

BERNARD H. KAHLERT P.Eng.

Consulting Geologist
Mineral Exploration

86-756-15392
9/87

1152 Indian Road, Mississauga, Ont. L5H 1R7 Tel. (416) 271-0369

TECHNICAL REPORT - ROCK SAMPLING

MOT CLAIM - 20 Units

OMINECA MINING DIVISION

94 D/3E

^{03.8'}
56°^{04'}N, 127°^{04.8'}W

Owner: B.H. KAHLERT,
1152 Indian Rd.,
Mississauga, Ont.,
L5H 1R7.

Operator: Granges Exploration Ltd.,
900-625 Howe St.,
Vancouver, B.C.
V6C 2T6.

Author: B.H. KAHLERT, P. Eng.

Date: December 3, 1986.

B. H. Kahlert
GEOLOGICAL BRANCH
ASSESSMENT REPORT

FILMED

TABLE OF CONTENTS

TITLE	Page
INTRODUCTION	1
PROPERTY OWNERSHIP AND DESCRIPTION	2
REGIONAL GEOLOGY	3
GEOLOGY OF THE MOT CLAIM	3
BASE-PRECIOUS METAL MINERALIZATION	5
1986 SAMPLING PROGRAM	6
ASSAY PROCEDURE	7
CONCLUSIONS	9

TABLE

TABLE I	8
---------	---

APPENDICES

APPENDIX I	10
APPENDIX II	11
APPENDIX III	12
APPENDIX IV	13

List of Figures

Figure 1	After P. 1
Figure 2	After P. 2
Figure 3	After P. 4
Figure 4	After P. 3

Introduction

The MOT Claim consists of 20 contiguous units and is located 4 km northwest of Motase Lake in north-central B.C.

Access to the property is only via helicopter from Smithers, which is located approximately 160 km to the south. Float planes can land at Motase Lake, located 5 km to the southeast. (See Fig.1, over, Fig.2, after P.2).

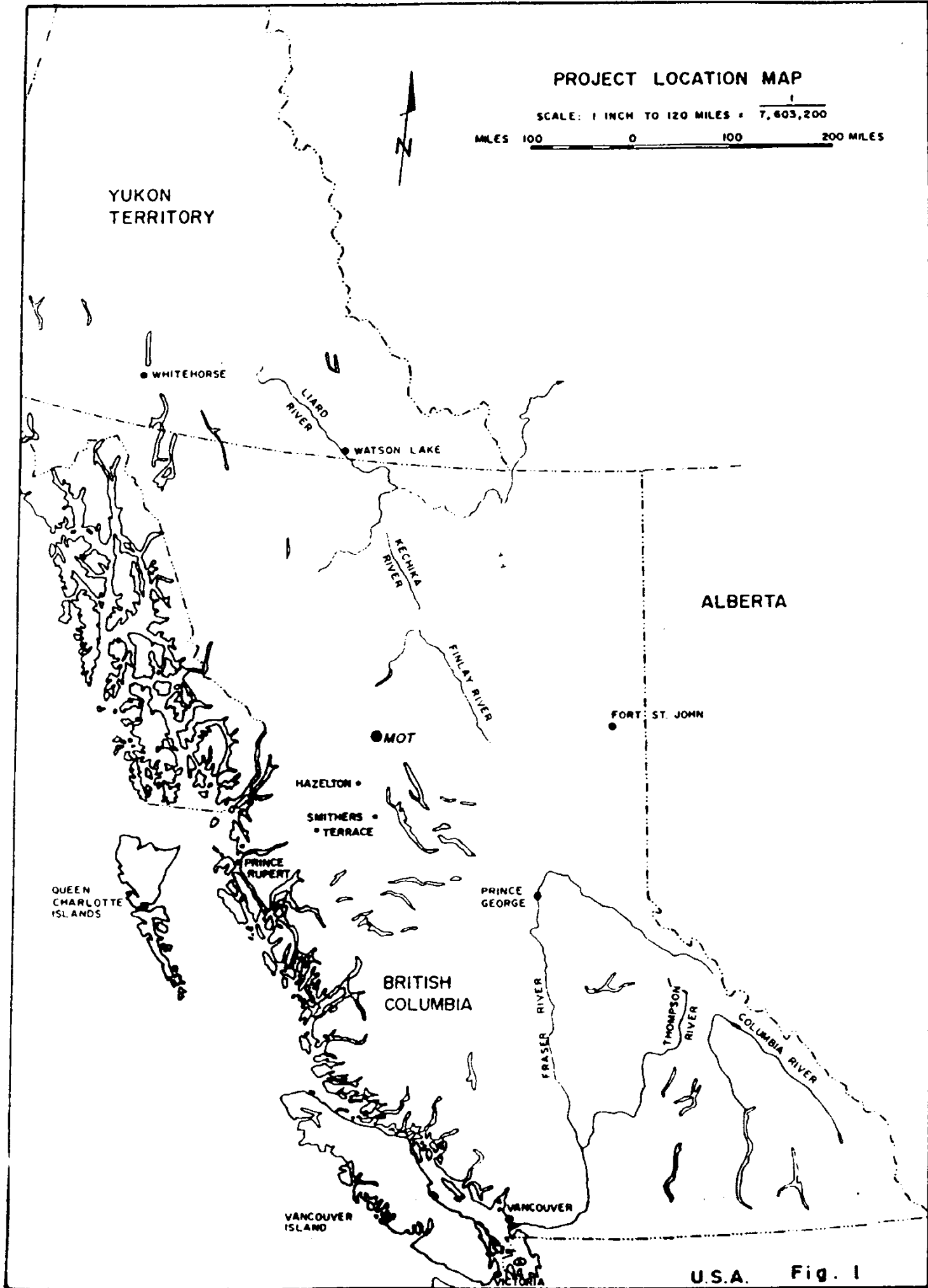
Local topography is rugged, with valleys at 1000 meters and peaks exceeding 2500 meters. Mineral prospects on the Mot Claim are above tree-line, between 1800 and 2100 meters elevation.

Previous work on the property goes back to 1948 when it was staked and prospected by H.H. Hestis. Drilling was carried out by Noranda in 1962 on the FC Claims, however, most of the property was dropped.

PROJECT LOCATION MAP

SCALE: 1 INCH TO 120 MILES = $\frac{1}{7,603,200}$

MILES 100 0 100 200 MILES



U.S.A. Fig. 1

In 1973, Canadian Superior Exploration Ltd. carried out geological mapping and sampling. In 1980 and 1981, Amoco Canada Petroleum Co., carried out detailed geological and geochemical surveys, followed by 915 meters diamond drilling in four holes. In 1983, Cominco carried out mapping and sampling on Amoco's property. When the property lapsed in 1985, it was staked by B.H. Kahlert.

Between August 15 and 17, 1986, Granges Exploration Ltd. of Vancouver, B.C. carried out a short rock sampling program on the Mot Claim.

Property Ownership and Description

The Mot Claim is owned by B.H. Kahlert. Claim data is tabulated below.

Name	Units	Tag No.	Date Staked	Date Recorded	Record No.
MOT	20	43107	Aug.8/85	Sept.6/86	7254

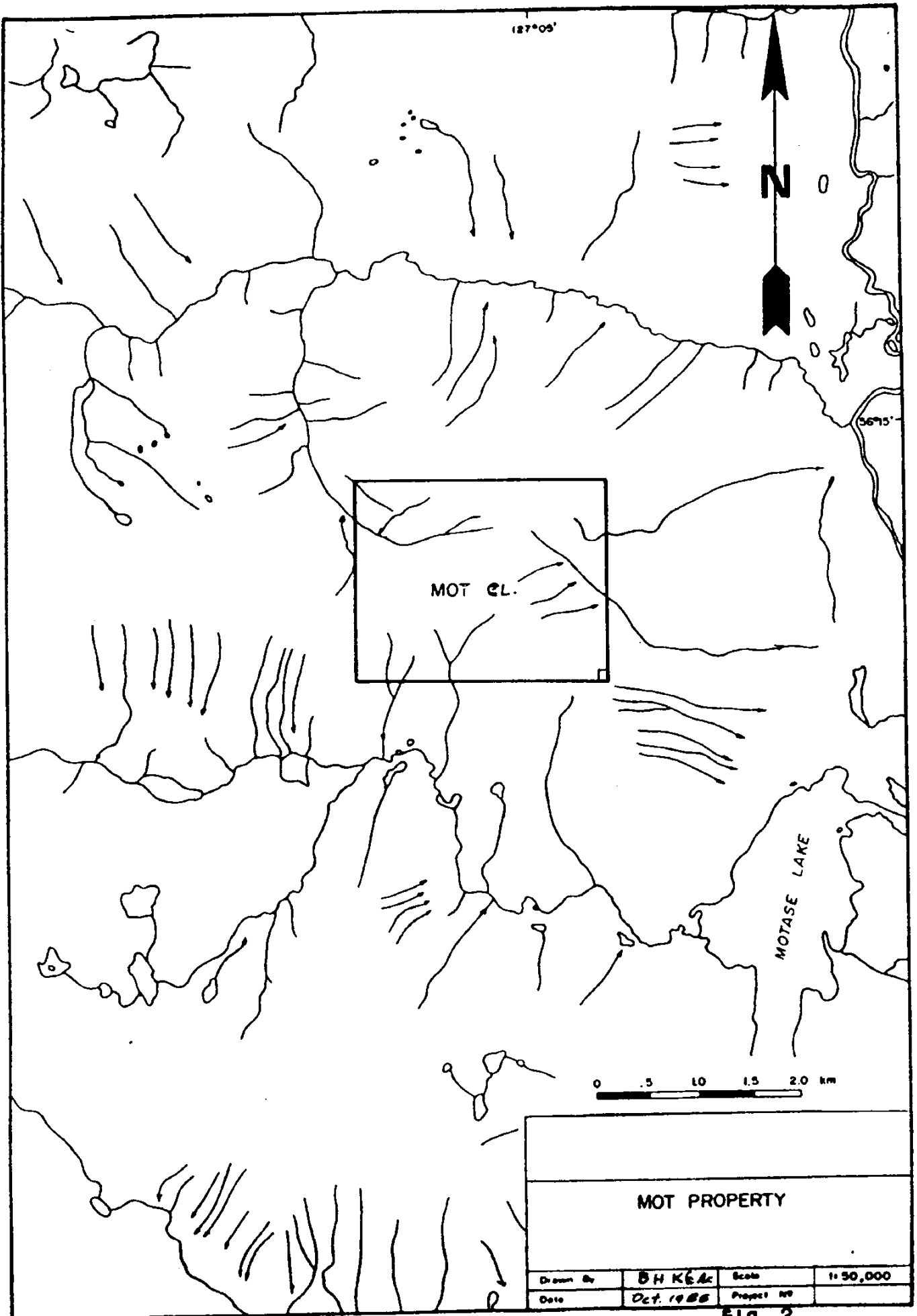


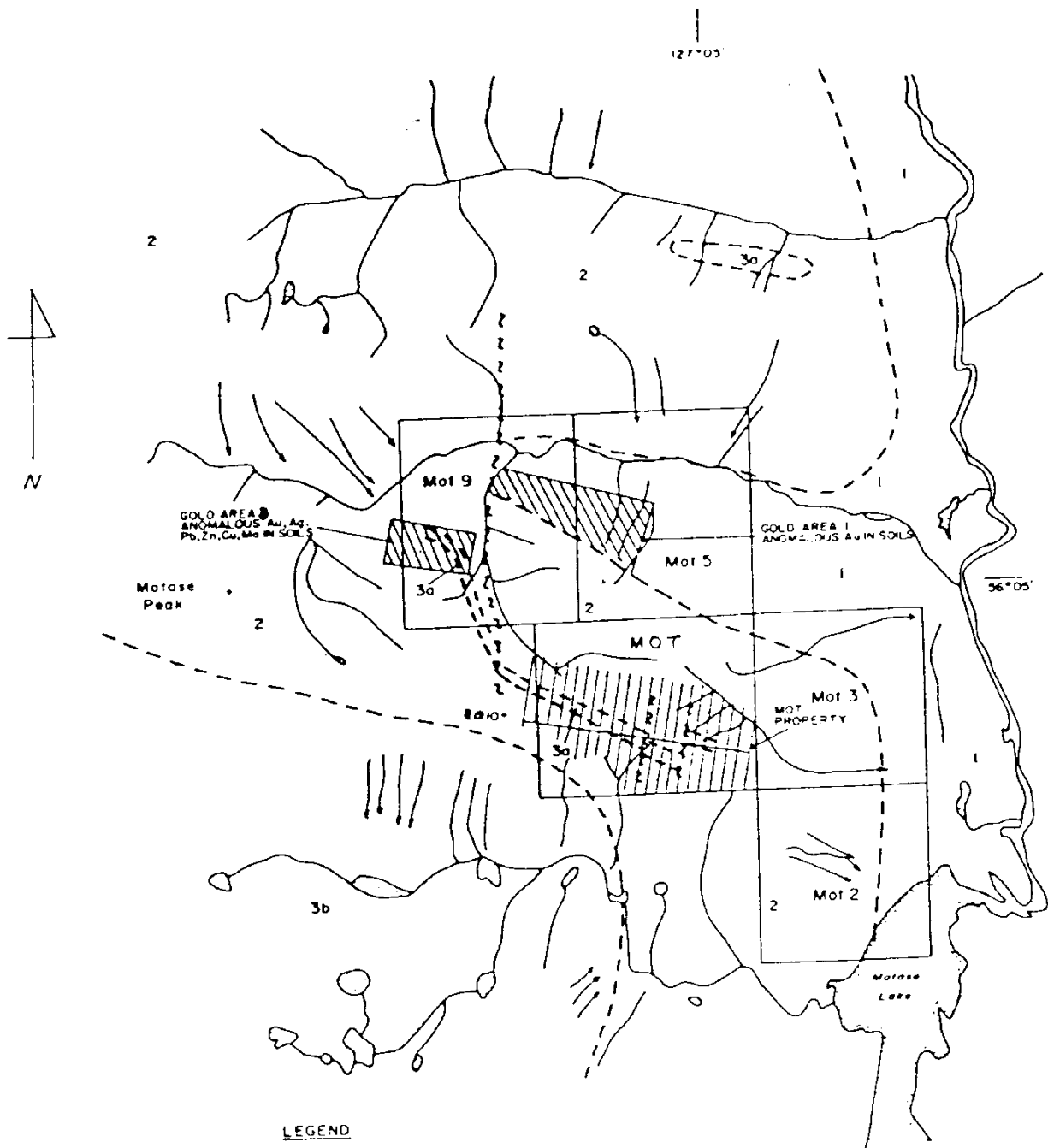
Fig. 2

Regional Geology (Fig.4)

Sheet 94D (West) has not been mapped geologically, only general data is available from the British Columbia 1:2,000,000 geological map. The MOT Claim is located on the eastern edge of the Middle Jurassic - Upper Cretaceous Bowser Group Sediments. The area of the MOT Property is the contact area of the underlying Lower Jurassic Hazelton volcanics and the overlying Bowser Sediments. This sequence has been intruded by feldspar porphyry dykes and sills which are variously altered and mineralized. These granitic rocks are related to the Cretaceous-Tertiary Bulkley intrusives which form small batholiths and stocks in the district.

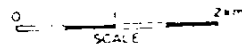
Geology of the Mot Claim (Fig.4)

The Hazelton volcanics and Bowser sediments have been intruded by two phases of Bulkley intrusives.



LEGEND

- 3
BULKLEY INTRUSIVE (CRETACEOUS-TERTIARY)
 3a-Feldspar Porphyry Sill/Stock
 3b-Granodiorite Intrusive
- 2
BOWSER GROUP (UPPER JURASSIC)
 siltstones, argillites, limestones, grey-waxes,
 pebbly conglomerates minor mafic tuffs
- 1
HAZELTON GROUP (JURASSIC)
 Mafic intermediate volcanic flows and tuffs
 minor argillite
- - - - - Approx. geological boundary
- ~~~~~ Fault (assumed)



**MOTASE LAKE PROJECT
PROJECT AREA GEOLOGY**

The older of these is a single, 50-80 meter thick, variably altered granodiorite feldspar porphyry sill that underlies the central portions of the MOT Claim and extends to the northwest.

The younger intrusives are comprised of a number of relatively thin monzonite dykes and sills that cut the sediments and volcanics as well as the older feldspar porphyry sill. Both the older and younger sill and dykes become thicker and more persistent towards a small batholith which extends into the southwest corner of the MOT Claim.

The basal Hazelton intermediate and mafic tuffs and flows, intercalated with minor argillite, underly the northeastern portion of the MOT Claim. Bowser group sediments, comprised of a succession of pebble conglomerates, sandstones, wackes and argillites of deltaic origin.

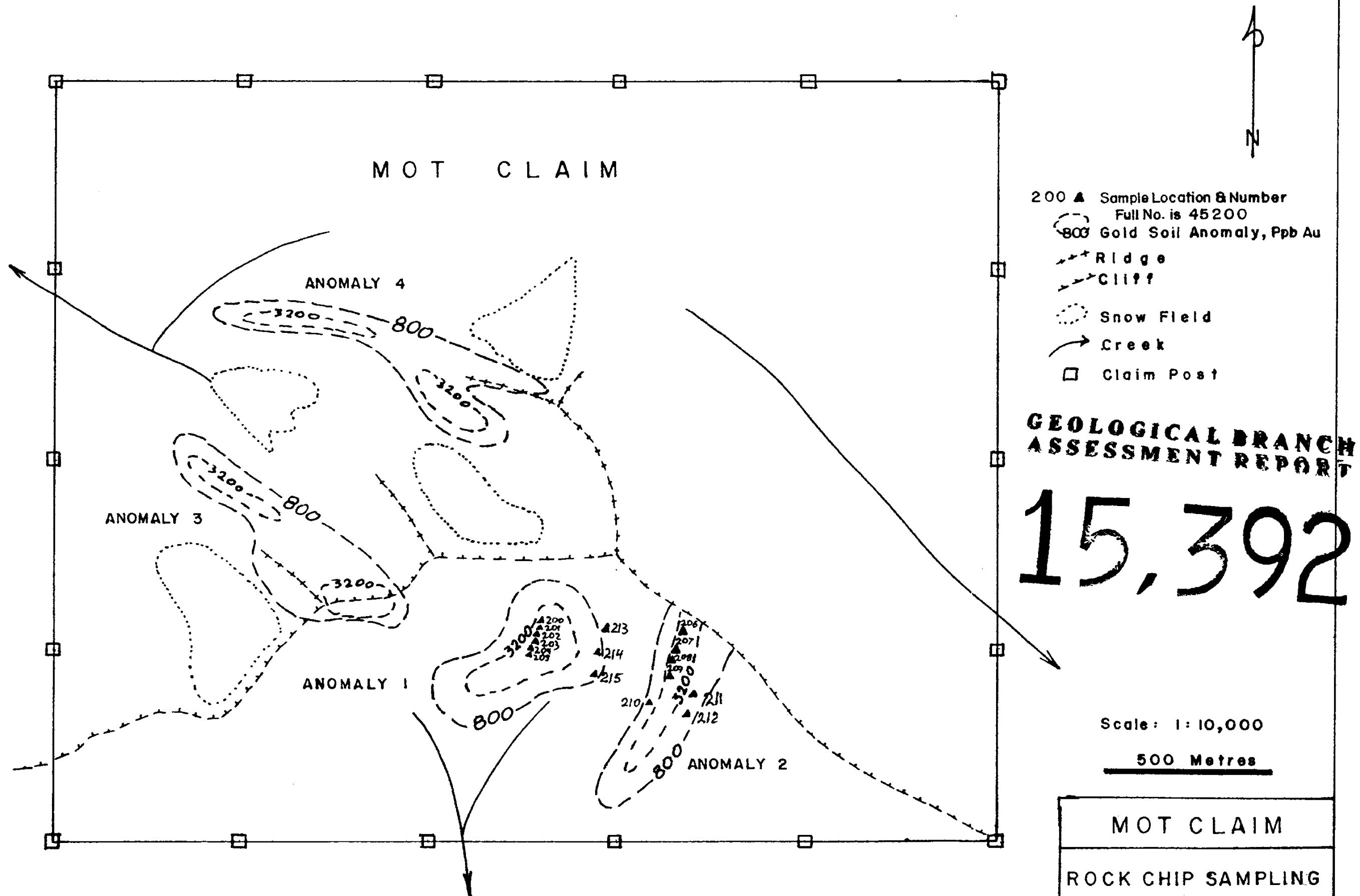


Fig. 3

Proximal to the intrusives, Hazelton volcanics are silicified, epidotized, chloritized and pyritized, while Bowser sediments are horn-felsed, silicified and pyritized. Quartz veining is associated with the pervasive silicification.

Base-Precious Metal Mineralization

On the Mot Property and surrounding area, showings of gold, silver, lead, copper, molybdenum and tungsten mineralization have been established by prospecting, mapping, sampling and diamond drilling. These mineralized showings are often close to the Hazelton Volcanics-Bowser Sediments contact, usually close to, or associated with dykes and sills of the Bulkley intrusives. This geological relationship may be a control on mineralization in the area.

On the Mot Property four large soil geochemical anomalies with coincident high gold, silver and copper

values are indicated. Rock chip sampling by previous workers gave a number of highly anomalous to ore grade results. Also, showings of chalcopyrite, molybdenite, galena, and sphalerite, with pyrite and/or pyrrhotite are known on the property.

1986 Sampling Program

The 1986 sampling program was carried out to assist in evaluating the very strong gold soil anomalies as shown on Fig. 3. Rock samples collected during the program consisted of grab samples, channel or continuous chip samples, and in several instances, selected intervals of drill core stored on site.

Location of the samples collected is shown on Fig. 3. Samples of selected core are shown in their approximate stratigraphic position.

Detailed description of individual samples is shown on Table I, overleaf.

Assay Procedure

Samples were assayed for gold and silver by Acme Analytical Laboratory Ltd., 852 E. Hastings St., Vancouver, B.C.

Rock samples are crushed, split and pulverized. From each pulp, 10 grams of sample are heated to produce a bead, the bead is dissolved by Aqua Regia gold and silver values obtained by standard assay procedure.

TABLE I

Sample No.	Description	Width Meters	Assays	
			Au gm/T	Ag gm/T
45200	Quartz Vein, minor pyrite, trace chalcopyrite	1.0	9.8	25.0
45201	Quartz Vein, minor pyrite, trace chalcopyrite	1.5	11.0	64.0
45202	Quartz Vein, minor carbonate, trace pyrite	1.0	0.25	9.0
45203	Quartz Vein, minor pyrite, trace pyrrhotite & carbonate	0.7	0.40	10.5
45204	Quartz Vein, 5% pyrrhotite, trace molybdenite, minor pyrite	1.5	0.05	8.0
45205	Quartz Vein, minor pyrite	1.0	0.10	13.5
45206	Brecciated Quartz Vein, minor pyrite	Grab	0.05	0.50
45207	Quartz rich Talus, 5% pyrite, trace chalcopyrite	Grab	0.05	4.0
45208	Quartz Vein, 1% pyrite, trace chalcopyrite	1.0	0.05	1.5
45209	Talus-Extremely altered porphyry, quartz, carbonate, malachite	Grab	11.3	17.0
45210	Pyritic Argillite, trace chalcopyrite	Grab	0.05	1.0
45211	Drill Core, Quartz Vein, 10% pyrite, Tr. pyrrhotite	1.7	0.30	7.0
45212	Drill Core, Quartz Vein, 15% pyrrhotite, tr. pyrite and pyrrhotite	2.0	0.05	1.5
45213	Drill Core, Altered Tuff, quartz-carbonate alteration	Grab	0.05	0.5
45214	Drill Core, Altered Tuff, quartz-carbonate alteration	Grab	0.05	0.5
45215	Drill Core, Quartz Vein, minor pyrite	1.0	0.05	32.5
45216	Other Property			

Conclusions

Results of gold and silver assays on the samples submitted returned 3 very high gold values and a number of anomalous to very high silver values. The presence of gold and silver in situ on the property is confirmed.

Interestingly, none of the core samples were above background in gold and only one contained appreciable silver. This is due to the fact that the holes were originally drilled for base metals in a northerly direction, which parallels the major structure and quartz veins on the property. These diamond drill holes did not, therefore, test the gold and silver potential of Anomalies 1 and 2.

Further work is recommended and planned in 1987.

Appendix I

Names and Addresses of Persons Conducting Work.

Scott Weekes,
1012 Belmont Ave.,
North Vancouver, B.C.
Graduate Geologist,
University of British Columbia.

R.K. Taylor,
1040 Kemano St.,
Kamloops, B.C.
Prospector.

Appendix II

Analytical Fee Schedule

Acme Analytical Laboratories Ltd.,
852 E. Hastings St.,
Vancouver, B.C.
V6A 1R6.

Sample Preparation - Rock and Core Samples	3.00/sample
Fire Assay Charge	
Gold - Silver Assay	11.25/sample
Total Assay Charges per sample	14.25
Total Charges, 16 samples	228.00

Appendix III

Itemized Cost Statement

August 15-17, 1986.

Salaries:

Scott Weekes, \$91.31/day x 3 days	\$ 273.93
R.K. Taylor, \$86.25/day x 3 days	<u>258.75</u>
Total Salaries	532.68

Meals and Lodging 205.39

Transportation

Okanagan Helicopters	
3.9 hrs. @\$415.00/hr.	1,610.35

Assay Charges (See App.II) 228.00

Report Preparation 300.00

Total Expenditure \$2,876.42

Appendix IV

Qualifications of B.H. Kahlert

I, Bernard H. Kahlert, of 1152 Indian Rd.,
Mississauga, Ont., do hereby certify that:

1. I have been practising as a professional geologist for more than 20 years for mining exploration and consulting companies in Canada, Australia and the United States.
2. I obtained a B.Sc. in geology from the University of B.C. in 1966 and was registered with the Association of Professional Engineers of B.C. in 1971.



B.H. Kahlert
B.H. Kahlert, P.Eng.

Vancouver, B.C.
Dec.3, 1986.