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ATTENTION OF A.O. Birkeland

SUBJECT Bigfoot Group Option

The purpose of this note is to provide a summary of current and past geological, geochemical and geophysical results on which to base a decision concerning the Bigfoot Option. A review of work done in 1977 on the Bigfoot Group necessitated partial remapping of the geology and further fill in of the soil grid. Detail prospecting along the narrow silicified rhyodacite horizon was also carried out. This review and subsequent field work was directed toward delineation of specific drill targets and was completed between October 11 and 28, 1977. An attached statement of eosts indicates that approximately $10,000.00 is applicable for 1977 work. The assessment report on the Bigfoot Group is due in New Westminster by January 1978.

Present Status of Claims:

On January 10, 1977 G.A. Noel filed assessment work and formed the Bigfoot Group as indicated below;

Name of Claim	Units	Assessment Applied
Sasquatch	9	2 years
Big Foot	9	2 years
BF 2	9	2 years
BF 3	12	1 year
Total	39 units	Total cost - $6,600.

It is unfortunate that the Sasquatch fractions could not be eliminated as they do not cover any significant ground. Likewise claim BF 3 is more than half over-staked on Swim Lakes' claims. The Swim Lakes' claims are at least 3,000 feet north of the location shown on the claim map. Claim BF-1 (18 units) was not included in the Bigfoot Group although considerable geology has been done on it during 1977. The anniversary date of BF-1 is October 21st . To apply one year assessment on all units including BF-1 would require

$ 5,600 work. G.A. Noel did not apply all available assessment work last year because of the late date at which the BG 1 to 3 claims were staked.

Summary of Work:

Two separate reports are planned; 1) one dealing solely with the Big Foot Group for Delphi to be filed as assessment and 2) a detail summary report on the large data base now available to McIntyre in the Harrison Belt emphasizing regional correlation and possibilities for future work.

The Big Foot assessment report has been delayed in order to complete drafting and include a section on the problem of rock classification as indicated by a suite of stained thin sections. This is not strictly required and an assessment report to include BF-1 is roughly outlined.

The following notes deal with all results in the light of drill site possibilities.

Geology:

The 200 to 400 thick silicified rhyodacite tuff unit which hosts the stringer type mineralization has been traced to the northwest, however the pyrite content is much lower and no new sphalerite-chalcopyrite showings were found. It appears that localization of Cu-Zn zones is confined to the southeast section. The main rock-type in each mineralized zone is very similar to a much more widespread rock-type differing only in degree of silicification. The discontinuous line of showings is not parallel to the upper contact between the pyrite rhyodacite and andesitic agglomerates, tuffs and flows. Most measurements indicate a 30 - 50^{o} northeasterly dip to the entire package. There is considerable faulting of the rhyodacite-andesite contact in lower Simms Creek valley. Barite was found in several localities

east from the main showing to Harrison Lake. The irregular interdigating nature and sharp thickness variation of individual flows and pyroclastic units over short distances complicates the stratigraphic succession. Drill core from holes drilled in 1965 just south of Simms Creek (3 holes - 700 feet) show little mineralization although the rhyodacite member was extensively encountered. The percussion holes mentioned by Noel are the work done on Swim Lakes ground in April 1976.

Preliminary thin section examination indicates K-spar to be much more abundant than previously envisaged. Consequently some specimens can be considered true rhyolites.

Mapping at 1" = 200' was completed over the entire Big Foot claim, 9 units in BF-1, and small areas of BF-2 and BF-3. Most of the 1" = 400' base map of the entire area is completed using replotted data on the Swim Lakes ground.

A second extensive unit of rhyodacite was found on the northern boundary of the BF-1 claim, however this zone is essentially barren of all sulfides.

Geochemistry:

The Big Foot claim and part of BF-2 were soil sampled. An anomalous area around the main showing elongated to the south is apparent. If the sequence is dipping to the northeast the elongation of metals in the soils could be largely a glacial feature. Other restricted anomalous zones are indicated to the south, underlain by andesitic-dacitic fragmentals. The significance of these small anomalies is unknown. All anomalous samples in the 1977 program near the rhyodacite unit were rechecked and found to be probably caused by very organic samples. A broad area farther south characterized by threshold values was contained in relatively low lying poorly drained terrain.

Profiles were taken over the main showings and in the center of the largest soil anomaly near the power line. Results show constant metal values despite changes in soil horizons. Zinc is the only metal present in anomalous quantities. Cold extraction results are not yet available.

Two anomalous samples were taken in recent work north of claim BF-1 on the second rhyodacite belt and are worth re-checking.

Geophysics:

Orientation lines were run with a EM-16 AND SE-300 (vertical loop). The EM-16 proved unsuitable (however there was no Seattle crystal) and conductors encountered with the SE-300 did not correspond to previous results by Nielson in 1974. Contrary to conclusions by Nielson, the weak conductors do not appear to be down dip extensions of surface mineralized zones due to simple geologic reasoning (NE dip). In any event the operating restrictions on the machine used by Nielson (Crone C.E.M.) in regard to conductor dimensions and likelihood of discontinuous shaly horizons make detection of the observable target difficult. There is little indication these weak conductors indicate massive sulfides. For example $+17^{o}$ readings were encountered on orientation studies at Seneca. Nielson observes in view of the low amplitude E.M. response that I.P. may be of more value in follow-up work.

Conclusions and Recommendations

No localized, specific drill targets have been defined by current work.

An alternative to terminating the option is a limited program of 5 to 7 percussion drill holes 200 to 300 feet in depth spaced along the silieified rhyodacite unit to test the continuity of surface showings in intervening areas and nature of the silicification at depth. Estimated cost of 2000 feet of drill @ $10/ft is $20,000. Considering the poor results of previous drilling there is little potential for large scale massive sulfide zones.

Despite the largely negative findings of work on the Big Foot, part of the initial rational (Proposed Exploration Program, J. Shearer, April 2, 1976) for entering into the agreement has been realized;

a) to provide a focal point for initial evaluation of the Harrison Area volcanics,

b) to become familiar with local geology and its relationship to the stringer mineralization,

c) to provide regional data and correlation for selection of other favourable areas and identification of volcanic centers - associated sulfides.

Judging from work completed to date, the most significant continuing program is the completion of road mapping started by Noel and Jones. Base maps (1:12,000) are readily available and the cost-time needed for the actual survey is negligible.

Respectfully submitted

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