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

5252

93N/13E
& 94C/4E

GEOCHEMICAL REPORT ON FLAME MINERAL CLAIMS

FLAME 1 - 64 INCLUSIVE
CLAIM SHEETS 93/N13E and 94C/4E

HAHA CREEK AREA B.C.

OMINECA MINING DIVISION
56° 00' N. LAT., 125° 36' W. LONG.

N.T.S. MAPS 93N and 94C

OWNER OF CLAIMS
L. M. HART

SUPERVISION AND REPORT BY:
R. S. ADAMSON, P.ENG.

WORK COMPLETED: PERIOD 8th - 30th JULY, 1974

NOVEMBER 8, 1974

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

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

INTRODUCTION

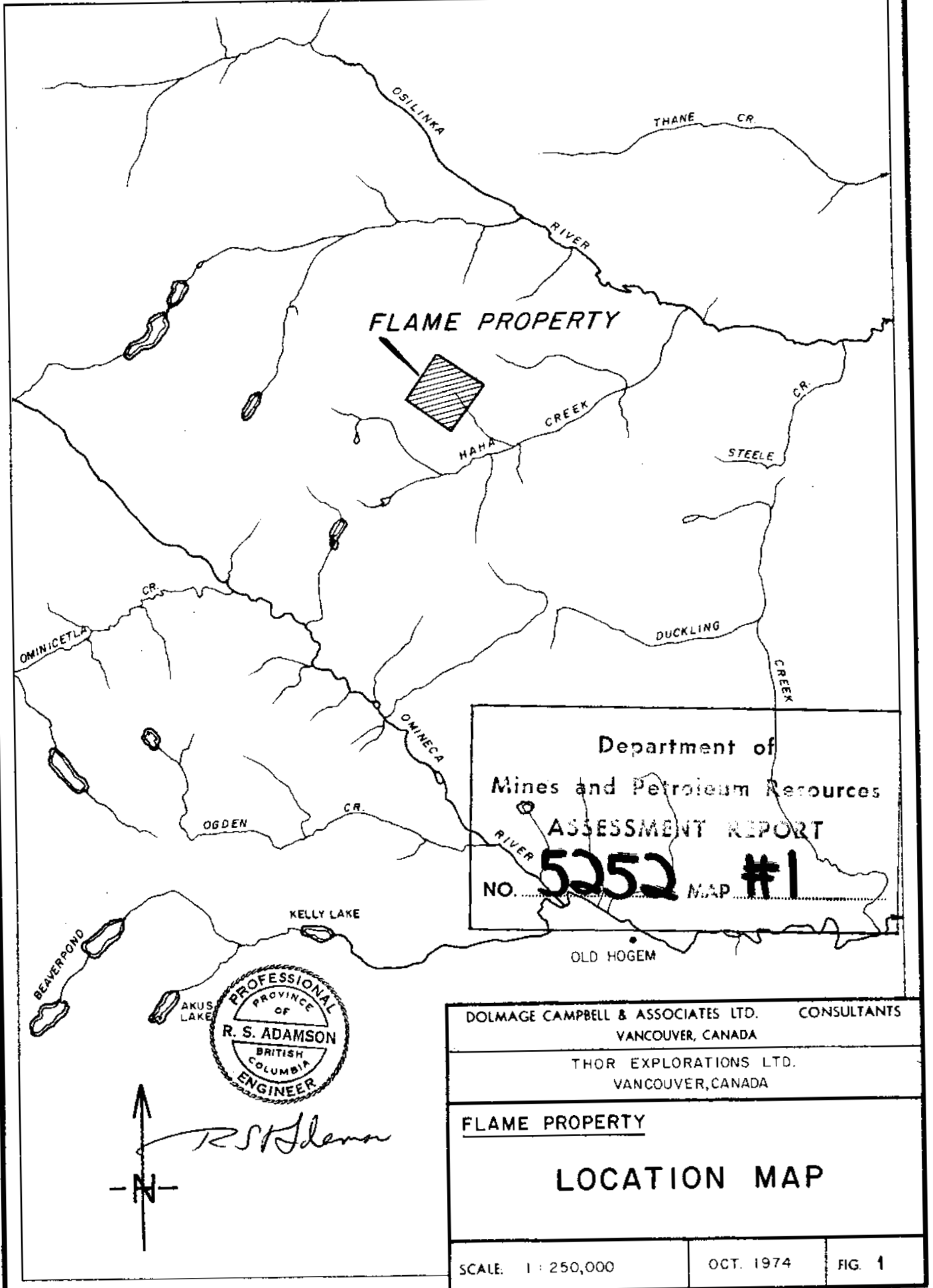
A combined magnetometer and geochemical soil survey was carried out over a cut line grid on the FLAME claims during the period July 8th to July 30th, 1974. The FLAME property (Figure) comprises FLAME claims 1-64 inclusive, and the survey covers the claims shown. A total of 1,310 soil samples was collected and each assayed for copper, zinc and molybdenum. The combined survey was conducted by Donegal Developments Ltd. of Vancouver, B. C. under the direction of the writer.

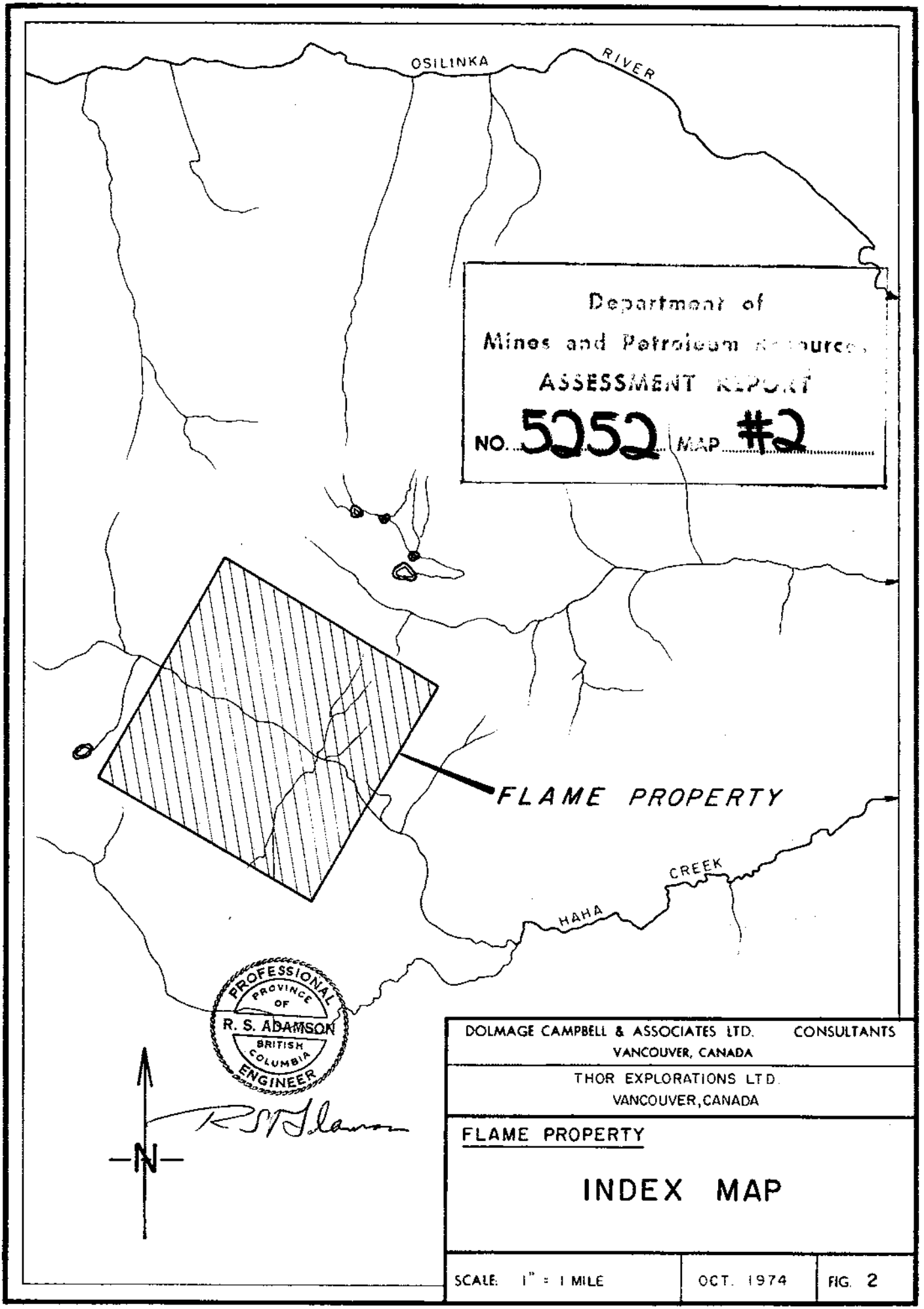
LOCATION AND ACCESS: (56°00'N, 125°36'W) (Figure 1)

The Flame property is located 10 miles northeast of the Omineca River and 38 miles west-northwest of the small community of Germansen Landing in north-central British Columbia. It is about 175 miles northwest of Prince George. The only means of access at present is by helicopter although a road, less than 20 miles in length, could be constructed without great difficulty from the Uslika Lake road at a point some 35 miles northwest of Germansen Landing.

TOPOGRAPHY: (Figure 2)

The property straddles a glaciated, U-shaped valley, its northeast and southwest boundaries lying approximately along the ridge crests on either side. A stream drains to the southeast through the centre of the claim block in the valley bottom. Some rock is exposed on the ridge crests but for the most part the claims are covered with overburden. Elevations range from about 4500 ft. to 5500 ft. with the lower half covered by scrub timber and brush.


OSILINKA
RIVER
THANE CR.
FLAME PROPERTY
HAHA CREEK
STEELE CR.
OMINICETLA CR.
DUCKLING CREEK
OMINECA RIVER
OGDEN CR.
KELLY LAKE
BEAVERPOND
AKUS LAKE
OLD HOGEM
N
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5252 MAP #1
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON
R S Adamson
DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS
VANCOUVER, CANADA
THOR EXPLORATIONS LTD.
VANCOUVER, CANADA
FLAME PROPERTY
LOCATION MAP
SCALE: 1 : 250,000
OCT. 1974
FIG. 1



DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS
VANCOUVER, CANADA

THOR EXPLORATIONS LTD.
VANCOUVER, CANADA

FLAME PROPERTY

INDEX MAP

SCALE: 1" = 1 MILE	OCT. 1974	FIG. 2

GEOLOGICAL SETTING

REGIONAL GEOLOGY

The Flame property lies within the Swannell Range of the Omineca Mountains. The core of the range is made up of rocks of the Omineca intrusions which form a composite batholith of Early Jurassic (?) to Early Cretaceous age that intrudes sedimentary, volcanic, and metamorphic rocks ranging from Proterozoic to Early Jurassic. The principal intrusive body in the present area of interest is the Hogem batholith, a northwesterly trending, elongate body bounded to the southwest by the Pinchi fault and varying from 4 to 25 miles in width.

The major feature of this portion of the Hogem batholith is an elongate body of syenite which intrudes basic rocks ranging from diorite to monzonite. Lenses of pyroxenite and older schists and gneisses, (basement rocks), are enveloped by the syenite intrusion. The syenite, which has been named the "Duckling Creek Syenite Complex", varies considerably in grain size, texture, mafic content, and specific mineralogy.

Mappable lenses and small irregularly shaped bodies of pyroxenite are enveloped and cut by the syenite. The pyroxenite seems to be spatially associated with lenses of well-developed schists and gneisses which are also surrounded and intruded by foliated syenites. Outcrops of schist-gneiss and pyroxenite and more evident at lower topographic levels, suggesting increased distribution at depth.

The consistent northwest parallelism exhibited on an outcrop scale by syenite foliations and on a regional scale by foliation belts associated with the syenite borders and areas around the lenses of foliated basement rocks, together with the northwest elongate configuration of the syenite body, suggest that its emplacement was controlled by an underlying pre-existing structural trend, a trend parallel to but northeast of the Pinchi fault. This direction, (NW), correlates with linear magnetic highs on the aeromagnetic map of the area.

Indications of mineralization in the form of malachite stained fractures and rare disseminated chalcopyrite grains are widespread in the vicinity of the Ducking Creek Syenite Complex. Two types of mineralization are evident. The first type, of lesser importance in the present case, is spatially associated with the Hogem-Takla contact zone. It consists of copper mineralization in the form of massive stringers and disseminations in altered fractured zones within the volcanic rocks as well as disseminations in syenite and monzonite dikes cutting Takla volcanics. The second type is spatially associated with the Duckling Creek Syenite Complex and consist of disseminated sulphides occuring most commonly in syenite hybrid rocks, (fine to medium grained meso-to melanocratic potash feldspar rock), and in potash feldspar enriched stringers and fracture fillings cutting the syenite. Chalcopyrite and less abundant

bornite are the dominant sulphides; magnetite is a common accessory mineral. Disseminated chalcopyrite also occurs in some of the basement schists. As well as chalcopyrite and bornite, other copper minerals reported to occur in the complex are chalcocite, covellite, chrysocolla and cuprite.

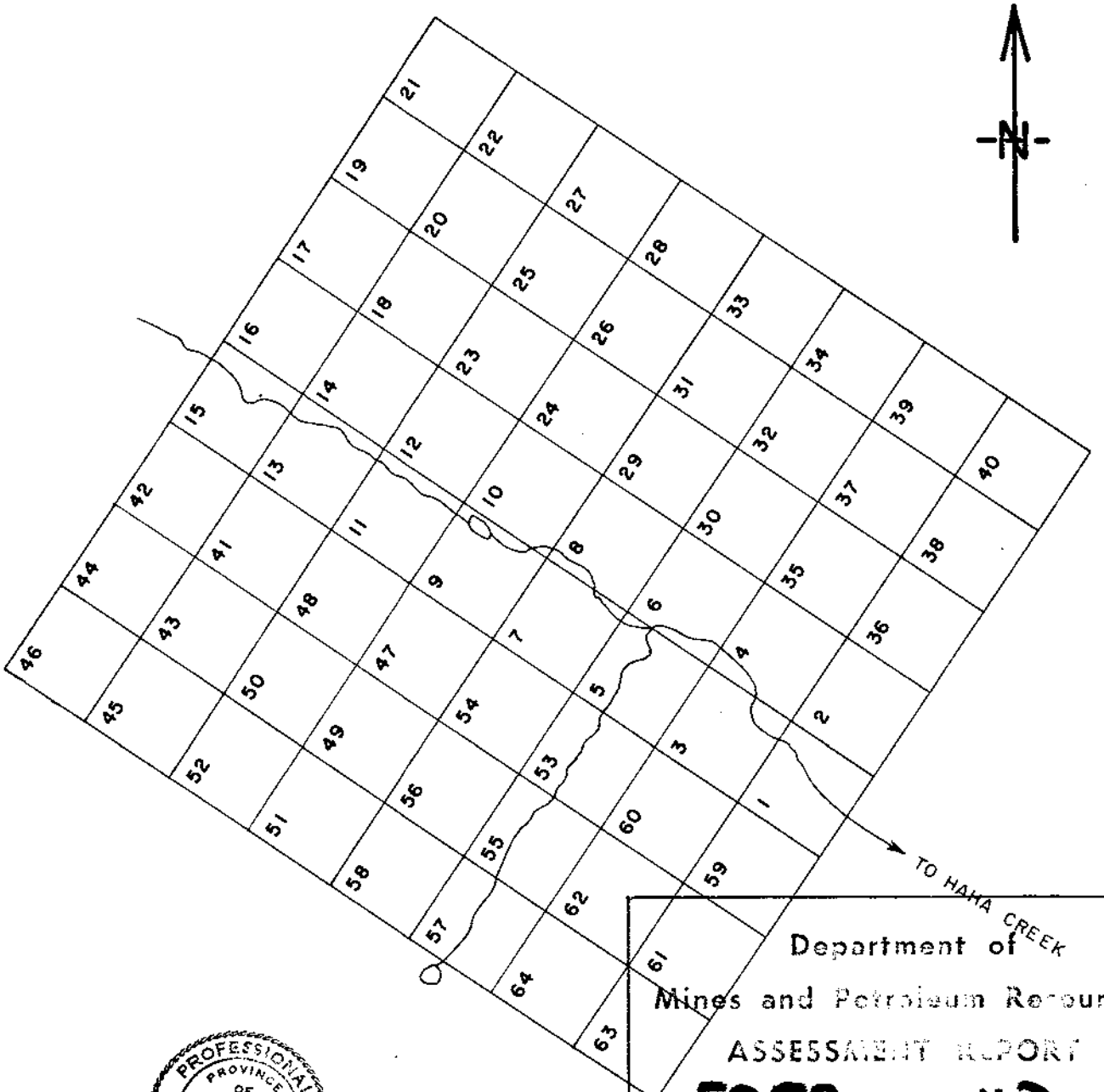
PROPERTY GEOLOGY

The Flame property has not been geologically mapped in detail. Outcrops are few except along the two ridges which flank the property along its southwest and northeast boundaries. A ground magnetic survey carried out concurrently with the geochemical soil survey gives an indication of the nature of the underlying lithology and structure.

On the basis of the ground magnetics, rock samples from outcrops along the ridges, and the regional geology of the district it is evident that, for the most part, the property is underlain by differentiated intrusive phases of the Hogem batholith. The area of magnetic highs (+2000 gammas) is interpreted as a cluster of syenite plugs intrusive into intermediate phases, denoted by a broad zone of moderate magnetics (in excess of 0 gammas). The interpreted syenite intrusives are of economic interest as copper occurrences of a porphyry type are known to be associated with syenite elsewhere in the district.

MINERAL OCCURRENCES

The property has been prospected, but not in detail. Chalcopyrite, bornite, and molybdenite occur locally, erratically distributed in outcrop and as float on the property. Nowhere has it yet been discovered in economic amounts, but the outcrops are sparse on most of the property and more prospecting is required.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5252 MAP #3

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON

R S Adamson

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS
VANCOUVER, CANADA

THOR EXPLORATIONS LTD.
VANCOUVER, CANADA

FLAME PROPERTY

CLAIM MAP

SCALE 1" = 2500'	OCT. 1974	FIG. 3

GEOCHEMISTRY

SAMPLING TECHNIQUES

Sampling control was established from a grid, surveyed in by transit, with cut, chained and picketed lines. Sample lines at 400' spacing (see Figures 4, 5, 6) were set perpendicular to surveyed base and tie-in lines, and samples were taken at 200' intervals. Where sample lines were not cut and picketed, fill in sample lines were compassed, chained and flagged as sampling progressed.

A total of 1310 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 kraft paper sample bags and sent to CHEMEX LABS LTD. of N. Vancouver, B. C. 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 mylon frame (manufactured by Miners and Prospectors Supply Inc. of California.) The minus 80 fraction was then analysed for copper, molybdenum and zinc using standard atomic absorption techniques.

RESULTS

The results of the geochemical soil survey are shown on Figures 4 (copper), 5 (molybdenum), and 6 (zinc). Contour intervals are as shown on individual maps.

CONCLUSIONS

Anomalous copper values in soils occur in a zone in the north central sector of the property; generally extending from line 100 north to line 140 north and from 92 east to 124 east. Anomalous molybdenum values tend to be erratic and are only weakly supportive of the anomalous copper zone. Zinc values are weak and are economically insignificant.

Of potential economic interest is the spatial relationship of the anomalous copper zone with the cluster of magnetic anomalies. Because copper mineralization is known to occur on the property, and because copper mineralization in the district is frequently associated with syenite intrusives in the district, it is evident that further work is warranted with a view to determining whether a prphyry-type copper deposit exists in the immediate vicinity of the combined copper geochemical and magnetic anomaly.

RECOMMENDATIONS

An induced polorization survey is proposed to investigate the above magnetic and geochemical zone. The results of this geophysical survey will aid in defining precise diamond drill targets.

Respectfully submitted by

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON

R. S. Adamson, P.Eng.

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

In the Matter of
THE FLAME CLAIM GROUP

I, R. S. ADAMSON,

of 1000 - 1055 West Hastings Street, Vancouver, B.C.

in the Province of British Columbia, do solemnly declare that

Expenditures for combined GEOCHEMICAL and GEOPHYSICAL work performed on the FLAME Claim Group between July 8th and July 30th, 1974 are as follows:

GEOCHEMICAL and GEOPHYSICAL SURVEY COSTS (INCLUDING LINE CUTTING) AS PER DONEGAL DEVELOPMENTS LTD. INVOICE OF AUGUST 6, 1974	$ 9,902
HELICOPTER	2,799
ASSAYING (CHEMEX LABS)	2,652
TYPING, SECRETARIAL and DRAUGHTING	200
SUPERVISION	1,400
REPORTS	1,000
	$ 17,953

NOTE: Total cost is for geochemical and geophysical work carried out simultaneously, as described in this geochemical report and accompanying geophysical report. Field costs on a line mile basis for the geochemical survey are shown on the attached contractor's statement.

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 12 day of November 1974, A.D.

R S Adamson

Joan Lunka

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

Sub-mining Recorder

Donegal Developments Ltd.

PHONE: 327-8060

5050 Fraser Street,
Vancouver 10, B.C.

August 6, 1974

Dolmage Campbell & Associates Ltd.,
1055 West Hastings Street,
Vancouver, B.C.

Attention: Mr. Robert S. Adamson

Subject: Flame Project, Germinson Landing, B.C.

Dear Sirs:

1. Line Cutting: 20.0 miles at $170.00 per mile	$3,400.00
2. Mag Survey: 51.3 miles at $50.00 per mile	2,566.00
3. Soil Sampling: 49.2 miles at $80.00 per mile	3,936.00
Total	9,902.00
Less Advance	3,258.00
Total Owing	$6,644.00

#62

aug. 7, 1974

Yours truly,

CLIENT THOR EX
PROJECT FLAME
COST GROUP
APPROVED RSA

Seamus Young

SY:ek

160 E. PB

156 E

140 E. TIE LINE

148 E

132 E

124 E

100 E. BASE LINE

116 E

108 E

92 E

64 E. W. TIE LINE

76 E

68 E

84 E

60 E

52 E

44 E

40E PB

L. 156 N.

L. 148 N.

L. 140 N.

L. 132 N.

L. 124 N.

L. 116 N.

L. 108 N.

L. 100 N.

L. 92 N.

L. 84 N.

L. 76 N.

L. 68 N.

L. 60 N.

L. 52 N.

L. 44 N.

POND

LAKE

HAHA CREEK

LEGEND

(100) 100 PPM AND ABOVE

224 200 PPM AND ABOVE

546 500 PPM AND ABOVE

CUT, CHAINED AND PICKETED LINE

COMPASS, CHAINED AND FLAGGED LINE

CLAIM POSTS

× ROCK SAMPLES

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. S. ADAMSON

TO ACCOMPANY GEOCHEMICAL REPORT, DATED 8th NOV. 1974 BY R.S. ADAMSON, P. ENG.

DOLMAGE CAMPBELL & ASSOCIATES LTD.

FLAME PROJECT

HAHA CREEK, BC

COPPER GEOCHEMISTRY

FIGURE 4

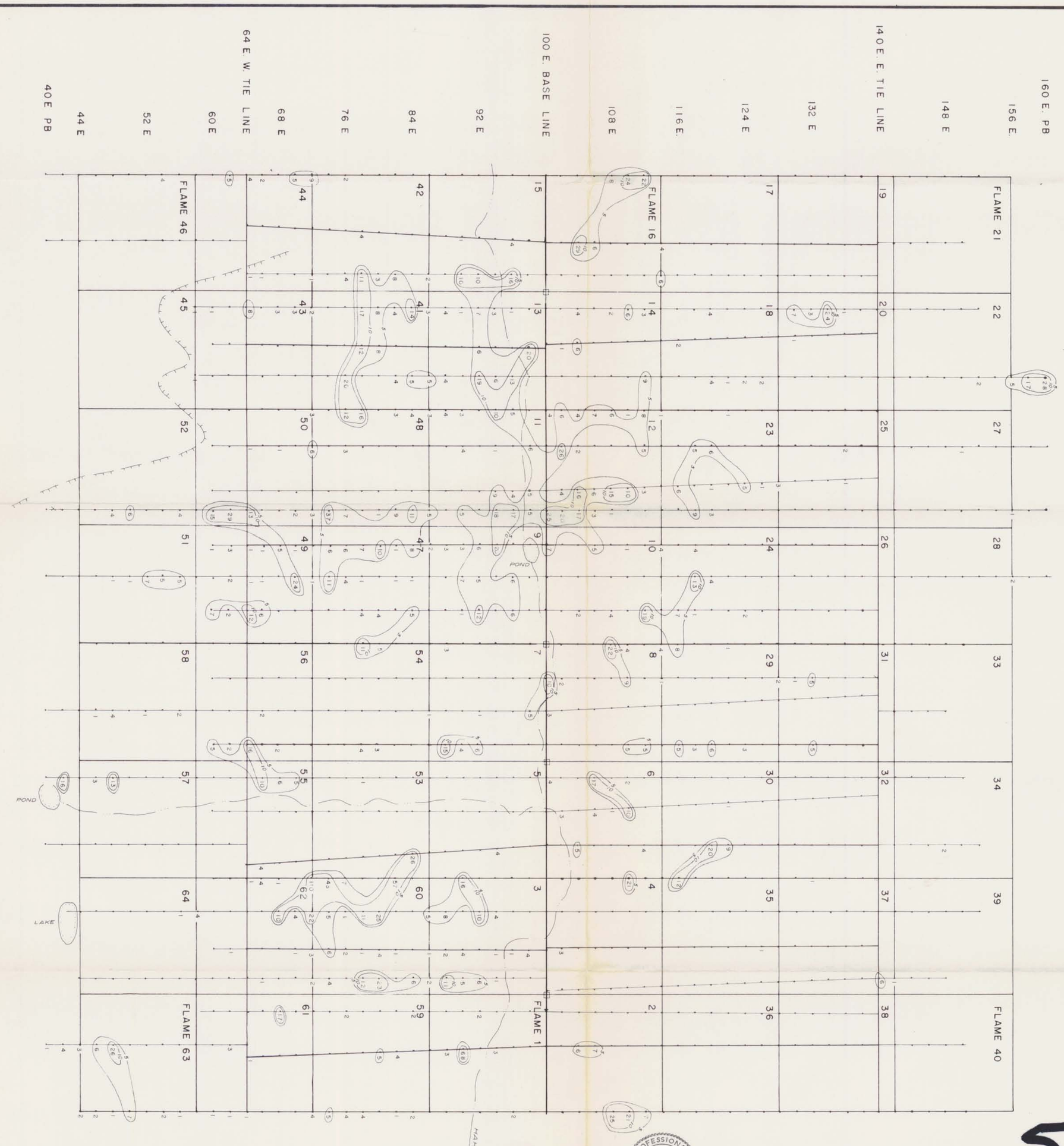
SCALE

FEET 800 0 800 1600 2400 FEET

DONEGAL DEVELOPMENTS LTD.

JULY, 1974

5252 M4



LEGEND

5, 10 PPM AND ABOVE

CUT, CHAINED AND PICKETED LINE

COMPASS, CHAINED AND FLAGGED LINE

CLAIM POSTS

ROCK SAMPLES

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON

TO ACCOMPANY GEOCHEMICAL REPORT, DATED 8th NOV. 1974
BY R.S. ADAMSON, P. ENG.

DOLMAGE CAMPBELL & ASSOCIATES LTD.

FLAME PROJECT

HAHA CREEK, BC

MOLYBDENUM GEOCHEMISTRY

FIGURE 5

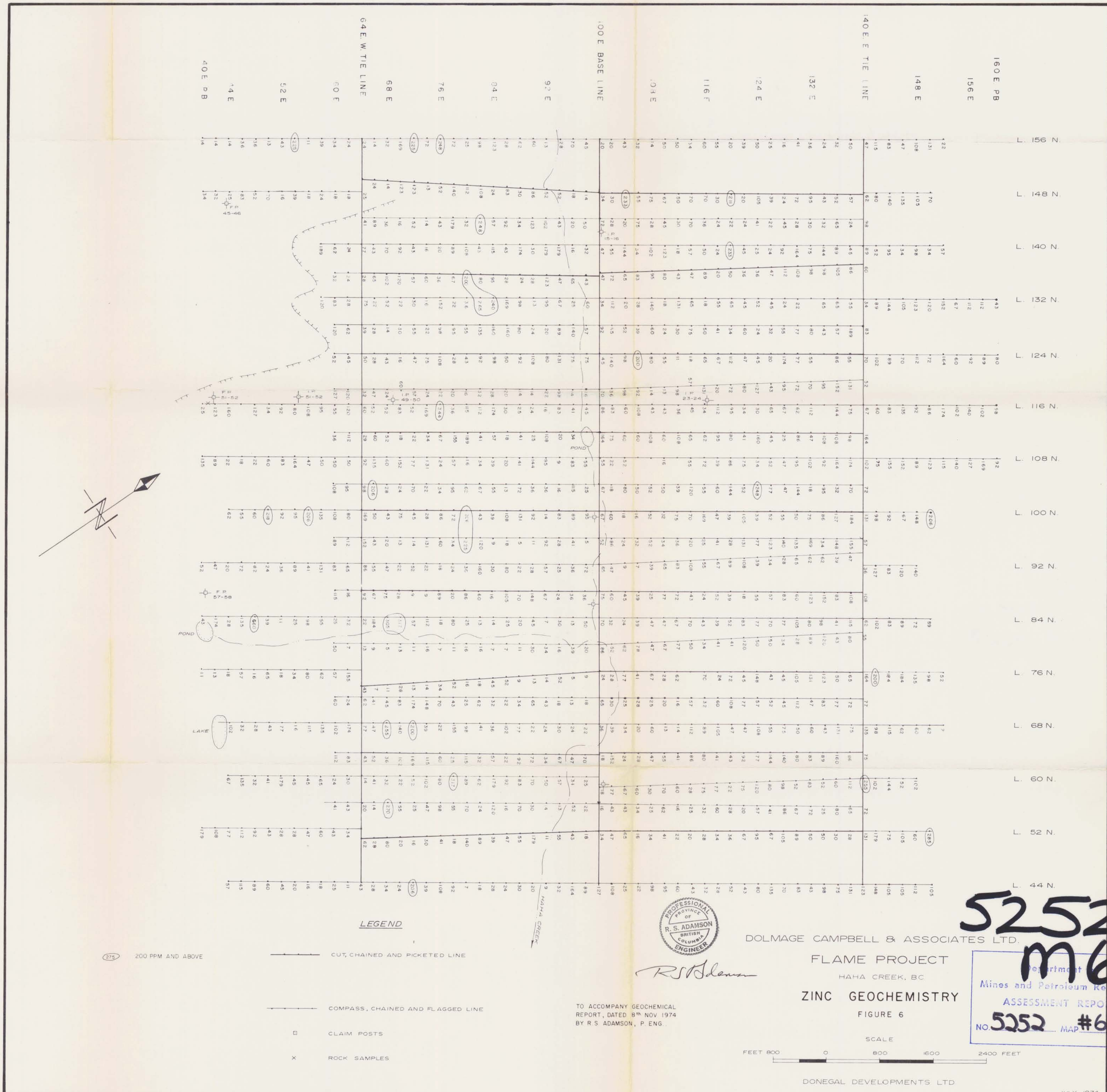
SCALE

FEET 800 0 800 1600 2400 FEET

DONEGAL DEVELOPMENTS LTD

JULY, 1974

5252
MS



64E W. TIE LINE
100E BASE LINE
140E E TIE LINE
160E PB
L. 156 N.
L. 148 N.
L. 140 N.
L. 132 N.
L. 124 N.
L. 116 N.
L. 108 N.
L. 100 N.
L. 92 N.
L. 84 N.
L. 76 N.
L. 68 N.
L. 60 N.
L. 52 N.
L. 44 N.
POND
LAKE
HAHA CREEK
LEGEND
200 PPM AND ABOVE
CUT, CHAINED AND PICKETED LINE
COMPASS, CHAINED AND FLAGGED LINE
CLAIM POSTS
ROCK SAMPLES
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. S. ADAMSON
TO ACCOMPANY GEOCHEMICAL REPORT, DATED 8th NOV 1974 BY R. S. ADAMSON, P. ENG.
DOLMAGE CAMPBELL & ASSOCIATES LTD.
FLAME PROJECT
HAHA CREEK, BC
ZINC GEOCHEMISTRY
FIGURE 6
SCALE
FEET 800 0 800 1600 2400 FEET
DONEGAL DEVELOPMENTS LTD
JULY, 1974
5252 M6
Department Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5252 MAP #6