

DESCRIPTION

OF THE

826422

TWIST LAKE MOLYBDENUM - COPPER PROSPECT

CONSISTING OF

KENO 1	6 UNITS	TAG NO. 59220
KENO 2	4 UNITS	TAG NO. 59219
KENO 3	6 UNITS	TAG NO. 59218
KENO 4	4 UNITS	TAG NO. 59217

STAKED ON 3RD APRIL 1980

SITUATED

46 KILOMETRES SOUTH-WEST

FROM

TATLA LAKE POST OFFICE

IN THE

CLINTON MINING DISTRICT

N.T.S. 92/11E

LATITUDE $51^{\circ} 36'N$; LONGITUDE $125^{\circ} 02'W$

OWNERS: JOHN M. MIRKO

ANTONIO M. DE QUADROS

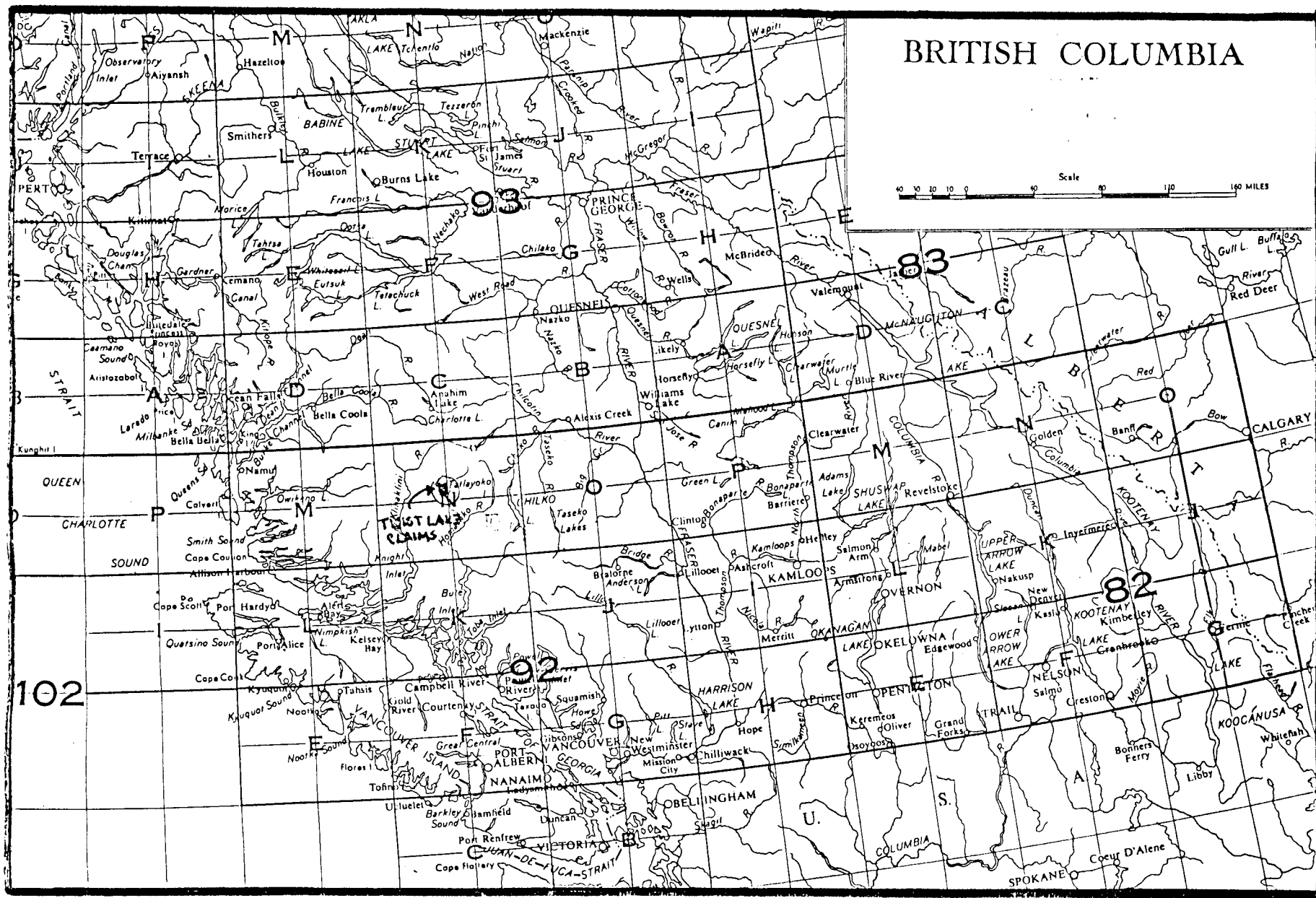
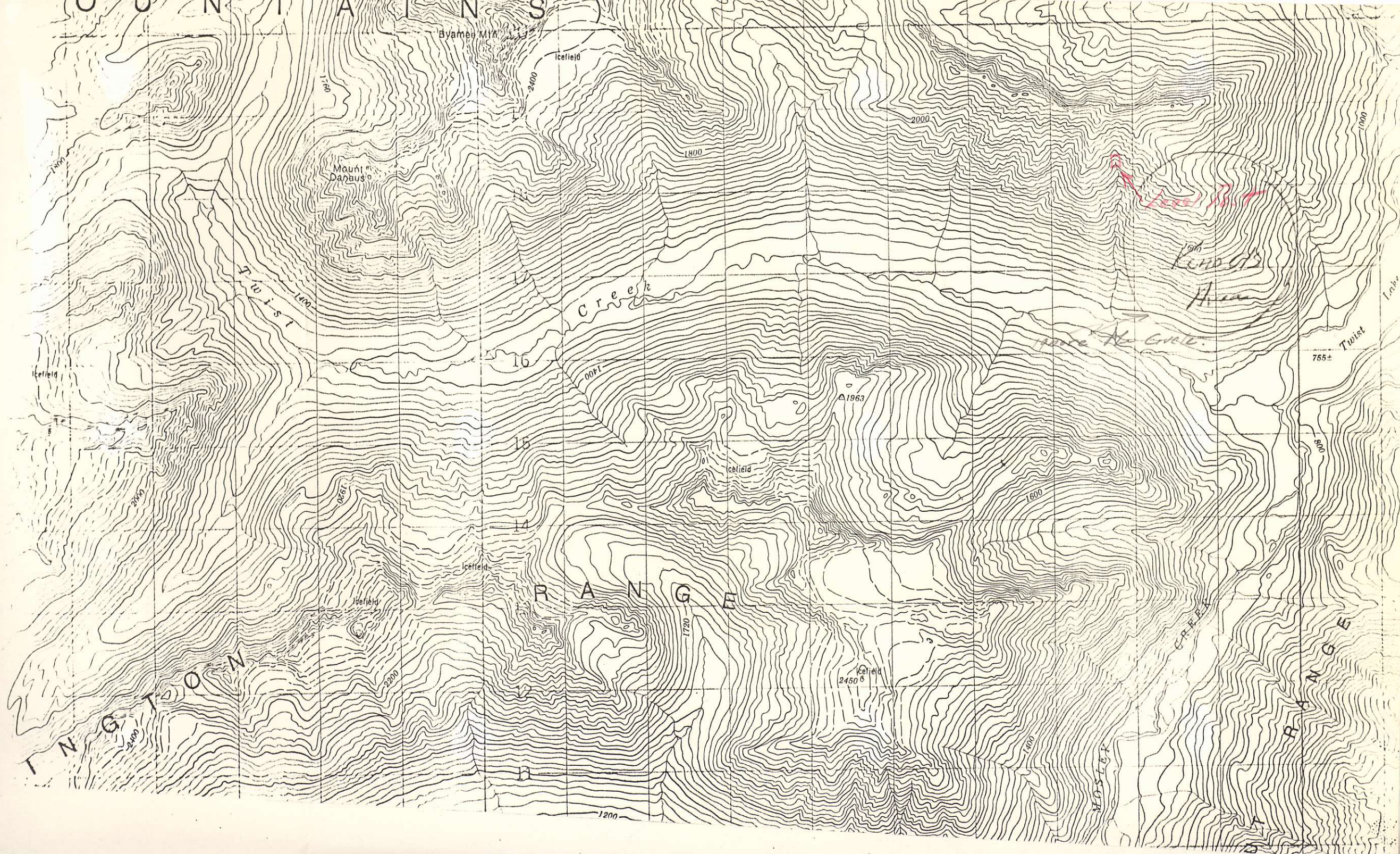


FIG 1; LOCATION MAP



INTRODUCTION

The Twist Lake Molybdenum-Copper Prospect is located approximately 36 kilometres SW of Tatla Lake, just west of Twist Lake. A dirt road, apparently private, runs from Takla Lake to the north end of Twist Lake; alternative access is by helicopter from Pemberton (1 hour), Williams Lake (1.25 hours) or Lilloet (1.50 hours).

The claims were staked by John Mirko and the writer on 3rd April 1980 to cover showings that had been staked and described by Cities Services Minerals Corporation geologists in 1973-1974. The claims are:

KENO 1	6 UNITS	TAG NO. 59220
KENO 2	4 UNITS	TAG NO. 59219
KENO 3	6 UNITS	TAG NO. 59218
KENO 4	4 UNITS	TAG NO. 59217

They were recorded in Vancouver on 10th April 1980.

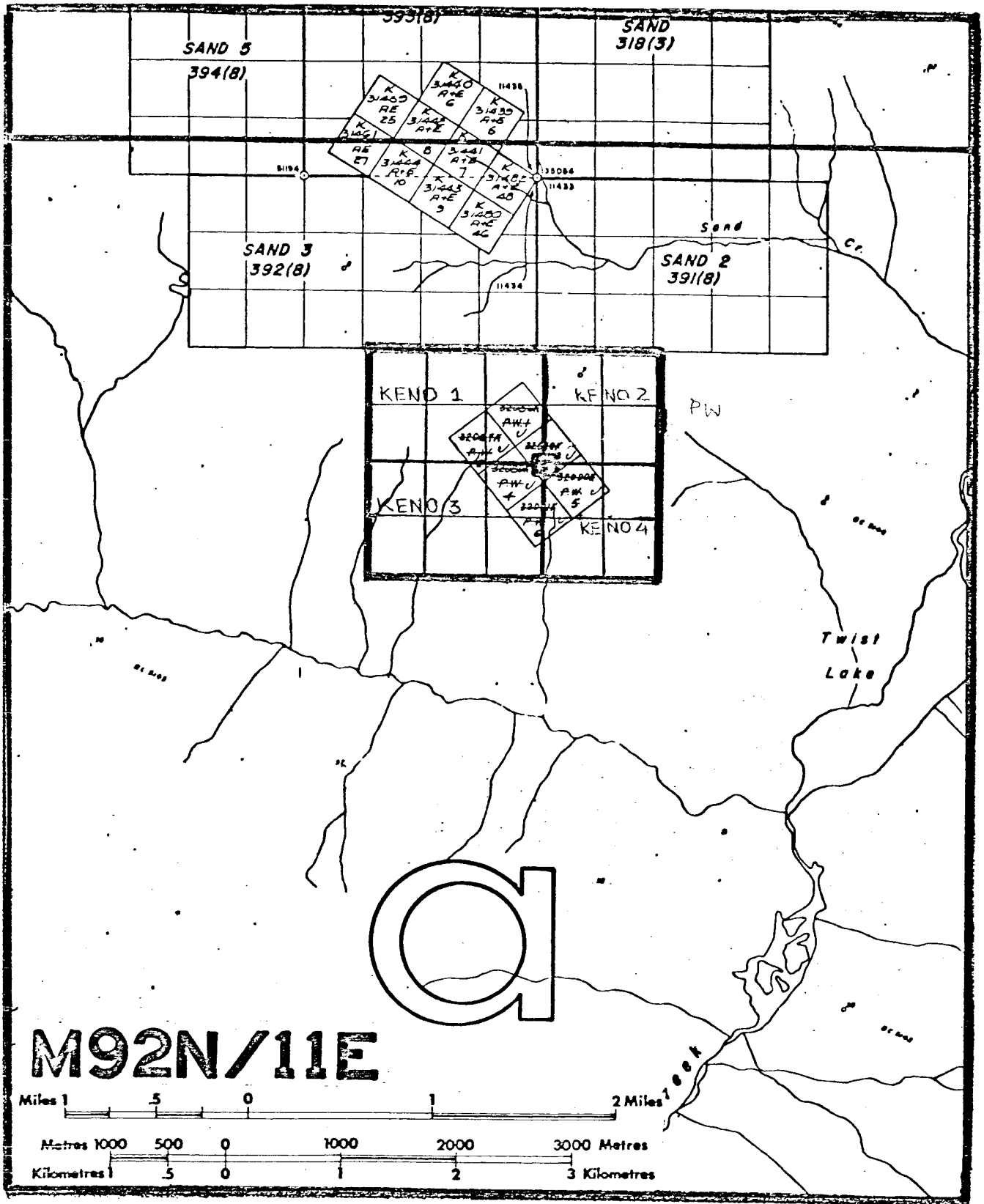


Fig 2: Claim Map

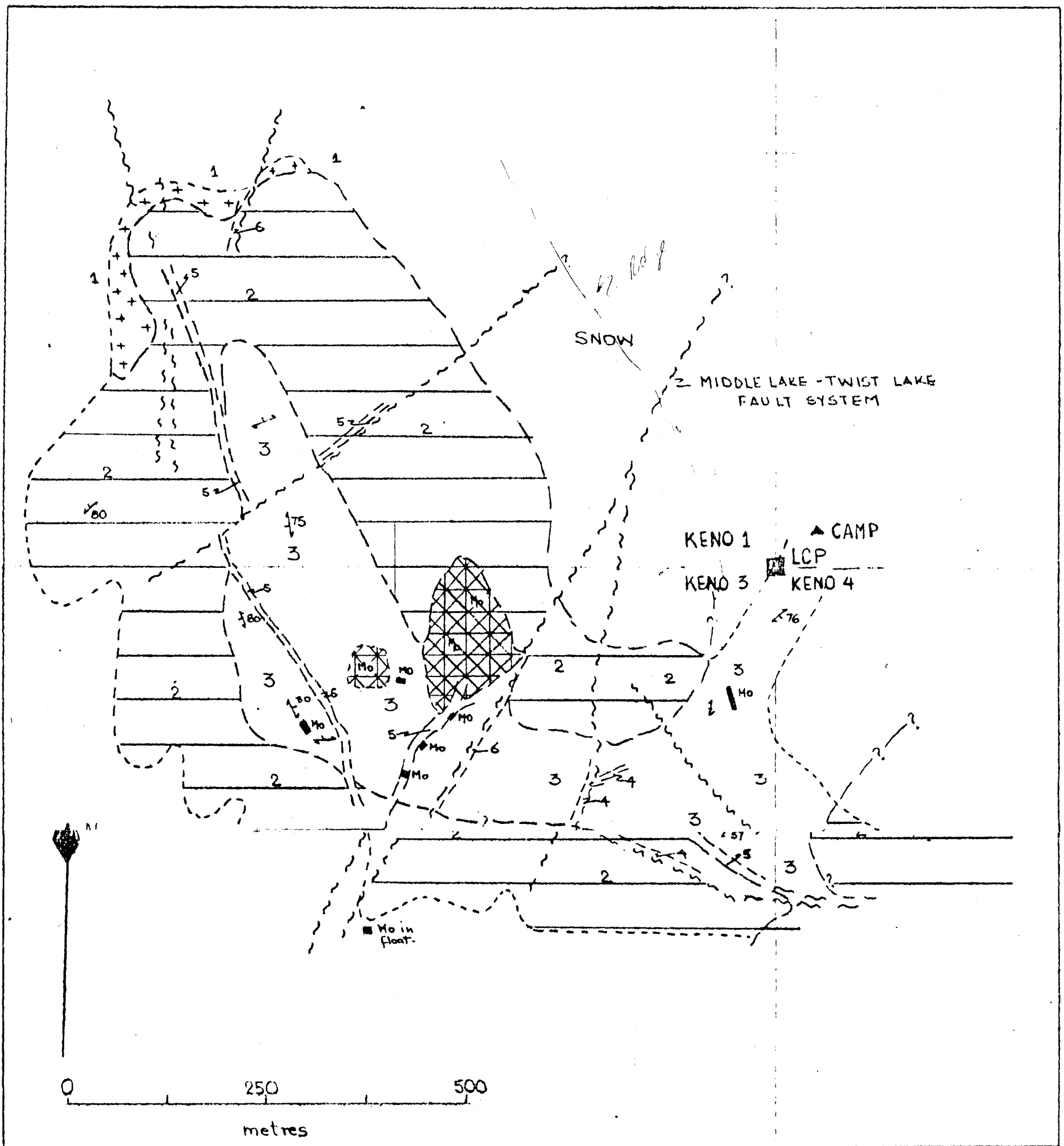
PROPERTY DESCRIPTION


The following description is based largely on the Assessment Report No. 5494 by the City Service Minerals geologists W.H. Murton and G. Salazar in 1974. The owners spent about a day on the property during staking and examined some of the outcrops.

GEOLOGY


The area is underlain by rocks of the Cretaceous to Tertiary Coast Crystalline Batholith; these rocks have a complex plutonic history and range from granites to quartz monzonites. Three phases have been described:


- a) gneissose biotite-feldspar granite - a green to white rock with a coarse texture, feldspar phenocrysts, moderate foliation and moderate to strong chloritisation of mafics.
- b) granular biotite-granite - a grey to white, medium to fine-grained rock with some magnetite and minor alteration. It is the most abundant rock on the property.
- c) porphyritic granodiorite or biotite granite - a dyke-like crescent-shaped body. It is a medium grained gray to pink rock with strong kaolinisation and silicification, small quartz eyes, fresh biotite flakes and is generally strongly stained with limonite and ferrimolybdite. It is strongly fractured.



 BIOTITE-FELDSPAR PORPHYRY
HATCHED WHERE HIGHLY ALTERED
AND COATED WITH LIMONITE AND FERRIMOLYBDITE

 BIOTITE GRANITE


 GNEISSOSE GRANITE

 VEINS 6 ANDESITE
5 QUARTZ-EYED MONZONITE
4 MONZONITE

Mo VISIBLE MoS_2 AND/OR FERRIMOLYBDITE

 FOLIATION

 VISIBLE CONTACTS

 OUTCROP

 SHEAR/FAULT

After MURTON & SALAZAR (1974)

Fig 3: Geology

KENO 1-4

TWIST LAKE PROSPECT

The whole area is cut by dyke swarms of varying age and composition:

- d) monzonite dykes - strong alteration haloes around biotite-magnetite-quartz-sulphide veinlets.
- e) quartz-eyed monzonite dykes - fine-grained porphyritic rock with strong limonite staining and minor chalcopyrite.
- f) andesite dykes
- g) aplite dykes - narrow, random and common in the very broken areas.

The area is structurally controlled by two sets of faults. The first parallels the Middle Lake-Twist Lake fault and appears to control the numerous aplite dykes in the mineralised zone. The second approximately at right angles to the first, controls the quartz-monzonite dykes. This system appears to be older of the two.

MINERALISATION

The porphyritic granodiorite in the dyke-like crescent-shaped intrusive has been the most highly altered. It is highly stained and leached and hence component minerals are hard to identify and estimate. Hydrothermal products are common and consist of biotite, potassium feldspar and quartz, as well as kaolin. Thirty or more fractures per metre are not uncommon.

Pyrite is the one sulphide easily recognisable. It is present to about 3% in the rocks. The owners found one exposure of quartz veins that showed wuggy quartz with open space filling. The whole exposure carried about 0.1 to 0.6% Mo estimated visually and was covered with bright yellow ferrimolybdate. Very minor chalcopyrite was noted.

GEOCHEMISTRY

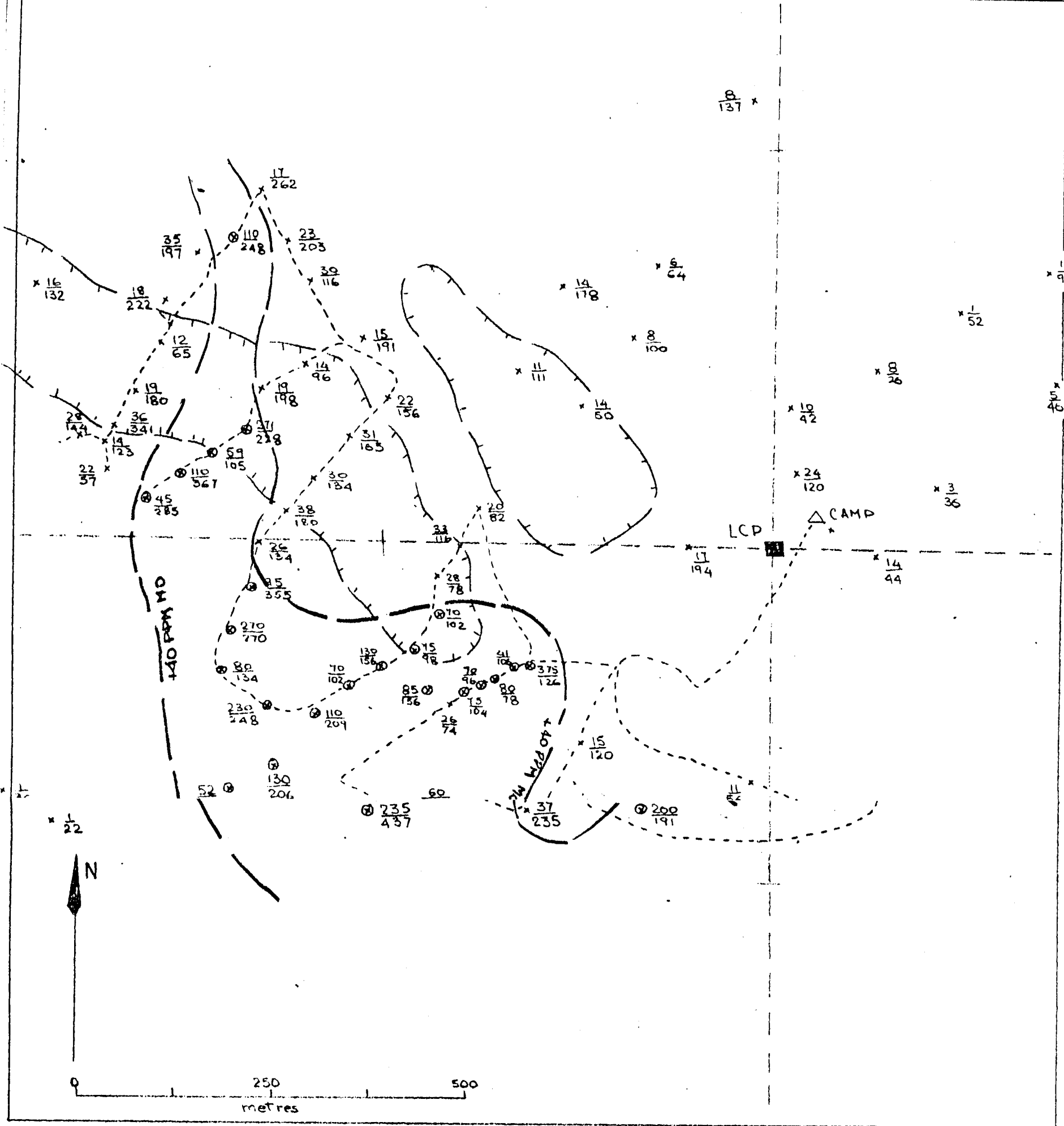
Due to ruggedness of the area, irregular sampling traverses were made for soil sampling and the results are plotted on figure 4.

Values range from:

Cu	36	to	437 ppm
Mo	1	to	375 ppm

Taking 40 ppm as the lower limit of interest for Mo, the geochemistry outlines an area of about 400 metres by 400 metres. An anomaly for Cu above 200 ppm roughly coincides with the Mo anomaly.

Rock values taken by Cities Service on this property were of low order, ranging from 19 ppm to 100 ppm Mo and 26 to 34 ppm Cu. These values are considered much too low to explain the geochemical anomalies and the intensity of mineralisation seen by the owners.



After MURTON & SALAZAR (1974)

x $\frac{30}{124}$ Gravel Silt Sample Mo ppm
Cu ppm

⊗ > 40 ppm Mo

- - - traverses

(---) discoloured area (gouan) on air-photos

FIG 4: Geochemistry Twist Lake Prospect

CONCLUSIONS

The Twist Lake Molybdenum-Copper Prospect covers a large anomalous area with significant Mo and Cu values in the gravels and silts. A large gossan easily visible from air marks a large zone, approximately 400 metres in radius, where a highly altered, sheared and leached granite of complex intrusive history and porphyry affinities is exposed.

The prospect has visible molybdenite and chalcopyrite mineralisation; further work including mapping and possibly drilling is recommended.

Respectfully presented,

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, positioned above the printed name.

A.M de Quadros

Geologist

RECOMMENDATIONS

AND

COST ESTIMATES

TWIST LAKE CLAIMS


In view of the foregoing description of the Twist Lake Claims, it is recommended that an integrated programme involving geological mapping, petrological studies, rock geochemistry and drilling be carried out this summer.

Access to the property may be gained by flying by float plane to Tatla Lake or Middle Lake and thence a ferry by helicopter; a second alternative is by road to Tatla Lake from Williams Lake and thence a ferry by helicopter. The cheapest would be by the private road to Twist Lake but this passage would have to be negotiated with the farmers.

Taking into consideration the first two alternatives, the following programme is recommended, subject to approval by an outside professional engineer:

1.	a)	Road transport (supplies from Williams Lake)	12,000.00
	b)	Helicopter support (from Pemberton)	20,000.00
	c)	Float plane (from Vancouver)	6,000.00
2.	a)	Camp	8,000.00
3.	a)	Surface diamond drilling and assays 3000 feet at \$35.00/foot (3 holes x 1000 feet NQ)	105,000.00
4.	a)	Line picketing 5 miles	2,000.00
	b)	Rock geochemistry	3,000.00
	c)	E.M. Survey 5 miles	4,000.00
	d)	Topographical mapping	2,000.00
5.		Management Geologist, Expediter/Manager, Assistant	20,000.00
6.		Contingencies	18,000.00
		TOTAL COST	200,000.00

Respectfully submitted,



A. M. de Quadros, Ph. D.
Geologist

STATEMENT OF QUALIFICATIONS

I, Antonio M. de Quadros, certify that:


a) I hold the following degrees in Geology:

B.Sc. Hons.	University of London	1964
M.S.	U.C.L.A.	1968
Ph. D.	University of Nairobi	1972

b) I have worked on geological projects since 1959, including:

- i 1964-1965 Geologist, Geological Survey of Tanzania
- ii 1968-1972 Lecturer in Geology, University of Nairobi, Kenya
- iii 1973 Geologist, Agilis Exploration Services, Vancouver, B.C.
- iv 1974 Geologist, Union Carbide Exploration, Vancouver, B.C.
- v 1974-1975 Geologist, Dolmage Campbell & Associates.
Diamond Drilling of Hat Creek Coal Deposit
- vi 1975-1976 Geologist, Kerr Addison Mines,
Feasibility & Exploration, Grum Joint Venture
- vii 1976-1977 Geologist, Dolmage Campbell & Associates.
Hat Creek Coal Deposit.
- viii 1977-1978 Project Geologist, Chinook Construction & Engineering
Ltd., Prospecting, Property Work and Evaluation -
Uranium in B.C. and Colorado Plateau.
- ix 1978 to Present Self-employed geologist and prospector

- c) I am
- i) a Fellow of the Geological Association of Canada
 - ii) an Engineering Pupil of the Association of Professional Engineers of B.C.


A.M. de Quadros