

DOLMAGE CAMPBELL & ASSOCIATES LTD.

CONSULTING GEOLOGICAL & MINING ENGINEERS

1000 GUINNESS TOWER

VANCOUVER I. B.C.

5251

MAGNETOMETER REPORT
on the
FLAME MINERAL CLAIMS

93N/13E

& 94C/4E

FLAME 1 - 64 inclusive
Claim Sheets 93N/13E and 94C/4E

HAHA CREEK AREA

British Columbia

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 July 8 - 30, 1974

Department of
Mines and Technical Resources November 8, 1974

ASSESSMENT REPORT

NO. 5251

M.P.

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CONSULTING GEOLOGICAL & MINING ENGINEERS

1000 GUINNESS TOWER

VANCOUVER 1, B.C.

INTRODUCTION

A combined magnetometer and geochemical soil survey was carried out concurrently, preceded by the establishment of a transit survey cut line grid over the Flame group of mineral claims. The property comprising 64 located claims was fully covered by the magnetometer survey. The purpose of the magnetometer survey was to aid in mapping the geology of the claims as outcrops are few, occurring primarily along two ridges which flank the property to the southwest and northeast. The survey was conducted by Donegal Developments Ltd. on behalf of Dolmage Campbell and Associates Ltd.

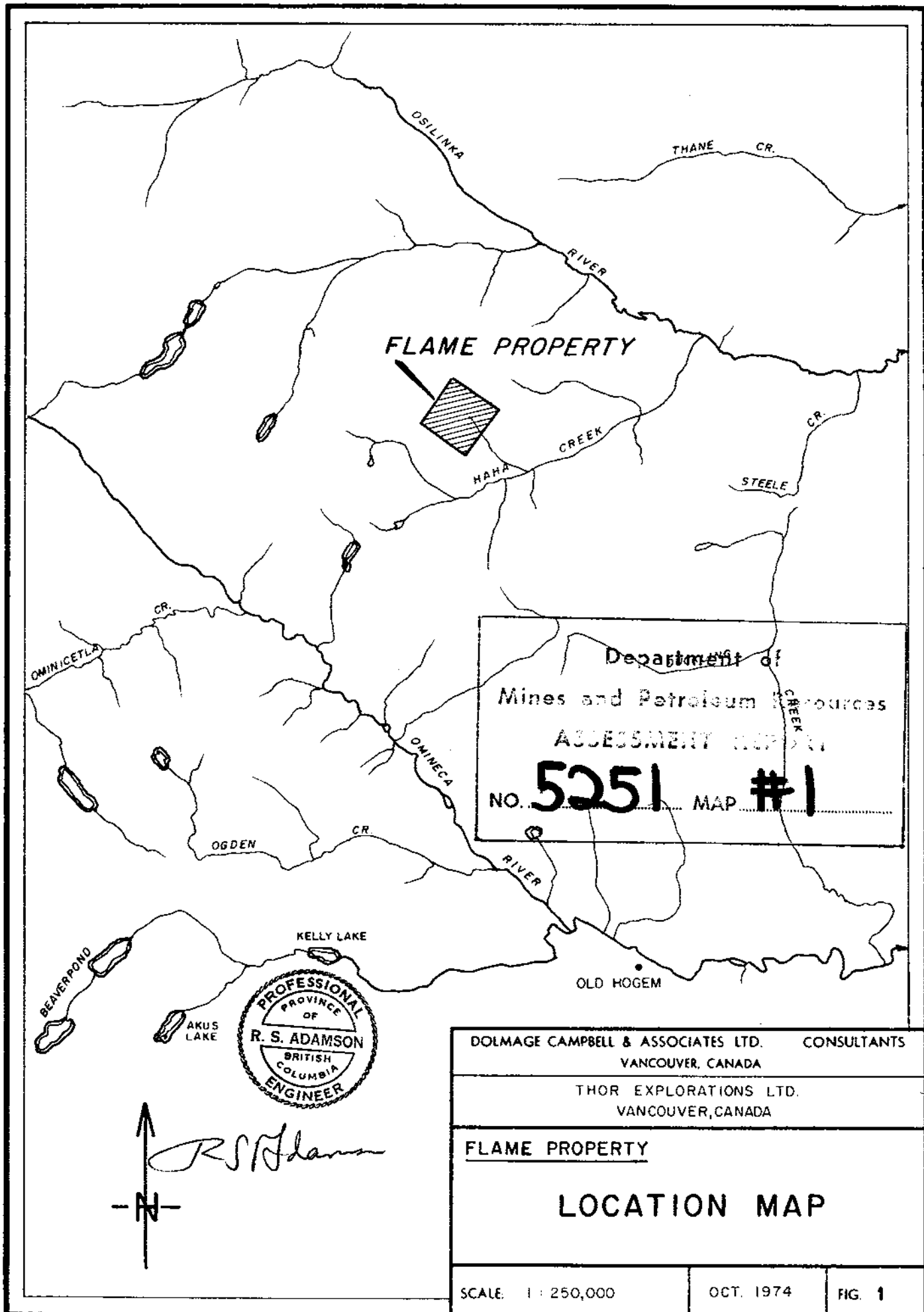
LOCATIONS AND ACCESS (56° 00' N., 125° 36' W.)

The Flame property lies 10 miles northeast of the Omineca River and 38 miles west-northwest of the settlement of Germansen Landing in north-central British Columbia. Access to the property consists of a helicopter flight from a good gravel road 20 miles distant.

PROPERTY

The Flame property consists of 64 contiguous mineral claims encompassing an area of approximately 3200 acres (5 square miles). The claims as are enumerated as follows:

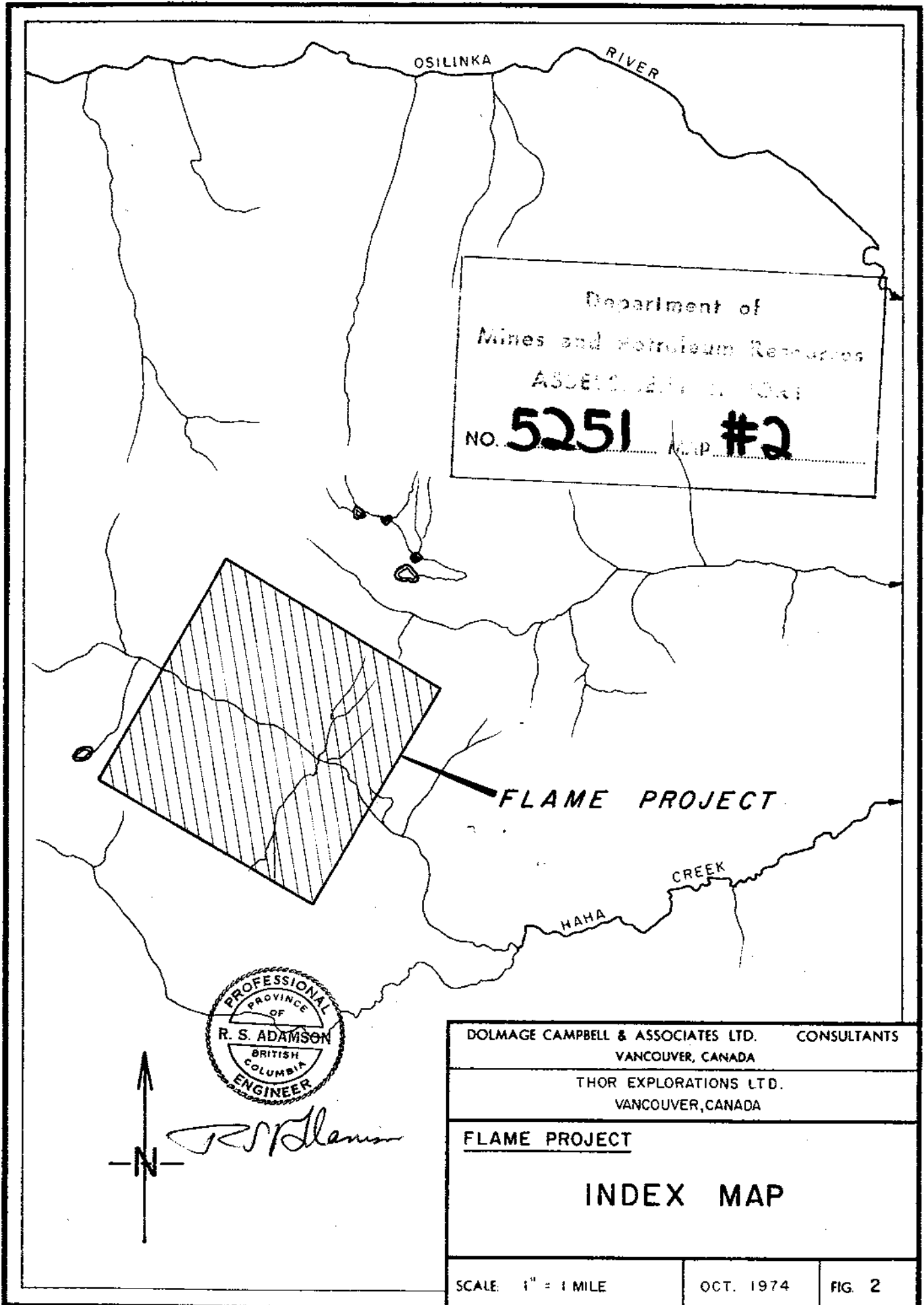
Flame 1 - 64 inclusive; Tag numbers 45201M - 45264M inclusive.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **5251** MAP **#1**

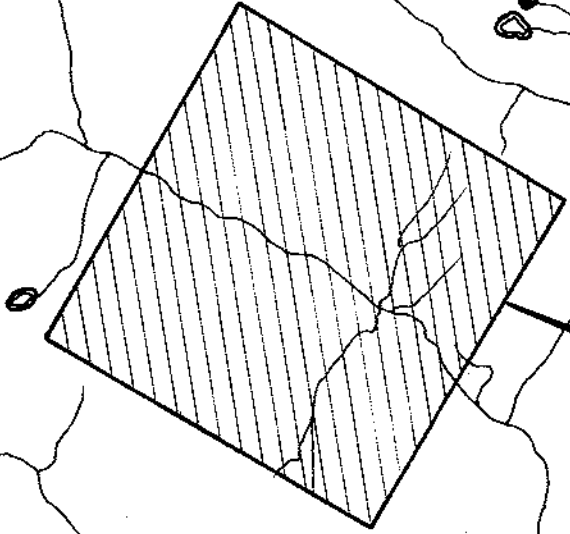
DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
THOR EXPLORATIONS LTD. VANCOUVER, CANADA	
FLAME PROPERTY	
LOCATION MAP	

SCALE: 1 : 250,000	OCT. 1974	FIG. 1
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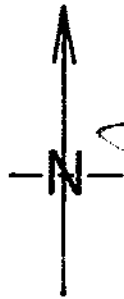
OSILINKA RIVER

Department of
 Mines and Petroleum Resources
 ASSESSMENT NO. 5251 REP. #2



FLAME PROJECT

HAAHA CREEK



R. S. Adamson

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS	
VANCOUVER, CANADA	
THOR EXPLORATIONS LTD.	
VANCOUVER, CANADA	
FLAME PROJECT	
INDEX MAP	

SCALE: 1" = 1 MILE	OCT. 1974	FIG. 2
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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 the Hogen batholith, a northwesterly trending elongate body varying in width from 4 to 25 miles. In the vicinity of Duckling and Haha Creeks an intrusive complex of syenitic composition intrudes the batholith along a north-west alignment. Rocks in the region, therefore, comprise a wide variety of intrusive phases with remnants of older Paleozoic and Mesozoic sedimentary and volcanic rocks. Consequently the geology of the area surrounding the Flame property is very diverse and complex, both lithologically and structurally.

The Flame property has not been geologically mapped. Outcrops occur principally along the two previously-mentioned flanking ridges; they consist of granitic rocks ranging from granodiorite to quartz monzonite in composition. Regional mapping in the area has established the presence of outcrop in a creek in the southern quadrant of the property. The outcrops in the creek consist of foliated basement rocks (schists and gneisses) which are remnant in character with respect to the surrounding granitic rocks. A fault has been mapped, striking S 70° W, on the ridge which occurs on the eastern corner of the property by geologists of the Dept. of Mines and Petroleum Resources.

MINERAL OCCURRENCES

Copper mineralization occurs extensively in the district, associated usually with intrusives of a syenite composition. The Flame property has been prospected but not in detail. However, chalcophyrite, bornite and minor molybdenite occurrences have been found erratically distributed in outcrop and as float on the property, again in the outcrop areas on the flanking ridges.

MAGNETOMETER SURVEY

NATURE OF SURVEY

The magnetometer survey of the Flame Property covered a total of 51.3 miles of grid line. Line interval was at 200 foot spacing except for the peripheral claims where it was reduced to 400 foot spacing for reconnaissance purposes. The station intervals were at 200 feet coincident with the soil sample stations. Base station control was established and diurnal corrections were made to all readings recorded in the field.

The magnetic readings have been contoured at an interval of 1000 gammas. In addition the 500 gamma level was contoured. A plan map (Figure 4) accompanies this report.

The survey was carried out with a McPhar M-700 fluxgate magnetometer Serial No. 7161. The instrument has a maximum sensitivity of 20 gammas per scale division. Field work was carried out in July, 1974.

DISCUSSION OF RESULTS

With reference to Figure 4, three geological lithologies are in evidence on the Flame property, manifested by differing gamma ranges. They have been interpreted in general terms as follows from the regional geology of the area and rock samples taken at random from the property.

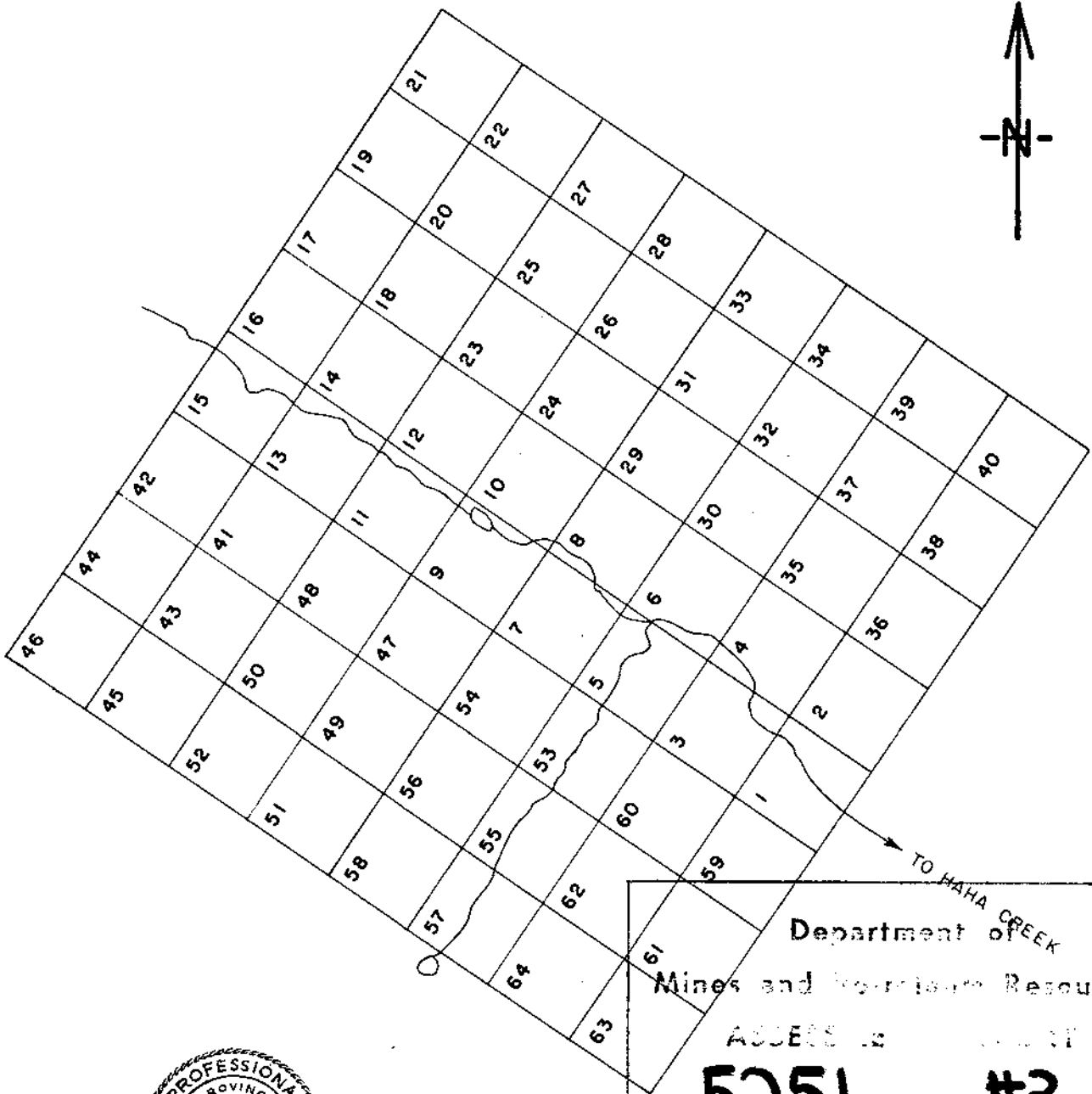
1) Values less than 500 gammas are interpreted as being underlain by granitic rocks ranging in composition from granodiorite to quartz monzonite; texture from very fine grained (aplitic) to very coarse grained.

2) Values from 500 to 2000 gammas are interpreted as being a belt of remnant basement rocks which in the district consist of gneisses and schists with lesser amounts of calcareous metamorphic rocks (skarn etc.)

3) Values greater than 2000 gammas are interpreted as a cluster of syenite intrusions. These bodies occur essentially at the contact between metamorphic rocks (schists and gneisses) and granitic rocks.

The distribution of the above inferred rock units is shown by contouring on Figure 4. The survey area is dominated by a belt of metamorphic rocks, trending northwestward across the property in a belt approximately $\frac{1}{2}$ mile in width. Granitic rocks bound the metamorphic unit. A smaller area of metamorphic rocks lies in the eastern section of the property.

Inferred faults are shown on the accompanying map. The principal structure, verified on the ground from regional mapping in the district, strikes north 70° east. Two subsidiary faults strike N 55° west.



Department of
 Mines and Technical Resources
 ASSESSMENT DISTRICT
 NO. **5251** #3



R. S. Adamson

DOLMAGE CAMPBELL & ASSOCIATES LTD. CONSULTANTS VANCOUVER, CANADA	
THOR EXPLORATIONS LTD. VANCOUVER, CANADA	
<u>FLAME PROPERTY</u>	
CLAIM MAP	
SCALE 1" = 2500'	OCT. 1974
	FIG. 3

CONCLUSIONS

The magnetic anomalies defined by values in excess of 2000 gammas on the basis of the available evidence appear to be a very attractive target for the possible presence of porphyry-type copper mineralization. The geological setting as interpreted is economically promising, comprising a cluster of syenite bodies lying at the contact between metamorphic and granitic rocks. This complex of intrusive and metamorphic rocks appears to be structurally disrupted by intersecting faults. Such a geological setting must be regarded as very favourable, particularly in view of the presence on the property of widespread occurrences of copper mineralization.

Supporting the attractive geology is the presence of anomalous copper values in soils in a zone located downhill from the inferred syenite plugs. In the light of the relatively direct association of anomalous geochemistry with the above geological setting, it is evident that further work on the property is clearly warranted.

RECOMMENDATIONS

An induced polarization survey is proposed to be carried out in 1975. Initially reconnaissance surveys should be carried out over the presently established cut line grid. Special attention with more detailed surveys should be given to the geochemically and magnetically anomalous area.



Respectfully submitted by

A handwritten signature in cursive script that reads "R. S. Adamson".

R. S. Adamson, P. Eng.

Danegal 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	640	2410
2. Mag Survey: 51.3 miles at \$50.00 per mile	2,566.00	1975	1293
3. Soil Sampling: 49.2 miles at \$80.00 per mile	3,936.00	1515	2521
			6222
	Total	9,902.00	
	Less Advance	3,258.00	153
	Total Owing	\$6,644.00	

#62
Aug. 7, 1974
Yours truly,

CLIENT.....Z.HOR. KK
PROJECT.....FLAME
COST GROUP.....
APPROVED.....R.S.A.

Seamus Young

SY:ek

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

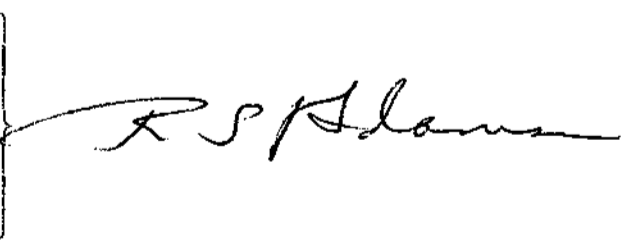
Expenditures for combined GEOCHEMICAL and GEOPHYSICAL work performed on the FLAME Claim Group between July 8th and July 30th, 1974 are as follows:

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	<u>1,000</u>
	\$ 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 magnetometer survey are shown on the attached contractor's statement.

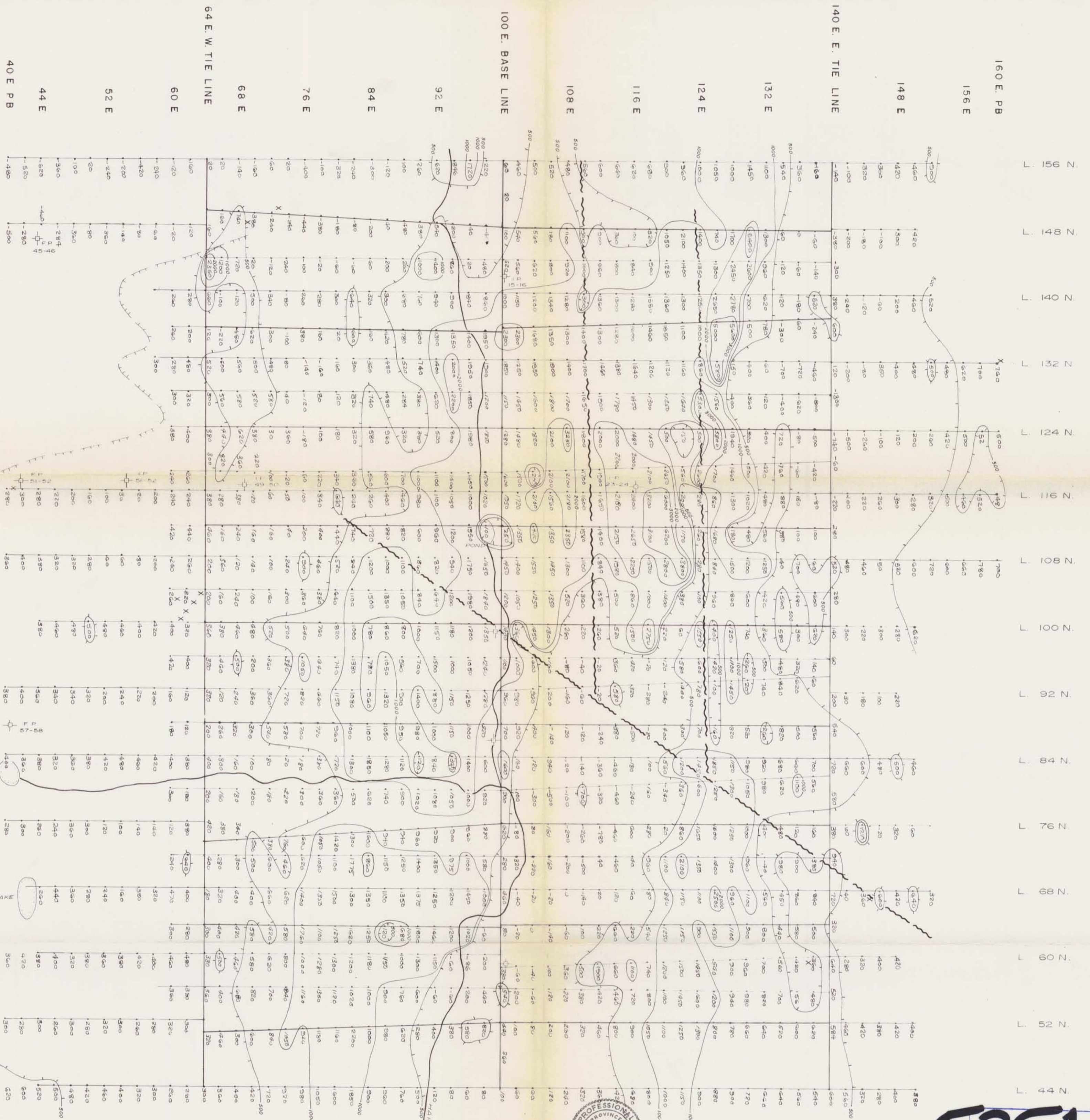
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 12
day of November 1974, A.D.



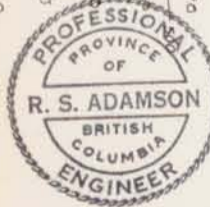
John Curme
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder



LEGEND

- 1000
-500
- CONTOURS, READING IN GAMMAS
- CUT, CHAINED AND PICKETED LINE
- COMPASS, CHAINED AND FLAGGED LINE
- CLAIM POSTS
- ROCK SAMPLES



R.S. Adamson

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

DOLMAGE CAMPBELL & ASSOCIATES LTD.

FLAME PROJECT

HAAH CREEK, BC

MAGNETOMETER SURVEY

READINGS IN GAMMAS

SCALE

FEET 800 0 800 1600 2400 FEET

DONEGAL DEVELOPMENTS LTD

5251 M4
ASSESSMENT #4
NO. 5251 M.P. #4