

CONFIDENTIAL

REPORT ON  
GEOPHYSICAL INVESTIGATION ON THE "TOM" AND "MAC" CLAIMS  
SKWIM LAKES AREA - PELLY RIVER DISTRICT  
YUKON TERRITORY

BY  
A. ALLAN

VANCOUVER, B.C.  
December 16, 1955.

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REPORT ON  
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YUKON TERRITORY.

INTRODUCTION:

A magnetometer survey was carried out over the claims to determine whether an anomalous pattern indicative of sub-surface mineralization could be outlined. The survey was carried out over the sixteen-claim group encompassed by the Tom and Mac claims. The decision to undertake the magnetometer survey was based on the finding of heavily mineralized float on the Mac claims and chalcopryrite mineralization in calcite on the Tom claims, during 1954.

SUMMARY & CONCLUSIONS:

The survey was completed in one month's time including linecutting and magnetometer readings.

A narrow, anomalous area was outlined on the Tom #2 mineral claim. The outline of the anomaly closely parallels the diorite-schist contact to the northwest. The variation is probably due to the presence of graphitic material along the contact. It is of interest to note that 2000 gamma reading was taken directly over a known mineralized exposure. Mineralization at this point consisted of blebs of chalcopryrite and pyrrhotite in a 2" wide lenticular calcite stringer within the shale. Sufficient trenching had been completed in this area to permit proper evaluation of the anomaly. The variation in magnetic intensity as outlined is not believed to be indicative of a buried orebody and further work in the area is not warranted at this time.

Magnetometer readings on the Mac claims showed very little variation, ranging from 1535 gammas to 1565 gammas. No anomalous areas were outlined on this group.

In conclusion, the reconnaissance magnetometer survey carried out over the claims failed to outline an area indicative of a buried mineralized zone.

LOCATION & ACCESS:

The sixteen claims lie west of the north end of Skwim Lake. The location posts of the Tom #1 and 2 mineral claims lie about one mile from the lake. The claim line of the Tom group extends west to the eastern boundary of the Mac claims. The claim line of the Mac group lies about 1500 feet distant from the Tom line and extends to the north. The elevation of the claims is about 3800 feet.

A very excellent campsite exists at the north end of Skwim Lake, complete with docking facilities and tent frames, size 14' x 12'. Access to the claims concerned is by a fairly well defined trail around the end of the lake and up the low hill to Skwim Lake, a distance of about one and one-half miles. Camp supply is entirely by charter air service from Whitehorse to Skwim Lake, approximately one hour and twenty minutes flight from Whitehorse.

#### TOPOGRAPHY:

The Tom claims lie along a low divide between Skwim Lake and Pelly River. The Mac group lies on the Pelly River slope. The hills are gentle, rounded and in general burned over, with numerous high, swampy areas near the divide. Skwim Lake formerly drained into Blind Creek, but this drainage was plugged by glacial debris during the last ice age. The terrain in the general area is of low to moderate relief, with the exception of Mount Mye to the northeast.

#### GEOLOGY:

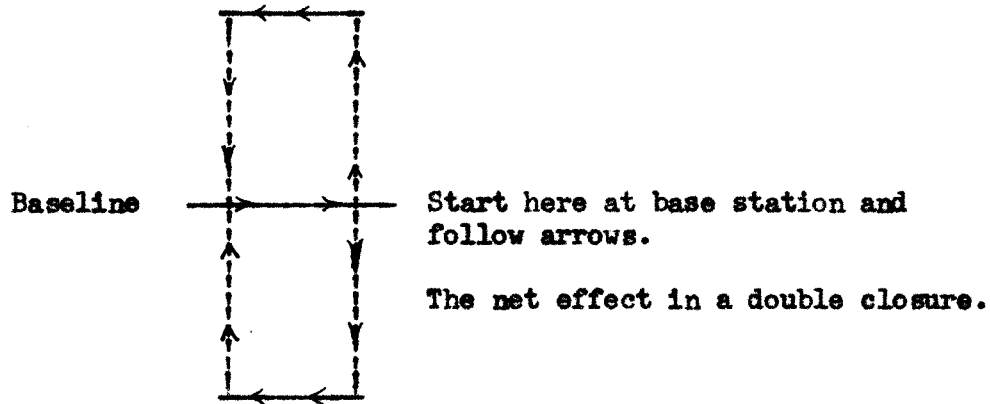
The claims are underlain by greenstone, greenstone schist, shale and quartzite, intruded by diorite dykes. A contact was observed between the basic volcanic complex and light green cremlated talc schist on the Tom #2 mineral claim. Rapidly varying attitudes indicated rather close folding and the drag folds observed had a 45 degree plunge west-northwest. Mineralization on the Tom claims consisted of blebs of chalcopyrite in narrow lenticular calcite veins within highly sheared black argillite. Lack of sufficient outcrops prevents any detailed geological investigation of the area. A rather loose interpretation of the structure existing on the claims is that of an anticline with minor folding along the limbs plunging moderately west-northwest. A suggestion of overturning to the north is found in some of the drag folds and this could possibly account for the shearing in the argillite along the axis of the fold.

#### METHOD OF SURVEY:

A base line was established along the north boundary line of the Tom claims and extending the line across the Mac claims to the west. Base stations were established at 400-ft. intervals along the line; picket lines extended north-south from the base stations with magnetometer stations set up at 200-ft. intervals. The Yo-Yo method of magnetometer readings was employed to eliminate the drift as much as possible. In this method, the operator proceeds along one line from the base station to the end of the line, crosses to the next line and returns to the base station next in line. Using predetermined average values for each of the base stations eliminates a good deal of unnecessary travel back to individual base stations after completing a line. Drift corrections and average readings were carefully calculated prior to the final plotting on the base map.

All measurements of the magnetic intensity were plotted relative to a mean base of 1425 gammas. This figure was established at Prospectors Airways' camp and the instrument calibrated accordingly.

DIAGRAM OF YO-YO METHOD TRAVERSE:



GENERAL:

Work commenced on the claims on July 12th and was completed on August 13th, 1955. A further ten days were spent on calculations and preparation of the map. A crew of four men was employed in the field, under the direct supervision of A. Allan. George Peebles acted as party chief in the field. The powder left in the cache at Skvim Lake was used to trench the other groups of claims in the immediate area. The work is on file and could be recorded if necessary to maintain the status of the claims for another year. It is the writer's opinion that the claims do not warrant any further expenditure and should be allowed to lapse. The entire area is covered with overburden and very few outcrops were noted. Unless a major geophysical program was instituted, at considerable expense, the expenditure of minor amounts is superfluous.

RECOMMENDATIONS:

- (1) That the work be recorded for the Tom and Mac claims for one year only. (Work has been recorded).
- (2) No further expenditure is warranted on the basis of the recent geophysical investigation.
- (3) That the remainder of the claims in the area be allowed to lapse.

ACKNOWLEDGMENT:

The field crew is to be commended for the very excellent and expeditious manner in which the field work was carried out.

Respectfully submitted,

EXPLORATION SERVICES LIMITED,



A. ALLAN (Geologist).

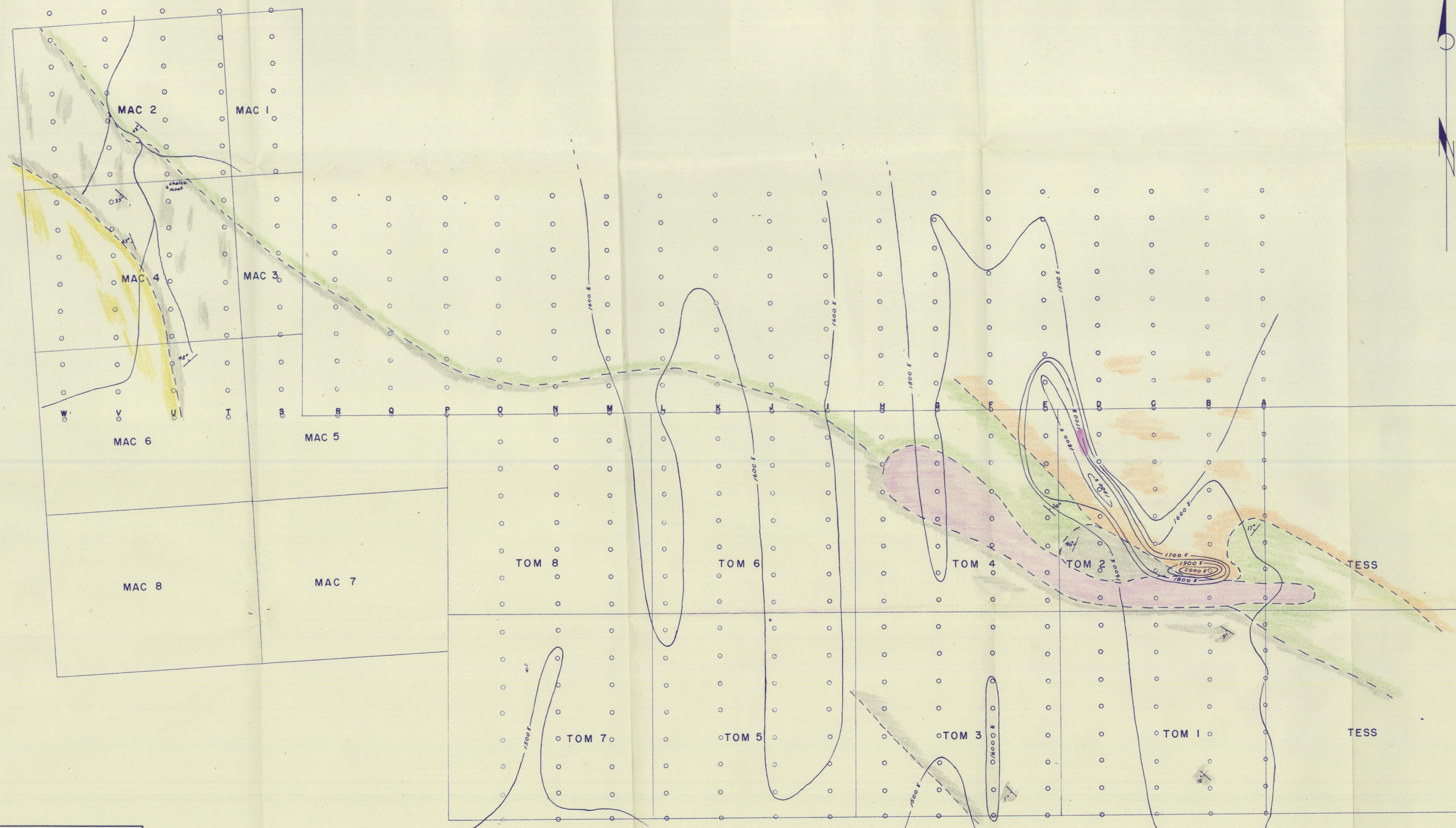
AA/hc.  
December 16, 1955.

PERSONNEL:

Chief of field party . . . . .	George Peebles . . . . .	\$ 375.00/mo.
Labour . . . . .	H. Skiesna . . . . .	\$ 10.00/day
Labour . . . . .	J. Laurier . . . . .	\$ 10.00/day
Labour . . . . .	A. Roberts . . . . .	\$ 10.00/day
A. Allan . . . . .	Supervision . . . . .	\$ 20.00/day

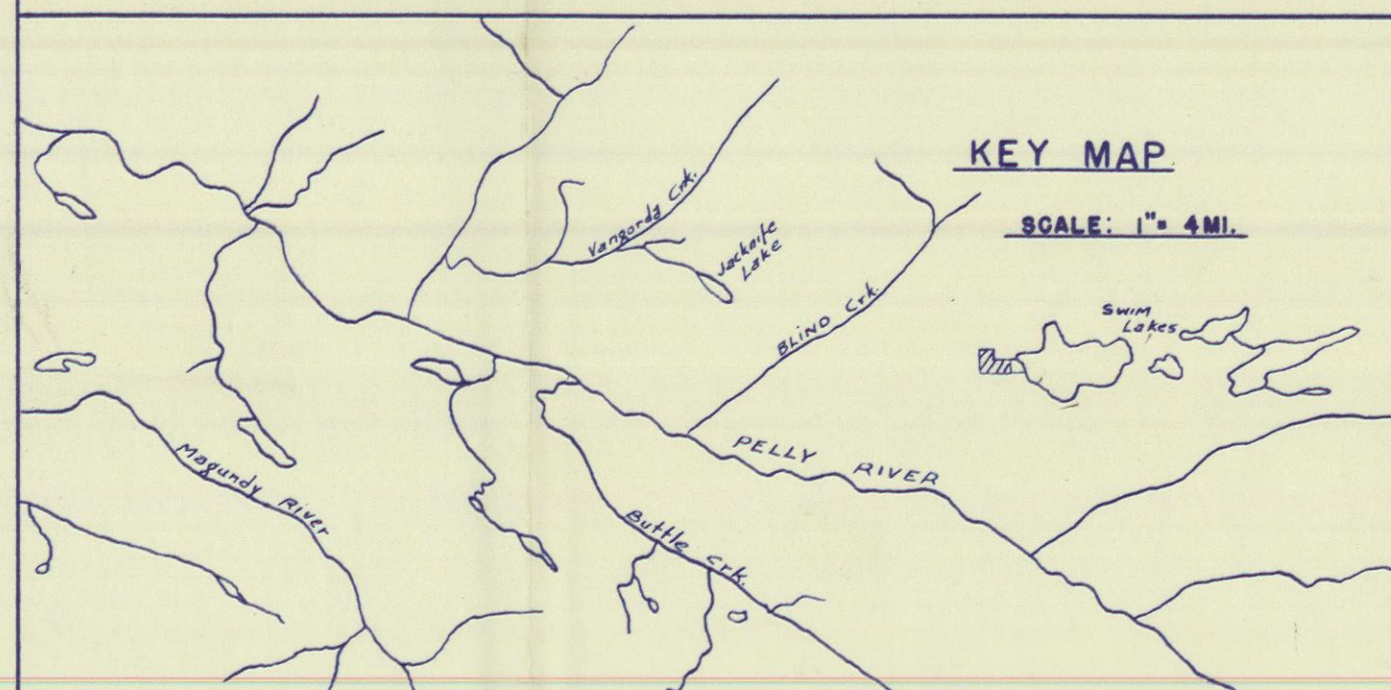
COST SUMMARY:

Line-cutting - 101,700 ft. . . . .	\$ 900.00
Surveying Stations & Magnetometer Readings. . . . .	\$ 900.00
Transportation Air . . . . .	\$ 360.00
Camp and Food Supplies . . . . .	\$ 650.00
Magnetometer Rental @ \$150.00/month . . . . .	\$ 75.00
Supervision - Final Report . . . . .	<u>\$ 200.00</u>
TOTAL . . . . .	<u>\$ 3085.00</u>



**LEGEND**

- SHALE
- CHERTY QUARTZITE
- GREENSTONE GNST. SCHIST
- QUARTZ DIORITE
- DIORITE ALTERED DIORITE
- GEOLOGICAL BOUNDARY ASS.
- STRIKE AND DIP SYMBOLS
- MAGNETOMETER STATIONS
- MAGNETIC CONTOURS
- CONTOUR INTERVAL 100 M



EXPLORATION SERVICES LIMITED  
 MAGNETOMETER SURVEY  
 TOM AND MAC CLAIMS SKWIM LAKES AREA  
 PELLY RIVER DISTRICT  
 Y.T.  
 SCALE: 1" = 400'      DEC. 1955  
 A. ALLAN