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October 14th, 1975.

To: W.R. Bacon
From: J.C. Stephen
Re: BURN Group Results

The following observations are made after plotting the geochem and magnetic results from the BURN group program:

Attached are prints of magnetics, geochem and geology. It is suggested the coloured geology map is adequate and that it is probably unnecessary for Mustard to draft a new map. He should, however, do some work on his rock specimens and write a geological report.

Three possible areas of interest are suggested but none appear to be a 'hot' target.

MAGNETICS

The zone of mag low readings (below 1400+) outlines the zone of alaskite intrusive as known by mapping and drilling from about 64N to about 4S.

From 4S a few pieces of alaskite float indicate the alaskite may extend farther.

From 12S to 32S scattered porphyritic granite float and a few small outcrops occur along the trend of the magnetic low and to the east. The alaskite may grade into this rock type but the lack of outcrop provides no conclusive evidence. It is

possible the alaskite continues to the south limits of the grid and is offset by the faults trending northwest across the southwest portion of the grid.

Local magnetic lows on line 00N at 38E and 41E correspond to location of alaskite float and indicate parallel or branch alaskite dykes.

MAPPING

Numerous float boulders are recorded. A relatively small proportion are noted as having sulphide mineralization. Of these ^{mineralized} floats, 69 are alaskite, 58 are monzonite, 6 are diorite and 1 is porphyritic granite. Two or three instances could not be assigned to rock type on the map. A larger proportion of alaskite boulders are noted as containing MoS_2 than is the case with other rock types. Many of the monzonite floats are noted as pyrite only, although MoS_2 is fairly common and chalcopyrite occurs rarely.

Most mineralized float is concentrated between 24N and 8N in an arc shaped fan which contains 63% of the recorded mineralized float. To the north of this fan, 11% of the mineralized float occurs and to the south, 26% in an area which could be considered an extension of the fan. *Total fan 63% + 26% = 89%*

Approximately 26% of the mineralized float occurs west of the west margin of the mapped alaskite. This is comprised of about 32 floats of which 5 monzonite and 2 alaskite floats are noted as containing MoS_2 .

No mineralization is noted in outcrop or float of unit 5, the leucocratic diorite. Extent of this type of float is very limited which might be due to difficulty in recognition.

GEOCHEMISTRY

Gaps in sample results for lines 8S, 12S, 16S, 20S and 24S suggest some results are missing or some samples were lost (approximately 50 samples).

GAPS ARE DUE TO UNSUITABLE SAMPLING CONDITIONS JS

There is no apparent reflection in the pattern of geochemical results of the apparent arc of abundant mineralized float.

Anomalous copper results on lines 28S, 32S and 36S from 25E to about 42E are due to minor pyrite and rare chalcopyrite mineralization in diorite. This rock type is well exposed and the geochemical results are probably equivalent to rock geochemistry.

Anomalous molybdenum results with accompanying copper on lines 4S at 20E, 8S at 19E to 30E, 12S at 30E, 31E, 20S at 40E to 44E, 24S at 49E, 28S at 45E to 50E and 58E, 59E, 32S at 49E to 51E are in the vicinity of the northwest trending fault zones. No significant mineralization has been found here but the magnetic low, representing the alaskite zone, is cut by this faulting in an area generally devoid of outcrop and represents a structural target.

Other anomalous molybdenum and copper results from the new sampling program occur in the vicinity of generally more isolated anomalous highs located by sampling of the 1971 program. These results generally exhibit a northwest trend similar to that shown by the more widely spaced 1971 pattern.

DISCUSSION

The 1975 mapping was not carried out north of 48N and, therefore, a comparison of the frequency of mineralized float is largely subjective. In general, however, much less float is evident in the north portion of the grid area due to somewhat flatter topography and better development of soil.

The majority of mineralized floats known occur in the area mapped in 1975. Of those to the north which are mineralized, the majority are alaskite except perhaps in the vicinity of the proposed diamond drill cross-sections. Mineralized alaskite floats extend north along the trend of the alaskite zone as far as "Camp Creek".

Although fragments of quartz with good mineralization were encountered in trenching in 1971, no float of that type has been located except a single piece about six miles to the north near Kwanika Creek.

The arc shaped zone of mineralized float may be due to concentration through action of the last cirque remnant of valley glacier having been stagnant at that point for some period of time. The source of this float then should be in the vicinity of the alaskite zone near the focal point of this arc.


Although no grades are suggested, Mustard feels that the best mineralization he saw was in the alaskite float.

Three possible target areas are suggested:

- (a) One diamond drill X-section, as suggested by Dome at about 40N.

Choice of section probably depends on which section appears best from Mustard's detail mapping.

- (b) The zone of IP effect on line 8S in the vicinity of the branch alaskite dykes, IP and northwest faulting.
- (c) The magnetic low at 24S in the area of northwest faulting.



J.C. Stephen

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