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TO: W. M. SIROLA
FROM: F. CHOW
SUBJECT: Glenlyon Project Progress Report,
Period Ending July 31st, 1969.

J.H.S.
P.M.K. ✓
R.D.S.
B.C.B.
I.D.B.
G.M.H.
P.K.

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During the past six weeks of this project the three field crews have explored the Cambrian rocks within the Glenlyon Range. Since July 30th, all the crews have been moved into the Tay River area. They will prospect the area on the southwest corner of the map sheet (105-K/3 & 4); namely the Magundy River drainage area and north to the Pelly River.

About 90% of the Glenlyon area was explored thoroughly and the remainder not as extensively because of the shortage of time. More work is planned for this area in two weeks time when all assay results are received.

Most of the prospecting is centered within areas mapped as Precambrian and/or Cambrian by the G.S.C., including the small pendants within the intrusive mass. Magnetic anomalies outlined in the G.S.C. maps were also investigated. Almost all the magnetic anomalies found by our own flying with the Elsec Magnetometer is indicated on the G.S.C. magnetic maps. More work is required on our own magnetic maps for further assessment of the Glenlyon area.

Two areas were found to be worthy of further work. Both show anomalous values in the geochemical assays, both exhibit magnetic

anomalies, and one of these show an exposure of sulphide mineralization.

The latter one is located immediately southwest of the junction of Pass, Jar, and Felix Creek, for two miles upstream of each of the three creeks. Silts were taken from the side streams and soils from the mountain slopes.

There are no exceptionally high values compared to geochemical anomalies with other Yukon mineral deposits. Range of values obtained (so far received) are: 7 to 42 ppm Cu, 8 to 55 ppm Pb, and 55 to 144 Zn.

I have tentatively applied a factor of three times average background for anomalous values (average only approximated). The values considered of interest are: 30 ppm Cu, 40 ppm Pb, and 100 ppm Zn.

In this area, a showing of sphalerite mineralization in diopside ^{*}(?) skarn lies between limestone and intrusive contact at the 4400' elevation. It is located at $62^{\circ}25.2'N / 134^{\circ}15.1'E$.

The showing is about 15' x 40' long at the east end of the limestone-intrusive contact. The mineralization is not continuous on strike towards the west and is hidden by overburden towards the east. Total rock outcrop is about 100' x 100'.

The diopside ^{*}(?) skarn contains 1 - 10% magnetite, 0.3 - 3% Zn, a trace of chalcopyrite, and probably galena. Mineralization is fine-grained and not easily recognised by the students.

No other work was done on this showing because the crew was moved to the Tay River area. Further work is planned when the assay for the soil samples are received.

* *typical*

The second geochemical anomalous area is located at $62^{\circ}43.7'N / 134^{\circ}55.7'E$, three miles northeast of the west end of Detour Lakes. The values are all obtained from soil samples near the bank of the hook-shaped back-water of the Pelly River (2000' \pm elevation).

Anomalous samples range in assay from 12 to 61 ppm Cu, 12 to 50 ppm Pb, and 106 to 216 ppm Zn (6 soil samples within area 2500' x 4000'). The area sampled is about one mile square; consequently, the anomaly is open south of the Pelly River.

No rock outcrop was seen in the immediate area of interest. Basalt float rock containing pyrrhotite was noted. One-half mile southwest show outcrops of argillite containing minor pyrrhotite, pyrite, and magnetite.

The area lies on the assumed location of the Tintina Fault, also within the magnetic anomaly as shown on the G.S.C. map. Our air-magnetic survey outlines the anomaly in the same location and shows the same pattern.

Further work is planned to outline the geochemical anomaly within two weeks. Unfortunately, the crew was moved to the Tay River area before the assay results arrived.

OTHER GEOCHEMICAL HIGH VALUES:

One high copper value, 228 ppm, is detected from a soil sample located at $62^{\circ}31.1'N / 134^{\circ}39.1'E$, 3.6 miles northwest of skarn

Ridge at the 5700' elevation. Other samples in the immediate area do not show any values above background. Three silts and one soil sample are located within 2500 feet of the high copper sample.

If time and weather permit, one crew day will be spent to check it out more closely.

OTHER AREAS OF GLENLYON RANGE:

I am omitting detailed report on other areas of the Glenlyon Range. So far, nothing of interest was found. Further assessment will be made upon receipt of the assay results and review of the magnetic tapes.

TAY RIVER MAP AREA:

Exploration in the Tay River map-area will be conducted along the lines as we discussed during your last visit here - prospect the more favourable magnetic and geological areas.

WEATHER:

The month of May and part of June was good "weatherwise". Since then the weather has been poor, continuous rain followed the spell of smoke from forest fires.

I will draft two geochemical plans to cover the area of interest and send them to you within the next few days.

Yours truly,

(signed)

Fred Chow.

FC/lk