

DOLMAGE CAMPBELL & ASSOCIATES LTD
CONSULTING GEOLOGICAL & MINING ENGINEERS
1000 GUINNESS TOWER
VANCOUVER I. B.C.



Geochemical Report
on the
FOS MINERAL CLAIMS
Nos. 1-16 inclusive

Claim Sheet No. 105 I-12



SUMMIT LAKE AREA
Watson Lake Mining Division
Yukon Territory

62° 30' N. Lat., 129° 45'

W. Long. 2592.00

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

Resident Geologist or
Resident Mining Engineer

Owner of Claims:
Mr. L. Hart

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

Supervision and Report by: Commissioner of Yukon Territory
R. S. Adamson, R. Eng.

Work completed between Sept. 10 and Sept. 12, 1973.

October 28, 1973.

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INTRODUCTION

A geochemical soil survey was carried out on the FOS claim block by Dolmage Campbell & Associates Ltd. during the period September 10 to September 12, 1973. A total of five men were employed sampling the property: G. Bequette, P. Etzel, J. Dick, E. Olles, and B. Wigen. The sampling program was undertaken under the field direction of Mr. J.B. Kirkland and the supervision of the writer.

The property, comprising 16 contiguous mineral claims, is situated within a few miles of the boundary between the Yukon and Northwest Territories, approximately 200 miles north of Watson Lake, Y.T. Present access to the property consists of flying directly by helicopter, usually from nearby Summit Lake, which is suitable for float aircraft. The nearest road lies 50 miles southeast near the Canada Tungsten mine.

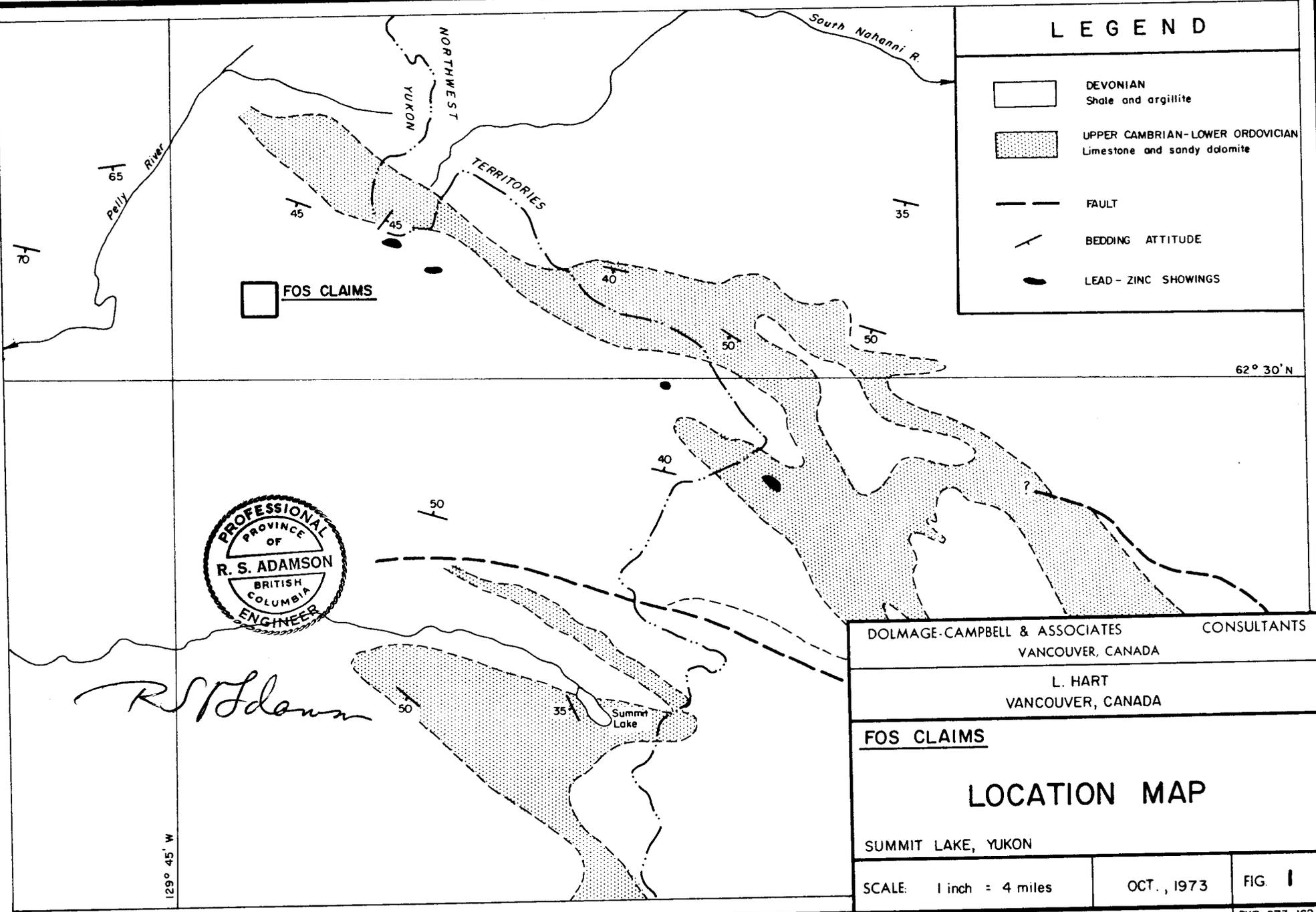
The southern half of the property is underlain by swampy ground, hence was not sampled. The northern half is for the most part thickly wooded and overburden-covered. Elevations on the property range from 4000 feet at creek level on the southern perimeter of the property to 4500 feet on a moderate hill in the centre of the property.

No previous work is known to have been done on the property. The property was initially staked in early 1973 as a result of the discovery of stratiform-type lead-zinc deposits by Canex-Placer Ltd. on their property located 15 miles southeast of the FOS claims.

GEOLOGICAL SETTING

The geological setting of the Summit Lake zinc-lead district comprises essentially two rock formations; an argillaceous unit ranging in age possibly from the Upper Ordovician to the Mississippian (but predominately Devonian), and an older carbonaceous unit which is probably Cambrian in age.

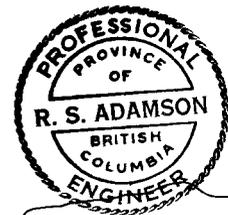
The most extensive rock type in the area, the argillaceous unit, is black-grey shale that is extensively regionally metamorphosed to argillite with well developed foliation. The argillite is noticeably harder than the unmetamorphosed shale and is locally pyritic; otherwise, the two rock types are not readily distinguished in the field by casual observation. Most of the rock exposed in the area



LEGEND

-  DEVONIAN
Shale and argillite
-  UPPER CAMBRIAN-LOWER ORDOVICIAN
Limestone and sandy dolomite
-  FAULT
-  BEDDING ATTITUDE
-  LEAD - ZINC SHOWINGS

 FOS CLAIMS



R. S. Adamson

DOLMAGE-CAMPBELL & ASSOCIATES CONSULTANTS
VANCOUVER, CANADA

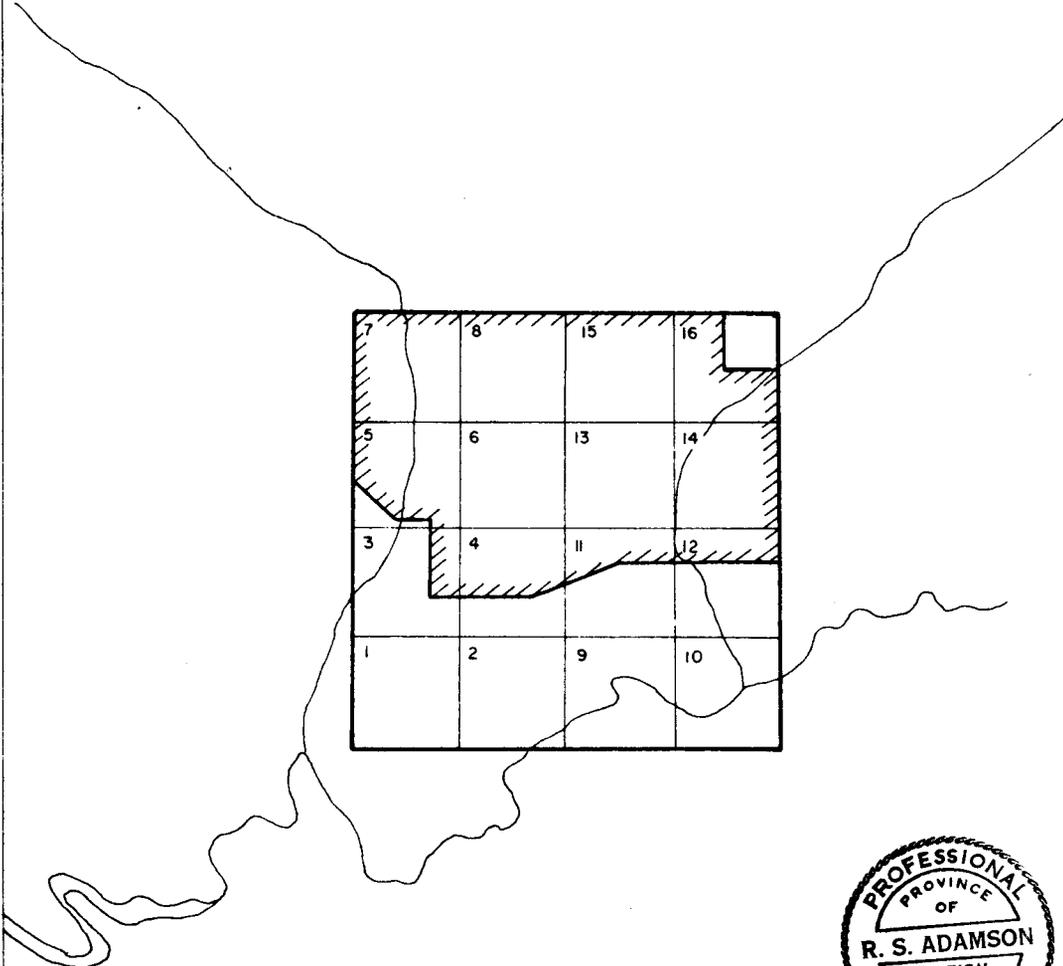
L. HART
VANCOUVER, CANADA

FOS CLAIMS

LOCATION MAP

SUMMIT LAKE, YUKON

SCALE: 1 inch = 4 miles	OCT., 1973	FIG. I
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R S Adamson



Surveyed Area

DOLMAGE-CAMPBELL & ASSOCIATES		CONSULTANTS
VANCOUVER, CANADA		
L. HART		
VANCOUVER, CANADA		
<u>FOS CLAIMS</u>		
CLAIM MAP		
SCALE	1 inch = 1/2 mile	OCT., 1973
		FIG 2

of the Summit Lake base metal occurrences is argillaceous and some is pyritic enough to have produced gossans. Local intense (isoclinal) folding of the shale-argillite sequence is common and, combined with the absence of distinct marker beds, makes precise stratigraphic positional determinations difficult in this sequence. Also, due to this difficulty of determining the proper sequence in the shale-argillite rocks it is likely that some of the rock units included in it may be as old as Ordovician and thus represent an orderly sequence from the underlying Cambrian rocks.

Of direct potentially-economic significance is a distinctive graptolitic shale formation that occurs near the base of the argillaceous sequence. It is this formation, Upper Ordovician in age, which hosts the presently known deposits on the nearby Canex-Placer claims. The distribution of this key formation throughout the district is, at best, relatively unknown, due primarily to its highly-erodable characteristics.

The Cambrian carbonaceous rocks, limestone and minor dolomite, that underlie the shale-argillite sequence are exposed as windows in the lower flanks of the ridges in northwest-trending bands. This relatively simple relationship is complicated by steep folding, by possible thrust faulting parallel to the northwest-trending contacts, and by topography because of the gentle southwest dip of the argillite-carbonate contact.

Although outcrops are relatively few on the FOS claims, a reasonable assessment of the geology of the property in general terms may be ascertained by relating to the surrounding area. The regional geology indicates that the FOS claims are underlain by rocks of the argillite unit; the precise formations (shale, argillite, conglomerate, or sandstone) within the unit at this stage of investigation is unknown.

GEOCHEMISTRY

The soil sample survey on the property was undertaken by sampling along flagged lines spaced at 400 foot intervals. Samples were taken at 200 foot stations where possible. Where rock outcrop and swamp prevented it no samples were taken; this accounts for the occasional gap in the grid. The southern sector of the property was not sampled because of extensive muskeg development. The property base line (Figure 3) was established arbitrarily by flagging a line that strikes east-west.

SAMPLING AND ASSAYING TECHNIQUES

Soil samples were taken by first digging a hole with a mattock; a small handful of soil was then taken and packaged in a standard high wet-strength brown kraft paper sample bag. Wherever possible, samples were taken from the "B" soil horizon. If the "B" horizon could not be reached the samples were taken from the "A" horizon and noted as such. The samples were sent to Chemex Labs Ltd. in North Vancouver for analysis.

At the assay laboratory the samples were dried at 110° F and then sieved to -80 mesh consistency through a nylon and stainless steel sieve. One-half gram of the dry pulp was weighed into a calibrated test tube and 3 mls. of perchloric acid and 1 ml. of nitric acid was added. The samples were digested initially at low heat and then at a temperature of 203° C. Digestion time was two to three hours. The digested samples were cooled, made up to 25 ml. volume with distilled water and the solutions thoroughly mixed. Analysis for lead and zinc were then done by Atomic Absorption procedures.

The results of the lead and zinc soil assays were interpreted visually.

INTERPRETATION OF RESULTS

The zinc geochemical results were contoured at 500 and 1000 ppm zinc as shown on Figure 3. Two anomalies of consequence were outlined; a central one which extends east-west for approximately 2400 feet, and a western one which apparently continues off the claim to the west.

Values on the lead geochemical map were contoured at 35 ppm lead. Results tend to be erratically distributed and would appear to economically be uninteresting. There appears to be no relationship between the lead values and the zinc anomalies.

CONCLUSIONS

The lead values are too erratically distributed to be of economic interest. With regard to the two zinc anomalies, in general the magnitude of the values within the anomalies does not appear to be such that intensive follow-up work would be warranted; particularly in light of the generally high zinc background in rocks of the argillaceous unit in the Summit Lake area.

RECOMMENDATIONS

The writer recommends that a minimal exploration be carried out on the central anomaly. The area surrounding the anomaly should be prospected visually supported by minimal hand trenching to bedrock if overburden is not too thick.

Respectfully submitted,
DOLMAGE CAMPBELL & ASSOCIATES LTD.



A handwritten signature in cursive script, appearing to read "R. S. Adamson".

R. S. Adamson, P. Eng.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.

In the Matter of

To WIT:

L. HART - FOS MINERAL CLAIMS
NOS. 1-16 INCLUSIVE

I, R.S. ADAMSON

of 1000 - 1055 W. Hastings St., Vancouver 1, B.C.

in the Province of British Columbia, do solemnly declare that
Expenditures for work performed on the FOS claims between Sept. 10 and Sept. 12th,
1973 are as follows:

WAGES - 3 man/days @ \$39.25	\$117.75	
6 man/days @ \$32.20	\$193.20	
6 man/days @ \$35.00	<u>\$210.00</u>	\$ 520.95
MAINTENANCE - 15 man/days @ \$15.00		\$225.00
TRANSPORTATION - HELICOPTER, 5 hrs. 35 mins. @ \$160./hr.		\$894.00
ASSAYING - 181 samples @ \$1.70		\$ 307.70
TYPING, SECRETARIAL, DRAUGHTING		\$ 150.00
SUPERVISION, REPORT		<u>\$ 495.00</u>
	TOTAL:-	<u>\$2592.65</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of
the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *14*
day of *November*, 1973, A.D.

R S Adamson

[Signature]
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

APPENDIX No. 2

DETAILED ACCOUNT OF EXPENDITURES

WAGES:

G. Bequette, Box 4509, Whitehorse, Y.T. 3 days @ \$39.25	\$117.75
P. Etzel, General Delivery, Ross River, Y.T. 3 days @ \$32.20	\$ 96.60
J. Dick, General Delivery, Ross River, Y.T. 3 days @ \$32.20	\$ 96.60
E. Olles, Suite 3, 211 Wood St., Whitehorse, Y.T. 3 days @ \$35.00	\$105.00
B. Wigen, Suite 3 - 211 Wood St., Whitehorse, Y.T. 3 days @ \$35.00	\$105.00
	<hr/>
TOTAL:-	<u>\$520.95</u>