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FILE

INTER-OFFICE LETTER

DATE: OCTOBER 15, 1974

TO: F.B. WHITING

FROM: L.W. SALEKEN

COPIES TO:

W. BACON

LION

WHEN FEASIBLE, CONFINE LETTER TO ONE SUBJECT

RE:

LION-CUB GROUP - TAKLA LAKE, B.C. (93M-16)

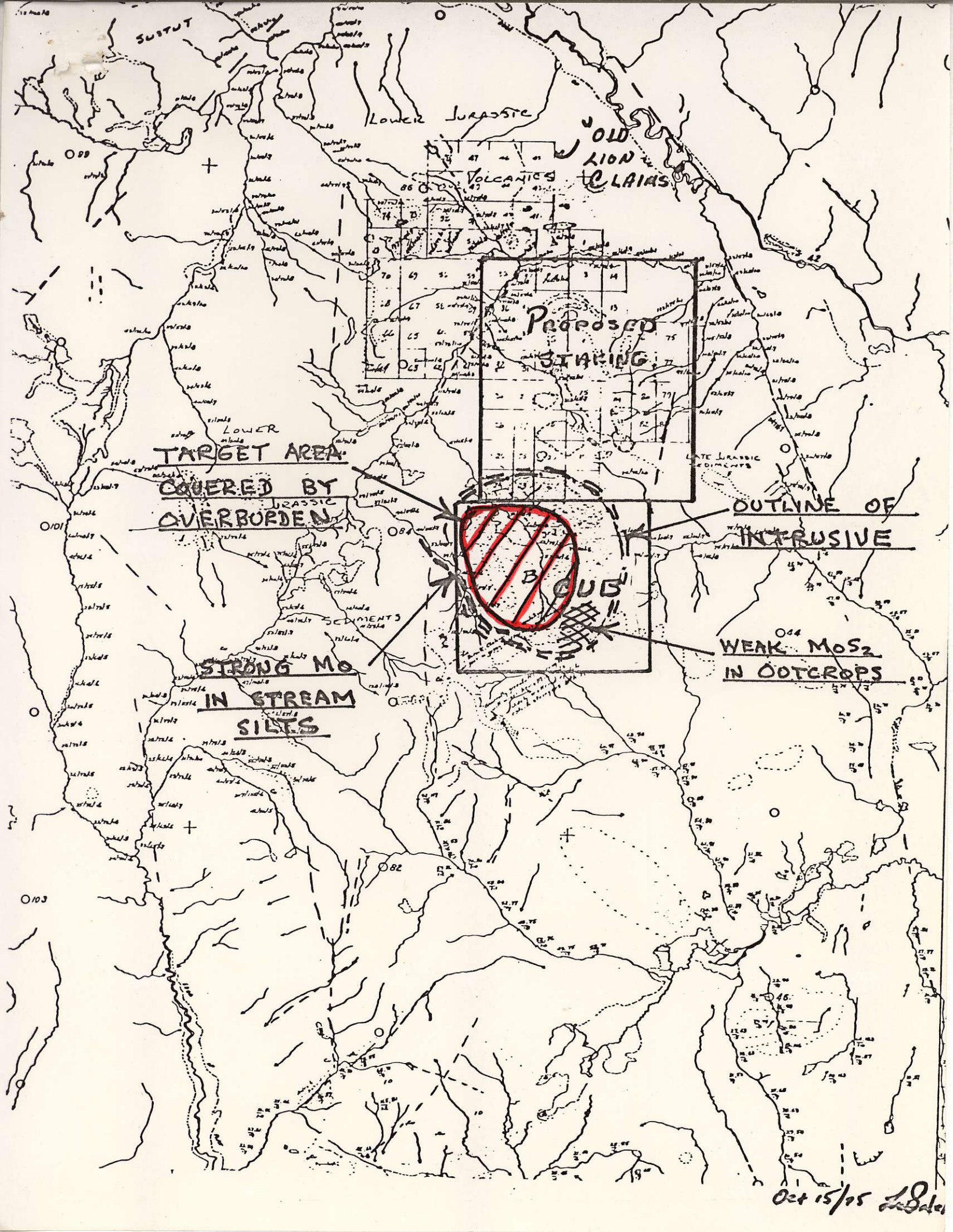
Summary and Recommendations

The two properties are located adjacent to each other. The Cub claims are a restaking of ground previously owned by Canadian Superior. A progress report by R.J. Overstall on the properties is attached. This summer's work on both properties was encouraging and further work is recommended for 1975. An initial $40,000 work program is proposed.

Lion Claims	$15,000
Restaking, geological mapping, rock geochemistry.	
Cub Claims	$25,000
Geological mapping, I.P.-Mag., trenching.	

A second stage program would be contingent on the results of the first and would include diamond drilling. The estimated costs of the next phase are $60,000.

L.W. SALEKEN


SUSTUT
Lower Jurassic
"OLD LION" CLAIMS
VOLCANICS
PROPOSED STAKING
LOWER JURASSIC SEDIMENTS
TARGET AREA COVERED BY OVERBURDEN
OUTLINE OF INTRUSIVE
BUG
STRONG Mo IN STREAM SILTS
WEAK MoS_2 IN OUTCROPS
Oct 15/75

INTER-OFFICE LETTER DATE: SEPTEMBER 23, 1974

COPIES TO:

FBW

TO: L.W. SALEKEN

FROM: R.J. OVERSTALL

WHEN FEASIBLE, CONFINE LETTER TO ONE SUBJECT

RE: PROGRESS REPORT ON LION/CUB GROUP - TAKLA LAKE AREA
93 M 16

General

Work started on August 21 with Overstall and Alexander setting up camp. Crooker and Zimmerman arrived on August 24.

26 claims and 13 fractions called the Cub group were staked to the south of the Lion group. These were recorded on September 17, 1974.

Fill in lines were flagged and brushed out on the old Can. Sup. grid over the Cub claims so that the east-west lines are now 400' apart. Soil samples were taken at 200' stations on these lines and geological mapping and rock sampling carried out.

A good part of the Lion claim group and surrounding area was prospected and mapped.

Claim Staking

An 8,000' square block of claims was staked on August 25, 26 and 27 to the south of and adjoining the Lion group. These were Cub 1-26, Cub 100-112 Fr. These were recorded in Vancouver on September 17, 1974. The claims include the mineralized monzonite intrusive and most of the surrounding diorite intrusive.

General Geology

A series of Lower Jurassic Island arc volcanics underly the Lion/Cub area with a general northwesterly strike and southerly dip. To the northeast an extension of the Pinchi Lake fault zone occupies the Ominicettla Creek valley. To the east of this fault older Permian and Palaeozoic oceanic volcanics outcrop.

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The Jurassic volcanics consist of three fairly well defined units:

1. Green porphyritic andesite - fairly massive with minor interbedded clastic and limey sediments.
2. Dark chloritic agglomeritic andesite - some maroon conglomerate beds.
3. Pale grey agglomerate - andesitic fragments in tuffaceous matrix.

A faulted block to the east of the claim groups contains sediments with belemnite fossils probably of late Jurassic age. Intruded into this sequence is a differentiated quartz poor pluton. The outcrop measures two miles long and one mile wide with the long axis trending northwest. However aeromagnetic maps suggest it is much larger than the surface outcrop and underlies much of the claim groups at shallow depths. Intense re-crystallisation of contact volcanics, coarse grained equigranular fabric and the presence of pegmatite veins suggest a fairly deep seated slow cooling intrusion.

Lion Group (owned by Luc Syndicate)

Much the most interesting ground in the area is that about the #2 showing and the high geochemical anomaly 2,500 feet to the west.

In brief the showing consists of a black copper-bearing carbonaceous and argillaceous limestone bed of undeterminate thickness and extent within the green porphyritic andesite unit.

The bed is made up of thin poorly defined sheets and lenses of black argillite, limestone and andesite. The showing is in a steep north facing gully but numerous faults cut it off on all sides and the bed cannot be traced to the main plateau area.

The mineralization consists of chalcopyrite and pyrite in calcite filled stockwork. The bed is up to 50 feet thick, the base not being seen, and is defined by the intense rusting of the pyrite. Sampling by the Luc Syndicate averaged 0.136% Cu over 130' - this line of sampling representing a diagonal across the bed. The andesite overlying the sediments is slightly rusty for a few tens of feet and a sample averaged 0.016% Cu and 0.05 oz/ton Ag over 20'

While the showing itself is obviously not economic the occurrence may have some significance in relation to the main geochemical anomaly 2,500 feet to the west. Here the 200 ppm Cu contour defines 1,400 ft x 800 ft area with

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soil values up to 1,800 ppm Cu and 1.8 ppm Ag. On the ground the anomalous area contains outcrops of highly pyritic andesite. However no copper minerals or staining was seen and no porphyry type alteration or intrusive activity appears to be present. If the limey sediments continue under this area it could be postulated that the anomaly represents a leakage halo above a well mineralized horizon.

This possibility should be tested initially by a programme of careful mapping and rock geochemistry.

Other pyritic zones and minor intrusives on the Lion group were examined but no encouragment was obtained. The quartz feldspar porphyry mapped in the main creek is similar to the Karstberg intrusions that extensively outcrop to the northwest. No mineral deposits are known to be associated with these intrusions.

That part of the Lion group lying to the northwest of the main creek flowing through the claim block was not examined.

Cub Claims

This group was staked to cover the former Canadian Superior Carr claims and tie into the Lion Group.

The previous work consisted of soil geochemistry and magnetometer surveys over a 6,000' x 4,000' area on east-west lines 800' apart. High copper and molybdenum soils were found about the edge of a 4,000' x 2,000' magnetic low.

The present work included putting in lines 400 feet apart, soil sampling all lines at 200 ft stations together with detailed mapping and rock sampling.

In addition that part of the surrounding area not included in the Lion group was mapped and prospected on a reconnaissance basis.

The intrusion briefly described under general geology underlies much of the claim group. It is made up of two distinct phases - an outer diorite and a later core of monzonite.

Diorite - generally an equigranular medium to coarse grained fresh grey rock. Plagioclase is white to grey and biotite with lesser or, more rarely, equal amounts of hornblende are the main minerals with magnetite an important accessory. The rock is characterized by frequent patches of felted biotite and large (up to 1 inch) poikilitic biotite crystals. The southeastern end of the intrusion gradually becomes more basic in appearance -

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the plagioclases appear more calcic and the proportion of mafic minerals especially hornblende increases. There is also some igneous layering caused by concentrations of mafic minerals.

At the margins of the intrusion the diorite becomes fine grained and contains xenoliths of re-crystallised volcanics.

The diorite is fairly massive with sparse disseminated pyrite and rusty fractures. An exception is a small area outcropping on the cliff to the south of the claim group - here numerous pyrite filled joints give the rock a rusty appearance.

Monzonite - The rock is composed of varying proportions of plagioclase and orthoclase with hornblende and biotite as mafics. The rock is coarse grained and the somewhat larger orthoclase crystals give it a slightly porphyritic appearance. Locally the feldspar is entirely the orthoclase making the rock a syenite.

The monzonite stock is about 5,000 ft in diameter and because it lies in a saddle between two upland areas is poorly exposed due to talus and glacial overburden.

The precise contact between the diorite and monzonite is not seen but sharp changes in lithology between adjacent outcrops suggests a sharp intrusive one. In support of this small syenitic dykes intrude the diorite to the south of monzonite boss.

Mineralization and Alteration

The monzonite is exposed only on its southern contact with the diorite. Here it is sparsely mineralized with disseminated pyrite, chalcopyrite and rare molybdenite.

The pyrite and chalcopyrite occur as discrete grains replacing the chloritised mafic minerals in the rock. Molybdenite occurs in a similar mode and also as a fine dusting on dry and orthoclase filled fractures. In a few outcrops the feldspars have been sericitized.

Nine outcrops were chip sampled, some of them twice. The results were disappointing. The best assay was 0.111% Cu; 0.006% Mo. The remainder were much less than half of this. The higher results correspond fairly well with increased pyrite content and greater alteration.

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Geochemistry

Soil samples were taken at 200 ft stations on lines 400 ft apart. In addition silt samples were taken at all points where the lines crossed creeks and seeps.

The results show the soils and silts to be anomalous in copper and molybdenum particularly in the southern half of the grid.

East of the baseline the high results generally correspond with the sparsely mineralized outcrop. High copper in a silt sample at 32S/15E suggests a very local source of copper mineralization in the diorite there. Otherwise the anomaly rapidly falls off away from the monzonite outcrops.

To the west of the base line high silts and soils follow a northwesterly trending creek from 36S/8W to 8S/30W - the edge of the grid. The consistency of the copper and molybdenum values and the pattern of the soil anomaly suggests a source to the east of the creek between 32S and 12S. Monzonite outcrops in this creek between 28S and 24S were well chloritised and sericised but had no visible mineralization.

The overburden is a coarse boulder sand probably derived from talus. In the central part of the grid most of the drainage is sub-surface. It is possible therefore that a mineralized source here would not show as a soil anomaly but would be reflected in the silts of creeks lower down.

Recommendations for Cub Group

The very low grade of the copper mineralization does not encourage great expenditure on this property.

However a possibility exists that the mineralization seen east of the baseline extends westwards towards the creek with high soil and silt values. This area is also the core of the magnetic low that corresponds with the monzonite intrusion.

As there is a close correlation between the copper content and pyrite content of the monzonite in outcrop I.P. should be an accurate guide to whether better grades can be expected in this area. About 8 line miles would be a generous estimate of the I.P. coverage required.

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If the survey is encouraging drilling would be the next step together with the expansion of geophysical (I.P. and magnetic) surveys to the west and east of the present grid.

R.J. OVERSTALL