Mr. R. S. LaFlamboy, President
Glacier Mining Company
4039 Brooklyn Avenue
Seattle 5, Washington

Re: Docket No. OME-6007 (Copper)
Glacier Mining Company
Mike et al., Claims
Whatcom County, Washington

Dear Mr. LaFlamboy:

Your application for aid for an exploration project and other data available to us in Washington relating to the above-named property have been reviewed.

Careful study of all the information available to us indicates that the probability of disclosing significant ore reserves on your property is not sufficiently promising to justify Government participation in the proposed exploration. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We regret the necessity of taking such action; however, it is taken without prejudice to your property. If additional work should reveal a definite geological target which would materially alter this opinion, be assured that we will be pleased to consider a new application.

Sincerely yours,

Frank E. Johnson

Acting Director

WPKlagsscheid/mr -
Rewritten 4/8/59 (4/7/59)
Copy to: Docket
Dir Read File
Op. Committee
Mr. McMahon, USBM
Mr. Kiilsgaard, USGS
Region I(2)
Chron.

90

March 31, 1959

Memorandum

To: W. E. Grimald, Office of Minerals Exploration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Examiner's recommendation report, Docket No. OMX 607 (copper), Glacier Mining Company, Shinn et al Claims, Whatcom County, Wash.

According to the Examiner's report there is no geologic justification for the exploration program as proposed by the applicant. Previous exploration completed in 1958 under Docket No. WMA 1527 (copper), Contract No. Ibm-958 failed to locate any significant mineralization. Subsequent diamond drilling and cross-cutting carried on by the applicant did not develop an attractive target and it appears that the program proposed in the application would be prospecting on area that has not been tested.

The Examiner points out that information gained through the completed exploration work indicates little possibility of making a significant discovery by the proposed program and recommends denial of the application.

I concur in the Examiner's recommendation.

for A. D. McMahon

ADMcMahon/vr

Copy to: Division of Minerals
Branch of Base Metals (2)
Chas Hilingsard, S.E.R.S.
F. R. Lamb
Files

March 25, 1953
Re: OME 6X/7
Glacier Mining Co.
Midas et al Claims
Whatcom County, Washington
832,356 - Copper

Memorandum

To: W. H. Griswold, Office of Minerals Exploration

From: R. E. Nelson, U. S. Geological Survey

Subject: Review of examination memorandum (office) of E. A. Magill

The more exact information afforded by Mr. Magill's report serves to clear up some of the unknowns at the Glacier property.

Evidently Mr. Magill accepts the one dip and strike symbol shown on Mr. Puffett's map of 1/2/53 as representative of the attitude of the argillite. If such is the case, as his section A-A implies, the chances of there being a mineralized bed between the end of No. 8 drill hole and the surface are greatly reduced.

Assuming the attitude holds over the area, the adit from Cut No. 4 and the end of the drill hole (No. 8) more or less eliminate the "ground" between the short adit and the long main adit and confine the chances of the existence of a more favorable bed to the ground between the short adit and the top of the hill at Cut No. -, a maximum vertical distance of about 170 feet. By the same token, more work in the main adit is not now warranted.

However, conditions could change in the 170-feet interval and a little more work by the company, such as surface diamond drilling, is justified.

Mr. Magill's conclusions are apt and I concur with his recommendation that the application be denied.

R. E. Nelson

cc: OME (3)
A. D. McMahon, 3-23
Director's reading
Branch reading
Chron. file
Docket file
RENelson/mm
G-MD-3-25-53

6007

RECEIVED MAR 1959

Sp. 157 Howard Street
Spokane 4, Washington

March 16, 1959

Mr. George C. Selfridge, Chairman
Operating Committee, OGE
Department of the Interior
Washington 25, D. C.

Re: Docket No. OGE-4207 (copper)
Glacier Mining Company
Mines at Mt Slaton
Whatcom County, Washington

Dear Mr. Selfridge:

Enclosed are three copies of a report on the referenced application prepared by E. A. Magill, Mining Engineer, U. S. Bureau of Mines. Magill is thoroughly familiar with the property and was the engineer who handled the former contract under Docket No. MMM-2335. With the additional information which he was able to get from Mr. LaFlamboy in the latter's office concerning the work done by the company since the end of the former contract, an inspection on the ground would not aid in appraising the application. Therefore, no field examination was made.

Since the end of the former contract the applicant, at his own expense, has completed 360 feet of exploratory in two headings and has diamond drilled 9 holes totaling 1,638 feet without finding anything that could be interpreted as the source of the copper-bearing boulders found on the surface. Hole No. 9 at a depth of 43 feet gave a sample that averaged 5.09 percent copper. The applicant believes this is from a northeasterly structure picked up by a geophysical survey of unknown variety and an H-cross. However, if this sample came from a structure of any appreciable size and importance, it is difficult to see how it could have been missed in the first easterly crosscut from the main adit or in diamond drill hole No. 1.

Magill concludes that the area below the surface copper-bearing boulders has been rather thoroughly and adequately explored. He further concludes that additional exploration is not warranted at this time and recommends that the application be denied.

We concur with Magill's conclusions and recommendations.

By Field Team, Region I

Ring C. Ignew, Member
U. S. Bureau of Mines

A. L. Weissenborn, Exec. Officer
U. S. Geological Survey

Reviewed by
OGE OPERATING COMMITTEE

(date)

Enclosure

cc: USGS (2)

1201 N. Division St.
Spokane 2, Washington

March 6, 1959

MEMORANDUM

To: GMK Field Team, Region I

From: R. A. Magill, Mining Engineer, U. S. Bureau of Mines

Subject: New application, Docket No. GMK-6057 (copper), Glacier Mining Company, Kidge et al Claims, Whatcom County, Wash.

The application of the subject company for Government assistance under the GMK program to carry out further exploration on the cited property has been reviewed.

A conference was held with Mr. LaFlamboy, President of the Glacier Mining Company, on March 2, 1959, concerning the application. Some of the cores from the diamond drilling carried out by the applicant were examined on March 4. The property itself was not visited. I was last on the property in September 1957.

The property is located in sec. 4, T. 39 N., R. 7 E., W.M., 1½ miles north of the town of Glacier, Washington. Previous exploration was carried out on the property between July and December 1952 under Docket No. DMEA-2335 (copper), Contract No. Idm-2362.

Interest was originally drawn to the property in 1947 when several large pyrite-chalcopyrite boulders were discovered in the overburden. Extensive bulldozing, diamond drilling and underground crosscutting since that time have failed to find the source of these boulders. In 1952 exploration on the property was carried out under Contract No. Idm-2362. Under this program a total of $6,700.34 (Government's share $3,354.17) was expended in making 6 bulldozer cuts and driving 150 feet of crosscut. This DMEA work failed to locate any significant mineralization and a certification of discovery was not made. (See Field Team Final Report, Contract No. Idm-2362, by R. A. Magill and Willard Puffpatt, dated January 14, 1954.)

Since the completion of the DMEA contract in 1952 the applicant has continued exploration at his own expense. During this time he has carried out 1,631 feet of diamond drilling in 9 diamond drill holes and 160 feet of crosscutting in two headings (see attached map).

Reviewed by
[illegible] COMMITTEE

(date)

The first two diamond drill holes which the applicant drilled early in 1953 after the BMEA project was completed were holes 270 feet and 234 feet in length, labeled No. 1 and 2, respectively, drilled northward from the Lower adit to further explore the possibility that the pyrite-chalcopyrite boulders had a source in a NW-SE trending zone which dipped to the north. These two holes failed to encounter any significant mineralization.

A 110-foot crosscut was driven in 1954 northward from Open cut No. 4. It failed to penetrate solid rock. Because of the heavy ground it was necessary to place sets on 2-foot centers. This crosscut was examined in September 1957 and was too dangerous for detailed mapping. For about the first 35 feet it was driven in iron-stained overburden similar to that exposed in the open cut. The remainder of the crosscut is in what appears to be a highly crushed zone. The rock definitely does not appear to be overburden. The largest piece of rock noted was not over 2 inches in diameter, was fine-grained, dark green, homogeneous and contained no mineralization. It very definitely is not the argillite exposed in the other underground workings nor is it similar to the rock exposed on the ridge to the north.

In 1957 the applicants extended the Lower adit southeastward 250 feet in the hope that mineralization exposed on the surface in Cut No. 6 extended downward. This crosscutting failed to expose any significant copper mineralization. The crosscut was in argillite similar to that in most of the other underground workings. There were, however, a number of irregular zones which are lighter in color, fairly close-grained, and are calcareous (mild reaction to HCl). Disseminated pyrite and occasional pods of pyrite up to an inch or more in diameter were encountered. It is believed that this pyrite was formed as part of the country rock; perhaps some petrographic work would help to confirm this.

During the summer of 1958, 4 diamond drill holes (Nos. 3-9) were formed out from the heading in a futile attempt to locate the source of the pyrite-chalcopyrite boulders. The diamond drill holes encountered rock similar to that in the crosscut. Mr. LaFlamboy reports that in Hole No. 8 the drill rods came out of the hole coated green when calcareous rock was encountered from about 145 to 157 feet. However, the core apparently did not show any copper mineralization.

Late in 1958 a geophysical survey (doodle-bug ?) of unknown classification was run over the property. According to Mr. LaFlamboy, this survey and a subsequent one using a Fisher M-Gauge located a zone which trends S. 45° E. from a point near the lower adit portal. To test this theoretical structure a diamond drill hole was drilled almost parallel to the strike of the zone (according to Mr. LaFlamboy). It

was from this downward inclined hole at a depth of 63 feet that the sample which assayed 5.89 percent copper was obtained. This hole (marked No. 9) was never completed because of the diamond drill breaking down.

The applicant, according to his present application, would like to carry out:

30 days of bulldozing
400 feet of crosscutting and drifting
600 feet of diamond drilling
Total cost to be $22,390.00
Work to be completed in 6 months

The exact location as to where this work is to be carried out is a little indefinite, but it appears that the intention is to extend the Lower adit eastward with some of the 400 feet of drifting and crosscutting to be used in drifting on a structure if one is located. The bulldozer work is to strip the area around Open cut No. 6 to determine if a contact exists in that area. The location of the diamond drilling is indefinite in the application.

When Mr. LaFlamboy was contacted on March 2, he appeared to be more interested in a diamond drilling program only, with three targets in mind:

1. The zone trending SE from the portal of the Lower adit.
2. The area ahead of the face of the Lower adit.
3. The bedrock beneath Open cut No. 4.

On the basis of the presently available information I do not believe that the work which the applicant requests is warranted. The area beneath where the boulders were found appears to have been fairly well explored. After examining the pyrite-chalcopyrite deposit on Church Mountain I feel that very possibly the boulders had their source on Church Mountain or are from a similar deposit. A visit was made to the Church Mountain deposit (Red Bird) in 1958. A pyrite-chalcopyrite lens with a maximum width of 4 feet and length of 55 feet occurs in a formation which is very similar to that found attached to the boulders dug up on the Mike claim. The mineralization looks very similar and assays of the sulfides from the two properties reveal about the same copper content. When you stand on the Red Bird deposit on Church Mountain it appears that it would be possible that the small hill which makes up the Glacier property is the result of a large landslide. Detailed geologic mapping of the area could possibly determine if this were true.

If the boulders at the Glacier property are similar in occurrence to the deposit on Church Mountain, then it is doubtful that the further expenditure of any appreciable amount of money is warranted. The target just does not appear to be large enough to warrant continued expenditures.

The exploration program as proposed by the applicant does not appear to have any definite geologic basis other than to explore the ground which does not already have a hole in it. The hill is too steep for a bulldozer out with the slope. Also, the excessive overburden encountered in the other cuts has discouraged further attempts to try and get through the overburden with a dozer. However, it is possible that dozer work in the No. 6 cut would uncover bedrock without going too far as it is on top of the hill. From the overburden in the No. 6 cut it does not appear that the bedrock is argillite.

In regard to the possibility which Mr. Nelson suggests in his memorandum of February 13, 1959 to W. R. Grimwald, as to other beds between the adit level and the surface, this is a possibility although drill hole No. 6 (see attached section AA') does lower the chances.

I believe that before additional exploration is undertaken on the property, sufficient geologic work should be carried out (by a competent private consultant) to determine if the hill which forms the Glacier mine area is in place or is a large landslide (possibly a mile or more in extent). Also, sufficient petrographic work should be done to determine if the pyrite found underground was formed as a part of the rock or whether it has been introduced at a later time. If it was formed from the constituents of the original rock it would not appear that there would be much of a possibility of a large deposit.

It is recommended that the applicant's request for exploration assistance be denied. He has presented no definite target for exploration nor are there any readily apparent targets from the information which is presently available. If further geologic work indicates a target area, then the application should be reconsidered.

Attachments (2) E. A. Magill

Distribution:
GMK (3)
UMKE (2)
Decker
SFG
Magill

FEB 16 1959

500

Mr. A. E. Weissenborn
Executive Officer
OMS Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. OMS-6007 (Copper)
Glacier Mining Company
Midas, et al., Claims
Whatcom County, Washington

Dear Mr. Weissenborn:

The cited application is being referred to your office for consideration, a field examination of the property if warranted, and recommendations.

The diamond drill holes drilled to date do not seem to give much data but there is an assay sheet for a hole No. 7 which is not mentioned anywhere in the application which carries copper values.

Copies of memoranda dated January 2 and 7, 1959, by R. A. Nelson, Geological Survey and A. D. McMahon, Bureau of Mines, respectively, relating to the project are enclosed for your information. We are also enclosing one copy of the application for the use of the Field Team.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

Enclosures
APPROVED:

H. G. Iverson
Member, Bureau of Mines

N. E. Nelson
Member, Geological Survey

WPKlugescheid/er 2/13/59
Copy to: Docket
Dir Read File
Op. Committee
Mr. McMahon, USBM
Mr. Killsgaard, USGS
Chron.

P.S. Also enclosed are two copies of a memorandum dated February 11, 1959, by R. A. Nelson, USGS, relating to this application.

FEB 16 1959

Mr. M. D. LaFlamboy, President
Glacier Mining Company
4039 Evanston Avenue
Seattle 3, Washington

Re: Docket No. [illegible] (Copper)
Glacier Mining Company
Midas, et al., Claims
Whatcom County, Washington

Dear Mr. LaFlamboy:

Your application for Government assistance to explore the cited property has been reviewed by the Division of Base Metals of the Office of Minerals Exploration and has been referred to:

Mr. A. J. Weissenborn
Executive Officer
OME Field Team, Region 1
South 157 Howard Street
Spokane 8, Washington

If the Field Team requires additional information concerning your application, they will contact you at an early date.

Sincerely yours,

Frank E. Johnson

Acting Director

WPKhagenchai/er 2/13/59
CC: Docket
Dir Read File
Op. Committee
Mr. McMahon, U BM
Mr. Billsgaard, USGS
Region I (2)
Chron.

February 13, 1959
Re: OME 6007
Glacier Mining Co.
Midas Claim
Whatcom County, Wash.
Appl. Est. $32,350 - Copper

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

In this application, a re-instatement of DMEA 5073, the applicant requests assistance in extending a drift--or crosscut--to a hypothetical vein or some other type of copper mineralization. The opening to be extended was designed to cut the vein but did not, nor did oblique diamond drill holes drilled ahead of the face it is planned to advance.

The existence of a vein or whatever is based on the presence in considerable amount of copper-bearing boulders up to 3 feet in diameter as float on top of and in deep overburden.

In 1951 a shipment consisting of 2.36 tons of the boulders recovered in bulldozer work was made. Smelter returns were:- Gold 0.02 oz. per ton, silver 0.89 oz. per ton, copper 4.59%, zinc 0.80%, and SiO_2 14.9%.

Bulldozing under DMEA 2335 (1952) did not uncover a vein and an unsuccessful attempt was made also under DMEA 2335 to find the vein underground.

Since then the applicant has done crosscutting or drifting and diamond drilling, probably 7 holes, and no sign of a vein has been found, though one sample from Hole 7 at 63 feet showed "copper calculated as Cu - 5.89%.

The reason for 'Laucks' reporting in such a manner is not given. To add to the confusion no map at hand shows the location of Hole 7.

In fact, no map at hand shows just where the new work would be done as the drift on the sketch map with this application does not register well with the Forbes Robertson map furnished with application DMRA 5073. If my inference is correct, at least four holes were drilled from the face of drift in 1958. A fifth hole is indicated but it is not numbered. At any rate, Holes 2 and 3, as shown in the J. D. Saures map of this application, would seem to have partly served the purpose of the proposed drift extension and diamond drilling. A hole straight ahead could be more useful than the backward looking holes.

Therefore, the proposal of DMRA 5073, now referred to only in this application, is practically without substance. Curiosity as to the source of the boulders is justified, and in case the studies of the surrounding surface conditions have been thorough and the conclusions more or less sound, further search is warranted. However, a new approach is indicated as the underground search has been expensive and essentially fruitless.

If no more difficult than the topographic map (RAM) suggests, a diagonal bulldozer trench down slope from the ridge should be possible and the nature of the bedrock would be determined, or diamond and churn drilling through the deep overburden should not be impossible. The nature of bedrock under the bulldozer trenches at least could be learned. Unless Hole 4 indicated to be an angle hole in an upper the unexplored vertical interval between Cut 4 and the work in the adit is 200 feet that below Cut 5 is 290 feet, and below Cut 6, 328 feet.

Probably only one bedding plane dip and strike are shown on the maps, that is 17° at the end of the DMRA drift. If it is representative of all the argillite and perhaps other sedimentary beds, a section shows there is room for other sedimentary beds (limestone?) between the adit level and the surface. A transverse trench as indicated above or drill holes should reveal such beds. Consideration of these suggestions by Mr. Magill is requested.

Referral of the application to the Field Team is recommended.

N. E. Nelson

cc: OME(3)
A. D. McMahon, 3623
Director's reading
Branch reading
Chron. file
Docket file

NENelson/mm
G-MD-2-13-59

6007

MME Form 40
Dec. 1958

FEB 11 1959
O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No. 42–R1368
Approval expires Dec. 31, 1963

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.)*

GLACIER MINING Co
4039 EVANSTON AVE
SEATTLE 3 Wash.

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: OME 6007

DATE RECEIVED: 2-11-59

REGION: I

DIVISION CODE: 500

BUSINESS ORGANIZATION *(Check one)*

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

STATE IN WHICH FIRM IS ORGANIZED

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
R.B. LAFLAMBOY	4235-3rd NW SEATTLE WN	PRES
J. McCASLIN	ENUMCLAW WN	VICE "
J. R. ATKESON	4039 EVANSTON AVE SEATTLE	SEC-TRES.
J. BALES	4733-54th So "	BOARD
HAROLD HELM	PORT BLAKELY WN	"

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

ESTIMATED COST OF PROJECT: $ See DMEA request

PROPERTY NAME: GLACIER MINING CO. 4039 Evanston Ave. Seattle 3, Wash.

LOCATION COUNTY: Whatcom STATE: Wash

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 four 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.

January 7th 1959
DATED

R B LaFlamboy
BY *(Signature)*

President
TITLE

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

INFORMATION REQUIRED WITH THIS APPLICATION

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 exploration [redacted] cost.

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).]

INT.-DUP. SEC., WASH., D.C. 48740

EXTRA COPY
O. M. E.
RECEIVED FEB 11 1959

DATE	INITIALS	CODE

Jack douglas Sauers
8816 Aurora
Seattle, Washington
July 17, 1958

Mr. R.B. Hartshorn
Glacier Mining Company
c/o L&W Realty
6809 Greenwood Ave
Seattle, Wash.

Dear Sir:

At your request, the mine at Glacier Washington was again examined to ascertain the results of your diamond drilling program. This was on Thursday June 5, 1958. Two separate holes had been drilled with the third one not completed yet.

The actual strike dip and length of the holes are plotted on attached Sheet #1. The bearings are only approximate since they were taken with Brunton Compass from the end of the adit as shown. The iron machinery and drilling equipment present could alter these bearings somewhat.

Holes #4 and #5 have been drilled since this visit and are on each side of Hloe #2.

It was recommended on checking the cores at the mine that all cores be saved and sent to your office in Seattle. This was done because a most of the cores obtained were mineralized with pyrite, visible under a 10 power habd lens in the field.

The core from hole #1 was washed completely and checked at the mine and cores from holes #2 and #3 were partially washed and checked there.

Since hole #3 had not been completed and you were planning additional drilling it was recommended that all of the present cores plus those anticipated be sent to Seattle tl your office where they could be further studied.

On the completion of this phase of your diamond deilling program and after the cores arrived in Seattle, all of the cores were washed and examined throughout and the core boxes labeled for further study.

This was done on June 25 and 26, 1958.

The following is a report on the results:

All diamond drill holes were drilled from the end of the adit of the Midas Claim as shown on the enclosed level map.

Hole #1- Bearing- S35degreesE,------125 feet long; Boxes A-E

Hole #2- Bearing- N30degreesE,------155 feet long; Boxes A-D

Hole #3- Bearing- S60degreesE, ------135 feet long; at time of visit, extended afterwards to 185 feet. Boxes A-5

Holes added after visit.

Hole #4- Bearing close to North, ---195 feet long; Boxes A-G

Hole #5- Bearing between #2& #3 and close to 117 feet long. BoxesA-D

Total length of all footage drilled to June 25, 1958 - 787 feet.

The individual boxes of each hole were labeled A,B,C,D, etc. as they were washed and checked.

All of the cores appeared to be mineralized throughout with finely disseminated pyrite (FeS). no chalcopyrite was visible. In places the amount of pyrite increased in an irregular and spottu sort of a manner.

These zones were from a quarter inch in size up to a foot through. After passing through these the rock returned to its normal character. The usual color of the rock is black with the fine flecks of pyrite usually visible only looking through a 10 power hand lens at the wetted core. This is aided considerably by looking at it in the sunlight or under a good light. The pyrite when it becomes more prevalent in patches increases in crystal size and tends to aggregate together in yellow clots in almost a concretionary manner. The matrix in-between the pyrite grains recrystallizes also into quartz, calcite, and probably feldspars with sometimes a green "chlorite" mineral present. A thin section study might reveal more data on the mechanism of this process.

It definately does appear to be related to some hydrothermal activity of a rather low temperature. This seems to be of a fairly pervasive nature and penetrative throughout all of the rock mass.

How much of the pyrite was originally present in the sediment is an unknown at this time. It might either be introduced or redistributed.

If the pyrite and mineralization is related to copper metallization then you may have conditions that would approach those THAT formed the pyrite boulders you have on the surface.

All that might be necessary now would be to further explore this pyrite zone to determine if and where there is a massuve vein present. This can be done by further diamond drilling guided by assays of split cores to determine if you are heading in the correct direction.

A plot of the cores and assays on a map would be of help.

It might be advisable to have a mining engineer present while you are drilling, to direct it and take care of the cores, sampling, and assays.

It should be noted that only S.D. hole #1 appeared to be heading at all in the direction recommended by the last report and it was off by 15degrees.

It should also be noted that the area in the back of this core, is the most highly recrystallized and is a greenish to brownish purple in color. It might be advantageous to extend this hole.

Attached is a map for your guidance.

Yours Truly,

Jack Douglas Sauers

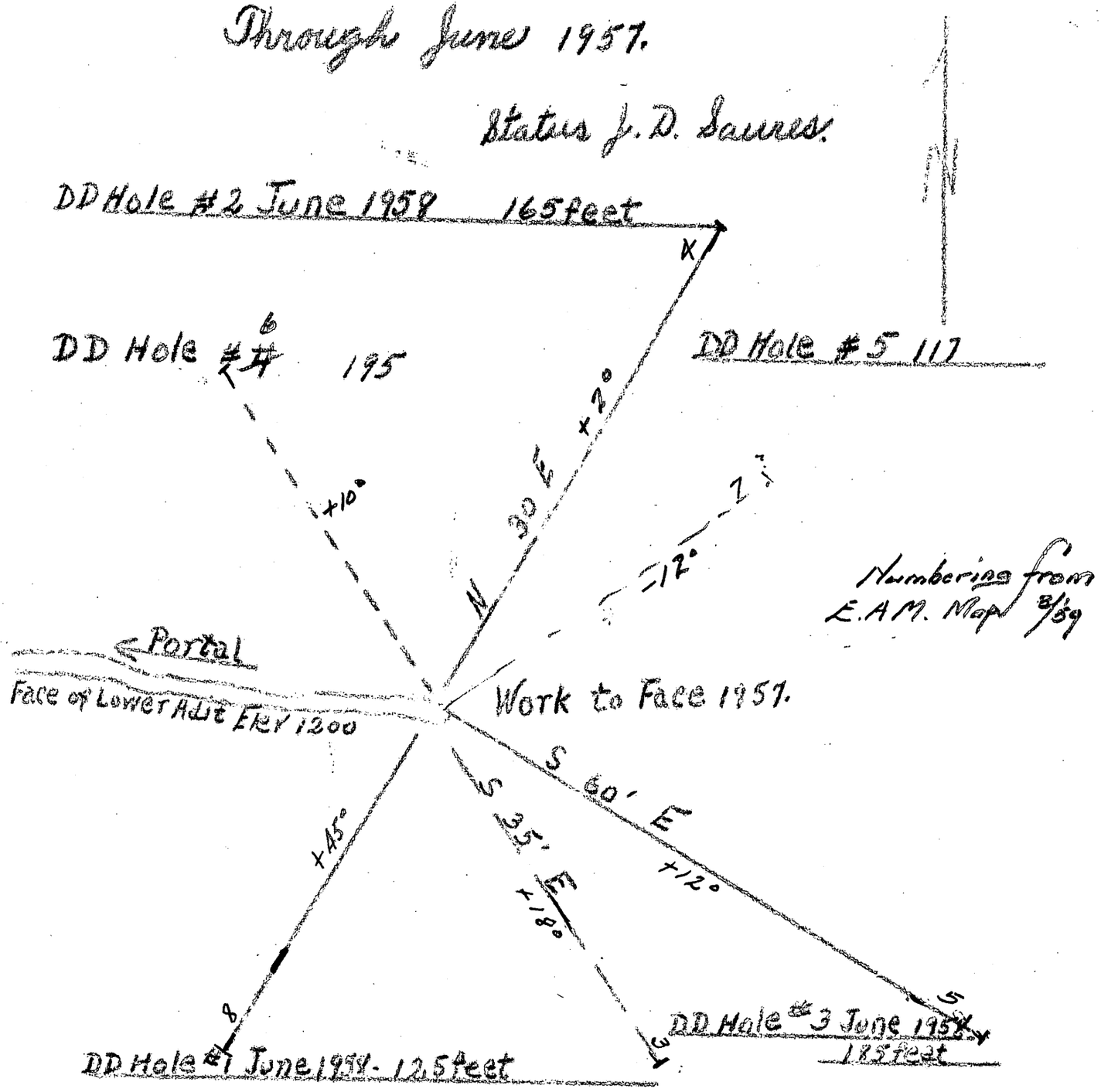
Geologist.

Glacier Mining Co. — Glacier Nash.

Diamond Drilling Completed.

Through June 1957.

Status J. D. Sauers.



0 20 40 60 80 100 120

Scale in feet

1" = 40

Map.

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O. M. E.
RECEIVED FEB 11 1953

DATE	INITIALS	COPY

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DATE	INITIALS	CODE

Certificate

LAUCKS TESTING LABORATORIES
Incorporated

1008 Western Ave.
Seattle 4, Washington

Laboratory No. 21984
Date 9/3/58

Client

GLACIER MINING CO.
4039 Evanston Ave.
Seattle, Washington

Report on CORE DRILLING

Sample identification Marked: Diamond Drill Hole #7
63'

Test performed and results,

Copper calculated as Cu ---------- 5.89%

I certify this to be a true copy.
R B Pattenaby Pres.

Respectfully submitted,

LAUCKS TESTING LABORATORIES, INC.

Signed before
Leah E. Lipp
Witness; Notary seal

By F.P.Olicers