UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 500

August 4, 1958

MEMORANDUM:

To: Mr. Winfield N. Chamberlain
Division of Operation Control & Statistics

From: Director, Division of Base Metals

Subject: Semi-Annual Reports of Certified Projects for the period January 1, 1958 thru June 30, 1958.

The following projects were inactive during the cited period.

Docket No.	Contract No.	Name
DMEA-3112	Idm-[illegible]651	Centrida Mines, Inc.
DMEA-432	Idm-[illegible]1	Mines Management, Inc.
DMEA-81	Idm-[illegible]18	United Minerals Corporation
DMEA-1166	Idm-[illegible]76	American Zinc, Lead & Smelting Co.
DMEA-390	Idm-[illegible]63	Highland-Surprise Cons. Mining Co.
DMEA-125	Idm-[illegible]1	Bennett Mining Company
DMEA-981	Idm-[illegible]	Idaho Mining Company
DMEA-525	Idm-[illegible]137	Spokane Mining Syndicate
DMEA-1877	Idm-[illegible]155	William Kulcahy
DMEA-652	Idm-[illegible]177	South Mt. Mining & Concentrating Co.
DMEA-1596	Idm-[illegible]184	Mabob Silver-Lead Company

DMEA-2166	Idm-E208	Farmer Mine Enterprises
DMEA-1959	Idm-E223	Wylie M. Gardner and L. R. Vance
DMEA-2123	Idm-E228	Pacific Northwest Mining Company
DMEA-1831	Idm-E242	William Soren
DMEA-1175	Idm-E251	Amador Mining Company (assignee of Kootenay Copper Mines)
DMEA-1894	Idm-E266	Bushman, Brecken and Morden
DMEA-2213	Idm-E294	Elmer Enderlin
DMEA-2388	Idm-E301	American Zinc, Lead & Smelting Co.
DMEA-2269	Idm-E308	Mines Management, Inc.
DMEA-2420	Idm-E380	Hypotheek Mining & Milling Co.
DMEA-2237	Idm-E421	Signal Mining Company
DMEA-2637	Idm-E475	Golconda Lead Mines
DMEA-2862	Idm-E482	Spokane-Idaho Mining Co.
DMEA-2612	Idm-E489	Granore Company (assignee of Index Mining Company)
DMEA-2929	Idm-E587	Grandview Mines
DMEA-3142	Idm-E644	Howe Sound Company
DMEA-3288	Idm-E667-	Alaska Copper Mines, Inc.
DMEA-3664	Idm-E819	Highland-Surprise Cons. Mining Co.

W. R. Griswold

WRG/dl 8-4-58
cc to: Dockets (28)
Admr. R. File
Chcmr.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code

April 28, 1958

Memorandum

To: Wingfield Chamberlain, Statistics Branch
Division of Operation Control & Statistics

From: Director, Division of Base Metals

Subject: Semi-Annual Reports for Certified Project, for the Period July 1, 1957 thru December 31, 1957.

The following projects were inactive during the cited period.

Docket No.	Contract No.	Name
DMEA-1 & 1A	Idm-24	Chief Consolidated Mining Company
DMEA-989	Idm-2131	Harrington Mines, Company
DMEA-1094	Idm-216	Haildriver Mining Company
DMEA-1098	Idm-2132	Combined Metals Reduction Company
DMEA-1708	Idm-2229	Kentucky-Utah Mining Company
DMEA-2603	Idm-2428	Magna King Manganese Mining Company
DMEA-2653	Idm-2477	U. S. Smelting, Refining & Mining Company
DMEA-2672	Idm-2437	Duke Page Auto Company
DMEA-2887	Idm-2606	Gordon French
DMEA-3266	Idm-2733	Big Indian Uranium Corporation
DMEA-3288	Idm-2667	Alaska Copper Mines, Inc.

W. R. Griswold

W. R. Griswold

8623

RECOMMENDATIONS

The examination was made on October 28-29, 1954, by Robert L. Thorne, U. S. Bureau of Mines, and Robert M. Chapman, U. S. Geological Survey, representing the D.M.E.A. Field Team. The following program for future exploration with D.M.E.A. funds was agreed upon by Wellweger, Thorne, and Chapman:

1. Extend the main adit about 150 feet in a northerly direction, starting at the turnout and following on, or in close contact with, the extension of the sulfide bearing quartz vein now exposed in the turnout.

2. Drift about 75 feet in a southerly direction from the crosscut on the 18-foot quartz vein.

3. It is the opinion of the field team representatives that the raise is not justified under the D.M.E.A. program.

zone are marked by faults and a decrease in quartz mineralization. Minor amounts of quartz are found in the country rock beyond the limits of the sheared, quartz zone. It seems apparent that this zone is the extension of the 18-foot quartz vein that is exposed in the crosscut and that it has been curved or faulted westward possibly by the fault shown at the junction of the adit and crosscut. The drill hole from the October 28 adit face reportedly did not encounter the quartz zone or any sulfide mineralization, and it appears that the hole was not drilled at the proper angle to intersect the quartz within 40 feet.

The raise on the western margin of the 18-foot quartz vein showed no sulfide mineralization. The lower 10 feet exposes intermixed quartz and lava. A band or horse of lava is cut between 15 and 23 feet, and it is bounded on the south by a fault striking east and dipping 50° south. The remainder of the raise is almost entirely in barren quartz. The operator expects to continue this raise to the surface.

SAMPLES

A composite grab sample (54ACh-17) was collected from an ore dump of material (estimated 40 tons) mined from the metallized quartz vein in the adit close to the turnout. Splits of this sample will be assayed by the U. S. Bureau of Mines and the Territorial Department of Mines.

Mr. Zellweger, manager of operations, has also sampled this ore dump, but assay results on his sample are not available yet.

Mr. Zellweger supplied the following assay results:

Samples from small veinlet and gouge in drift at the crosscut—

	Au	Ag	Cu
vein	0.06 oz./ton	nil	1.23%
gouge	0.04 oz./ton	nil	0.84%

Assay by Territorial Dept. of Mines, College, Alaska

Returns from Tacoma Smelter on shipment of ore from Discovery outcrop—

Dry weight of ore	-	29,751 lbs.
Au	-	0.03 oz./ton
Ag	-	1.52 oz./ton
Cu	-	17.21%
Net payment	-	0.3785¢ lb./ton

FORM AFL 205 - SKINNER

ALASKA FREIGHT LINES, INC.

C O P Y

5 August 1954

Alaska Freight Lines, Inc.
Post Office Box 3365
Seattle 14, Washington
ATTN: Mr. P. P. Barbey

Dear Sir:

In compliance with our agreement, the Alaska Copper Mines, Inc. submits herewith the following operating hours on the rental equipment taken from recorders on A.F.L. D-8 tractors during July 1954:

D-8 Cat. No. 1

172.3 hours - by driver Pittenger

D-8 Cat. No. 2

114 hours - by driver Zumwalt

Total hours operated: - 286.3 hours

Note: Of the total hours indicated above, 181 hours applies on open cut work authorized in D.M.E.A. Contract Docket No. 3288.

Very truly yours,

ALASKA COPPER MINES, INC.

DON ZELLMEGER
Executive Vice President

FORM AFL 205 - SKINNER

ALASKA FREIGHT LINES, INC.

C O P Y

23 August 1954

Executive Office
D.M.E.A. Region #1
Post Office Box 560
Juneau, Alaska

Dear Sirs:

We are enclosing herewith the original and four (4) copies of report and voucher for month of July 1954, which completes our part of D.M.E.A. Contract #IDM 667, Docket # DMEA 3288, Phase I. It will be noted that the total expense exceeds that amount authorized by D.M.E.A. It is consequently understood that although these actual costs are shown, they will not increase the amount due by authority of D.M.E.A. 3288 unless such an increase is volunteered by the D.M.E.A. Office.

All samples taken as shown in the attached diagram have been shipped under separate cover for assay by the U.S. Bureau of Mines, Juneau office. As field team inspection has now been completed, we respectively request early consideration by D.M.E.A. on Phase II application to Docket # 3288, submitted in our transmittal dated June 7, 1954.

Very truly yours,

ALASKA COPPER MINES, INC.

DON ZELLWEGER
Executive Vice President

Encls.

October 4, 1954

xxxx 590

Alaska Copper Mines, Inc.
Box 3365
Seattle 14, Washington

Gentlemen:

Your Mf-104 for the month of July has been approved for payment with the following breakdown of items of cost:

		Approved this Month	Approved Previously	Total
1.	Bulldozing	2,736.00	7,506.00	10,242.00
2.	Labor	960.00	---	960.00
	Supervision	---	537.60	537.60
3.	Freight on cats	347.53	618.47	966.00
	Total:	4,043.53	8,662.07	12,705.60
	Payment due, 50% gov't. participation			$2021.76
	Less 10% hold back per contract			635.28
	Current payment			1386.48

Assuming that some of the labor reported includes surveying & mapping the $960.00 has been allowed under item 2. for labor.

Although the freight on cats, item 7,, is specified as $750.00, the $966.00 has been approved inasmuch as no maximum allowance prevails and the contract includes $216.00 for assays.

Before payment of this voucher is made, documentation is required as follows:

1. Transcript of payrolls covering labor and supervision charges, including rates of pay, hours worked, etc.,
2. Invoice to support freight charge for return of cats to Fairbanks,
3. Invoice from Alaska Freight Lines, Inc. to support statement of operating hours dated 5 August 1954.

Upon receipt of the above documents your current payment will be immediately released.

Very truly yours,

Lawrence J. Wilcox
Chief
Administrative Division

ALASKA COPPER MINES, INC. PROGRESS REPORT FOR JULY 1954

Phase I to DMEA Contract #3288 was completed in July, however heavy rains during the last week of July and first few days of August damaged much of surface work by caving and mud filling. Five trenchs had to be cleaned a second time in order to expose the area for Field Team examination which was completed August 20, 1954.

Fifteen open cuts were made in all, two of which are not shown on Diagram of Surface work because they are located outside Claim Number K.M. 1 west of west-side line of K.M. #1. No mineralization was found in either of these two cuts. With reference to attached diagram of surface work, the following information gives additional description of work done.

CUT NO	LENGTH OF CUT	AVERAGE DEPTH OF CUT	SAMPLE NO.
1	100 ft	4.5 ft	#1
2	80 ft	3.5 ft	#2
3	100 ft	3.0 ft	#3A, 3B, 3C
4	30 ft	2.5 ft	#4A, 4B, 4C
5	100 ft	2.5 ft	None
6	165 ft	2.5 ft	None
7	240 ft	2.0 ft	None
8	180 ft	3.25ft	#8A, 8B
9	110 ft	2.5 ft	#9A, 9B, 9C
10	150 ft	1.5 ft	None
11	130 ft	3.5 ft	None
12	40 ft	1.5 ft	None
13 (Adit Bench)	380 ft	9 ft	None

SAMPLING INFORMATION

SAMPLE NO.		
#1	#1 Cut	18" channel cut across 12" vein of quartz, Bornite, Chalcopyrite and Malachite and 3" on both sides of vein in altered country rock
#2	# 2 Cut	6' channel cut across broken quartz approximately 5 ft wide showing extreme leaching and 1 ft altered footwall on west side of vein.
#3	#3 Cut	14.5' channel, gouge, quartz vein and altered country rock. Entire area shows leaching
	3A	Sample 30" gouge and crushed quartz in west side of out crop.
	3B	Sample 5' oxidized vein material
	3C	Sample 7' solid quartz 3' barran and 4' showing copper minerals.
#4	#4 Cut	12' channel gouge, quartz vein and altered country rock showing leaching and oxidation.

	4A	Sample 3' altered footwall on west side of vein containing Veinlets of mineralized Calcite.
	4B	Sample 2½' of crushed quartz vein
	4C	Sample 6½' of crushed quartz vein and altered country rock.
#8	#8 Cut	4½' channel across oxidized vein and altered country rock. Leaching very evident.
	8A	Sample 2' of altered country rock west side of vein.
	8B	Sample 2½' fractured vein and altered country rock east side of vein.
#9	#9 Cut	7' channel across altered footwall, gouge and hanging wall. No visible mineralization due to oxidation and leaching.
	9A	Sample 2' of altered footwall west side of vein
	9B	Sample 3' oxidized gouge (possible vein)
	9C	Sample 2' altered hanging wall

All sample cutting is noted on diagram attached. All veins appear nearly vertical and all except that in #1 cut show a great deal leaching and oxidation.

No strong leads were exposed by #13 Adit Bench cut however, Copper mineral was often found in Calcite Veinlets of altered country rock. Faulting is definitely noted along this cut which may be cause of lack of vein extension south of main discovery out crop. A portal site was located as indicated, and work was begun on Adit bearing N-18°-E. If the exposed surface veins continue down to this elevation they should be intersected by 220 - 250 ft of adit.

ALASKA COPPER MINES, INC.

Don Zellweger

DON ZELLWEGER
Executive Vice-President

Interim Report on Kathleen-Margaret Copper Prospect, Upper Maclaren River, Alaska. Docket No. D.M.E.A.-3288 (Copper), Alaska Copper Mines, Inc. Fourth Report, October 30-December 3, 1954.

by
Robert M. Chapman
U. S. Geological Survey, College, Alaska

SUMMARY

Since October 29, a drift has been driven 187 feet northeastward from the turnout in the adit. The quartz vein that was to be followed disappeared at 31 feet in the drift, and it has not been located north of this point. The vertical raise has been extended a total distance of slightly over 100 feet, and no copper mineralization has been encountered.

The examination on December 3 was brief and additional geologic mapping remains to be done. It appears that the main quartz vein, with which the copper is associated, has been offset by a fault or that the quartz vein feathers out northward from the junction of the adit and drift. Additional drilling or a short crosscut or drift, based on adequate geologic data, will be necessary to determine what has happened to the northward extension of the vein.

WORK ACCOMPLISHED

1. Since October 29 a drift has been extended from the adit, at a point about 295 feet from the portal, a distance of about 187 feet in a northeasterly direction.

2. The vertical raise on the west side of the 18-foot quartz vein has been extended to a total height of slightly over 100 feet.

FIELD EXAMINATION

A brief visit to the property was made on December 3. Due to adverse flying weather, short hours of daylight, and the drifted snow between the camp and mine, it was possible to spend only about 30 minutes underground. Thus, the mapping of the drift by tape and compass was done hastily, and only part of the geology could be noted well enough to plot it on the map.

GEOLOGY

The drift was started on a N. 5 -10° E. bearing from the turnout in the adit mentioned in the previous Interim Report by Robert M. Chapman. The slightly metallized quartz vein, on which the drift was started, is cut by a fault about 25 feet from the adit. This fault, which trends N. 60° E., and dips about 80° south, does not appear to be a major structure. The quartz vein has been crumbled and dragged about 2 feet vertically along the fault, and the vein disappears into the floor in the east wall about 6 feet north of the fault. A few tiny stringers of pyrite or chalcopyrite were noted in the fault zone in the east wall. The drift was continued to a distance of 50 feet on this same bearing and no quartz or other mineralization were observed or reported. A flat drill hole 16 feet in length was drilled into the east wall at about 45 feet. The bearing of the hole was not taken, but it appeared to be approximately N. 45° E.

Between 50 and 100 feet the bearing of the drift is N. 10° E. A quartz vein 1-2 inches thick was followed between 50 and 80 feet, and is still exposed in the back. It does not show any copper mineralization. At about 80 feet the vein disappears into the east wall.

Between 100 and 150 feet the bearing of the drift is N. 15-20° E. No copper or quartz mineralization was noted or reported.

From 150 feet to the face at 187 feet the drift bears N. 45-50° E., in barren lava country rock. No mineralization was noted or reported. The last 15 feet had not been completely mucked-out at the time of the examination.

It appears that (1) the quartz and mineralized vein exposed in the adit has been offset, probably eastward, by the fault that cuts the drift at about 25 feet, or (2) the vein feathers out northward and disappears at the drift level beyond the 31-foot point. It appears that the fault exposed at 25 feet in the drift should be exposed near the face in the adit. However, a slight change in strike or slight mapping inaccuracies might easily place it a few feet north of the face of the adit. It is also possible that it is offset by the northernmost fault exposed in the adit.

Mr. Zellweger reports that the 40-foot drill hole, which was drilled north from the face of the adit, penetrated some quartz in the last foot or so. Possibly this quartz is part of the main vein, although it might be an isolated pod or veinlet. The 16- and 40-foot drill holes have not adequately explored the block of ground east of the drift and north of the adit face.

The locations of ore showings on the surface have been plotted on the accompanying map as accurately as possible from the available survey data. However, the relative positions of the surface showings and underground workings should not be taken as exactly correct.

The surface exposures of quartz and copper mineralization and the vein or veins (?) cut by the adit and crosscut indicate that the intensity of copper mineralization and the discrete nature of the main quartz vein both decrease northward from the area of the Discovery outcrop and the crosscut. Present underground exposures indicate that the richness of copper mineralization decreases markedly with depth. Thus, it is reasonable to assume that the main quartz vein may feather out northward from the exposures in the drift and adit. This should be thoroughly checked by carefully located underground drill holes and/or short crosscuts or drifts.

It is possible, but not likely, that the quartz mineralization in the drift and adit is not the main continuation of the 18-foot quartz vein exposed in the crosscut and raise. This possibility should be checked by means of a drill hole to the east from near the face of the adit.

Time did not permit inspection of the raise. Zellweger reported that it has been extended vertically slightly over 100 feet, and that no metallization of the quartz vein has been encountered.

GENERAL COMMENTS

1. Some additional exploration work has been suggested, but a more careful and detailed geologic examination should be made before definite plans are made for future work.

2. The location of several of the drill holes leaves much to be desired. This is partly due to the operator's choice and partly to the unsuitability of the drill for such work. If drilling is to be directed perpendicularly to the drift or adit, it will be necessary to cut a station to accomodate the length of the drill, or to obtain another drill that can be handled in the width of the present workings.

3. The operator plans to shut down work for 3-4 months by December 17. Some of the crew have already been released. The difficulties encountered in combating the cold weather and drifting snow have proven costly, and the operator plans to defer further work until spring. The major problem seems to be that of keeping the road open between the camp and the portal. A heavy snowfall and strong winds are common in the Maclaren River area.

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

Hunsinwold
Ditty

P. O. Box 560
Juneau, Alaska

February 15, 1955

Memorandum

To: Operating Committee, Defense Minerals Exploration Admin., Department of the Interior, Washington 25, D.C.

From: Executive Officer, Alaska District, Region 1.

Subject: Operators Reports - Docket No. DMEA-3288 (copper)
Alaska Copper Mines, Inc.,
Contract No. Idm-667

Enclosed herewith are 2 copies each of forms MF-104, MF 104A and the operator's "narrative" report (w/map attached) for the month of December, 1954.

R.S.V.

R. S. Velikanje,
Acting Executive Officer,
Alaska District.

Encls. - 3

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

P. O. Box 2688
Juneau, Alaska

April 26, 1957

EXTRA COPY
DMEA
RECEIVED APR 29

DATE	INITIALS	CODE
4/29		110
4/29		500

Memorandum

To: Operating Committee, Defense Minerals Exploration Admin., Department of the Interior, Washington 25, D.C.

From: Executive Officer, Alaska District, Region I.

Subject: Final payment, Docket No. DMEA-3288 (copper), Alaska Copper Mines, Inc., Contract No. Idm-2667.

Enclosed are two copies of form MF-104 which document the final payment to the subject company for contract No. Idm-2667 on the Maclaren River, or Kathleen-Margaret, copper deposit.

Your letter of April 1 gave us official permission to waive any further final reports from the Alaska Copper Mines, Inc.

A final report by the Field Team will not be attempted until a determination has been made regarding further continuance of the work by the new Maclaren River Copper Company.

S. H. Lorain

Enclosure-1

cc: Volikanje
Mordlick
Wilcox

-C-O-P-Y-

Alaska Freight Lines, Inc.
Seattle Office: P.O. Box 3365, Seattle 14

January 4, 1955

Mr. S. H. Lorain, Executive Officer
Field Team, Region I
U.S. Defense Minerals Administration
P.O. Box 560
Juneau, Alaska

Dear Mr. Lorain:

With reference to your letter of December 31 we are attaching hereto our revised voucher in the amount of $12,000.00 covering drifting and crosscutting at the 3800' level. By now you have received the Van Dyke showing the progress as of the end of December and can account for the 500' that we are billing for by the attached voucher. To help explain this footage, I would advise that you refer to the Van Dyke and note that I have allowed 120' of crosscutting, 80' in one instance and 40' in another, both measurements being taken from the frog of No. 1 and No. 2 switches, respectively.

I have also measured the drifting starting from the No. 2 frog at the second switch to the present face. After deducting the 187' disallowed by the government, I arrived at a figure slightly over 500 net feet, but for convenience in billing I have made the voucher out for 500' even. If we are in error on the total footage accomplished, I believe it is due to my measuring in the crosscuts. Perhaps this will explain the total amount. At any rate, please feel free to allow a reasonable footage that you feel fair and correct my voucher accordingly. I mention this because I feel that we can complete the contract in an agreeable manner to both the government and ourselves next spring.

Since mailing the Van Dyke to you I have received assay reports on samples taken which I will give herewith for addition to the exploration drawing which you have already received.

Please note the 65' drill hole bearing south 25° east and at a slight incline of plus 12° at switch No. 1. Time and lack of steel prevented us from actually crosscutting the vein in this long drill hole. However, we did drill through a mineralized area on the west side of the vein which carried copper minerals, quartz and greenstone and assayed 1.3% copper, .2 oz. silver and nil gold through the area 50 to 61'. (This sample was a slosh sample for 10' of drilling.)

-C-O-P-Y-

-C-O-P-Y-

Sample No. 2 was taken for about the first 20' of the long drill hole parallel to the drift and inclining 18° at the extreme northern end of the drift. This sample showed nil gold, silver and copper. However, I feel that nil on the copper is a laboratory error as I did see by visual inspection some minute particles of chalcopyrite. I would venture a guess that this actually should have shown .25% copper which, incidentally, is considered nil so far as Alaska Copper Mines is concerned.

I made some channel samples in the raise which were not essential at the time, but may be of interest to you. Starting from the crosscutting at 20' a 3' channel sample revealed a trace of gold, .2 oz. of silver and .35% copper. At 80' a 4' channel revealed nil gold and silver and .94% copper. At 125' a 10' channel revealed nil gold, .24 oz. silver and .71% copper. An 18" channel at 125' revealed .02 oz. gold, .16 oz. silver and 4.61% copper. A 4' channel at 125' revealed .04 oz. gold, .85 oz. silver and 3.44% copper.

At the No. 2 switch where we crosscut the vein a second time, a grab sample of 100 pounds taken from ore cars and reduced by cone and quartering five times produced an assay of .12 gold, .42 oz. silver and 4.84% copper. It now appears to me, however, that this was an enriched area, the extent of which is still undetermined.

Referring back to the long drill hole at the No. 1 switch, I would advise that 18' more would crosscut the vein entirely as we had just hit it when we were forced to shut the operation down. My present plans now are to extend this hole at the first opportunity. From the sampling done to date, I would conservatively estimate that we have between 4,000 and 6,000 tons of millable ore, but I am afraid this cannot be used as an influence in deciding our future plans on this property. I will keep you advised accordingly.

Very truly yours,

ALASKA COPPER MINES, INC.

/s/ Don Zellweger
Don Zellweger
Vice President

DZ:rc
Enc.

-C-O-P-Y-

RECEIVED 10 1958
DATE
4/10
4/15 Com
4/12
4/18 WRL

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

SEMI-ANNUAL REPORT OF CERTIFIED PROJECT

Reporting period:	October 26, 1956 to December 31, 1957
Date of report:	March 15, 1958
Operator:	Alaska Copper Mines, Inc., P. O. Box 3365, Seattle 14, Washington
Mine name:	Albertson-Pettyjohn Copper Prospect
District:	Talkeetna Mining District Territory of Alaska
Docket number and commodity:	DMEA-3288 (copper)
Contract number:	Idm-E667

Date of contract:	April 2, 1954
Date of certification:	October 26, 1956 (termination agreement)
Expiration date of royalty payments:	May 29, 1968 (~~11~~ yrs. from date of contract Idm-E1093)

Total amount of contract:	$41,530.00
Total expenditures under contract:	35,511.10
Amount of Government participation at 50%:	17,755.55

Royalty payments this period:	none
Previous royalty payments:	$56.21
Total royalty payments to date:	56.21
Percent Government participation repaid:	0.3%

Royalty due on production to date: none

Royalty remarks: Royalty audit by E. D. Talbert dated May 3, 1955, showed royalty was due on a shipment identified as Lot No. 2334, settlement sheet dated October 12, 1954, and this royalty of $56.21 was deducted from the final payment made under the contract.

Original estimate of DMEA reserves:
(from Field Team final report)
Mines ___ Survey ___ Joint ____

No information in our files regarding any estimates made.

Production remarks: The Operator's Work Progress Report for this property but under Contract No. Idm-E1093, dated February 21, 1958, stated that he has 180 tons containing 4.46 percent copper, 0.11 oz/ton gold, and 0.41 oz/ton silver, and 190 tons containing 1.03 percent copper stockpiled at the mine.

Signed: E. W. Parsons (Engineer)

Distribution:
DMEA (4)
USGS (2)
USBM (AD)
USBM (2)

D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~

Defense Minerals Administration
RECEIVED
DEC 30 1954

P.O. Box 560
Juneau, Alaska

December 23, 1954

Memorandum

To: Operating Committee, Defense Minerals Exploration Admin., Department of the Interior, Washington 25, D. C.

From: Executive Officer, Region I

Subject: Interim Report
Docket No. DMEA-3288 (copper)
Alaska Copper Mines Inc. (assignee)

Enclosed herewith are four copies of an interim report by Robert M. Chapman.

Although not mentioned in this report, I am told that a drill hole easterly from a point south of the crosscut penetrated very good copper mineralization in the big vein south of the crosscut and very nearly under the discovery outcrop. Therefore it appears to me that the logical next step (which had been recommended and should have been undertaken instead of raising) would be to drift south on the main vein. If, say, fifty feet or more of good ore were exposed by this work, some exploration at greater depth would be justified. Otherwise about all that remains to be done is to drift northward to below this trench 3-5 area (which is the best of the new surface exposures) and to do some more long hole drilling east and west from the main drift north of the "turnout". This work should be preceded by an accurate transit survey.

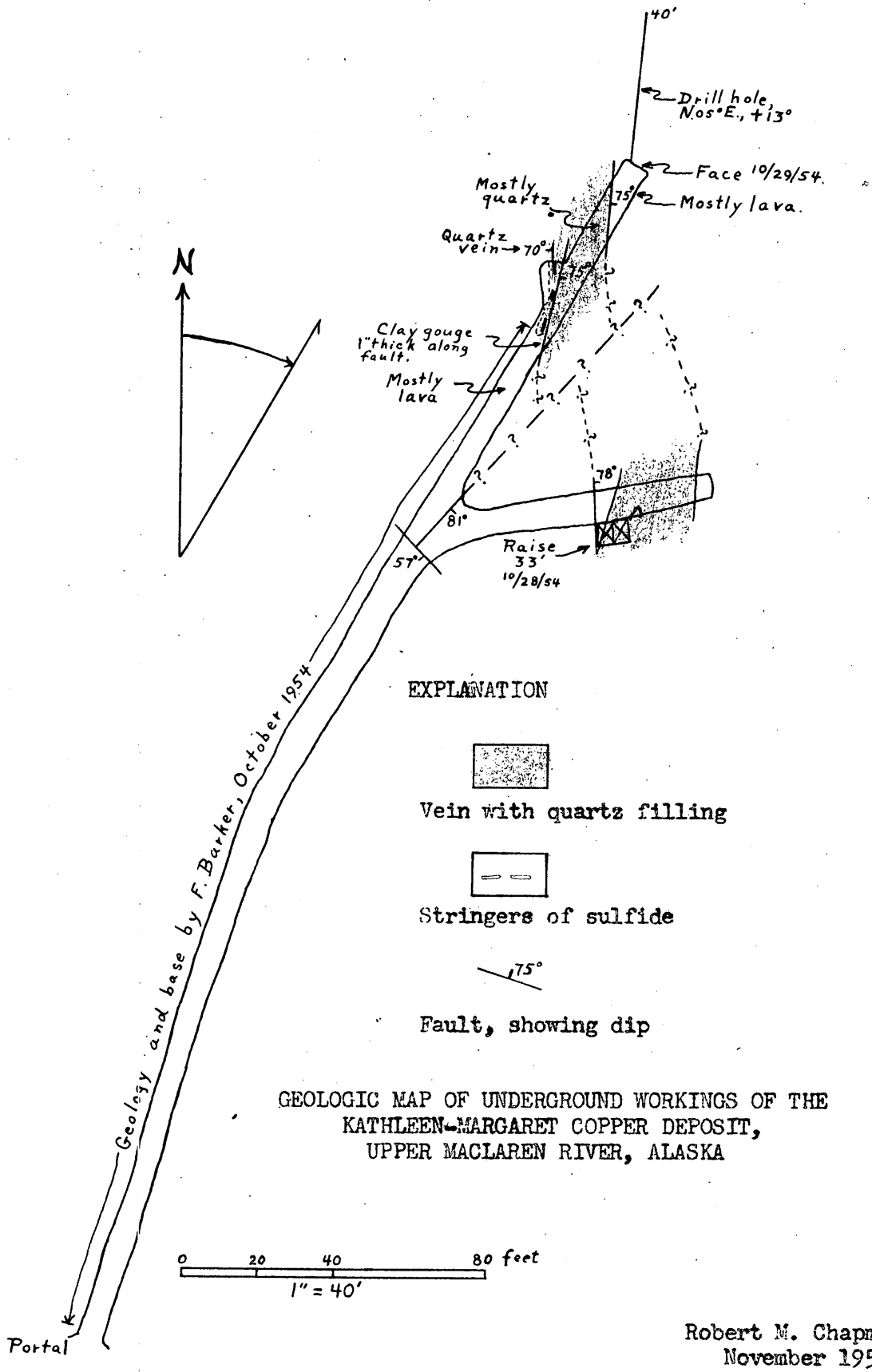
S. H. Lorain, Executive Officer
Field Team, Region I

Encl - 1 (in quad)

cc: USGS - Velikanje

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

D.M.E.A.
INTERIM REPORT



GEOLOGIC MAP OF UNDERGROUND WORKINGS OF THE
KATHLEEN-MARGARET COPPER DEPOSIT,
UPPER MACLAREN RIVER, ALASKA

Robert M. Chapman
November 1954

D. M. E. A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D. C.~~

P. O. Box 560
Juneau, Alaska

December 23, 1954 Arnold Betty

Memorandum

To: Operating Committee, Defense Minerals Exploration Admin., Department of the Interior, Washington 25, D. C.

From: Executive Officer, Region I

Subject: Operators report
Docket No. DMEA-3288 (copper)
Alaska Copper Mines Inc. (assignee)

Enclosed herewith are 2 copies each of MF-104, form MF-104A, and the operators "narrative" report for the month of July 1954. These reports were very slow in reaching us, consequently payment has been withheld for some time. Although this contract has been extended by an amendment we are still withholding ten percent of the government contribution.

S. H. Lorain, Executive Officer
Field Team, Region I

Encl: 1 (in dup)

cc: USGS - Velikanje

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

FEB 17 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1954 Docket No. DMEA 3288 Contract No. IDM-667
Operator's Name Alaska Copper Mines, Inc. Minerals Copper
Address P.O. Box 3365, Seattle 14, Washington
Contract Amount, $ 41,530.00 Government Participation: 50 % Amount, $ 12,000.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing					10242.00	10242.00
Crosscutting	120'	0	120'			
Drifting 475' @ 142.00	380'	0	380'	22800.00		22800.00
(2) Labor and Supervision:						
Labor					960.00	960.00
Supervision					537.60	537.60
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Freight on cats						
Poke & return					966.00	966.00
(8) Contingencies (specify):						
TOTALS	500 ft.	-	500 ft.	22,800.00	12,705.60	35,505.60

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 4, 1955 *Payee Alaska Copper Mines, Inc.

Per Don Sullivan Title Exec. Vice President

Don Sullivan

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$11,400.00

Signature
(Authorized Certifying Officer)
Lawrence J. Wilcox

Date 2/14/55 Vou. No. [illegible]-13
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. ..... in accordance with the terms of the contract.

Signature Robert L. Thorne Title Mining Engineer Date 2/21/56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature R. S. Velikanje Title Acting Executive Officer Date 2/21/56

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1954 Docket No. DMEA 3288 Contract No. IDM-667

Operator's Name Alaska Copper Mines, Inc. Minerals Copper

Address P.O. Box 3365, Seattle 14, Washington

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting	ft.	18,240.00	380	18,240.00	380	$48.00	600	$24.00
Crosscutting		5,760.00	120	5,760.00	120	48.00		
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching 1	Trench	-	-	12,705.60	12	1,058.80	12	1,058.80
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$24,000.00	500	$36,705.60				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$24,000.00	500	$36,705.60				$41,530.00

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

Date Jan. 4, 1955 Operator Alaska Copper Mines, Inc.

Per Don Zellweger Title Executive Vice President

Don Zellweger

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

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Form MF-104 (Rev.)
(April 1952)

Wash

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Final payment, Nov. 195 5 Docket No. DMEA 3233 Contract No. Min-1667
Operator's Name Alaska Copper Mines, Inc. Minerals Copper
Address P. O. Box 3365, Seattle 24, Washington
Contract Amount, $ 11530.00 Government Participation: 50 % Amount, $ 20765.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:				8/5/57	9584K	Per DMEA Audit 5/3/55
Drilling				-0-	10212.00	10212.00
Bulldozing						
Crosscutting				-0-	22300.00	22300.00
Drifting						
(2) Labor and Supervision:						
Labor				- 259.09	960.00	700.91
Supervision				- 12.60	537.60	525.00
Technical Services				+ 6.25		6.25
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Freight on tractor				+ 270.94	966.00	1236.94
(8) Contingencies (specify):						
TOTALS				5.50	35505.60	35511.10

$580.82 (Interim Audit 5/3/55) corrected to $581.82

RECEIVED APR 26 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.

Date _____ *Payee _____

Per _____ Title _____

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: $2.75 plus $635.28 previously held back on 3/54 payment Less $56.21 royalty due per audit or $ 581.82

Signature _____ (Authorized Certifying Officer)

Date 11/14/55 Vou. No. DMEA 36 56

4/24/57

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-1167 in accordance with the terms of the contract.

Signature ..... Title Executing Officer Date 11/24/55

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title Executing Officer Date 11/24/55

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

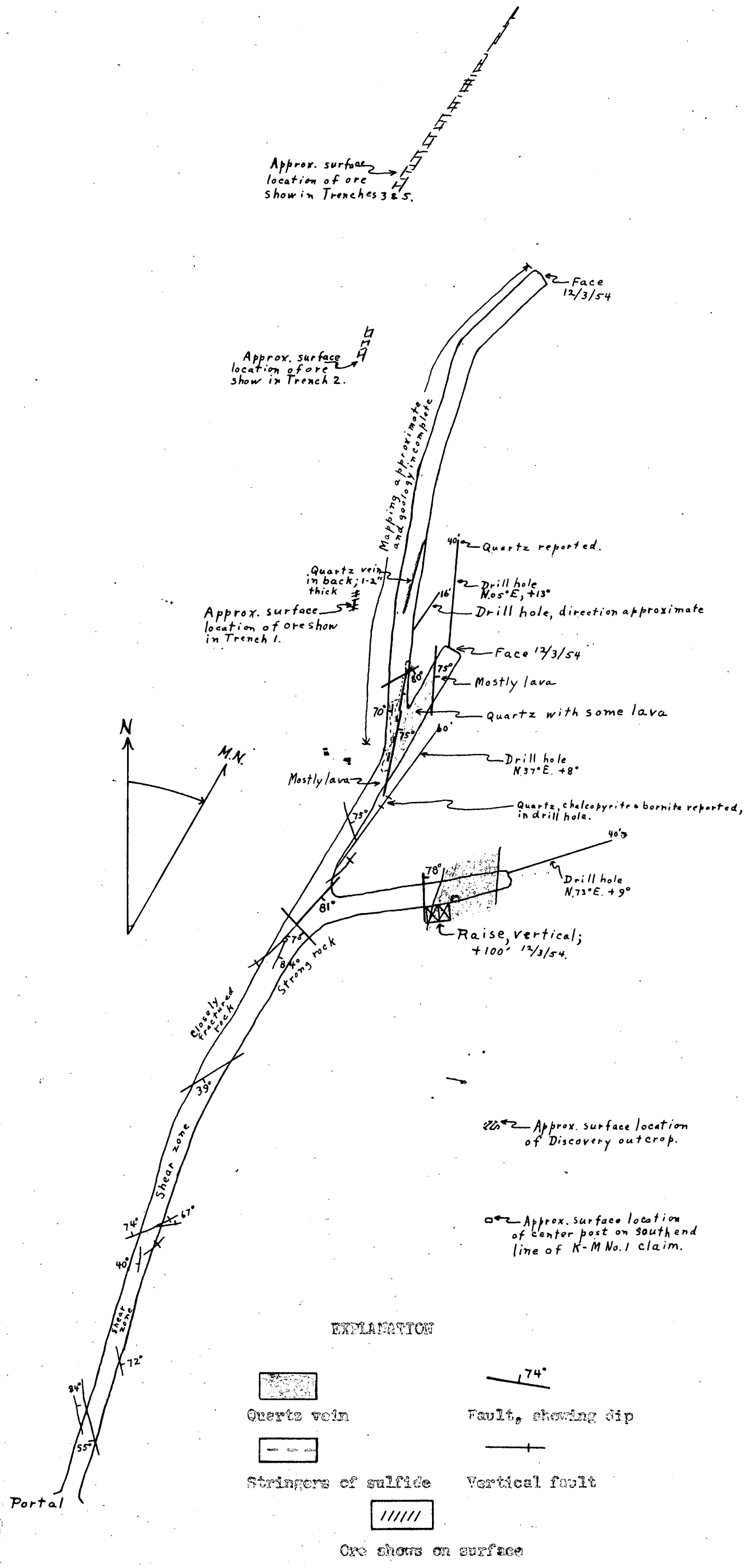
The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

D.M.E.A.
TUCKER SOUND



GEOLOGIC MAP OF UNDERGROUND WORKINGS OF THE
KATHLEEN-MARGARET COPPER DEPOSIT,
UPPER MACLAREN RIVER, ALASKA

0 40 80 feet
1" = 40'

Robert W. Chapman
December 1954

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.1
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1954 Docket No. DMEA 3288 Contract No. IDM 667
Operator's Name Alaska Copper Mines, Inc.(Assignee) Minerals Copper
Address POB 3365, Seattle 14, Washington

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching (1)	Trench	5,086.47	3	13,773.44	12	1,147.78	12	1,060.80
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		5,086.47		13,773.44				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5,086.47		13,773.44				

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

Date Aug 10, 1954 Operator Alaska Copper Mines, Inc.

Per Don Zellweger DON ZELLWEGER Title Vice President

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

(Instructions on reverse)

REMARKS: It will be noted that the actual costs shown above, exceeds the amounts authorized in contract. However, it is not the intent of this company to ask for more than authorized by contract, but merely to show the actual costs necessary to complete same.

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

Form MF-104 (Rev.)
(April 1952)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of JULY, 1954 Docket No. DMEA 3288 Contract No. IDM 667
Operator's Name Alaska Copper Mines, Inc. (Assignee) Minerals Copper
Address POB 3365, Seattle 14, Washington
Contract Amount, $ 12,730.00 Government Participation: 50 % Amount, $ 6,365.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing	3,258.00	7506.00	10,764.00	2736.00	7506.00	10242.00
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	960.00	None	960.00	960.00	-o-	960.00
Supervision	250.00	562.50	812.50	-o-	537.60	537.60
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Freight on 2 cats Fairbanks to mine & return				347.53	618.47	966.00
(8) Contingencies (specify): Accrued freight expense for 2 Cats. Mine to Fairbanks	618.47	618.47	1,236.94			
TOTALS	5,086.47	8,686.97	13,773.44	4043.53	8662.07	12705.60

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug 10, 1954 *Payee Alaska Copper Mines, Inc.

Per DON ZELLWEGER Title Vice President

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of $2021.76 less 10% of gov't. participation or $635.28

$ 1,386.48

Signature Lawrence Wilson
~~S. H. Lorain~~ (Authorized Certifying Officer)

Date 10/8/54 Vou. No. DMEA #7

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Ececutive Officer Alaska Field Team Region I

Signature ..... Title ..... Date .....

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word; such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

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

P. O. Box 560
Juneau, Alaska

December 21, 1954

Memorandum:

To: Operating Committee, Defense Minerals Exploration Admin., Department of the Interior, Washington 25, D. C.

From: Executive Officer, Region I

Subject: Interim Report
Docket No. DMEA-3288 (copper)
Alaska Copper Mines, Inc.

Enclosed herewith are four copies of an interim report by Robert M. Chapman on the Kathleen-Margaret Copper Prospect.

We have heard that the company plans to resume operations next summer but we have had no official reaction to the proposed new DMEA contract which was submitted to them.

S. H. Lorain, Executive Officer
Field Team, Region I

Encl: 1 (in quad)

cc: USGS - Velikanje

Interim Report on Kathleen-Margaret Copper Prospect, Upper Maclaren River, Alaska. Docket No. D.M.E.A.-3288 (Copper), Alaska Copper Mines, Inc. Third Report, October 8-29, 1954.

by
Robert M. Chapman
U. S. Geological Survey, College, Alaska

SUMMARY

The adit has been extended a distance of about 337 feet from the portal, and a turnout has been started on a sulfide-bearing quartz vein about 275 feet from the portal. A vertical raise on the 18-foot quartz vein, which is exposed in the crosscut, has been driven 33 feet. No appreciable copper mineralization has been encountered in the adit or raise since the previous examination on October 8. Recommendations for extending the adit about 150 feet and drifting 75 feet on the 18-foot quartz vein are made by the Field Team representatives, but it is not recommended that the D.M.E.A. participate in the cost of the raise.

WORK ACCOMPLISHED

1. Since October 9, the adit has been extended 45 feet on a bearing of about N. 30° E. A drill hole was driven from the adit face 40 feet N. 05° E. +13°. A turnout on a mineralized quartz vein has been started.

2. A vertical raise has been driven about 33 feet from a point on the south side of the crosscut about 40 feet from the adit and on the west edge of the 18-foot quartz vein.

GEOLOGY AND MINERALIZATION

As a result of the work accomplished between October 9 and 28, little can be added to the geologic description and interpretation presented by Fred Barker in the previous Interim Report. The slightly metallized quartz vein that showed in the face on October 9 extends slightly east of north into the face of the turnout, and at this point dips about 70° west. Very little sulfide mineralization showed in this face, and a few small pockets of sulfide showed in the roof of the turnout.

A sheared zone consisting of quartz with minor amounts of the lava country rock and no visible sulfide is exposed in the adit between the turnout and the October 28 face. The side boundaries of the sheared

Grunwald
Betty

October 1954
Monthly Report

Docket No. DMEA-3288 (copper), Alaska Copper Mines, Inc. (Assignee)

An exploratory drift, started at an altitude about 200 feet below the surface indications, was advanced almost parallel to the vein until opposite the downward projection of the original outcrop discovery. A short crosscut to the vein exposed about 20 feet of vein quartz, with weak copper mineralization, almost directly below the outcrop. The drift is being continued northward to explore the strike extension of the vein.

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.4
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1954 Docket No. DMEA 3288 Contract No. IDM 667
Operator's Name Alaska Copper Mines, Inc., Assignee Minerals Copper
Address P.O. Box 3365, Seattle 14, Washington
Contract Amount, $ 12,730.00 Government Participation: 50 % Amount, $ 6,365.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing	7,506.00	None	7,506.00	7,506.00	—	7,506.00
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	562.50	None	562.50	537.60	—	537.60
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Freight on 2 D-8 Cats, Fairbanks to Paxsons				618.47	—	618.47
(8) Contingencies (specify): Freight on 2 D-8 Cats, Fairbanks to Paxsons	618.47	None	618.47			
TOTALS			8,686.97	8,662.07	—	8,662.07

I certify that the above bill is correct and just and that payment therefor has not been received.

Date July 15, 1954 Payee Alaska Copper Mines, Inc.

Per [signature] Title Vice President

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 4,331.04

Signature [signature] (Authorized Certifying Officer)
Lawrence J. Wilcox

Date 8/24/54 Vou. No. DMEA-4

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E667 in accordance with the terms of the contract.

Signature ..... Title Regional Director Date 8/24/54

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Executive Officer Alaska Field Team Region I

Signature ..... Title ..... Date 8/24/54

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of JUNE 195 4 Docket No. DMEA 3288 Contract No. IDM-667
Operator's Name ALASKA COPPER MINES, INC. (ASSIGNEE) Minerals COPPER
Address POB 3365, SEATTLE 14, WASHINGTON

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching	1-TRENCH	$8,686.97	9	$8,686.97	9	$965.22	12	$1,060.83
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$8,686.97						TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$8,686.97		$8,686.97				$12,730.00

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

Date JULY 15, 1954 Operator ALASKA COPPER MINES, INC.

Per DON ZELLWEGER Title VICE PRESIDENT

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

REMARKS: FREIGHT CHARGES IN THE AMOUNT OF $618.47 ARE INCLUDED IN TOTAL COSTS ABOVE, AS WELL AS $562.50 SUPERVISION EXPENSE. BALANCE OF COST APPLIES TO 417 HOURS OF RENTAL @ $18.00 PER HOUR FOR D-8 CAT.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

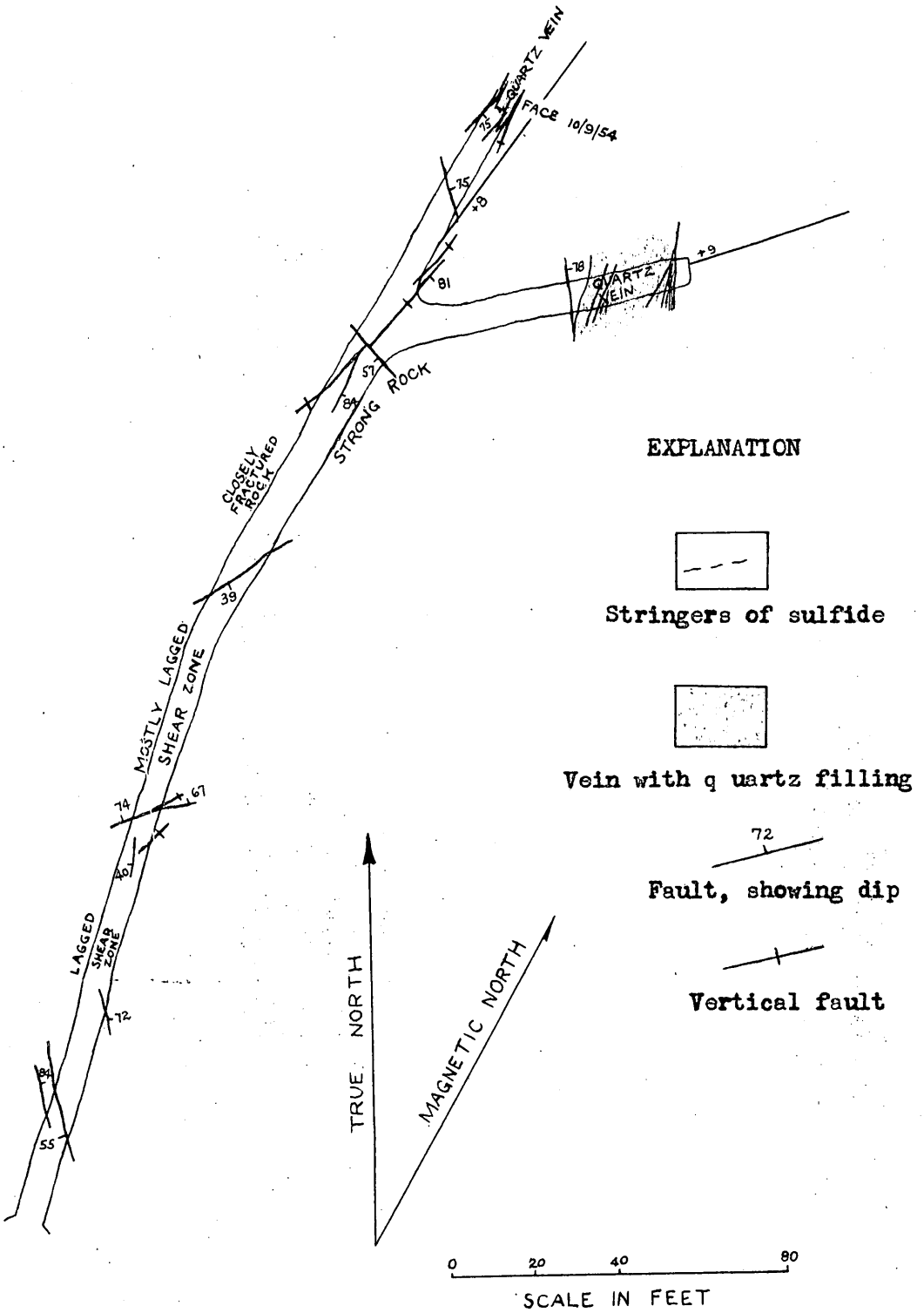
In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

RECEIVED
AUG 20 1954
BUREAU OF MINES
JUNEAU, ALASKA

GPO 83-38475

U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

DMEA REPORT



GEOLOGIC MAP OF UNDERGROUND WORKINGS OF THE KATHLEEN-MARGARET COPPER DEPOSIT, UPPER MACLAREN RIVER, ALASKA

F. Barker
October, 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.~~ C.
P. O. Box 560
Juneau, Alaska

OCT 25 1954

October 20, 1954

Memorandum:

To: Operating Committee, Defense Minerals Exploration Admin.

From: Executive Officer, Field Team, Region I

Subject: Interim Report
Docket No. DMEA-3288 (copper)
Alaska Copper Mines, Inc., Assignee

Enclosed is an original and three copies of an "Interim" geological report by Fred Barker. Except that Mr. Barker did not sample the veins, the report appears to be very well done. If we ever get the new contract we will send in an engineer and a geologist to sample the vein exposures and to lay out the extended program.

status

gig ?

When superimposed upon the map of surface trenching, Mr. Barkers map indicates that the vein exposure in the face of the drift probably is a split from the large vein that is exposed in the crosscut and that both will prove to be down-dip extensions of the veins exposed by the surface trenching; therefore exploration will be a simple matter of following the vein. We will have to hope that the metal content improves toward the north.

S. H. Lorain
Executive Officer
Field Team, Region I

Encl: 1 (in quad)

09725034

Report on Kathleen-Margaret Copper Prospect, Upper Maclaren River, Alaska (Docket No. DMEA-3288, copper, Alaska Copper Mines, Inc.) Second Report, Period August 21-October 8

by

Fred Barker
U. S. Geological Survey, Juneau, Alaska

SUMMARY

The adit has been continued to a distance of 295 feet from the portal. A cross cut was driven 75 feet in a N80°E direction from a point in the adit 227 feet from the portal. A quartz vein 4.5 feet in thickness and sparsely mineralized with chalcopyrite and bornite is exposed in the face of the adit. A second and larger 18 foot-thick quartz vein, which contains several small stringers of bornite, has been intersected in the easterly crosscut.

The access road on the north side of Discovery Creek has been completed and the portal can be reached by four-wheel drive vehicles. The winter access road up Discovery Creek also is in excellent condition. The camp has been enlarged and winterized.

WORK ACCOMPLISHED

1. Since August 20 the adit has been extended 108 feet in a general N 30°E direction (see attached map). A hammer drill hole was driven 60 feet N 37°E from the east wall of the adit 257 feet from the portal.

2. A cross cut 75 feet in length has been driven N 80°E from a point in the adit 227 feet from the portal. An exploratory hammer drill hole was driven 40 feet at N 73° E from the face of this crosscut.

The work is being done satisfactorily. One shift per day is working at present, but Mr. Zellweger expects to have two shifts working in the near future.

GEOLOGY

Wallrock

The wallrock in the underground workings is entirely medium to dark green lava - a dense, homogeneous, aphanitic rock. Some of the lava contains lath-shaped phenocrysts of feldspar that range from one to four mm in length. Closely spaced, irregularly oriented joints transect much of this rock. Drilling is difficult in most of this lava.

A number of faults are exposed in the unlagged portions of the adit and easterly crosscut. Most of these breaks are clearly defined by yellowish-brown to grayish-green clay gouge, which is of variable thickness, from 1/8 inch to three feet. Slickensides are visible on many of the faults, and all striations seen were steeply oriented to vertical.

Zones of sheared rock, containing much gouge, were encountered in two parts of the adit (see attached map). This ground is heavy and had to be lagged. A third zone of closely fractured rock, with little clay gouge, was found 180 to 190 feet from the portal. The displacement on the faults and shear zones could not be determined, but there is a possibility that the eighteen foot quartz vein exposed in the easterly crosscut and at the Discovery Outcrop on the surface is broken off on the south by faults that pass through the adit.

Veins

Two quartz veins are exposed in the underground workings: a 4.5 foot vein at the face 295 feet from the portal, and an 18 foot vein in the easterly crosscut.

The 4.5 foot vein, which strikes parallel to the axis of the adit and dips about 80° to the west, was exposed by the round blasted on October 8. The previous face, 8 feet to the south, showed four pod-like quartz veins two to six inches thick. Hence the vein has swelled more than three feet in thickness in a horizontal distance of eight feet. The vein has a fault contact with the wallrock on the east, and it shows an irregular caries-type replacement contact on the west. Irregular shreds of wallrock are contained in part of the vein. The eastern third of the vein shows sparse mineralization of stringers chalcopyrite and bornite, in a ratio of about 3:1, respectively, by volume. This vein may be the downward extension of the one exposed in Trench #1.

The 18 foot quartz vein is exposed in the easterly crosscut. The strike of the vein is about N 14°E and the dip is vertical. Four stringers of bornite from six to fifteen inches in dip length and two to six inches thick lie roughly parallel to the walls of the vein. The strike lengths of these stringers are not known, but probably are less than the dip lengths. About 0.5 percent of the exposed area of the vein is bornite. The western contact of the vein with the wallrock appears to have been sheared after formation of the vein. The vein has a fault contact with the country rock to the east, in which as much as three feet of crushed lava has been developed. Four mappable faults lie in the vein; a block of country rock appears to have been dropped into the vein along two of these faults at four to seven feet from the western wall of the vein. This wedge of wallrock, however, does not extend down as far as waist level and hence does not show on the attached map. The remaining and greater part of the vein is virtually 100 percent quartz. This vein is almost directly below the 10.5 foot thick vein that forms the Discovery Outcrop.

The sequence of events in the formation of these two veins appears to have been: faulting, silicification along these faults, partial replacement of quartz by bornite and chalcopyrite, and post-mineral faulting.

DRILLING

A hammer drill hole was driven 60 feet in a N 37°E direction from the east wall of the adit at 257 feet from the portal. Mr. Zellweger reported that all of this hole was in lava except the section from 27 to 31 feet, whose sludge, after the clay was washed out, gave about 90 percent quartz and ten percent bornite and chalcopyrite.

A second hammer drill hole was driven forty feet from the face of the easterly crosscut. Mr. Zellweger stated that the hole lies entirely in wallrock.

SAMPLES AND EVALUATION

The ore shoots and stringers of bornite and chalcopyrite are very irregularly distributed and difficult to sample accurately. Much more drifting along the veins is necessary.

RECOMMENDATIONS

It is recommended that the adit be continued along its present bearing to explore the ground under Trenches 1, 2, 3, and 4. Drifts should be driven on the eighteen foot vein north and south from the crosscut to determine the strike length of the vein and to search for possible ore shoots.

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

P. O. Box 2659
Juneau, Alaska
August 27, 1954

Interim Report on Trenching at the Kathleen-Margaret Copper Prospect, Upper Maclaren River, Alaska

Bedrock Geology

The Kathleen-Margaret copper prospect is underlain wholly by volcanic flows, which have been folded, faulted, and highly fractured. These flows are andesitic or baraltic in composition, and are massive, dense, and green to dark green in color, The rock is cut by irregularly oriented, closely spaced joints. Stratification of the flows is not visible in outcrop; exposures on the south wall of the canyon of Discovery Creek show what apparently is stratification of layers fifty to one hundred feet in thickness, lying approximately at N 40°E, 50°SE. Lath-shaped phenocrysts of feldspar are present in some of the lava, and amygdules were seen in several outcrops of this rock. Tabular veins of epidote-rich rock from one-half to two inches thick transect parts of the lava.

Trenches

Trench #1 - The lava in this trench is cut by closely spaced fractures, up to one inch apart, and rusty gouge zones up to ten inches thick that lie at N 1° E, 85° E. A set of moderately defined fractures, spaced one-half to six inches apart, lies N75° E, 55°N. A vein of quartz with malachite and bornite, eight to eleven inches thick, extends across the floor of the trench and is oriented at N4° E, 77° W.

Trench #2 - A vein five feet thick lies in irregularly jointed lava at N 25° E, 75° W. The westernmost three feet of this vein is a shear zone of shattered limonite-stained quartz, and the remaining part is dense to leached, slightly malachitic quartz. The shear zone appears to be parallel to the western wall of the vein.

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

P. O. Box 560
Juneau, Alaska

October 19, 1954

Memorandum:

To: Operating Committee, DMEA

From: Executive Officer, Field Team Region I

Subject: Operator's Monthly Report Docket No. DMEA-3288 (copper)
Alaska Copper Mines, Inc., assignee

Enclosed are two copies each of MF-104 and MF-104A for the month of June 1954.

The progress report and application for an amended contract was forwarded to your office on September 3 but, so far as we have been informed, no action has yet been taken on it.

S. H. Lorain, Executive Officer
Field Team, Region I

Encls: 2

cc: USGS

SHL:pl

Trench #3 - A section from W to E in the eastern end of this trench shows 2.6 feet of granulated, malachite-stained (?) vein quartz lying at N 18° E, 90°; 3.8 feet of sheared, rusty lava; 8 feet of coarse-grained quartz and breccia, part of which is vein material which contains about five percent of ragged fragments of wall rock and is sparsely stained with malachite, and part of which is a breccia which consists of about ninety percent of wall rock fragments and ten percent of quartz and bornite with malachite and lava to the eastward. The quartz vein is separated from the breccia by a smooth, gouge-free surface which consists in part of tabular voids.

Trench #5 - The 2.6 foot zone of crushed quartz is exposed for a distance of about thirty feet in a northeasterly direction and crops out in the South end of trench #5. In this trench the vein of fractured quartz is 2.0 feet thick, and lies at N 38° E , 90°. The wall rock is granulated lava; the southeast wall is stained with rust from two to four feet from the vein.

Trench #7 - The bedrock exposed in this trench is partly the typical green volcanic rock, and partly dark gray to black, dense, massive, porphyritic lava. Phenocrysts of feldspar as large as 2 mm are present in the dark colored lava. No mineralization is exposed.

Northerly group of trenches - No quartz veins are present in this group of trenches. In trench #8 a vertical shear zone in the volcanic rock strikes N 10° W, is two to five feet thick, partly contains light yellowish brown clay gouge, and shows traces of malachite (?). This shear zone is rusty in tabular zones one-half to two inches thick that are parallel to the shear zone. The exposure of this shear zone is about eighty feet long.

At the north end of trench #11, a shear zone of yellow-brown to red-brown clay gouge six feet thick lies at N 5° E, 90°. Mineralization is not visible in the gouge.

Report by F. Barker
August 27, 1954

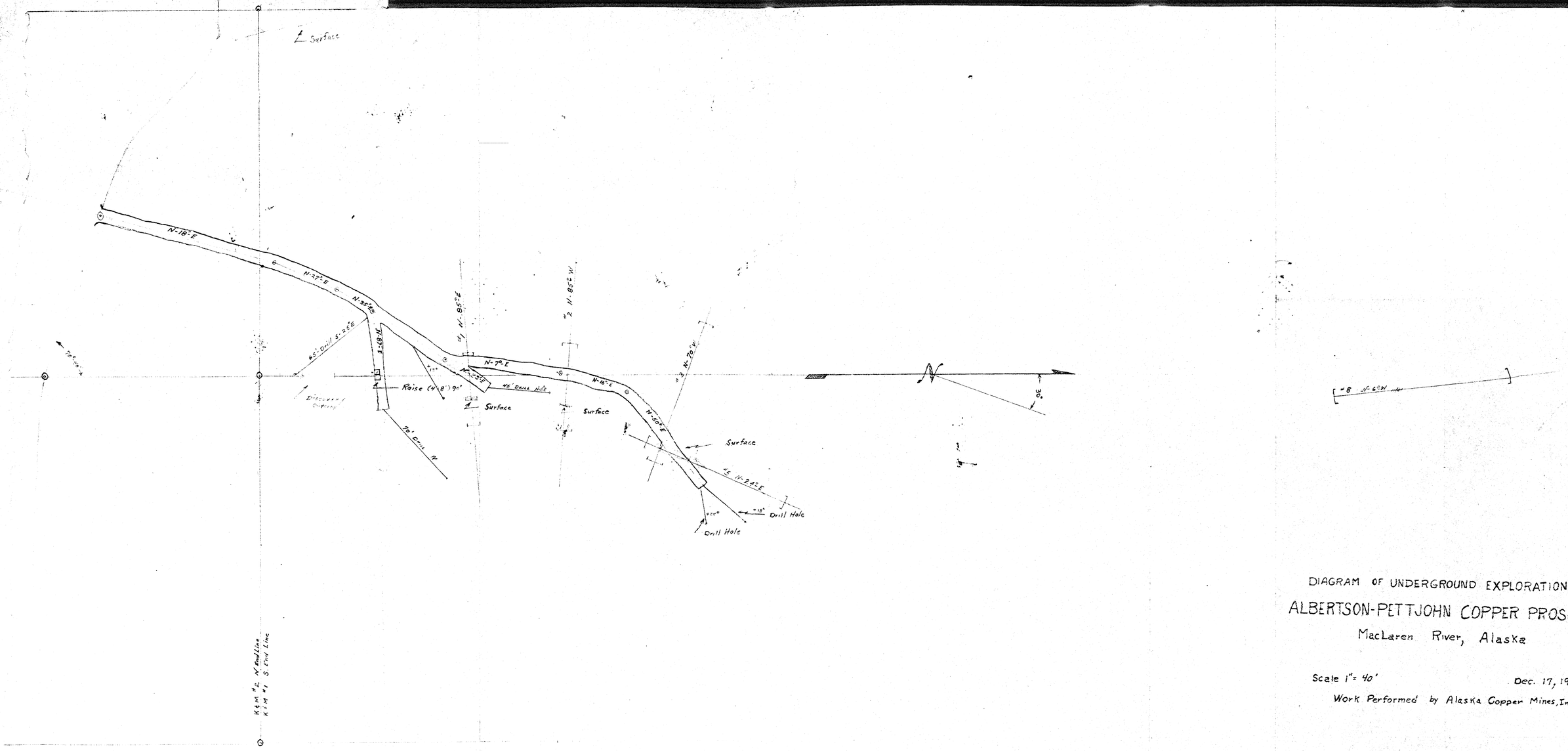


DIAGRAM OF UNDERGROUND EXPLORATION

ALBERTSON-PETTJOHN COPPER PROSPECT

MacLaren River, Alaska

Scale 1" = 40'

Dec. 17, 1954

Work Performed by Alaska Copper Mines, Inc.

D.Z