DOLMAGE CAMPBELL & ASSOCIATES LTD.
CONSULTING GEOLOGICAL & MINING ENGINEERS
1000 GUINNESS TOWER
VANCOUVER 1, B.C.

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MINING RECORDER
LAND AGENT
MAYO, Y.T.
I.A. & N.D.

Mark V Petroleums and Mines Ltd.

Vancouver, B.C.

GEOCHEMICAL REPORT

on the

MAR MINERAL CLAIMS

MAR 1-48 inclusive
NTS Claim Sheets 106 E 1 and 2
Mayo Mining Division

Supervision and Report
by
R.S. Adamson, P. Eng.

January 20, 1977

RECEIVED
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MINING
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WHITEHORSE, Y.T.

Office Of The Supervising Mining Recorder
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WHITEHORSE
Yukon Territory

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 $ 5441.55

Resident Geologist or
~~Resident Mining Engineer~~

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

B.R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

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INTRODUCTION

A geochemical soil survey and prospecting program was carried out on a portion of the Mar Claim Group by Donegal Developments Ltd. of Vancouver, B.C., during the period August 20 to September 3, 1976. The Mar property (Figure 2) comprises 48 Mar mineral claims. The soil survey was conducted over that part of property shown on Figure 2. A total of 293 soil samples were collected and each analyzed for copper and uranium content. The geochemical and prospecting program was supervised by Dolmage Campbell and Associates Ltd.

LOCATION and ACCESS (65° 05'N., 134° 30'W.) (Figure 1)

The Mar property is located in the Quartet Lakes region on the Bonnet Plume River in the northern Yukon Territory. The property, situated 115 miles northeast of Mayo, lies due west of a group of small lakes known as Quartet Lakes. Access to the property is best accomplished by fixed wing aircraft directly to Quartet Lakes. The property can be easily reached by a short walk from any one of the four lakes, (Figure 2).

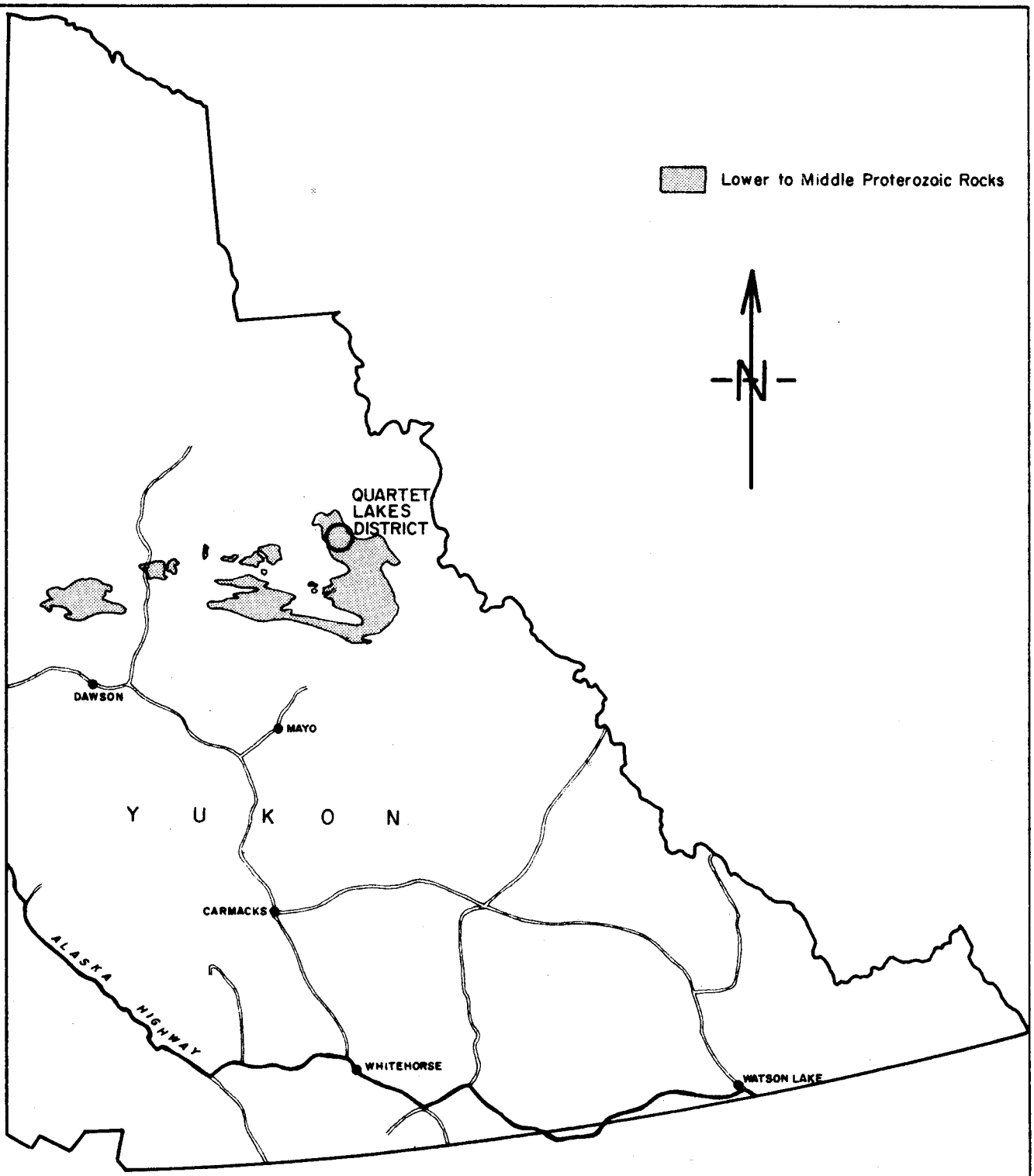
TOPOGRAPHY

The Mar property predominantly is underlain by the southern half of a rugged mountainous mass which rises sharply from the wide flat valley that contains Quartet Lakes. The western boundary of the geochemical survey (Figure 2) approximates the mountain valley interface. Elevations on the property range from approximately 2,000 feet at Quartet Lakes to in excess of 5,500 feet in the centre of the property. The mountainous mass consists of almost all outcrop whereas the valley bottom contains no outcrop. The geochemical survey therefore was conducted only over the valley bottom. The remainder of the property was, in part, visually prospected.

GEOLOGICAL SETTING

The regional geology of the Bonnet Plume River area has been presented in three publications of the Geological Survey of Canada. They are:

1. Geology of Nash Creek, Larsen Creek and Dawson Map Areas, Y.T. by L.H. Green, 1972, Memoir 364



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON

R S Adamson

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS
VANCOUVER, CANADA

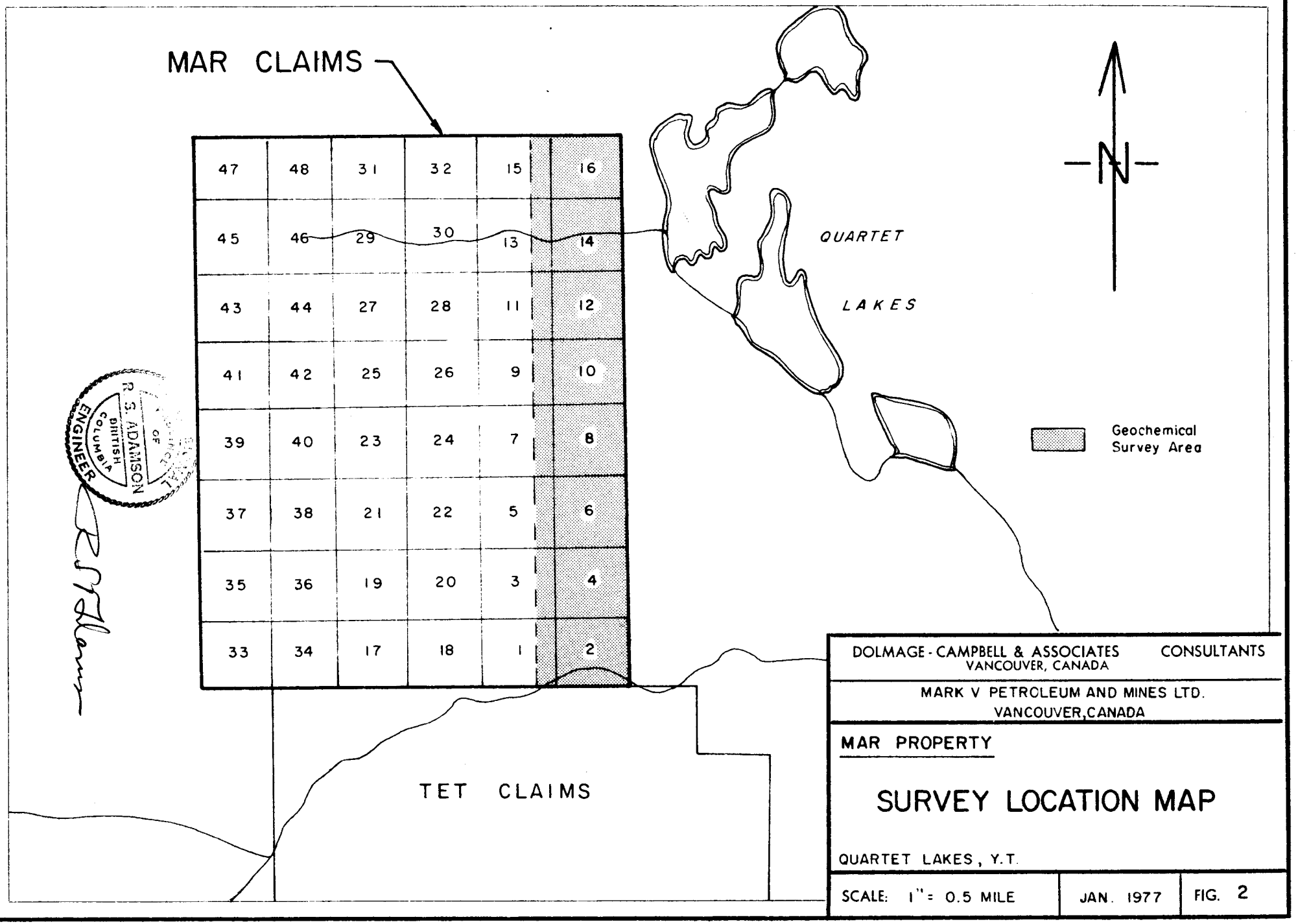
MARK V PETROLEUMS AND MINES LTD.
VANCOUVER, CANADA

QUARTET LAKES DISTRICT

LOCATION MAP

YUKON TERRITORY

SCALE: 1" = 80 MILES	JAN. 1977	FIG. 1



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MAR PROPERTY

SURVEY LOCATION MAP

QUARTET LAKES, Y.T.

SCALE: 1" = 0.5 MILE	JAN. 1977	FIG. 2

2. Geology of Nadaleen River and Bonnet Plume Lake Map Areas, Y.T., by S. Blusson, 1975, Open File 205

3. Geology of Snake River and Wind River Map Areas, Y.T., by D.K. Norris, 1975, Open File 279.

The Quartet Lakes region is underlain by meta-sedimentary rocks of Helikian age, which represent some of the oldest known rocks in the Yukon. The meta-sedimentary sequence comprises two conformable, but distinguishable, units. The lower unit consists of a basal formation of chlorite schist and calc-silicates (may be Aphebian) overlain by a succession of slates, argillites, phyllites, and quartzites with interbedded dolomite. The upper unit consists of thickly bedded, orange-weathered dolomite. The base of the upper unit is a series of alternating buff-weathering dolomites and interbedded slates and quartzites. Numerous irregularly-shaped breccia zones are erratically distributed throughout the Helikian meta-sedimentary rocks. In the vicinity of Quartet Lakes the meta-sedimentary formations have been gently to moderately folded along both northerly and easterly axes.

On the Mar property exposed rock types are predominantly inter-bedded quartzite and argillite which generally dip moderately northwestward.

GEOCHEMISTRY

Sampling control was initially established by chaining a baseline along one of the property claim location lines as shown on Figure 3. Lines were established by compass and flagging perpendicular to the baseline at 400 foot intervals. Sample stations were established by chaining along the cross lines at 200 foot intervals.

A total of 293 samples was collected, mostly from the B horizon, at an average depth of 6 inches.

The samples were packaged in standard high wet-strength brown paper sample bags and sent to Barringer Research laboratory in Whitehorse, Y.T. for analysis. They were dried in a fireproof, thermostatically controlled, electrically-heated oven for 24 hours at a temperature of 150°F. in the original sample bags. The dried samples were then screened through a 6 inch diameter No. 80 screen, consisting of a stainless steel mesh in a nylon frame. The minus 80 fraction was then analyzed for copper using standard atomic absorption techniques and for uranium using fluorometric methods.

RESULTS

The results of the geochemical survey are shown on Figures 3 (copper) and 4 (uranium). The results were contoured to endeavour to outline

anomalous conditions.

CONCLUSIONS

As shown on Figure 3, five copper anomalous areas (A to E) are evident within the surveyed area. Values in excess of 75 ppm copper appear to be anomalous. On Figure 4 uranium values in excess of 1.0 ppm occur as three broad trends. The southern trend appears to be associated with copper anomalies C and D; the centre trend with anomaly D; and the northern trend with anomalies A and E. Each of these three groups coincides, more or less, with outwash debris from three steeply-incised creeks which drain the mountainous mass to the west. This phenomenon indicates the anomalous copper uranium trends reflect transported material whose source lies in the high outcrop area to the west.

Preliminary prospecting of these three creeks has revealed minor amounts of copper and uranium float.

RECOMMENDATIONS

It is recommended therefore that more intense visual prospecting of the extensive outcrop areas on the claim block be carried out.

Respectfully Submitted,

DOLMAGE CAMPBELL AND ASSOCIATES LTD.

R.S. Adamson, P.Eng.

RSA/md

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of

I, ROBERT S. ADAMSON

of 1000 - 1055 West Hastings Street, Vancouver, British Columbia V6E 2E9

in the Province of British Columbia, do solemnly declare that

Expenditures for Geochemical Survey work performed on the MAR Claim Group between August 20 and September 3, 1976 are as follows:

a) Wages: P. Renouf 14 days @ $50 K. Hampton 14 days @ $50	$1400.
b) Supervision: R.S. Adamson 5 days @ $200	1000.
c) Maintenance: 33 man days at $10 per day	330.
d) Charter Aircraft	495.60
e) Geochemical Assaying: 293 samples at $4.15	1215.95
f) Typing, Secretarial, Draughting	200.
g) Report Writing: R.S. Adamson	800.
	$5441.55

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 27th day of JANUARY, 1977, A.D.

R S Adamson

Anthony J. Jasek

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

LIST OF PERSONNEL

P. Renouf 705 - 850 W. Hastings St. Vancouver, B.C.	Soil Sampler	Aug. 20 - Sept. 3, 1976
K. Hampton 705 - 850 W. Hastings St. Vancouver, B.C.	Soil Sampler	Aug. 20 - Sept. 3, 1976
R.S. Adamson, P.Eng. 1000 - 1055 W. Hastings St. Vancouver, B.C.	Geologist (Supervision and Report)	Aug. 20 - Aug. 24, 1976 Jan. 17 - Jan 20, 1977

R. S. ADAMSON
PROFESSIONAL ENGINEER
BRITISH COLUMBIA

FIGURE 3

MARK V PETROLEUMS & MINES LTD

MAR CLAIM GROUP

QUARTET LAKES AREA

GEOCHEMICAL SURVEY

COPPER IN PPM

SCALE

400 300 200 100 0 400 800 FEET

WORK BY DONEGAL DEVELOPMENTS

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. S. ADAMSON

FIGURE 4

MARK V PETROLEUMS & MINES LTD.
MAR CLAIM GROUP
QUARTET LAKES AREA
GEOCHEMICAL SURVEY
URANIUM IN PPM

SCALE
400 300 200 100 0 400 800 FEET

WORK BY DONEGAL DEVELOPMENTS