8816 Aurora North
Seattle 3, Wash.
May 15, 1962

Mr. R.B. La Flamboy, Pres.
Glacier Mining Co.
6809 Greenwood N.
Seattle, Wash.

Dear Sir:

The only data that I have on your recent magnetometer survey of your mining property at Glacier, Wash., is that given to me by your supervisor Mr. Fred Lawless.

He indicated to me that the magnetometer used was a Varian Model M49A. It was set on variance control 55 (55,000 gammas). He indicated that the normal reading over unmineralized rock and overburden was 55,100 gammas. When over the mineralized zone the readings climbed to 55,600 gammas at the edge of the ore. Gamma peaks in the center of the ore zone registered 55,900 gammas.

He indicated that the width of the anomaly was between 12-18 feet. The length was as indicated on the map he made.

I would like to indicate that the N.W. end of the anomaly was trenched down into actual oxidized ore. I taped the width of this oxidized zone in the N.W. corner of your Glacier Claim as being 20 feet wide on the S.E. side of the cut and 30 feet wide on the N.W. side of the cut. It is into this gossan that

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SPOKANE, WASH.

you propose to collar your shaft.

I anticipate that you will strike the massive sulfides here when you reach the water table or before. This certainly should be within 100 feet. It shouldn't be much below the level of the flat valley just below your cut to the N.W. It is quite possible that you will encounter massive chalcopyrite-pyrite sulfides within 50 feet in the shaft.

Very truly yours,

Jack D. Sauers

Jack D. Sauers

Geologic Consultant

P.S. - Good Luck!

So. 157 Howard Street
Spokane 4, Washington
June 1, 1962

Memorandum

To: Chief, Division of Field Operations

From: Acting Field Officer, Region X

Subject: OMX-6246 (Gold-Silver-Copper)
Glacier Mining Company
Midas, et al., Claims
Whatcom County, Washington

Enclosed are two copies each of two letters from the subject operator; one, dated May 19, 1962, tabulates M-scope readings; the other, dated May 24, 1962, encloses bids from three diamond drill contractors. Also enclosed is the applicant's version of a magnetic anomaly map.

I question the definitive value of the magnetometer survey, as the stations are, in most cases, spaced too far apart, and the distances between the designated edges of "zones" and the points of peak readings are lacking. About all the information the map gives may be tabulated as follows:

Station	Distance from last station*	Background gammas	Peak gammas	Anomaly gammas
#1	0	55,150	55,900	+ 750
#2	500 ft.	55,100	55,850	+ 750
#3	1,050 ft.	55,100	55,800	+ 700
#4	500 ft.	55,150	55,700	+ 550
#5	1,100 ft.	55,200	55,750	+ 550
#6	150 ft.	55,100	55,800	+ 700

*Scaled from map.

No background is given for the readings at stations #7 and #8; using the average background of the first six stations the anomalies at these two stations would be in the order of + 720 gammas each. According to Jack D. Sanders, Geologic Consultant, high anomalies were consistent over widths of 12 to 18 feet.

As plotted on the applicant's map, the first three check points, at which the highest readings were observed, line up pretty well. From check point No. 2 the map indicates two other veins, one bearing north of east, the other bearing southeasterly, but no information is given as to how the existence of these veins was determined. All three indicated veins have been offset by a fault or faults said to have been located by seismic methods. The map indicates that the fault has a rather sharp bend near its intersection with the east-west vein, and that the displacement east of the fault is north for the east-west vein and the northeast vein but south for the southeast vein. This would be possible if the dip of the southeast vein is opposite of that of the other two, but if any fault exists an interpretation calling for two faults would seem to be more reasonable than for a single fault with a sharp bend.

At check point No. 6, near the southeast corner of claim No. 8, a diamond drill hole, attitude not given, cut an unstated width of material containing 14.80 percent copper at an unreported depth. Between the southwest corner of the Glacier claim and check point No. 1 a trench was bulldozed in the overburden. At a depth of 20 feet, limonite was encountered and was trenched for an additional 20-30 feet. According to Sawers, the limonite zone is 20 to 30 feet wide and is "granular, pulverulent, often with cellular boxwork or spongy textures. ... The overall aspect is one of intense leaching and oxidation ... The relict textures indicate the presence of earlier iron and copper sulfides." A semiquantitative spectrographic analysis of the limonitic material in the bottom of the trench indicated 0.015 percent copper.

I talked by telephone with E. A. Magill of the U. S. Bureau of Mines concerning this application. He has not been on the property since the magnetometer work and subsequent drilling and trenching were done. However, he has seen the limonitic material from the trench and is not too impressed. I suggested the possibility of diamond drilling three or four holes near the trench, but he believes the overburden is probably too deep and contains too many boulders to make drilling from the surface feasible. The value of a drill hole from the trench bottom is questionable, and the cost of bulldozing through 30 feet or more of overburden for drill sites along and to one side of the vein is not practical. I then raised the possibility of starting near check point No. 1 and drifting easterly along the vein. As Magill recalls the topography, there is not very much topographic relief in an east-west direction, and one or two hundred feet of drift might be necessary to get through the overburden.

The magnetometer highs are interesting, but the distances between stations are too great to hypothecate a continuous structure. The gossan exposed in the trench and the copper reported from the drill hole some 3,300 feet to the east are both interesting but are too far apart to indicate a copper-bearing structure of that magnitude. It

is concluded that the evidence presented does not justify a program of sinking a shaft as proposed by the applicant even if timber were used in place of concrete.

Such a program might be justified if it were preceded by a systematic magnetometer survey whereby readings were taken at 25- to 30-foot intervals for 100 feet on either side of a high point along lines 150 to 200 feet apart and normal to the presently indicated strike of the vein. Because the overburden is made up of glacial debris, I am doubtful of the value of a geochemical survey, but a geophysical survey using an equipotential method might be more satisfactory than mere work with the magnetometer. However, I am not at all sure that company personnel is qualified to make or interpret such a survey.

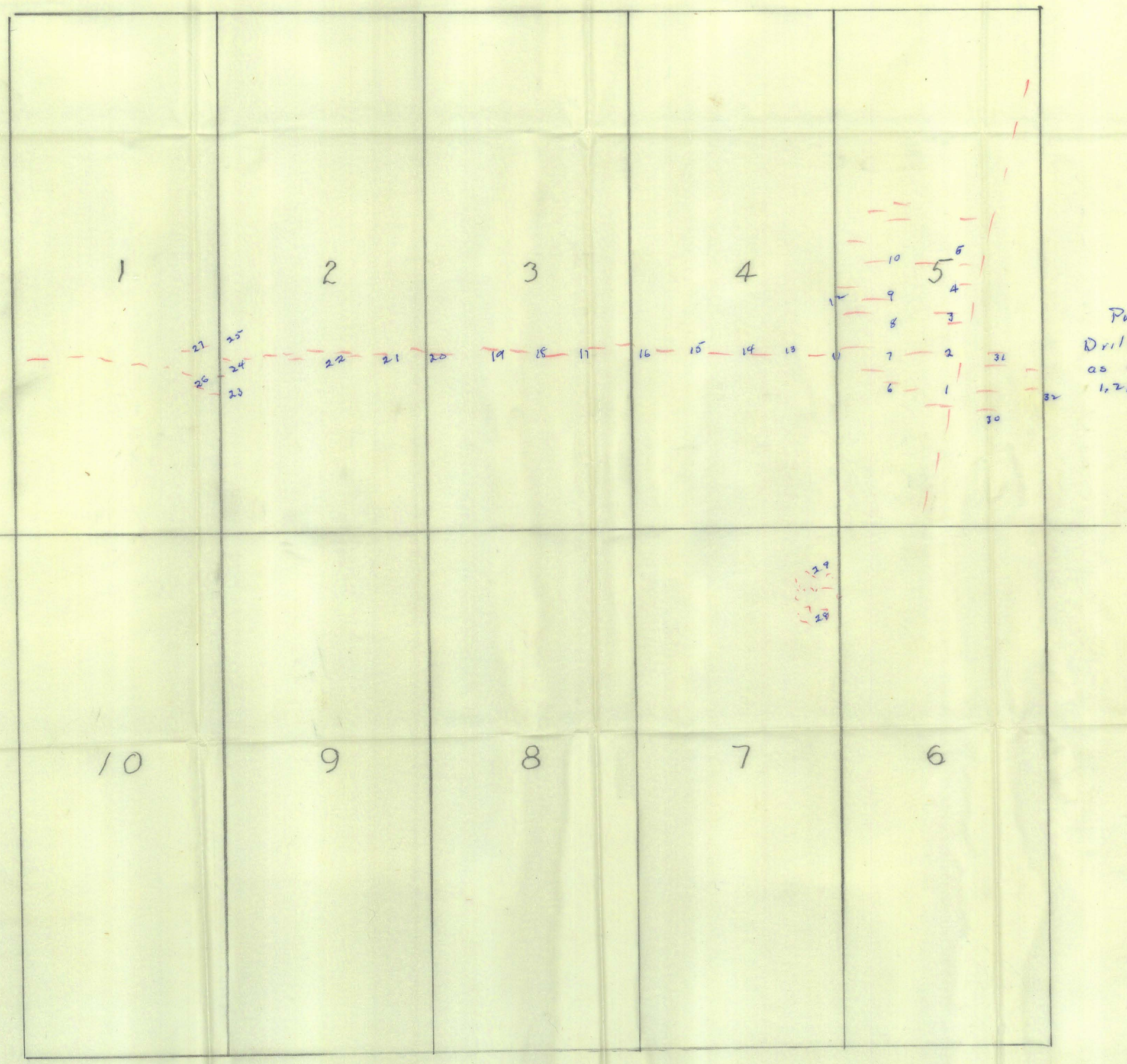
It would probably be better to discuss these possibilities with the applicant on the ground if you feel they are justified, but I do not see how I can justify a trip until late in June, as there are other more promising copper applications I will be working up if possible.

On the basis of the information presented in the application, I recommend that the application be denied.

D. R. MacLaren

Enclosures

DRMacLaren:my
Reading copying to:
Balan
Hobbs
Guild



Prospective Drill Holes as numbered 1, 2, 3, etc.

Church Mountain Claims
Whatcom County
State of Wash

Harold Reade

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AUG 24 1981
U.S.G.S.
SPOKANE, WASH.