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before _____ (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 18 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $16,300.00. The Government will contribute ~~50~~ 75 percent of the total fixed unit costs of the work performed, not in excess of $12,225.00 in accordance with the provisions of Articles 4 and 5.

(c) Interest computation.--Simple interest at the rate of _____ percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a)The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

None

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Lien Agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

None

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.--The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Repayment by Operator.--(a) Certification.--If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retain his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certification of possible production--from the date of the contract until the lapse of the time within which the Government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 6(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. Termination of the Government's Obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to pay on account of units of work not then performed; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 11.

ARTICLE 8. Notices to be given by the Government may be delivered to the Operator or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. Nondiscrimination in Employment.--The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961, as amended and supplemented, are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, U. S. Geological Survey, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, U. S. Geological Survey, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, U. S. Geological Survey, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, U. S. Geological Survey," as used herein includes his duly authorized representative.

ARTICLE 12. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The U. S. Geological Survey may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 13. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

(Operator)

By KIRK W. STANLEY

Title

By Director, U. S. Geological Survey

I, _____ (Name), certify that I am the _____ secretary of the corporation named as Operator herein; that _____ (Name), who signed this contract on behalf of the Operator, was then _____ (Title) of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

CORPORATE SEAL

EXPLORATION CONTRACT
KIRK W. STANLEY
OME-6546

ANNEX I

The land, including all rights pertaining thereto, referred to in Article 2 of the contract consists of four (4) unpatented lode mining claims located between Silver Creek and Ahtell Creek in the Ahtell Creek area/ Slana district, Chitina Precinct, Alaska.

The claims are shown on Figure 1, entitled "Map Showing Silver Creek Nos. 1-4 claims, Silver Creek Prospect, Ahtell Creek Area, Alaska," which is attached and made a part hereof.

The claims are recorded in the Office of the Deputy Magistrate, Chitina Recording Office, Glennallen, Alaska, as follows:

Claim	Serial No.	Book	Page
Silver Creek No. 1	61-175	19	134
" " " 2	66-55	3	88
" " " 3	66-55	3	88
" " " 4	66-67	3	90

The Operator is the owner of the above listed claims.

EXPLORATION CONTRACT
KIRK W. STANLEY
OME-6546

EXHIBIT A

The purpose of this project is to explore by core drilling from surface drill sites for silver-bearing veins occurring in the Silver Creek fault zone.

General Provisions

All drill holes shall be cased through overburden and completed with AX core size (core diameter approximately 1-1/8") or equivalent wire line size equipment.

The diamond drill core shall be stored in boxes identified as to hole number with markers in the core sections indicating the depths represented.

Significantly mineralized core from hole intervals not exceeding 5 feet each shall be split and one split assayed for silver and gold. Assays for lead and copper shall be made if samples indicate significant lead and copper mineralization. ~~lead, and copper.~~ Wherever the core recovery is less than 60 percent, a split of the corresponding retained sludge and a split of such core as may have been recovered shall be assayed separately and the assay results combined according to standard practice to represent a single sample. The remaining core shall be stored in proper sequence with the unsampled core, and the remaining sludge shall be stored in suitable containers properly identified as to source and location. The stored core and sludge samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored core and samples.

All drill holes shall be logged, and copies of the logs of completed holes together with plans and sections showing geology and assays shall be furnished monthly to the Government. Such logs shall be accompanied by true copies of assay certificates for all samples.

Facilities shall be provided for recovering diamond drill sludge, and such sludge shall be retained when drilling in significantly mineralized ground and identified as to hole number and depths represented.

The Operator shall provide such supervision, labor, and technical services as may be required to complete the work in a satisfactory manner.

The location, direction, and extent of each work item shall be subject to Government approval.

The Government will not participate in the costs incurred for incomplete drill holes.

Drill holes shall be not less than 100 feet from the outer boundary of the claim group shown on Figure 1 previously referred to in Annex I.

Description of the Work

The work shall consist of drilling ~~not more than 4 drill holes totalling~~ not more than 1,200 feet on a two stage program.

Stage I

Proposed Holes 1 and 2 in Stage I shall be drilled from the Silver Creek No. 2 claim approximately as shown on Figure 2, entitled "Map Showing Proposed Holes 1 and 2, Silver Creek Prospect, Ahtell Creek Area, Alaska," which is attached and made a part hereof.

The drill hole data are as follows:

Hole No.	Bearing	Inclination degrees	Length feet
1	Due North	-20°	300
2	N. 26° E.	Horizontal	300

Stage II

The number, location, bearing, inclination, and length of drill holes in Stage II shall be contingent upon the results obtained from proposed Holes 1 and 2, and shall have the prior approval of the Government confirmed in writing.

Estimated Costs of the Project

Stage I

Fixed Unit Costs 1/

Mobilization and demobilization, one surface drill unit	$500.00	
Freight of materials and supplies	450.00	
New buildings, 2 framed-in tents, 12 by 14 feet	800.00	
Diamond core drilling, 600 feet @ $9.42/ft. (rounded)	5,650.00	
Sample sacks, 60 @ $0.15/each	9.00	
Transportation of samples	91.00	
Assaying, 60 samples @ $8.00/each	480.00	
Silver and gold @ $4.00/sample		
Lead and copper @ $4.00/sample		
Accounting, 2 months @ $50.00/month	100.00	
Insurance, F.I.C.A., payroll taxes, etc.	600.00	
Total Stage I		$8,680.00

Stage II

Fixed Unit Costs 1/		
Freight, materials and supplies	$450.00	
Move drill rig to site of first hole on Stage II	250.00	
Diamond core drilling, 600 feet @ $9.42/ft. (rounded)	5,650.00	
Sample sacks, 60 @ $0.15/each	9.00	
Transportation of samples	91.00	
Assaying, 60 samples @ $8.00/each Silver and gold @ $4.00/sample, Lead and copper @ $4.00/sample	480.00	
Insurance, F.I.C.A., payroll taxes, etc.	600.00	
Accounting, 2 months @ $50.00 month	100.00	
Total Stage II (rounded)		$7,620.00
Total Estimated Costs of the Project (rounded)		$16,300.00
Government Participation @ 75%		$12,225.00

1/ Includes all costs whatsoever.

Form 7
(3)

OFFICIAL FILE COPY

Date	Surname	Code
7/19		120
		110
		220
		120M

July 19, 1966

Memorandum

To: The File

From: Harold Kirkemo

Subject: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

JUSTIFICATION FOR ESTIMATED COSTS

Stage I

Mobilization and demobilization		$500.00	
Freight of materials and supplies		450.00	
Freight - Gakona to Slana	$150.00		
Freight - Slana to deposit	300.00		
New buildings		800.00	
Diamond core drilling, 600 ft. @ $9.42/ft. (rounded)		5,650.00	
Personnel	$3,960.00		
Operating materials and supplies	919.00		
Operating equipment	768.00		
Total	$5,647.00		
Accounting, 2 months @ $50.00/month		100.00	
Insurance, F.I.C.A., payroll taxes, etc.		600.00	
Assaying, 60 samples @ $8.00/each		480.00	
Silver and gold @ $4.00/sample			
Lead and copper @ $4.00/sample			
Sample sacks, 60 @ 15 cents/each		9.00	
Transportation of samples		91.00	
Total Stage I			$8,680.00

Stage II

Freight, materials and supplies		$450.00	
Gakona to Slana	$150.00		
Slana to deposit	300.00		
Move drill rig from DDH 2 to site of first hole in Stage II		250.00	

(Stage II continued)

(Stage II continued)

Diamond core drilling, 600 feet @ $9.42/ft. (rounded)	$5,650.00	
Assaying, 60 samples @ $8.00 each	480.00	
Silver and gold @ $4.00/sample		
Lead and copper @ $4.00 sample		
Accounting, 2 months @ $50.00/month	100.00	
Insurance, F.I.C.A., payroll taxes, etc.	600.00	
Sample sacks, 60 @ 15 cents/each	9.00	
Transportation of samples	91.00	
Total Stage II (rounded)	$7,620.00	
Total Estimated Cost of the Project		$16,300.00
Government Participation @ 75%		$12,225.00

Harold Kirkemo

Harold Kirkemo

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

HKirkemo/gla 7-19-66

short form

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 11 1966

INITIALS	CODE
gla	130
	~~120~~
	110
	130

July 8, 1966

Memorandum

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

From: Field Officer
Region II

Subject: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Enclosed is a report on the subject application by R. M. Chapman, USGS, Alaskan Branch. Mr. Chapman recommends a contract be approved for a two-stage drilling project. I concur with Mr. Chapman's recommendations. He also points out that the field working season will end in October so that if the project is to be completed this season it must be started as soon as possible.

H. K. Stager

Enclosures

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

5010-106

UNITED STATES GOVERNMENT

Memorandum

TO : H. K. Stager, Field Officer, O.M.E.
U. S. Geological Survey, Menlo Park

DATE: July 6, 1966

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

SUBJECT: Transmittal of OME-6546 (Silver) application file and my report of examination

Enclosed are the OME-6546 (Silver) application file that you sent to me, and 2 copies of my report together with additional information furnished by the applicant, Kirk W. Stanley. I do not have enough copies of all attachments to provide a complete set with the second copy of my report. You will have better access to a Xerox machine than I do, so perhaps you can complete this set if you so desire.

I am not sure how many copies of examination reports you may want. If 2 copies are not enough, please advise and in the future I can send more if needed.

Bob

OFFICIAL
COPY
O. M. E.
RECEIVED
JUL 11 1966

INITIALS	CODE

RECEIVED
JUL 7 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

The Silver Creek prospect,
Ahtell Creek area, Alaska

Report prepared for review of OME-6546 (Silver)
application by Kirk W. Stanley

by

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

July 5, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
JUL 11 1966

INITIALS	CODE

FIELD
FILE REPT

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Location, accessibility and local facilities	1
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Property and ownership	2
Development	2
Geology	2
Ore deposits	3
Sampling	4
Proposed exploration	4
Exploration costs	5
Summary and conclusions	6
Recommendations	7

Attachments

Kirk W. Stanley letter dated May 24, 1966.
Kirk W. Stanley letter dated May 25, 1966.
Kirk W. Stanley letter dated June 9, 1966.
Summary of cost for exploring the Silver Creek deposit, Alaska: revised pages 1, 27-35, 37-38.

Introduction

The Silver Creek prospect is held by Kirk W. Stanley, 7003 Mink Place, Anchorage, Alaska. The loan application, OME-6546 (Silver), was referred to the writer for a field examination and discussion with the owner. I discussed the deposit briefly with Mr. Stanley on April 30, 1966, and visited the property with him on May 19, 1966. Additional information concerning various items in the application has been supplied by Mr. Stanley in letters to me dated May 24, May 25, and June 9.

The required information on this property and the proposed exploration has been fully and truthfully supplied by Mr. Stanley in his application and supplementary letters, and therefore only brief summary comments on many of the pertinent points seem necessary.

Location, accessibility, and local facilities

The Silver Creek prospect is on the north bank of Silver Creek, a tributary of Ahtell Creek, about 0.5 mile upstream from its confluence with Ahtell Creek. Silver Creek is shown as an unnamed stream on the Gulkana (C-1) 1:63,360 quadrangle at approximately 62° 44' N., and 144° 03' W. The prospect is 1.2 airline miles due north from the Glenn Highway, and can be conveniently reached via a tractor trail, about 2.5 miles long, that leaves the Glenn Highway about 2.4 miles west of Slana, which is about halfway between Gakona and Tok. The altitude at the prospect is about 2,800 feet.

The entire area below an altitude of 3,500-4,000 feet was free of all but small isolated patches of snow on May 19th. Silver and Ahtell Creeks had been flowing for several weeks at least, but the water in Silver Creek near and above the prospect was flowing in most places on ice as much as 3 to 6 feet in thickness. Reportedly, some of this ice remains until late in the summer. Silver Creek appears to afford a water supply adequate for any of the proposed operations. The sharply-cut valley could be dammed above the prospect to form a reservoir pond, if needed. The prospects and proposed drilling sites are far enough above creek level to be out of flood danger.

Trees in the immediate vicinity of the prospect are small, but some that would be adequate for mining use could be obtained along Silver Creek below the prospect. Larger timber is available in Ahtell Creek valley and along the Glenn Highway.

The tractor trail, shown on the Gulkana (C-1) quadrangle, is an easy, well-cleared route with no steep grades, and in its present condition might be passable in dry summer weather for 4-wheel-drive vehicles. It could be improved with relatively little work to provide a truck road for year around access. A shorter, but steeper, road could be constructed essentially due south from the prospect over the ridge to the Glenn Highway. The Glenn Highway is surfaced, and maintained throughout the year. Telephone service and bush airfields are available at several places along this highway.

History and production

The history of the prospect is not well known, but the existing information is fully covered in the application and attached publications of the U.S.G.S., U.S.B.M., and State Dept. of Mines. The production from the several prospect workings is not known, but certainly it was very small, if indeed any ore was shipped.

Property and ownership

The claims involved are fully described in the application. The applicant, Mr. Stanley, is a well trained, reliable, and honest person, and has had considerable experience in Alaskan mining operations as well as having an academic background of undergraduate and graduate college training in mining and geology. His Master's thesis for Montana School of Mines was done in this area. He has been employed for the past few years by the Alaska State Dept. of Lands, engaged in geological work, and he resigned from this position June 1st to enter private work. This answers the comment in Saarela's letter of March 25, regarding the applicant's legal status as a claim holder. It is my understanding that the State would not object, however. To my knowledge his integrity, competency, and responsibility are above average and without question.

As indicated in his letter of May 24, Question 6, and in discussions with me, financing of his share of the program has been arranged.

Development

The previous work on the property is described in the application (Section 3a) and in the attached publications by Moffit and by Thorne. When visited on May 19, the old adits, shaft, and pit mapped by Thorne were recognizable but caved and partially covered by slumped colluvium so that it was impossible to see or dig out any vein material that was in place. The picture in Figure 6 of the application accurately shows the site of the prospect. The only other surface working is a bulldozer trench, about 150 feet in length, on the bench just above the bluff face that is shown in the applicant's Figure 6.

There are no buildings or cabins at or near the property.

Geology

A general examination of the geology in this area was not made by the writer, as the descriptions given in the reports by Moffit (1938) and by Richter (1964) are adequate. Their work, however, does indicate that a better knowledge of ages and structural relationships of the various rock units is needed.

The Silver Creek prospect is in a contact zone between a biotite diorite pluton on the west and a mapping unit of interbedded sedimentary rocks, tuffs, and mafic lava flows, sills, and dikes to the east. Pyrite is common in the latter unit. Hornfels is present in the contact zone. The sulfide-bearing quartz-carbonate veins of the Silver Creek prospect are emplaced in a highly fractured and iron stained fault zone that is at least 130 feet wide.

Richter has postulated that the fault trends northeastward along the contact between the diorite and the sedimentary rock units.

A broad, gently-sloping terrace or bench, well illustrated in the applicant's Figures 1, 3, and 5, lies immediately north of Silver Creek. It is capped, where observed in the bulldozer trench (Plat 2), with about 15 feet of bouldery gravel, which is reportedly perennially frozen. Well-rounded boulders about 1 foot in diameter are common, and rounded cobbles averaging approximately 6 inches in diameter are abundant. This deposit, possibly a kame-terrace, probably corresponds with the ice-marginal terrace deposits in the Ahtell Creek area that are described by Moffit in Bulletin 904, p. 38.

Ore deposits

This deposit consists of chalcopyrite, sphalerite, tetrahedrite, and pyrite in quartz or quartz-carbonate veins that apparently have been intruded along fractures within a fault zone. Silver is the metal of chief interest, and it is reportedly contained in the tetrahedrite. There are 5 principal vein showings in the bluff exposure on Silver Creek (Plat 2), and these may be logically interpreted as showings of 2 northwest-trending veins. These vein showings range from one foot to at least 4 feet in thickness, and one was followed in the old workings to a total depth of 30 feet (reported by Thorne in 1946). Other smaller veins and some mineralization in the country rock within the fault zone are reported and were observed.

Seven other deposits in the Ahtell Creek area, similar in character to the Silver Creek prospect, are described by Richter. These 8 deposits are associated with the contact zones of the several plutons, with fault zones, with dikes, or with combinations of these 3 settings. There is not sufficient information available from exploration work and outcrops to determine the ore controls, but the geologic setting, as summarized by Richter, and the known lode (see inset on applicant's Plat 3) and placer showings are potentially favorable for a moderate-sized mineralized district. As is the case in many mineralized areas in Alaska, exploration has not been carried far enough below the surface showings to fully evaluate the potential for larger deposits, and there are few adequate published descriptions and assays of the deposits that were encountered in the shallow prospecting, which was usually done by persons without technical training, and who were primarily interested in finding gold.

In addition, the fundamental geologic problem of the strike of the fault zone at the Silver Creek prospect and the probable association of mineral deposits with the fault zone can only be answered by further exploration. Moffit believed that the fault zone trends N. 45-70° W., and Thorne accepted this interpretation. Richter thinks that the fault zone strikes N. 10-20° E., coinciding with the contact between the diorite and sedimentary rock units; field observations and the pictures shown in the applicant's Figures 4 and 5 tend to support this interpretation. The fault zone is not well enough exposed in any of the outcrops in the vicinity of the prospect to definitely measure its trend, and surficial deposits and vegetation cover conceal the bedrock along both of the possible trends.

The Silver Creek prospect can be reasonably regarded as typical of the reported sulfide deposits in the Ahtell Creek area. Information obtained from exploration of this deposit could be extended along the postulated Silver Creek fault, and also would have broader application to the other deposits and similar geologic settings in the area. This reasoning is mainly what has prompted the applicant's interest in exploring this particular prospect.

It is pertinent to note that currently there is other active interest in the deposits in this area. While in the field we met a mining engineer, representing the Eagle-Picher Co., who was coming in to examine the various prospects in the area. Also, recent work by a prospector at the Grubstake Creek deposit was reported.

Sampling

No sampling was done by the writer, because, as previously mentioned, the old workings were heavily covered and extensive digging would be necessary in order to expose any vein material in place. The 5 samples taken by Thorne in 1946 and the 4 taken by Kirk Stanley are the only recorded samples from this prospect. The locations and analyses of Thorne's samples are given in his Figure 4 and Table 4. All but one of these are from the inclined shaft, and his sample 4 is from a pit dug on what may be the same vein as that in the shaft. The other, or more westerly, vein in which the 2 adits were dug (presuming that these adits are on the same vein) was not sampled by Thorne. Stanley sampled both veins in the upper part of the bluff, but did not sample in the lower adit which is shown as #5 on his geologic map, Plat 2. The question raised by Frank Johnson in paragraph 5 of his letter of March 25, 1966 about the statement that veins 1 and 5 (Plat 2) are the same, points out a minor error in the applicant's statements. Actually he intended to say that veins numbered 2 and 5 on Plat 2 are probably the same vein. It seems reasonable to assume that workings 1, 3, and 4 are on another vein.

Too little is known about the structure, extent, and grade of the veins in this prospect to make any valid projections of reserves.

Proposed exploration

All things considered, the proposal to explore by means of drill holes is reasonable and practical. The applicant is quite agreeable to a 2-stage program with holes 3 and 4 being contingent upon results obtained from holes 1 and 2, as stated in his attached letter of May 24, 1966. If holes 1 and 2 show nothing, Mr. Stanley would be no more anxious than we would to spend money and time drilling holes 3 and 4. It would also be wise to leave some flexibility for locating holes 3 and 4, in case holes 1 and 2 give a different picture of the veins and fault zone than is now postulated. If holes 1 and 2 do show an appreciable ore deposit and indicate that the fault zone trends northeasterly, then holes 3 and 4 would certainly be warranted.

We discussed the drilling rate, estimate of down time, and size of core that have been proposed. Mr. Stanley took a realistic view of these matters in his application, based on his experience, and has supplied additional information under question 2 in his May 24 letter. He recognizes that the

drilling of horizontal holes will not be easy, but feels that with care it can be done satisfactorily.

I discussed with Stanley the possibility of doing more bulldozer trenching, as suggested by Leo Saarela in his memo of March 25. This is partly answered in Stanley's question 8 in his letter of May 24. It seems apparent, based on his previous trenching attempt with a D-7 cat that only a D-9 with ripper or possibly a D-8, could accomplish the trenching through the 15+ feet of frozen, bouldery terrace gravel. However, practical considerations almost preclude this exploration method. Trenches in this type and thickness of overburden would slough and necessitate moving considerably more yardage than that included in a nearly vertical-walled cut. The cost of getting a D-9 and operator from Anchorage (the closest location of an available D-9) into the Silver Creek area would be prohibitively expensive, and only a few D-9 cats are potentially available at any cost. There is also a question as to whether any contractor would be willing to tie up such a piece of equipment for a short job so far from his home base during the busy construction season. There are other considerations too, such as union stipulations regarding camp and mess hall facilities and overtime wages that would be required for a D-9 operator and would make the operation financially impractical.

Under more favorable circumstances, I would agree with Leo Saarela's suggested exploration by trenching, and I believe Mr. Stanley would also. However, I think that the above-outlined problems make drilling a preferable method for the Silver Creek prospect.

Exploration costs

Several questions were raised in Mr. Johnson's letter of March 25, and I discussed these points with Mr. Stanley. He has provided answers or explanations on these matters in his attached letters of May 24, 25, and June 9, and has also provided revised cost estimates, pages 1, 27-35, 37-38 attached, based on drilling only holes 1 and 2 as the first stage of a program. His additional information is self-explanatory, and to the best of my knowledge it is correct. Note that the problems connected with securing valid bids for freighting and drilling are explained in Stanley's letter of June 9, and that his original cost estimate for assays, which was obtained from the Alaska State Division of Mines, has been lowered on the basis of costs quoted in his letter of May 25.

There is apparently a misunderstanding on the interpretation of the costs shown in the Table II worksheet under item 3f in the application. These figures, as explained under Question 9 in Stanley's letter of May 24, are not intended to apply exclusively to the veins that seem to be present at the Silver Creek prospect, but are a projection of operating costs to show what could be economically worked in this district if the hoped-for additional deposits are found along the extension of the Silver Creek fault contact and other similar features. This type of practically-oriented cost analysis is seldom found in the exploration proposals encountered in Alaska. If the Silver Creek prospect does not prove to be more extensive than the veins presently exposed in the bluff, it would not be economically attractive, except possibly as a small scale operation to remove what ore might

be blocked out in the 2 veins. Mr. Stanley's idea is to prove the extent, tenor, and geologic controls in this prospect, and then, if warranted, continue exploration along strike and to similar favorable sites.

Summary and conclusions

The Silver Creek prospect consists of at least 5 showings of sulfide-bearing quartz-carbonate veins, which may be interpreted as representing 2 steeply-dipping northwest-trending veins, and also of some minor veins and sulfide mineralization in the adjacent country rock. The vein showings, which are exposed in a creek bluff, are within a fault zone and associated with a hornfels at the contact between a biotite diorite pluton and a mapping unit of interbedded sedimentary rocks, tuffs, and mafic flows, sills, and dikes. The strike of the fault zone is not definitely established, but possibly it trends northeast along the contact between the 2 major rock units.

The lateral and vertical extent of the sulfide mineralization has not been determined. Whether the mineralization is controlled by the diorite intrusion, by the fault zone, or by other factors is also unknown.

The applicant proposes to explore the lateral and vertical extent of the sulfide deposits by means of 2 diamond drill holes driven horizontally into a bluff face and approximately normal to the strike of the veins. This will also provide information on the trend of the fault zone.

The original proposal includes 2 more inclined drill holes to be drilled northward and southward on the projected fault zone from a point about 600 feet north of the bluff face. The applicant is agreeable to modifying the proposal to a 2-stage program, with holes 3 and 4 contingent upon the results obtained from holes 1 and 2.

Present geologic knowledge of the Ahtell Creek area and of the extent and tenor of the various deposits that have been discovered is not complete enough to adequately define the potential for a significant ore deposit at the Silver Creek prospect, or to estimate the probability of a mineral district in the area. At least 8 lode and 3 placer prospects are known, the lode deposits are generally similar in character, geologic conditions favorable for ore deposits are present, and the size of the area and distribution of prospects are factors that indicate a possibility of at least a moderate-sized mining district.

A properly planned and executed exploration program on at least one typical deposit seems long overdue in order to stimulate development of the potential deposits in this area if warranted. The history of prospecting in the Ahtell Creek and adjacent areas dates back 30 to 40 years or more, but no thorough or effective evaluation has yet been made of the known lode prospects. Owing to extensive surficial deposits and vegetation cover, considerable areas between the deposits are completely unknown.

The Silver Creek prospect, and Ahtell Creek area generally, are easily accessible from a main highway, and tractor trails that need relatively little improvement already exist. Adequate reconnaissance geologic mapping has

been done, although more detailed geologic information is needed. If mineral deposits worth developing can be demonstrated, equipment and camp and milling facilities could be brought in and erected easily. Airfield and road sites are generally available.

The applicant, Mr. Kirk W. Stanley, is well qualified to handle the project. He is academically trained in geology and mining engineering, he mapped part of this area for his Master's thesis, he has practical experience in exploration in Alaska, and has worked for the Alaska State Dept. of Lands as a geologist. He has an intelligent approach to mining in Alaska, and I feel sure that he is capable of doing a good job within a reasonable budget.

Recommendations

1 - I recommend that the exploration project be approved.

2 - I think that the proposal for 2 stages -- (a) drill holes 1 and 2, and (b) drill holes 3 and 4 -- with enough flexibility to allow for reasonable changes in location, direction, length, etc., of holes 3 and 4, should be approved.

3 - The application should be processed as soon as possible so that work can be done before cold weather begins in October.

7003 Mink Place
Anchorage, Alaska

June 9, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
JUL 11 1966
INITIALS | CODE

Mr. Bob Chapman
U. S. Geological Survey
P. O. Box 580
College, Alaska

Dear Bob:

Earlier you advised me that I should, if possible, obtain bid ~~estimates~~ for drilling and freighting.

With respect to drilling, I have contacted Alaska Diamond Drill Contractors, Inc., the only local diamond drill contractor. Mr. Sam McDowell, President, was asked to submit a bid estimate to me nearly a month ago. He has not done so and I doubt if he will, for the reason that there seems to be a legal problem as to who owns the drill.

Boyles Bros. were also asked to submit a bid, however, unless they can be assured of at least 2000 ft they prefer not to make up an estimate. The reason for this attitude being that their bid for 600 ft would by necessity be extremely high per foot.

On the matter of freighting from Anchorage to Slana, I cannot obtain what I believe is a reasonable bid on such a small tonnage. Therefore, I would be willing to stipulate that the cost of landing all equipment,i.e., fuel, etc., at Slana would not exceed $400.00. If the cost is more than $400.00, I will pick up the difference. I have a 4-wheel drive pick-up and will use that for the bulk of the work.

As for the problem of freighting the equipment and supplies by cat from the road to the prospect, I will have to depend upon local people. I made a trip to Slana last week to investigate the possibilities and there are several small cats available in the area. However, I cannot obtain bids because I don't know who would be available at the time I would need the service, and as you well know, those people are not going to give me a bid. They will do the job on a straight hourly basis.

I regret that I cannot supply you bid estimates for drilling or freighting, but I believe you understand the situation. Perhaps in the Lower 48 this would not be a problem but in Alaska conditions are (to say the least) somewhat different...especially in the summer. However, if you need additional information, please do not hesitate to call me.

Sincerely,

Kirk W. Stanley/ya

Kirk W. Stanley

KWS:ya

7003 Mink Place
Anchorage, Alaska

May 25, 1966

OFFICIAL
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O. M. E.
RECEIVED
JUL 11 1966
INITIALS | CODE

Mr. Robert Chapman
U. S. Geological Survey
Box 580
College, Alaska

Subject: OME 6546
Silver Creek Prospect

Dear Mr. Chapman:

The firm of Coast Eldridge, 125 East 4th Avenue, Vancouver, British Columbia, advises me of the following assay charges:

gold, silver	$ 3.50
copper	2.50
lead	3.25

The prices quoted are much lower than past quotations given me by stateside firms. I would intend to use this firm.

On the attached sheets I have written in the new estimated costs and these sheets should be substituted for pages 1 and 38 of the material sent you yesterday.

Substitution has been made, R.M.C.

Yours very truly,

Kirk W. Stanley

KWS:ya
Atchs

SUMMARY OF COST FOR EXPLORING
the
SILVER CREEK DEPOSIT, ALASKA

			950.00
(a)	Independent Contracts		$ ~~3,025.00~~
			3,960.00
(b)	Personnel		~~12,320.00~~
(c)	Operating Material and Supplies		
	Fuel	$~~1,562.00~~	521.50
	Equipment	460.00	397.50
			~~2,022.00~~
			919.00
(d)	Operating Equipment		
	Purchase	~~$2,011.00~~	668
	Rental	3,600.00	100
			~~5,611.00~~
			768.00
(e)	None		
(f)	New Buildings (camp)		801.00
(g)	Miscellaneous		
	Assays	$~~2,744.00~~	727.50
	Accounting and Insurance	2,464.00	792
			~~5,208.00~~
			1,519.50

Total Estimated Cost . . . . . ~~$28,987.00~~

$8,917.50

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(a) Independent contracts

Explanation. All fuel, material, ~~equipment, and supplies~~ will be purchased ~~assembled~~ at Gakona. ~~Mr. Arnie Sundt of Gakona will freight all material~~ Then ~~by~~ truck and thereafter to Slana. ~~A sledge will be constructed and all equipment and supplies will be~~ freighted into the deposit by a D-6 cat. ~~owned by Sundt. Sundt has the only working D-8 cat in the region. A smaller cat could not handle the initial freighting.~~

1. Freighting drill and equipment from Anchorage to ~~Gakona~~ Slana	200.00 * ~~$400.00~~
2. Freighting ~~all equipment~~, material, fuel, and ~~supplies~~ from Gakona to Slana	150.00 ~~$300.00~~ (150 + 300 = 450)
~~3. Sledge construction~~	~~$300.00~~
4. Transportation of D-8 cat (low-boy) from Gakona to Slana, Bailies Bros., Copper Center - $25/hr 4 hr round trip 2 round trips required	~~$200.00~~
5. Freighting by D-~~8~~ 6 cat from highway (Slana) to deposit - $~~35~~/hr - ~~20~~ 10 hrs required	350.00 ~~$1200.00~~
6. Moving drill from DDH 2 to DDH 3 will require cat. D-4 cat available from Bud Conkle, Slana. $25/hr - 10 hrs required	~~$250.00~~
7. Move out drill, if necessary, at end of program - D-4 cat (Bud Conkle) $25/hr - ~~13~~ 10 hrs required	250.00 ~~$375.00~~
Estimated Total Freighting Cost	~~$3025.00~~ 950.00

12.00
1 250.00

* Drill will be taken to Slana by pick-up 2 round trips to Anc.

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) Personal Services

The applicant will be responsible for, will supervise, and will serve as the geologist-driller for the exploration program.

Personnel	Rate of Pay	Duration (days)	Total
Supervisor (geologist-driller)	$ 50/day*	36 ~~112~~	$ ~~5,600~~ 1,800
Drill-helper	30/day	36 ~~112~~	~~3,360~~ 1,080
Laborer	30/day	36 ~~112~~	~~3,360~~ 1,080
Estimated total labor			~~$12,320~~ 3,960

*1 day = 10 hr

Estimate of Labor Cost per DDH

DDH #1

Total feet drilled	300'	
Advance/day (10 hr)	25' ~~17'~~	
Total drilling time	120' ~~180~~ hr	12 ~~18~~ days
Down-time	10 ~~40~~ hr	1 ~~4~~ days
Set-up	20 hr	2 days
Survey	10 hr	1 day
Total days		16 ~~25~~ days
Labor cost geologist/driller		$ ~~1,250~~ 800.
Driller-helper		750 580
Laborer		750 580
Total Estimated Labor		$ ~~2,750~~ 1,960

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) continued. . .

DDH #2

Total feet drilled	300'	
Advance/day	25 ~~17'~~	
Total drilling time	120 ~~180~~ hr	12 ~~18~~ days
Down-time	10 ~~40~~ hr	1 ~~4~~ days
Set-up	20 hr	2 days
Survey	10 hr	1 day
Casing	10 hr	1 day
Total days		17 ~~26~~ days
Labor cost geologist/driller		$~~1,300~~ 850
Driller-helper		~~780~~ 610
Laborer		~~780~~ 610
Total Estimated Labor		$~~2,860~~ 2,070

DDH #3

Total feet drilled	300'	
Advance/day	17'	
Total drilling time	180 hr	18 days
Down-time	30 hr	3 days
Set-up	40 hr	4 days
Survey	20 hr	2 days
Casing	30 hr	3 days
Total days		30 days
Labor cost geologist/driller		$1,500
Driller-helper		900
Laborer		900
Total Estimated Labor		$3,300

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(b) continued. . .

DDH #4

Total feet drilled	300'	
Advance/day	17'	
Total drilling time	180 hr	18 days
Down-time	30 hr	3 days
Set-up	10 hr	1 day
Survey	--	--
Casing	30 hr	3 days
Total days		25 days
Labor cost geologist/driller		$1,250
Driller-helper		750
Laborer		750
Total Estimated Labor		$2,750

Move In To Deposit

Geologist/driller	2 ~~3~~ days
Driller-helper	2 ~~3~~ days
Laborer	2 ~~3~~ days
Total days	6 ~~9~~ man/days

Move Out From Deposit

Geologist/driller	2 ~~3~~ days
Driller-helper	2 ~~3~~ days
Laborer	2 ~~3~~ days
Total days	6 ~~9~~ man/days

Geologist/driller	6 days-$50/day	$ ~~300~~ 200
Driller-helper	6 days-$30/day	~~180~~ 120
Laborer	6 days-$30/day	~~180~~ 120
Total Estimated Labor		$ ~~660~~ 440

Total Estimated Days and Labor Cost

(labor cost/day = $110)

		Days	Labor Cost	
Drilling & casing	24	~~79~~	$ ~~8,690~~	2,640
Down-time	2	~~14~~	~~1,540~~	220
Set-up	4	~~9~~	~~990~~	440
Survey	2	~~4~~	~~440~~	220
Move	4	~~6~~	~~660~~	440
Total	36	~~112~~	~~$12,320~~	$ 3,960

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(c) Operating Materials and Supplies

Fuel and Oil Estimates

Gas ($25 bbl - Glennallen)

Diamond Drilling (2 gal/hr)	Opr Hrs		Gals	
DDH #1	120	~~180~~	~~360~~	240
DDH #2	130	~~190~~	~~380~~	260
~~DDH #3~~		210	~~420~~	
~~DDH #4~~		210	~~420~~	
Total gals gas			~~1,580~~	500
Total bbls gas			~~29~~	9
Total cost				$~~725.00~~ 225.00

Water Pump (est consumption 1/2 gal/hr)

DDH #1	120	~~180~~	~~90~~	60
DDH #2	130	~~190~~	~~90.5~~	65
~~DDH #3~~		210	~~105~~	
~~DDH #4~~		210	~~105~~	
Total gals gas			~~590.5~~	125
Total bbls gas			~~7~~	2.5
Total cost				$~~175.00~~ 62.5

Pick-up Truck (~~8~~ 4 trips to Anchorage)

~~4800~~ 2400 miles

Total gals gas	~~480~~	240
Total bbls gas	~~9~~	4.5
Total cost	$~~270.00~~	112.5

Total gasoline cost $~~1,170.00~~ 400.00

Motor Oil ($12/case)

Drill - ~~4~~ 1 cases	$ ~~48.00~~	12.00
~~Pump - 1 case~~	~~12.00~~	
Pick-up ~~2~~ 1 cases	~~24.00~~	12.00
Total motor oil	$ ~~84.00~~	24.00

Lubrication Oil ($0.75/lb)

Total for all operating equipment = ~~50~~ 25 lbs	$ ~~37.50~~	18.75
Total lubrication oil	$ ~~38.00~~	18.75

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(c) continued. . .

White Gas ($0.75/gal)

3 gal/day for cooking and heating	105 ~~360~~ gals	78.75 ~~$270.00~~
Total white gas		521.50 ~~$1,562.00~~
Total Fuel and Oil		

Items Costing Less Than $50.00 each

5 ~~10~~ carbide insert core bits $12.50 each	62.50 ~~$125.00~~	
Camp equipment		
4 single cots $10 each	$40.00	
1 3-burner gas stove with oven	60.00	
1 kerosene heater	40.00	
3 gas lanterns $15 each	45.00	
Assorted cooking and eating equipment	150.00	
Total items costing less than $50		397.50 $ ~~460.00~~

Total Cost of All Items in Section 7(c) 919.00 ~~$2,002.00~~

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(d) Operating Equipment

1. ~~900' 1" OD iron pipe - pipe will be necessary to transport drilling water to DDH #3 and #4. 900' x $0.75/ft~~ ~~$675.00~~

2. 4 size AX Bortz diamond core bits Grade AA std matrix. Bit life est. to be 150' of drilling - $112.00/bit 448.00 ~~$896.00~~

3. 4 size AX diamond strip type reaming shells, Grade AA std. Matrix for double core barrel. Est. life 150' $ 55.00/shell 220.00 ~~$440.00~~

Total to be Purchased ~~$2,011.00~~ $ 668.00

TO BE RENTED TO PROGRAM

Explanation. Applicant will purchase new diamond core drill, pump, and necessary items to make drill a complete operating unit. The total drilling unit, minus bits and reaming shells, will cost $6,657.35, plus freight of $500.00 = $7,157.35. Complete unit will be rented to program at suggested rental of $900.00 per month. Following is breakdown of all equipment to be included in this $900 monthly rental,

1. 1 diamond core drill, new, Sprague and Henwood Model No. 35-H capacity 600' AX Gas 17.5 h.p., Cathead, hoisting drum and retracting cylinder. Price new FOB Scranton, Pennsylvania $4,320.00

2. 1 water pump, new, Sprague and Henwood Model 20 B1230 pumping unit consisting of John Bean 420 triplex pump. Driven by air cooled gas engine. Skid mounted price FOB Scranton $1,075.00

3. 1 hoisting type water swivel $ 177.65

4. 1 lowering iron $ 55.20

5. 1 Wommer safety clamp $ 90.60

6. 1 sheave wheel, complete $ 83.05

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(d) continued. . .

	7.	1 300 lb drive weight with chain sling	$ 120.00
Drilling Tools	8.	1 25' length, 1" water swivel hose with fittings	42.50
	9.	1 20' length, 1-1/2" suction hose with foot valve and strainer (ac)	41.15
	10.	1 open holding iron (ac)	14.45
	11.	5 drill rods with couplings 2' long - $11.55 each	57.75
	12.	4 drill rods with couplings 5' long - $13.75 each	55.00
	13.	32 drill rods with couplings 10' long - $18.05 each	577.60
	14.	10 extra, drill rod couplings $ 3.60 each	36.00
Recovery Tools	15.	1 male recovery tap	27.25
	16.	1 female recovery tap	35.40
Tools for Casing Overburden	17.	1 2-1/2' pipe drivehead	37.45
	18.	1 2-1/2" pipe drive shoe	14.05
	19.	1 36" long guide	12.75
	20.	1 36" long pull piece	15.10
	21.	2 3' lengths 2-1/2" drive pipe with coupling $10.30 each	20.60
	22.	5 5' lengths drive pipe with coupling $12.35 each	61.65
	23.	1 2-1/8" wide straight chopping bit	23.60
Overburden Tools	24.	1 2-1/8" wide cross chopping bit	24.75
	25.	1 boulder buster bit	24.65
	26.	3 2-1/8" wide, 3-wing fishtail bit and rod connection	104.85

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(d) continued. . .

Coreing Equipment	27.	1 size AX ball bearing double tube core barrel, 5' long	$ 91.00
	28.	1 size AX ball bearing double tube core barrel, 10' long	102.30
	29.	10 Core lifters, $ 2.80 each	28.00
Miscellaneous Tools	30.	1 50' length 1" manila rope	12.00
	31.	20 wooden core boxes, $8.00 each	160.00
	32.	1 set, hand tools 2 24" Stillson wrenches 1 12" adj. wrench 1 ballpeen hammer 1 hand oiler 1 grease gun 1 set small tools	50.00
	33.	2 chain tongs for 2-1/2" pipe $33.00 each	66.00
		Total To Be Purchased by Applicant and Rented to Program	$6,657.35
		Freight	500.00
			$7,157.35

Total to be Purchased	668.00 ~~$2,011.00~~
Total to be Rented ($900/month for 4 months)	100.00 ~~$3,600.00~~
Total Cost Section 7(d)	768.00 ~~$5,611.00~~

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(f) New Buildings, Fixtures, Installations.

Explanation. Two 12 x 14 framed-in tents will serve as living quarters. One tent will provide sleeping and the other utilized for cooking, eating, and as an office.

Tents	
2 12 x 14 tents - $200 each	$400.00
2 12 x 14 waterproof tarps - $40 each	80.00
Flooring and Framing	
12 sheets 1"x4'x8' plywood - $10 each	120.00
16 sheets 3/8"x4'x8' plywood -$6 each	96.00
18 2"x8"x12'	60.00
30 2"x4"x14'	40.00
nails	5.00
(Labor included in move-in)	
Total Cost Section 7(f)	$801.00

SECTION 7

Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

(g) Miscellaneous

Analytical Costs

Each 10' of core will represent 1 sample and samples will be assayed for gold, silver, copper, and lead.

Total possible core recovery = ~~1200'~~ 600
Total number of samples = ~~120~~ 60 — $555.00

Assay cost = $20.00 per sample — ~~$2,400.00~~

Sample weight = 3 lbs
Freight to Anchorage — ~~200.00~~ 100.00
Air Freight to Seattle - $0.20/lb — ~~144.00~~ 72.50

Total Assay Cost — ~~$2,744.00~~ 727.50

Accounting, Insurance and Payroll Costs

20% of $12,320 (total payroll) — ~~$2,464.00~~ 792.00

Total Cost Section 7(g) — $1,519.50 ~~$5,208.00~~

7003 Mink Place
Anchorage, Alaska

May 24, 1966

Mr. Robert Chapman
U. S. Geological Survey
Box 580
College, Alaska

Subject: OME-6546
Silver Creek Prospect

Dear Mr. Chapman:

During the field examination of the Silver Creek Prospect you asked certain questions regarding the OME application. Attached are my answers to your questions. The questions as answered are not necessarily in the order that you asked them.

Yours very truly,

Kirk W. Stanley

KWS:ya

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Question 1 Question regarding the possibility of setting-up the drilling program in stages

Answer If ore is not found in drill holes #1 and #2, in my opinion there is no justification for drilling holes #3 and #4. I would therefore have no objection to such a stipulation that would require the program to be set-up in two stages.

Question 2 Drilling rate is too low and down-time too high

Answer The rate of 17' per day is, of course, an estimate and I believe and would hope that I could advance at the rate of 30' per day. Because the drilling will be done under difficult conditions, the optimum rate is not likely to be achieved. However, I have no objections to changing the estimated rate to 30' per day.

As for down-time, the estimate given is on the high side but as you are probably aware diamond drill parts are not stocked in Alaska and unless one can find a make-shift part, the part must be air-mailed from the lower 48. If the latter is the case a 600 mile trip to Anchorage must be made which would cause a two day down-time period.

It may be of interest that during the 1965 drilling season in Alaska Falconbridge averaged two days of down-time for each 20 days of drilling.

With respect to using NX instead of AX coring tools, I would be of the opinion that the greater cost of equipment and reduced drilling rate would not compensate for possible greater core recovery by NX equipment. I believe under the expected condition, AX tools will provide nearly the same core recovery as NX equipment.

Question 3 Bids for freighting and drilling

Answer I will submit to you shortly bids for these services.

Question 4 Rental of drill too high and cannot exceed 1/60th of purchase price

Answer The rental for the drill as set forth in the application was quoted to me by a diamond drill dealer for a complete drilling and pumping unit excluding bits. However, if OME is required to go on the 1/60th basis, I will not argue with that requirement.

Question 5 Support the price of assays

Answer Charge given in application was quotation by State Division of Mines as the price they paid in Seattle. I will obtain a quotation from the commercial firm and submit it to you.

Question 6 Pertains to my share of the program financing

Answer Financial arrangements are now settled for contribution of my share of any OME program.

Question 7 Salary, accounting, and insurance too high.

Answer As the geologist-driller I would receive $50/day for a 10 hr day, 7 day week. The union scale for a diamond driller in Alaska is $5.20/hr on a straight time basis. Any time over 8 hours must be paid time and a half, and Saturday and Sunday are double time days.

Because this is a bush job the driller would receive free room and board. A union driller would therefore receive $486.00 for one week's wages. In addition a geologist would have to be hired. Under these conditions the salary of $50/day for a geologist-driller would appear reasonable.

With respect to Accounting, Insurance, and Payroll costs, the factor used for estimating this figure in Alaska is generally 15% of the total payroll; however on bush jobs the insurance is more costly and 20% is commonly used to arrive at a general estimate.

Question 8 Would trenching be a practical exploration method

Answer Trenching is not a practical exploration method at Silver Creek for the following reasons:

1) As pointed out in the application, permafrost was encountered in a trench dug at the prospect. Trenching therefore would require a D-9 or D-8 cat with ripper.

2) The floor of any trench dug would be almost immediately covered with mud and water because of permafrost and bedrock exposure would be poor.

3) At best the trench would expose a width of about 10' across the fault. Considering that exposures would be poor and that some leaching of surface material has occurred, information obtained by trenching would be incomplete as well as misleading.

4) Two trenches would cost in the neighborhood of $10,000 to $15,000 and diamond drilling would still be required to sample and evaluate the prospect.

Question 9 Question regarding worksheet

Answer The "worksheet" was merely intended to show that the deposit could be economically mined by open pit methods even if the grade were as low as 12 oz silver/ton.

The worksheet shows that if 12 oz of silver/ton is present the cost of mining and milling can be as high as $11.77/ton and the mine will provide a return of 20% on the capital invested. Mined by open pit methods, the cost of mining and milling would not be expected to exceed $12.00/ton. Whether or not sufficient reserves of 12 oz ore are present remains to be determined by exploration. However, I believe the following factors are such to cause the Silver Creek prospect to present a promising exploration possibility:

1) The deposit can be mined by low cost open-cut methods and exploitation of low grade ore is possible. Because low grade ore could be mined the probability of finding an economical ore body is greater than would be the case if relatively high grade ore were required.

2) Sufficient room is present along the projected fault for relatively large reserves of ore.

In regard to the prospect I do not believe that it is geologically proper to assume that all mineralization is confined to the quartz veins. I believe it is more realistic to assume that mineralization will also be found between the veins.

In view of the fact that the question was raised about conducting the program in stages, I have revised the cost section of the application by eliminating proposed drill holes #3 and #4. In addition I have revised the estimated drilling rate upward from 17' to 25' per day and reduced the down-time. Because less fuel and supplies would be required for the revised estimates, the freight problem is also reduced so that one of the small cats at Slana could be used. The revised costs are shown on the attached sheets.

IN REPLY REFER TO:

G-ALAS-RMC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ALASKAN GEOLOGY BRANCH
BOX 580
COLLEGE, ALASKA 99735

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JUN 17 1966
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MENLO PARK, CALIF.

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RMC	120 J
HK	120 K

June 15, 1966

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

Dear Hal:

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

Smith

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

Kirk

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

Sincerely,

Bob

Robert M. Chapman
Geologist-in-charge
College office

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

5010-108

UNITED STATES GOVERNMENT

Memorandum

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TO : H. K. Stager, OME Region II, Menlo Park, California

DATE: May 12, 1966

FROM : Robert M. Chapman, Alaskan Geology Branch, College, Alaska

SUBJECT: Silver Creek prospect, OME-6546(Silver)

I have arranged with Kirk Stanley to visit his Silver Creek prospect on May 19th. I shall leave here on the 18th and return on the 20th. From what he has told me there is nothing to be examined beyond the immediate area of the creek-bluff exposure that he proposes to explore, and one day in the field should be adequate. I think that that area is already free of snow, but certainly it will be by the 19th.

OME-6534

I expect to have a squib on the Busty Belle Mines property in the mail to you within a couple of days. Bruce Thomas is back in town now, and I have had an opportunity to talk with him and obtain some additional information.

Bob

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MAY 16 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

Memorandum

March 31, 1966

To: Robert M. Chapman
College, Alaska

From: Field Officer
OME, Region II

Subject: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Enclosed is the Docket for OME-6546. Will you please contact the Operator in Anchorage and make arrangements for a field examination when the property is accessible. I have talked to George Gryc about this application and he is agreeable to having you make the field examination and writing a report for OME. George suggested that perhaps by the time the property is free of snow, in May or June, Pete Sainsbury would be arriving in Alaska on his way to his summer field work and might be available to look at the property with you or discuss the application.

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

H. K. Stager

Enclosure

cc: Chief, OME, WDC
D RF
ACG RF
MP RF
Docket 6546
HKStager:mlb

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Date	Surname	Code
3/24	[illegible]	

3/25/66

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OMM-6346 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

The subject application is referred to Region II for review, a field examination if you consider it necessary, and recommendations.

This application is well prepared but we do have a few questions, most critical of which is the probability of a significant discovery. There may be someone in the Alaska Branch who has seen this or other prospects nearby, and who is familiar with the potentialities of deposits in the Slana district.

The purpose of the proposed project is to explore by two horizontal and two inclined AX core drill holes from the surface for silver-bearing sulfide ores in two or more steep quartz-carbonate veins about 6 feet wide within and about normal to the Silver Creek fault zone which is about 130 feet wide in Permo-Triassic(?) sedimentary-volcanic rocks and forms a fault contact with Jurassic diorite of the Ahtell batholith.

Holes 1 and 2 (horizontal) are to explore from the creek bank at depths of 160 and 100 feet below the land-surface where veins are exposed in shallow pits numbered 1 to 5 from which the best of nine samples assayed 75.95 oz. Ag, 0.02 oz. Au, 6.2% Pb, nil Cu. Holes 3 and 4 (inclined) are to explore from the level land-surface 550 feet northerly from the exposures to depths of 160 feet below overburden and permafrost which obscure the fault zone. All four holes cross the general strike of the veins and are within and roughly parallel to the strike of the fault zone.

Under Item 3(e), the observation that veins 1 and 5 are probably the same vein does not fit the mapping shown on Plat 2. The map indicates that there probably are two, or at most three veins.

Under Item 3(f), a definite target for holes 1 and 2 is indicated but the justification for holes 3 and 4 is largely negative evidence. This suggests that the project, if approved, should be staged, with holes 3 and 4 contingent upon the success of 1 and 2.

Also under 3(f), the Applicant states that the ". . . deposit will lend itself to open pit mining" and he includes Table II which indicates a milling rate of 400 tons per day, a value of $17.52 per ton, and a gross recovery of 2,430 tons of concentrate per year having a value of $2,452,800. Our computations, based on two veins each 6 ft. wide, 140 ft. long, and 160 ft. deep indicate a total content of 392 tons of concentrate having a gross value of $392,000. It is evident that a minimum of 10.5 other veins must be found to keep the hypothetical mill running for one year. Considering the Applicant's conclusion that the maximum permissible exploitation cost is $11.77, and this cost is based on 400 t.p.d., we question the economic feasibility of the project. Is it possible to establish that the value of the target may be considerably more than $17.52 per ton and might support an underground operation?

Under Item 5(a), the Applicant proposes to drill AX holes in rock known to be "fractured, altered, broken, silicified, and pyritized." Is AX size feasible in this type of rock?

In the event that you recommend a contract, the Applicant should be asked to submit bids for freighting by bulldozer and, if possible, for the drilling even though he plans to do the drilling himself. He should be informed that we would not allow his suggested rental of $900 per month but only depreciation at the rate of 1/60th of the purchase price per month. His estimate of 17 feet of advance per day seems low for AX drilling and his estimate of down-time seems high; improved performance would materially improve the overall cost of $24.16 per foot. His estimate of $20 per sample for assays should be supported by a price list. You might inquire as to the salability of a 49 percent interest in the property; would it be marketable only if an OME contract is granted?

FRANK E. JOHNSON

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME Reading File
OME Docket
120
RMSmith/mm (3/24/66)

P. S. Attached is a memo from Mr. Saarela giving his comments on the subject application. You may expect soon a letter from Thor Kiilsgaard relating to arrangements made today with Mr. Saarela for OME representation in Alaska.

MME Form 7
(2/63)

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		120

3/25/66

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Re: OME-6346 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Dear Mr. Stanley:

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

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

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
Region II (2)

MMerrithew/mm (3/24/66)

23263

MME Form 7
(2/63)

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Date	Surname	Code
7/25	[illegible]	

March 25, 1966

Memorandum

To: Chief, Office of Minerals Exploration

From: L. H. Saarela, Regional Mining Supervisor, Conservation Division, U. S. Geological Survey, P. O. Box 259, Anchorage, Alaska 99501 L.H.S. by [illegible]

Subject: OME-6546 (Silver)
Kirk W. Stanley
Silver Creek Prospect
Chitina Precinct, Alaska

Reference is made to the subject application which was briefly reviewed with Mr. Smith of your staff and the following comments are offered for whatever use can be made of them.

In the first place, the status of the Applicant should be carefully checked as he is a member of the State of Alaska Department of Lands staff. While there is possibly no bar to his making applications of this sort, the legal status should be clarified. As to the application itself, it seems to me that the first thing that should be done on the property is to bulldoze a trench through the frozen talus into bedrock far enough so that the bedrock could be examined. While the Applicant claims that the material is frozen during the summer months, this appears overdrawn and the material should thaw a foot or so a day without any trouble and in fact if equipment is of large enough size such as a D-9 with a ripper, it should be a simple matter to trench into bedrock to any depth. When the mineralized area is exposed, it should be mapped on adequate scale and sampled in accordance with regular procedures.

The above is offered as first suggestions and other subjects would be gone into on further study of the files.

cc: Director's Reading File
Division File
Economic Geology File
Mr. Saarela
✓OME Docket
OME Region II
OME Reading File

LHSaarela/mm (3/25/66)

23263

GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington 99204
March 21, 1966

Air Mail

Memorandum

To: Field Officer, Region II

From: Field Officer, Region I

Subject: Transmittal of Docket OMR-6354 (Silver-Gold)
Busty Belle Mines, Inc
Silvertone & Cottonwood Claims
Fairbanks Precinct, Alaska
and
Transmittal of New Application (Silver)
Kirk W. Stanley
Silver Creek Deposit
Slana District, Alaska

In accordance with Frank E. Johnson's memorandum of March 9, 1966, we are happily forwarding our complete file on Docket No OMR-6354 and the second copy of another Alaska application which we have just received. In order to save time, we have forwarded the original of the latter to Washington. You can send Frank a memorandum if you find any points on which you might want to comment.

As applications from Alaska will probably continue to be sent here for some time, let me know if you would prefer to have us send you both copies so you can prepare any comments to accompany the original to D.C.

In the past, when Alaska applications have been referred to the field, I have sent them to the Bureau of Mines requesting an examination and report covering accessibility of the property, geology, conclusions, recommendations, a cost estimate breakdown, if a project were recommended, and any appropriate sketches. With the Bureau no longer in the picture, I have called on:

Robert C. Chapman
Geologist in Charge
Alaskan Geology Branch
College Office
U. S. Geological Survey
P. O Box 500
Brooks Memorial Building
College, Alaska 99735

This is the first field referral of an application since the Bureau left the scene, but I would send it to Bob with the same request. As a possible aid to him in making his cost estimate, I would also send him a copy of the enclosed outlines for estimating drifting and timbering costs hoping they would be more helpful than confusing. I would emphasize the importance of the unit costs for materials and supplies as they are considerably higher than those in this part of the country and, of course, are vital to a reasonable estimate. If he only gave these, you could, if need be, work up the costs relieving him somewhat of that chore.

When the reports come back, I would attempt to write up a forwarding memo to D.C. either concurring with the conclusions, recommendations, costs, etc., or attempting to point out or justify any part of those items to which I might take exception.

D. R. Maclaren

Enclosures

DRMaclaren/mls

cc: Robert M. Chapman
w/cys of memorandum from GHK 3/9/66
GHK

Director's Reading File

March 21, 1966

Mr. Kirk W. Stanley
7003 Mink Place
Anchorage, Alaska

Subject: OME-6546

Dear Mr. Stanley:

Your application for exploration assistance, dated March 12, 1966, submitted to our office at Spokane, Washington, has been assigned Docket No. OME-6546.

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

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to Region XX

FIGURE 6, A view looking directly towards the face of the fault and illustrating the extent bedrock of the face is concealed by talus of altered and decomposed rock.

FIGURE 5, A view of the northeast extension of the Silver Creek fault. Dashed line indicates approximate location of fault. Stripped area is visible above stained area.

FIGURE 4, A view looking down Silver Creek towards the face of the Silver Creek fault and the location of the veins. In the foreground stream is following southwest extension of fault

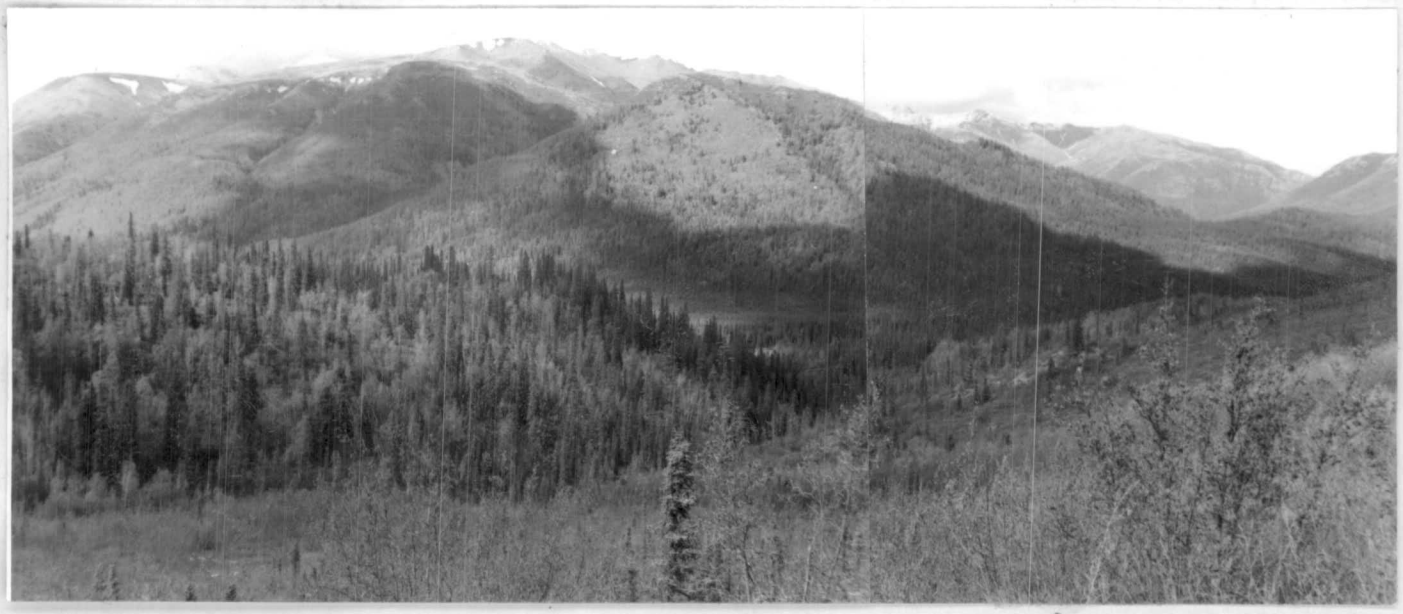

FIGURE 2, A view looking east and down Silver Creek towards the valley of Ahtell Creek. Observer is about 1000 feet south of the deposit.

FIGURE 3, A view looking north towards Silver Creek deposit and showing the general direction of the Silver Creek fault. Arrow points to stripped area.

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FIGURE 1, View looking north towards the Silver Creek deposit. The light colored stained bank is the face of the Silver Creek fault and the site of mineralization.

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