

84-1014-13169

9/85

GEOCHEMICAL REPORT

on the

ALPHA 2 Claim

CARIBOO MINING DIVISION, BRITISH COLUMBIA

NTS 93A/7E

52°21' North Latitude, 120°38' West Longitude

55 Km due east of Horsefly, B.C.

OWNER OF ALPHA 2 Claim

Amoco Canada Petroleum Company Ltd.  
Suite 300, 89 Queensway West  
Mississauga, Ontario  
L5B 2V2

OPERATOR

Amoco Canada Petroleum Company Ltd.  
Suite 300, 89 Queensway West  
Mississauga, Ontario  
L5B 2V2

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

Report prepared by  
Paul Brown  
August 7th, 1984

13,169 Paul Brown

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## INTRODUCTION

The ALPHA 2 claim consists of 9 units. It is located on the northeast side of the MacKay River Valley in the Cariboo Mining Division, B.C. The L.C.P. for the ALPHA 2 claim is approximately 100 m north of Hawkley Creek and 1.25 km at  $057^{\circ}$  from the confluence of Hawkley Creek and the MacKay River. The location of the LCP for ALPHA 2 has been determined by a British Columbia land surveyor and an approximate tracing of their map at a scale of 1:50,000 showing the ALPHA 2 claim and the surrounding claims is given as Figure 2 in this report.

The ALPHA 2 claim is owned by Amoco Canada Petroleum Company Ltd. and is part of a larger Frasergold property owned by Eureka Resources Inc. The Frasergold property has been optioned by Amoco Canada Petroleum Company Ltd. The author along with three field assistants spent eight man-days during the period June 8th-22nd, 1984, collecting soil samples over the most interesting portion of the ALPHA 2 claim.

The ALPHA 2 claim is situated at the contact between the Omineca Crystalline Belt and the Quesnellia Tectono-stratigraphic Terrane. The claim is underlain by metamorphic sedimentary rocks of the Omineca Belt to the northeast and by volcanic mafic to ultramafic rocks which

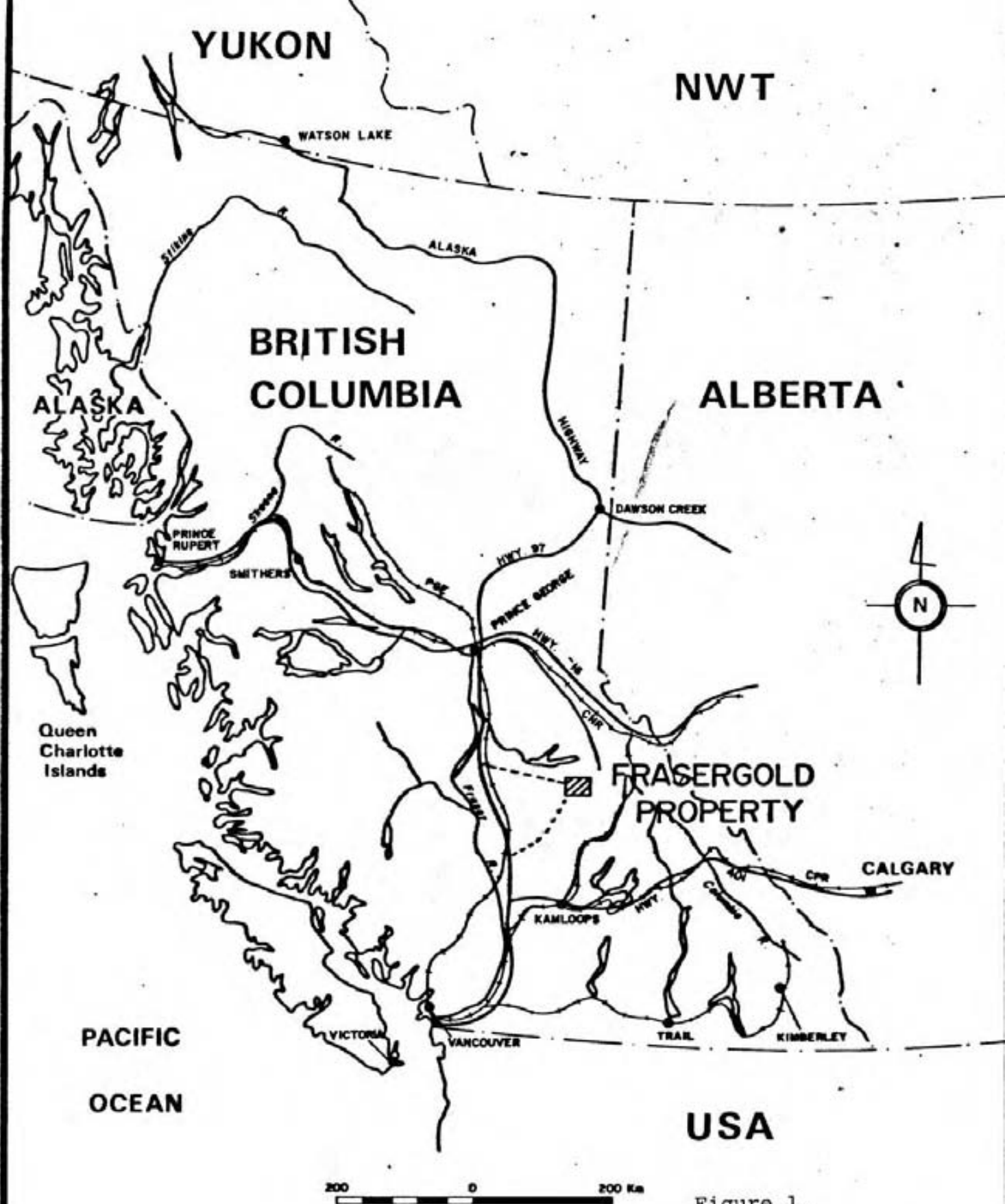


Figure 1.

AMOCO CANADA PETROLEUM CO. LTD.  
MINING DIVISION

**FRASERGOLD PROJECT  
LOCATION MAP**

Drawn By:	W. NOBLE	Scale:	1:7,600,000
Date:	APR/84	Project No:	

are in turn overlain by metasedimentary black phyllite rocks of the Quesnellia Terrane to the southwest.

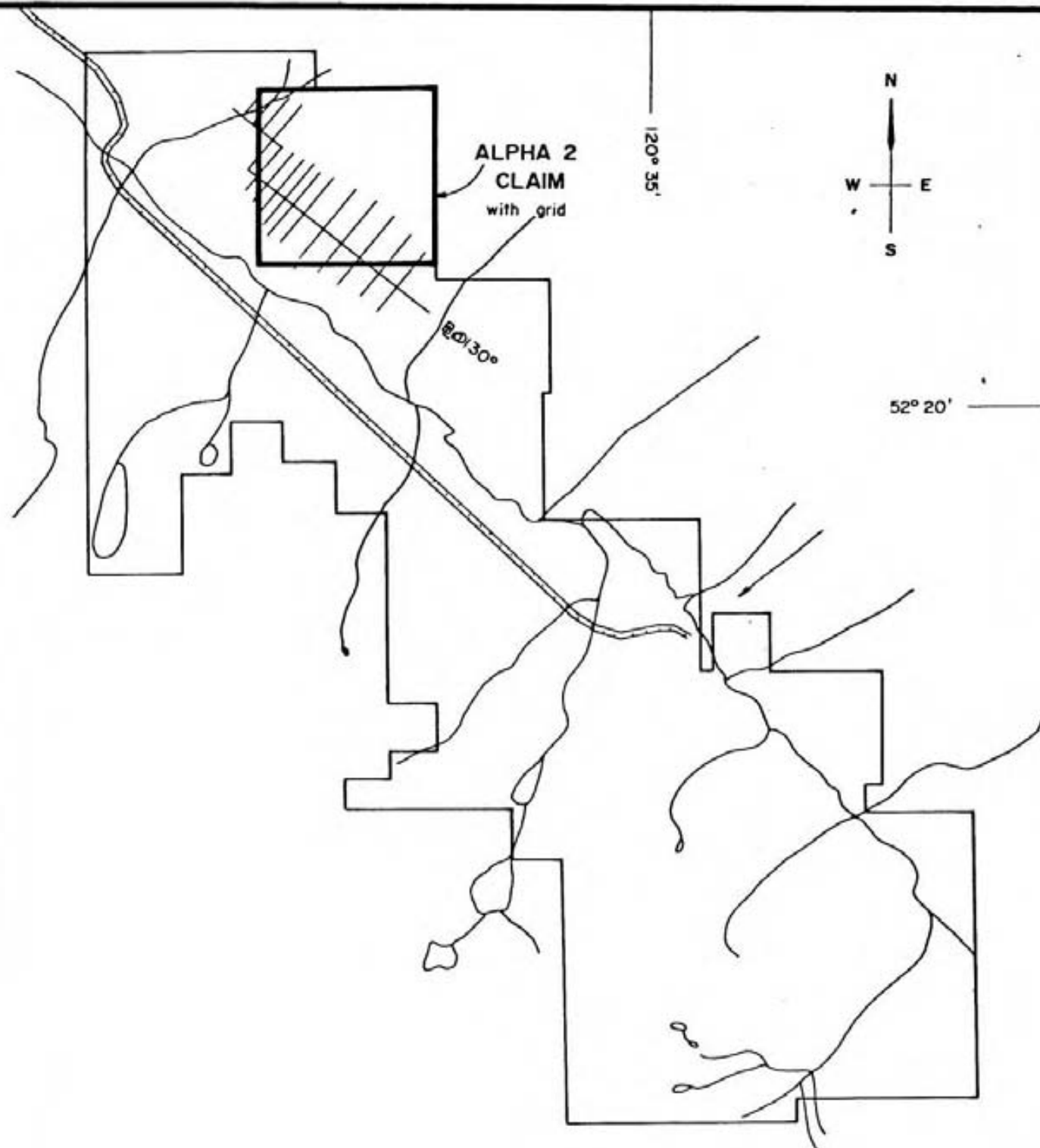
The MacKay River Valley first received attention in the early 1900's when placer gold was found in Frasergold Creek, however, it proved to be uneconomic. Very little exploration work was reported to have been done prior to 1978. Between 1978-1981, anomalous gold values in soil and rock chip samples were encountered between Frasergold Creek and Eureka Brook, by Keron Holdings Ltd.

Amoco optioned the Frasergold property (of which ALPHA 2 claim is now a part) in July 1983. This report describes the results of 251 soil samples collected on the ALPHA 2 claim in June of 1984.



### LOCATION AND ACCESS

The ALPHA 2 claim is located on the northeast side of the MacKay River Valley in the vicinity of Hawkley Creek and Cayuse Creek. This area is on the western flank of the Cariboo Mountains, approximately 55 kms. due east of Horsefly, B.C. The ALPHA 2 claim is located on Claim Map 93A/7E. The NTS co-ordinates for the claim is  $52^{\circ}21'$  North Latitude,  $120^{\circ}38'$  West Longitude.

Access to the claim is by a well maintained all-weather logging road up the northeast side of the MacKay Valley from the main Horsefly River road.



# LEGEND

-  Gravel logging road
-  Grid surveyed using chain and compass NTS. 93A/7E

SCALE: 0 0.5 1.0 2.0 KMS.

FIG. 2

AMOCO CANADA PETROLEUM CO. LTD.

MINING DIVISION

FRASERGOLD PROJECT

ALPHA 2

LOCATION MAP

Drawn by	R.W.N.	Scale	1:50,000
Date	AUG. 84	Project No.	83C-004



During the period, June 8th - June 23rd, 1984, Amoco spent 8 mandays soil sampling on the ALPHA 2 claim, the results of which are presented in this report.

## PHYSIOGRAPHY AND VEGETATION

The ALPHA 2 claim is located on the west flank of the Cariboo Mountains. The claim lies along the north-east side of the MacKay River Valley between Hawkley and Cayuse Creeks. Figure 2. Relief is gentle within the bottom of the MacKay Valley to steep at higher elevations. Relative topographical relief on the ALPHA 2 claim is 700 meters.

Vegetation along the lower reaches of the MacKay River Valley consists primarily of good commercial stands of spruce and balsam with moderate to thick underbrush. Forest cover is lighter above 1,600 meters A.S.L. and alpine vegetation prevails above 1,800 meters. The southwest quarter of the ALPHA 2 claim has been logged, with logging activity still being conducted in the area but not presently on the claim.

CLAIM

This report is on the ALPHA 2 Claim only.

The ALPHA 2 claim consists of 9 units (3 South, 3 East) with Tag Number 80121. The ALPHA 2 claim was staked on September 22nd, 1983 and recorded on September 23rd, 1983. Its record number is 5159.

Amoco Canada Petroleum Company Ltd. is the registered owner of the ALPHA 2 claim.

## GEOLOGY

The Frasergold property is situated along the eastern edge of the Quesnellia Tectonostratigraphic Terrane in the Quesnel Lake map area. The boundary between the Quesnellia Terrane and the western edge of the North American Craton is marked by a thin slice of Slide Mountain Terrane. The Quesnellia Terrane is an island arc assemblage which has been developed on oceanic terrane. Because of sea-floor spreading processes, Quesnellia has been swept eastwards and has collided with the western margin of the North American Craton. This collision has resulted in the obduction of the Slide Mountain Terrane and the eastern portion of the Quesnellia Terrane onto the Omineca Crystalline Belt. The ALPHA 2 claim straddles this contact. The strike of this regional stratigraphy is northwest-southeast.

The northeast half of the ALPHA 2 claim is underlain by the Omineca Crystalline Belt consisting of high grade metamorphic rocks of Hadrynian to Paleozoic age. These rocks have been designated Kaza Group and consist of metamorphic equivalents of sandstone, conglomerate, and grits. Also present are schists, marbles and gneisses. These rocks display evidence of mylonization which is generally more intense westward to its margin with the Slide Mountain Terrane.

The Slide Mountain Terrane is oceanic crust of Mississippian age. The Slide Mountain rocks consist of green to gray-green fine-to-medium grained mafic volcanics, with lesser meta-gabbro and variably altered ultramafic rocks. These rocks also display evidence of mylonization.

Within the ALPHA 2 claim, Slide Mountain rocks form a narrow band 100-200 meters wide.

The southwest half of the ALPHA 2 claim is underlain by Quesnellia Terrane rocks, which is an island arc assemblage developed on oceanic crust (Slide Mountain Terrane) during Early Jurassic to Early Triassic time). These island arc rocks consist of a thick basal phyllite, greenschist sequence which grades upward into alkalic augite porphyry flows, tuffs and breccias. The informal name given to these rocks is Black Phyllite. This name also describes the dominant lithology. Within the ALPHA 2 claim, rocks of the Black Phyllite Group are restricted to the lower portion of the basal greenschist-phyllite sequence. The lustrous black phyllite displays a penetrative crenulation foliation which is subparallel to the strike and dip of the bedding in the phyllite. Small-scale folding is noted axial planar to the foliation. Foliation trends at  $120^{\circ}$  -  $140^{\circ}$  and dips  $45^{\circ}$  -  $90^{\circ}$  to the southwest. The phyllites contain up to 30% translucent

to milky quartz veins which appear to have been strongly shattered and rehealed. These veins have been boudinaged into lenses and pods. Up to 10% pyrite and pyrrhotite are associated with the quartz, often in the selvages of the vein. Up to 5% disseminated and stringer pyrite and pyrrhotite are found in the phyllite.

The regional strike is northwest-southeast and this is maintained on the ALPHA 2 claim. The Black Phyllite rocks form the northeast limb of a northwestward plunging Eureka Syncline. Small-scale folding in the Black Phyllites can be noted, and reflect the larger scale regional structure.

The rocks of interest to Amoco on the ALPHA 2 claim are the mafic Slide Mountain sequence and the immediately adjacent Black Phyllite sequence. The soil overlying these rocks was sampled for its possible gold content.

GEOCHEMISTRY

Prior to Amoco's work in 1984, very little work had been done on the ALPHA 2 claim. Work conducted by the previous owners of the ALPHA claim consisted of very limited soil sampling and a few rock chip samples. Their results did not outline any anomalies.

During the period June 8th to June 22nd, 1984, Amoco Canada performed soil sampling over the most interesting portion of the ALPHA 2 claim. A total of 8 mandays were spent chaining and flagging a grid and collecting 251 soil samples. From L8E to L16E, gridlines are 100 meters apart and from L16E to L28E gridlines are 200 meters apart. On all gridlines, soil samples were collected at 25m intervals.

For control, a baseline at 130° was established. At L11E, the baseline was offset 300 meters to the southwest, from where it extends beyond the south boundary of the ALPHA 2 claim. The baseline and all gridlines were chained, compassed and adequately flagged using fluorescent orange flagging. A total of 6,175 meters of grid line were established within the ALPHA 2 claim.

Soil samples were collected from depths of 10 cm. to 30 cm. with a mattock and stored in kraft paper bags. The "B" horizon was sampled when present, otherwise, the "C" horizon was sampled.

The minus 80 mesh fraction of all samples was analyzed for Au by Min-En Laboratories of North Vancouver, B.C. In a few samples, where there was insufficient minus 80 mesh fraction, the minus 40 mesh fraction was used for analysis.

#### Discussion of Results

Background values for gold on the grid are 5 ppb - 10 ppb. Anomalous values are greater than 25 ppb. All but two values are either background or slightly elevated background. Of the two anomalous values, one occurs on L10E at 2+00N. The other occurs on L26E at 2+50N.

The only further work recommended for the ALPHA 2 claim would be additional closely spaced soil sampling in the vicinity of each anomalous sample. If any outcrop is present there, it should be sampled to try to determine a bedrock source for the anomalous gold in the soil.



EVALUATION OF WORK

WORK CONDUCTED	Grid Soil Sampling
CLAIM	ALPHA 2
DATES WORK CONDUCTED	June 8, 16, 21, 22

## SALARIES

Eric Finnsson	1 man-day @ \$53.85/day =	\$ 53.85
Kevin Mills	3 man-days @ \$57.69/day =	\$173.07
Barney Salamanchuk	3 man-days @ \$61.54/day =	\$184.62
Paul Brown	1 man-day @\$120.83/day =	\$120.83
MEALS 8 man-days @ \$15.00/day	=	120.00
CAMP COST 8 man-days @ \$35.00/day	=	280.00
TRUCK RENTAL 4 days @ \$32.81/day	=	131.24
ASSAY CHARGES		
251 samples analysed for Au		
251 x \$4.75 (gold geochem.)	=	1,192.25
251 x \$0.85 (sample preparation)	=	213.35
COST OF REPORT WRITING AND MAP PREPARATION	=	300.00

T O T A L

\$2,769.21

APPORTIONMENT OF EXPENSES

The cost being used for assessment credit should be spread evenly over each of the nine units comprising the ALPHA 2 claim.

APPENDIX I

FEE SCHEDULE

Geochemical analyses were done by:

Min-En Laboratories Ltd.  
705 West 15th Street  
North Vancouver, B.C.  
V7M 1T2

Geochemical Analysis

Au	\$4.75
Sample preparation	<u>0.85</u>

TOTAL \$5.60

*MIN-EN Laboratories Ltd.**Specialists In Mineral Environments*

Corner 15th Street and Bewicke  
705 WEST 15th STREET  
NORTH VANCOUVER, B.C.  
CANADA

ANALYTICAL PROCEDURE REPORTS FOR ASSESSMENT WORKPROCEDURE FOR GOLD GEOCHEMICAL ANALYSIS.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pre-treated with  $\text{HNO}_3$  and  $\text{HClO}_4$  mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

At this stage of the procedure copper, silver and zinc can be analysed from suitable aliquote by Atomic Absorption Spectrophotometric procedure.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl. Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

NAMES AND ADDRESSES OF PERSONS CONDUCTING WORK

ERIC FINNSSON  
7554 Wright St.  
Burnaby, B.C.  
V3N 3W7

BARNEY SALAMANCHUK  
2070 Reynolds St.  
Regina, Saskatchewan  
S4N 3M8

KEVIN MILLS  
420 Alberta St.  
New Westminster, B.C.  
V3L 3J7

PAUL BROWN  
7031 Estoril Rd.  
Mississauga, Ontario  
L5N 1N3

COST PER DAY FOR TRUCK

1983 GMC 4 x 4 leased from Airways Ltd.

2782 Grandview Hwy., Vancouver

Contract Rate: \$ 984.40/month = \$ 32.81/day.

QUALIFICATIONS OF PAUL BROWN

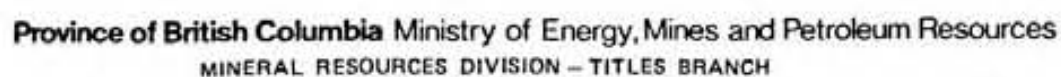
B.Sc. Geology, Memorial University of Newfoundland, 1974

Continuously employed in the mineral exploration industry since graduation and with Amoco Canada Petroleum Company Ltd. since April 1975.

Member of the Geological Association of Canada and the Canadian Institute of Mining and Metallurgy.

A handwritten signature in cursive script, reading "Paul Brown", is written over a horizontal line.

Paul Brown, B.Sc.



## STATEMENT OF EXPLORATION AND DEVELOPMENT

STATE THAT

1. I have done, or caused to be done, work on the ..... ALPHA 2 .....  
 ..... Claim(s) .....  
 Record No.(s) ..... 5159 .....  
 Situate at MacKay River ..... in the Cariboo ..... Mining Division,  
 to the value of at least \$2,769.21 ..... dollars. Work was done from the 8th ..... day  
 of June ..... 19 84 ..... to the 22nd ..... day of June ..... 19 84

2. The following work was done in the 12 months in which such work is required to be done:

(COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING)

**A. PHYSICAL** (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails)

(Give details as required by section 13 of regulations.)

[illegible]

I wish to apply \$ ..... of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

**B. PROSPECTING** (Details in report submitted as per section 9 of regulations.)  
(The itemized cost statement must be part of the report.)

COST	
1	1
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3	3
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5	5
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93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

I wish to apply \$ . . . . . of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

(For C and D sections, please turn over.)



## C. DRILLING

(Details in report submitted as per section 8 of regulations.)  
(The itemized cost statement must be part of the report.)

COST

## D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL

(Details in report submitted as per section 5, 6, or 7 of regulations.)  
(The itemized cost statement must be part of the report.)  
(State type of work in space below.)

251 soil samples

\$ 2,769.21

TOTAL OF C AND D

\$ 2,769.21

Who was the operator (provided  
the financing)?

Name Amoco Canada Petroleum Company Ltd.

Address Suite 300, 89 Queensway West

Mississauga, Ontario L5B 2V2

## Portable Assessment Credits (PAC) Withdrawal Request

AMOUNT

Amount to be withdrawn from owner(s) or operator(s) account(s):

Name of Owner

(May be no more than 30 per cent  
of value of the approved work  
submitted as assessment work in  
C and (or) D.)

1.

2.

3.

4.

TOTAL WITHDRAWAL

TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL

I wish to apply \$ 2,700.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record no.)

ALPHA 2 (9 units) Record No. 5159 recorded September 23rd, 1983.

I wish to apply 3 years of assessment credits to each unit of

ALPHA 2.

Value of work to be credited to portable assessment credit (PAC) account(s).

(May only be credited from the approved value of C and (or) D not applied to claims.)

Name

AMOUNT

In owner(s) name.

1.

2.

3.

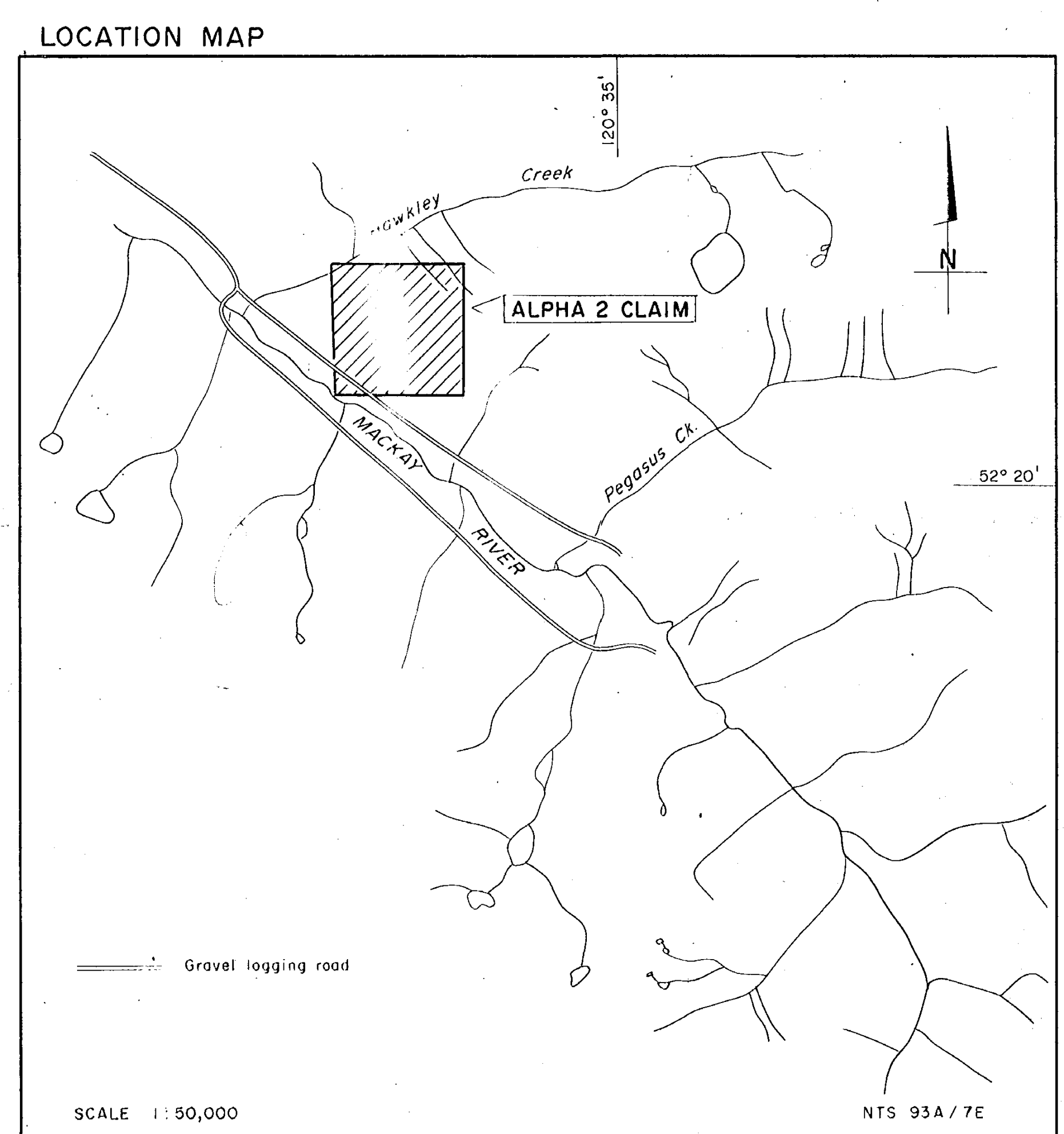
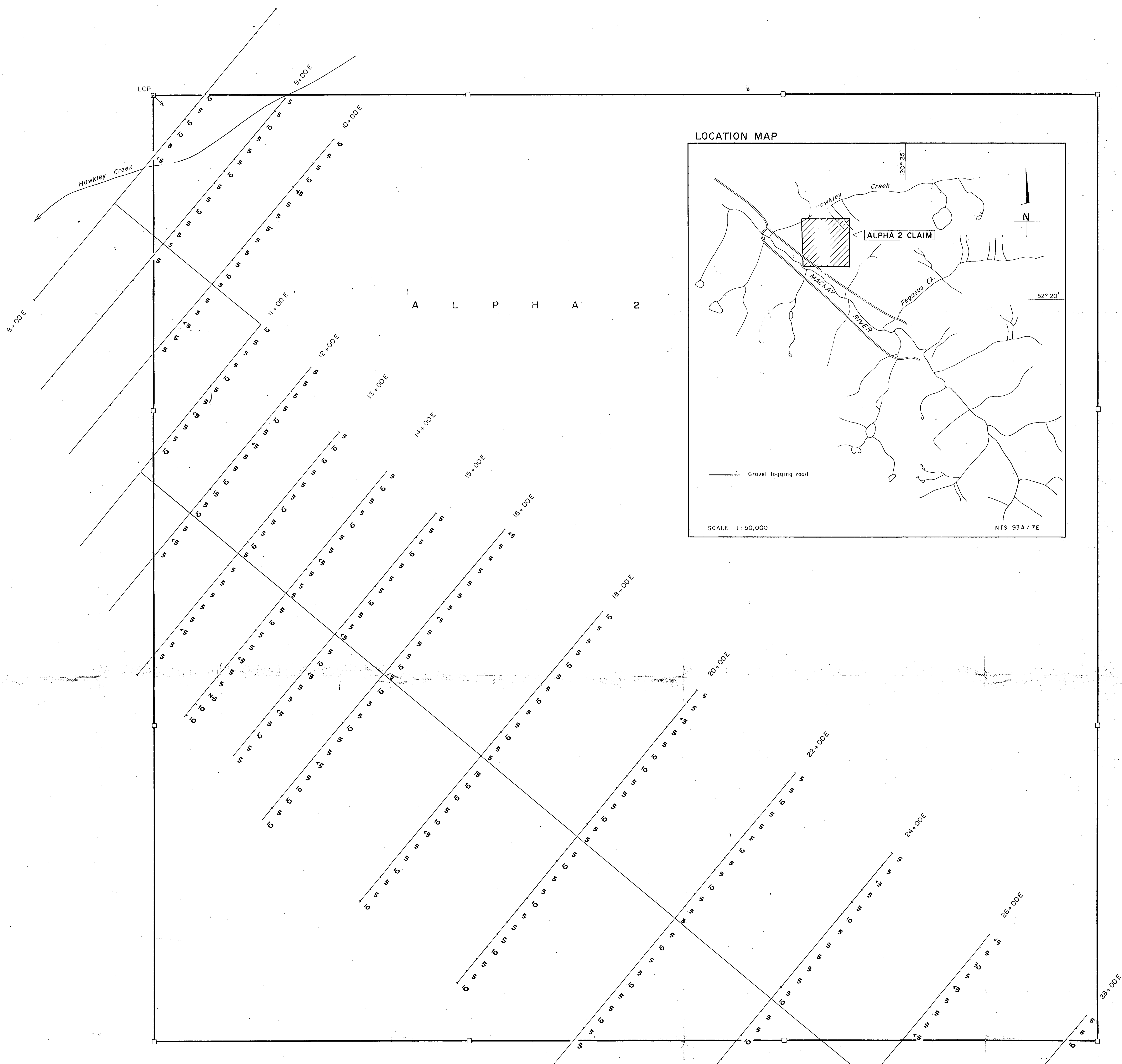
In operator(s) name  
(party providing  
the financing).

1.

2.

3.

Paul Boer  
(Signature of Applicant)



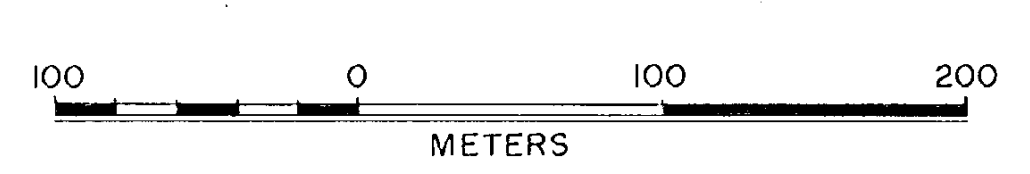
**LEGEND**

5  
10  
5  
5

SOIL RESULTS - GOLD in ppb.

LCP CLAIM POST AND LINES  
ARROW SIGNIFIES A LEGAL CORNER POST

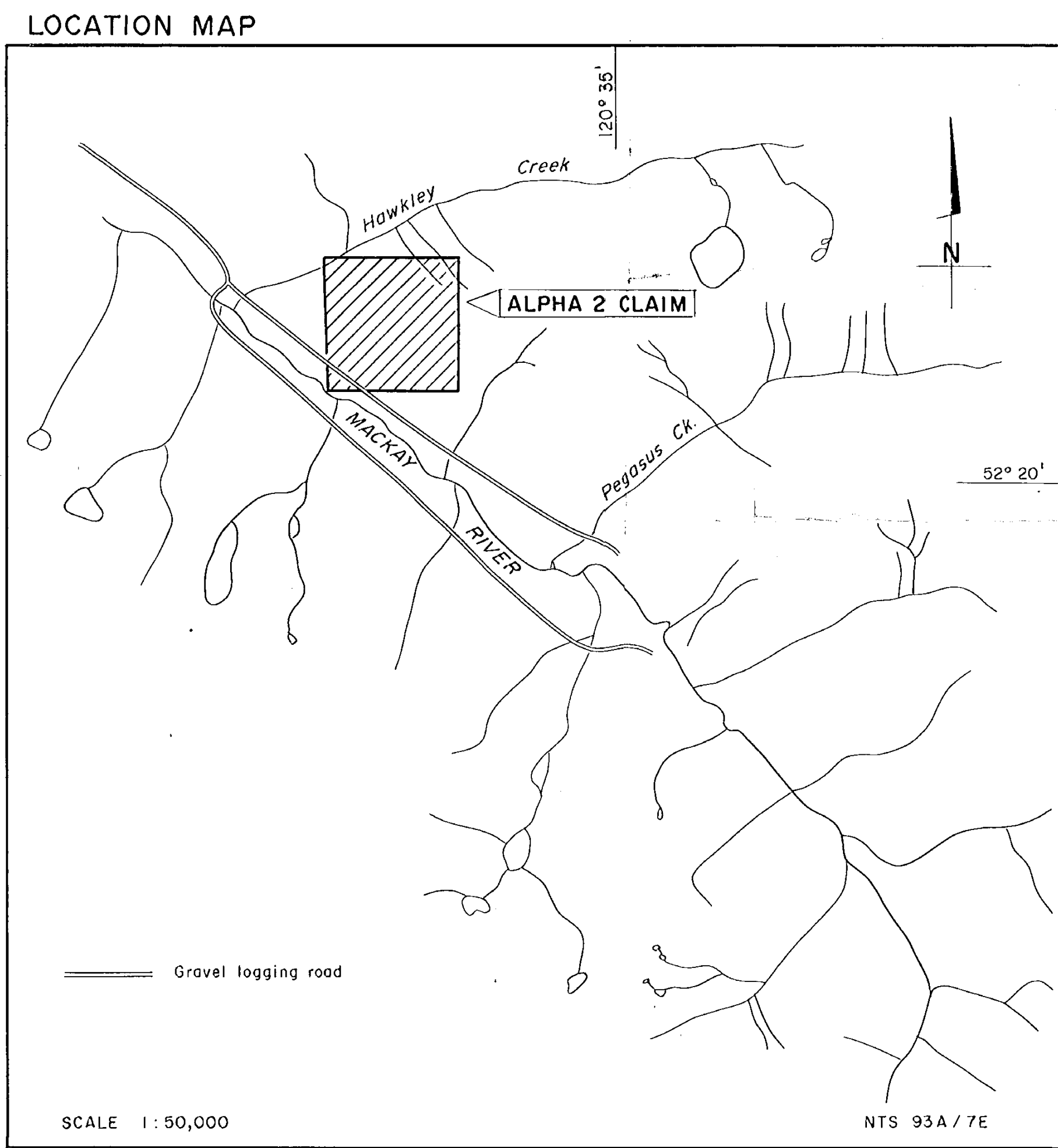
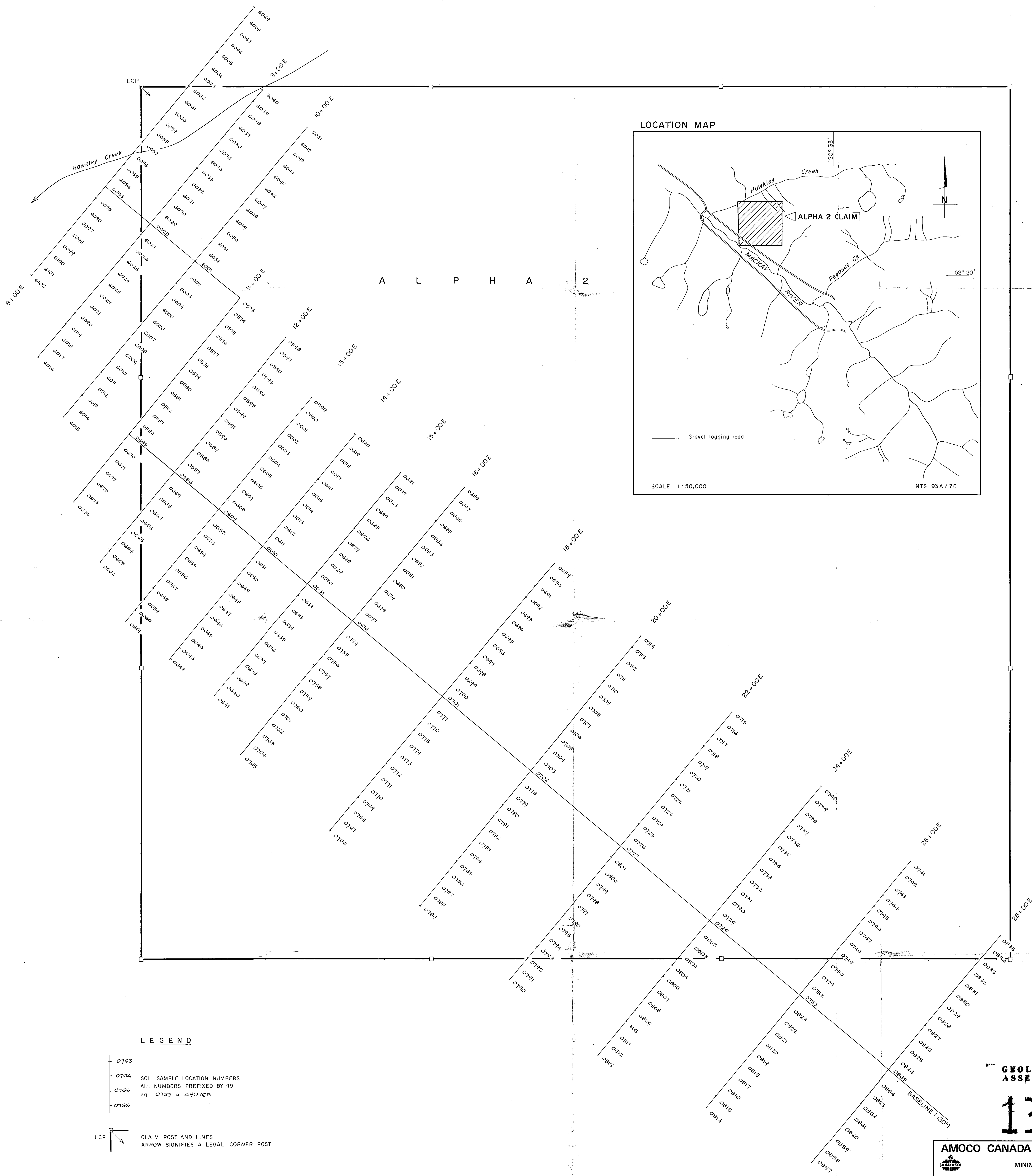
NOTE: LEGAL CORNER POST FOR ALPHA 2 CLAIM  
WAS LOCATED BY A BRITISH COLUMBIA  
LAND SURVEYOR  
THIS GRID WAS ESTABLISHED USING  
CHAIN AND COMPASS



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**13,169**

<b>AMOCO CANADA PETROLEUM CO. LTD.</b>			
MINING DIVISION			
FRASERGOLD PROJECT HAWKEY CREEK NORTH GRID			
<b>SOIL RESULTS - GOLD - 'B' HORIZON</b>			
Drawn By	d.o's	Scale	1:2500
Date	July 1984	Project No.	83C-004



LEGEND

- SOIL SAMPLE LOCATION NUMBERS  
ALL NUMBERS PREFIXED BY 49  
eg. 0765 = 490765
- CLAIM POST AND LINES  
ARROW SIGNIFIES A LEGAL CORNER POST

NOTE: LEGAL CORNER POST FOR ALPHA 2 CLAIM  
WAS LOCATED BY A BRITISH COLUMBIA  
LAND SURVEYOR.  
THIS GRID WAS ESTABLISHED USING  
CHAIN AND COMPASS

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

13,169

AMOCO CANADA PETROLEUM CO. LTD.			
MINING DIVISION			
FRASERGOLD PROJECT HAWKLEY CREEK NORTH GRID			
SOIL SAMPLE LOCATIONS			
Drawn By	d.o's	Scale	1:2500
Date	July 1984	Project No.	83C-004