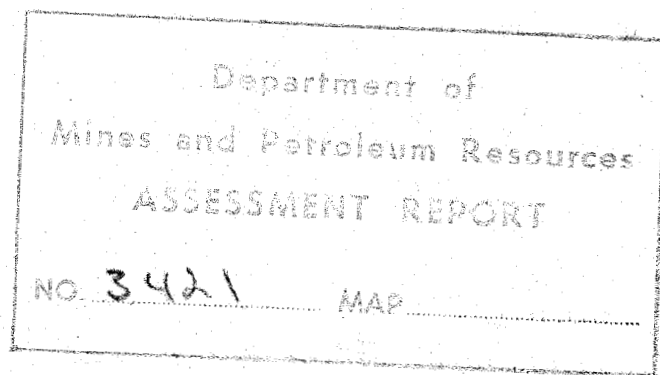


3421

Geological Aerial Photo-Interpretation

Trapper Lake Property

STIKINE RESOURCES LTD. (N.P.L.)



E. Livgard, P. Eng.

Vancouver, B.C.  
September 1971

I N D E X

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2 Location Map following Page 4

#1 Claim Map following Page 3

3 Photo-interpretation Map in Pocket

4 Tatsamenie Lake (Was)

5 Contour Interval

Appendix:

Certificate

INTRODUCTION

An aerial photo-interpretation of photos 11586 - A260, A261, A262, A303, A304, A305 taken in 1948 by R. C. A. F., at an altitude of 20,000 feet was carried out by the writer in September 1971 at the request of Stikine Resources Ltd. This report is a description of the findings of that photo study.

SUMMARY

Geological photointerpretation was carried out on the Karen claim #1 - 108 during September 1971 from Federal Government photos. The property is located in the coast range intrusives about 65 miles northwest of Telegraph Creek in the northwest corner of British Columbia. Three rocktypes occur on the property grandiorite, monzonite and up to six separate bodies of alaskite. The alaskite can in most cases be readily picked out on the photos while the monzonite-grandiorite contact is more uncertain. The rocks surrounding the alaskite bodies appears disturbed and may point to contact metamorphic effect. The most pronounced lineaments strike north-south and east-west. The north-south lineaments may be associated with faulting in the valley bottom. The eastwest lineament are quartzfilled fractures carrying molybdenite mineralization. Other lineaments strike southwest and southeast. Areas of particular economic interest are the fractured portions of the alaskite bodies. These are the northern part of body #1, the southern part body #2 and to a lesser extent bodies #3, 4 and 5.

PROPERTY

The property consists of a contiguous block of 108 claims named Karen #1 - 108 with the suffix A added to the following numbers: 15, 17, 38, 40, 42, 51, 52, 54, 59, 60, 67, 71-90, 92, 93.

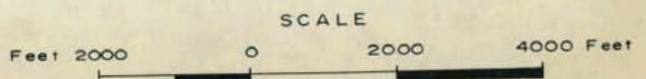
The central 20 claims are under option from Mr. Denis Odian of Atlin, British Columbia, while the other claims are owned by Stikine Resources Ltd. (N.P.L.).

36	37	39	41	43	45	47	49				
35	1	5	103	44	46	48	50				
2	3	7	104	105	53	55	57				
4	15A	38A	42A	52A	54A	56	58				
6	17A	40A	51A	71A	78A	59A	61	63	65		
8	72A	77A	76A	75A	73A	60A	62	64	66		
10	79A	88A	90A	92A	93A	67A	68	69	70		
94	97	99	101	9	14	81	83	85	87		
96	98	100	102	12	80	82	84	86	88		
16	106	107	108	19	21	23	25	27	29	31	33
	<i>KAREN GROUP</i>										
13	11	18	74	20	22	24	26	28	30	32	34
95	91										

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3421 MAP #1

*S. Livgard*

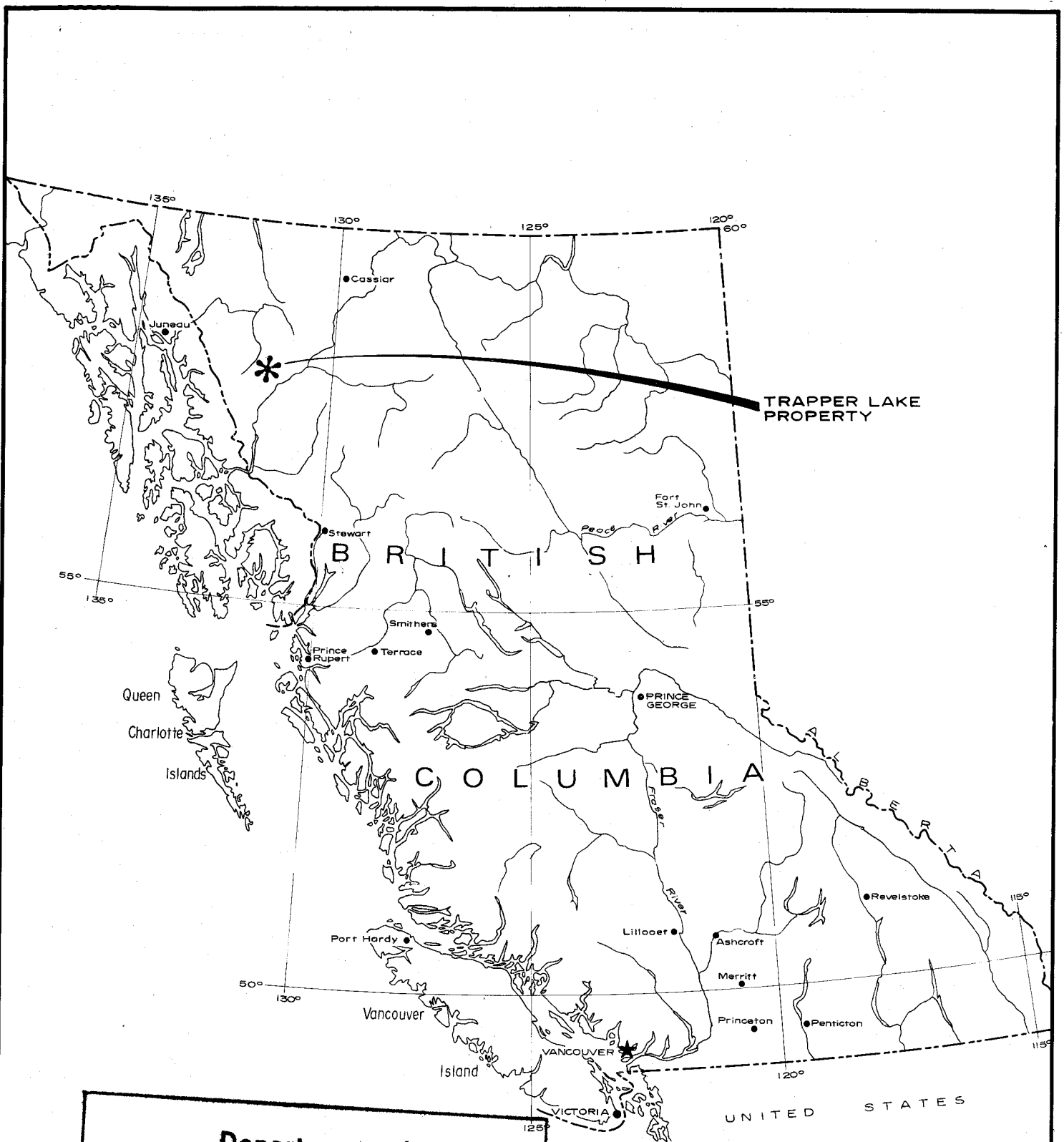
STIKINE RESOURCES LTD.  
 TRAPPER LAKE PROPERTY  
 CLAIMS MAP



LIVGARD CONSULTANTS LTD.

LOCATION

The property is located at  $58^{\circ} 17' 45''$  N,  $132^{\circ} 39'$  W in the Atlin Mining Division. It lies about 90 miles south and east of Atlin, British Columbia and 60 miles northwest of Telegraph Creek in the northwest corner of British Columbia.



Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 3421 MAP #2

*E. Campbell*

STIKINE RESOURCES LTD.  
 TRAPPER LAKE PROPERTY  
 LOCATION MAP

SCALE  
 1" = 136 MILES

LIVGARD CONSULTANTS LTD.



ACCESS

Access to the property is at present by air from Atlin or Telegraph Creek, by float plane to Trapper Lake eight (8) miles north of the property or by helicopter directly to the property. The nearest road is the Cassiar-Stewart road 65 miles to the East.

### TOPOGRAPHY

The property lies inside the eastern fringe of the coast range which in this area shows some of the most rugged mountains in North America. Peaks rise to 7,000 - 9,000 feet above sea level. Higher elevations are covered by glaciers. The claims cover a north-south valley. The minimum elevation is about 4000 feet and raises to about 6,000 feet on each side. The valley sides rise about 50 - 60 feet in elevation every 100 feet. The central valley is about 1,000 feet wide and is covered by outwash material from two glacial arms; one to the south and one to the east in a tributary "Hanging Valley". The glaciers feed streams which drain into the Whiting River or is in fact one of the headwaters of this river. The aerial photos clearly show previous further advances of the glaciers and ground inspection in 1970 showed that the glaciers have retreated maybe 400 - 500 feet since the photos were taken in 1948. An end morene lies across the main valley about 3700 feet north of the toe of the southern glacier as located on the photographs. The outwash material consists of an unsorted mass of boulders, sand and clay and may reach a maximum depth of about 150 feet.

The intermittent retreat of the glaciers has left marks on the terrain which to some degree obscures the outline of changes in rocktypes.

### GEOLOGICAL SETTING

The Trapper Lake property is underlain entirely by intrusive rocks of the coast range batholith.

G. S. C. mapping shows two major rocktypes, monzonitic rocks and granodioritic rocks. Within these rocktypes is located numerous small bodies of related rocktypes. Most of the Trapper Lake property is shown as being underlain by granodiorite while to the south, monzonitic rocks are reported.

Regional faults to the east and north trend, north, northwest and east.

PHOTOINTERPRETATION

Geological photointerpretation was carried out on photos 11586 - A260, A261, A262, A303, A304, A305 taken by the R. C. A. F. in 1948 from an elevation of 20,000 feet. A mirror stereoscope, wilde ST4-7239, was used to outline structure, rocktype boundaries and topographic information. The information was transferred to an enlargement of photos A261 and A304 and traced on transparent paper, the scale of the enlarged photos is approximately 580' = 1".

### PHOTOGEOLOGY

The photos show apparent rocktype differences on the claim ground. Several irregularly circular bodies show a lighter tone than surrounding rocks. From personal examination of the ground, some of these are known to be of alaskite composition. Along the main valley toward the south, markings left by retreat of the glacier obscures the outlines of two possible alaskite bodies. The majority of the rocks on the claim ground are known to be granodiorite and the terrain texture in these areas is quite uniform, except in the vicinity of the alaskite bodies where some changes can be seen indicating possible contact metamorphic alteration, or other disturbance affect during emplacement of the alaskite or by the presence of the alaskite.

The mapped (G.S.C.) monzonitic intrusive contact to the granodiorite has been tentatively outlined on the photos but the textural differences are slight and the position of the boundary not at all certain.

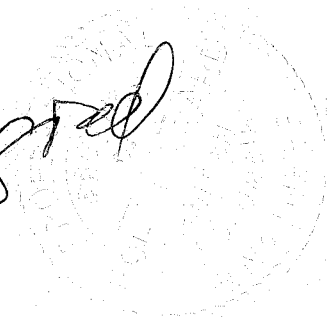
Photo linements indicate that the main fracture direction lies in the main valley and strikes north-south. This fracturing is largely confined to the main valley and may possibly be associated with faulting in the valley bottom. The other main fracture direction strikes east-west. Ground inspection has revealed that quartz veins carrying molybdenite mineralization is associated with these fractures. These fractures are widely spaced except for one area crossing alaskite intrusives #1, 2, 3.

Other fracture directions strike southwest and southeast but appear more irregular in strike direction and are generally confined to limited areas.

Areas of economic interest are the alaskite intrusive bodies which are mineralized with molybdenite, and the adjoining and altered granodiorite and monzonite which is mineralized with pyrite, chalcopyrite and molybdenite. Four alaskite bodies are known from ground examination #1, 2, 3, 4 while photo-interpretation indicates one or two other bodies # 5, 6.

Spots of particular interest within these areas must be zones of strong fracturing. These occur on the northern part of the alaskite body #1 and the area north of it in the granodiorite. The southern part of body #2 is also well fractured. Bodies #3, 5 and partly 4 are also fractured to some extent. These fractured areas constitute the primary areas of interest on the property.

*Egil Luigstad*



LIVGARD CONSULTANTS LTD.

1331 MARINE BUILDING

VANCOUVER 1, B.C.

EGIL LIVGARD, B.Sc., P.Eng.

CERTIFICATE

I, EGIL LIVGARD, with business and residential addresses in Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geological engineer.
2. I am a graduate of the University of British Columbia, B. Sc., 1960, Geological Sciences.
3. I am a Member of the Association of Professional Engineers of the Province of British Columbia.
4. From 1960 to 1970 I was engaged in mining and exploration geology in Canada and Norway.
5. I am President of Stikine Resources Ltd. (N.P. L.) and hold 50,000 shares in the Company.

DATED at Vancouver, British Columbia, this 20th day of  
~~February~~ 1971.

*Elg* SEPT.



Egil Livgard, B. Sc., P. Eng.  
Vancouver, British Columbia.

REFERENCES

Unpublished:

Report on Trapper Lake Molybdenum Property,  
Northwest, British Columbia, June 10, 1971,

by

Douglas Campbell, P. Eng.



LIVGARD CONSULTANTS LTD.

1331 MARINE BUILDING  
VANCOUVER 1, B.C.

EGIL LIVGARD, B.Sc., P.Eng.

To accompany Affidavit on Application for Certificate of Work on The Karen Group of Claims - Mining Division, dated November 20, 1971.

Topographic Survey - Cost by McElhanney Surveys \$885.00

Photointerpretation, maps and Report by Livgard Consultants Ltd. 633.00

Topographic survey carried out on 84 of the original 108 claims

Cost per claim  $\frac{\$885.00}{84} = \$10.54$

Alloted to the Karen Group 36 claims covered X \$10.54 - \$379.44

Photointerpretation on the original 108 claims

Cost per claim  $\frac{\$633.00}{108} = \$5.86$  \$234.40  
\$613.84

ALLOTTED TO KAREN GROUP  
 $\$5.86 \times 40 = \$234.40$

ELI

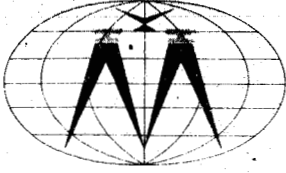
The above are the correct costs for the work noted.

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 26<sup>th</sup>  
day of Nov 1971, A.D.

*E. Livgard*  
E. Livgard, P. Eng.

*G. P. Phillips*  
A Commissioner for taking Affidavits within British Columbia or  
A Notary Public in and for the Province of British Columbia.

MINING RECORDS



INVOICE

**McELHANNEY SURVEYING & ENGINEERING LTD.**

Please remit to:  1200 West Pender St., Vancouver 1, B.C. Phone 683-8521  
 9507A Scott Rd., North Surrey, B.C. 581-5261  
 4619 Lazelle Ave., Terrace, B.C. 635-7163

In account with:

**Stikine Resources Limited**  
**#1300, 355 Burrard Street**  
**Vancouver, B. C.**

Invoice No. **71-043**

Date **25 May 1971**

Attention: **Mr. J. Snell**

Your Order No.

Our Job No. **05646**

Terms: Net 30 days. Interest may be charged on overdue accounts

FOR PROFESSIONAL SERVICES IN RESPECT TO:

**Topographic mapping in vicinity of Tatemonie Lake in accordance with our letter of 18 March 1971.**

Our Fee . . . **\$885.00**

*CONTRACT PRICE TO  
STIKINE RESOURCES LTD*

*E. Wiggert*

**LIVGARD CONSULTANTS LTD.**

684-7313  
1331 Marine Building  
Vancouver 1, B.C.

Stikine Resources Ltd. (N.P.L.),  
1300 - 355 Burrard Street,  
Vancouver 1, British Columbia.

Statement  
**CONSULTING SERVICES**

Invoice Date: **Oct. 27, 1971**

Photo-Interpretation by Egil Livgard

Interpretation, maps, report and 4 days

\$480.00

Overhead 10%

48.00

Drafting & Printing, Altair Drafting

105.00

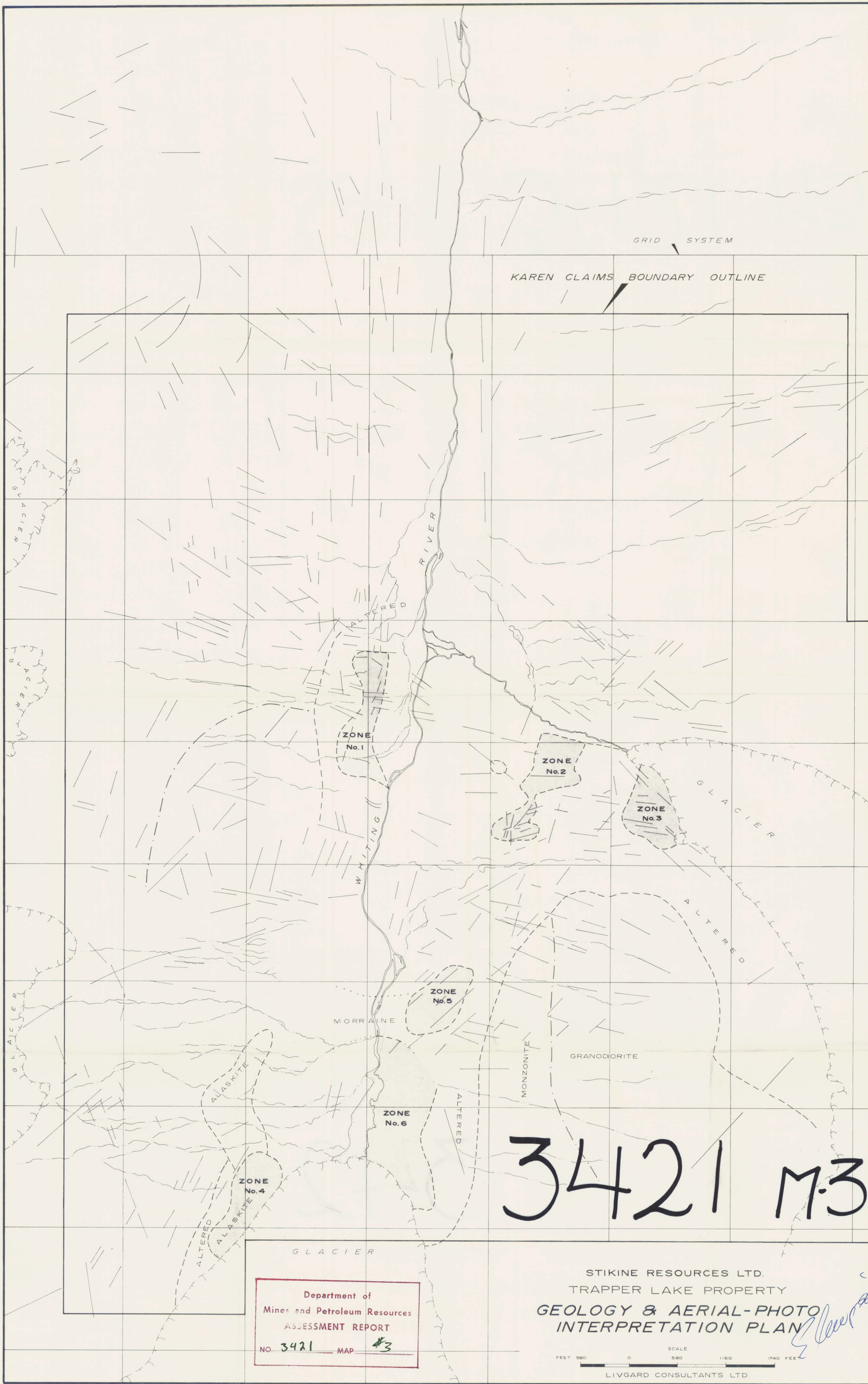
16 hrs. by Ken Kikegawa

\$633.00

*E. Livgard*

E. & O.E.

SERVICE CHARGE OF 1 1/2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.  
ACCOUNTS OVERDUE AFTER 10TH OF MONTH FOLLOWING DATE OF INVOICE.



GRID SYSTEM

KAREN CLAIMS BOUNDARY OUTLINE

ZONE No. 1

ZONE No. 2

ZONE No. 3

ZONE No. 5

ZONE No. 6

ZONE No. 4

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

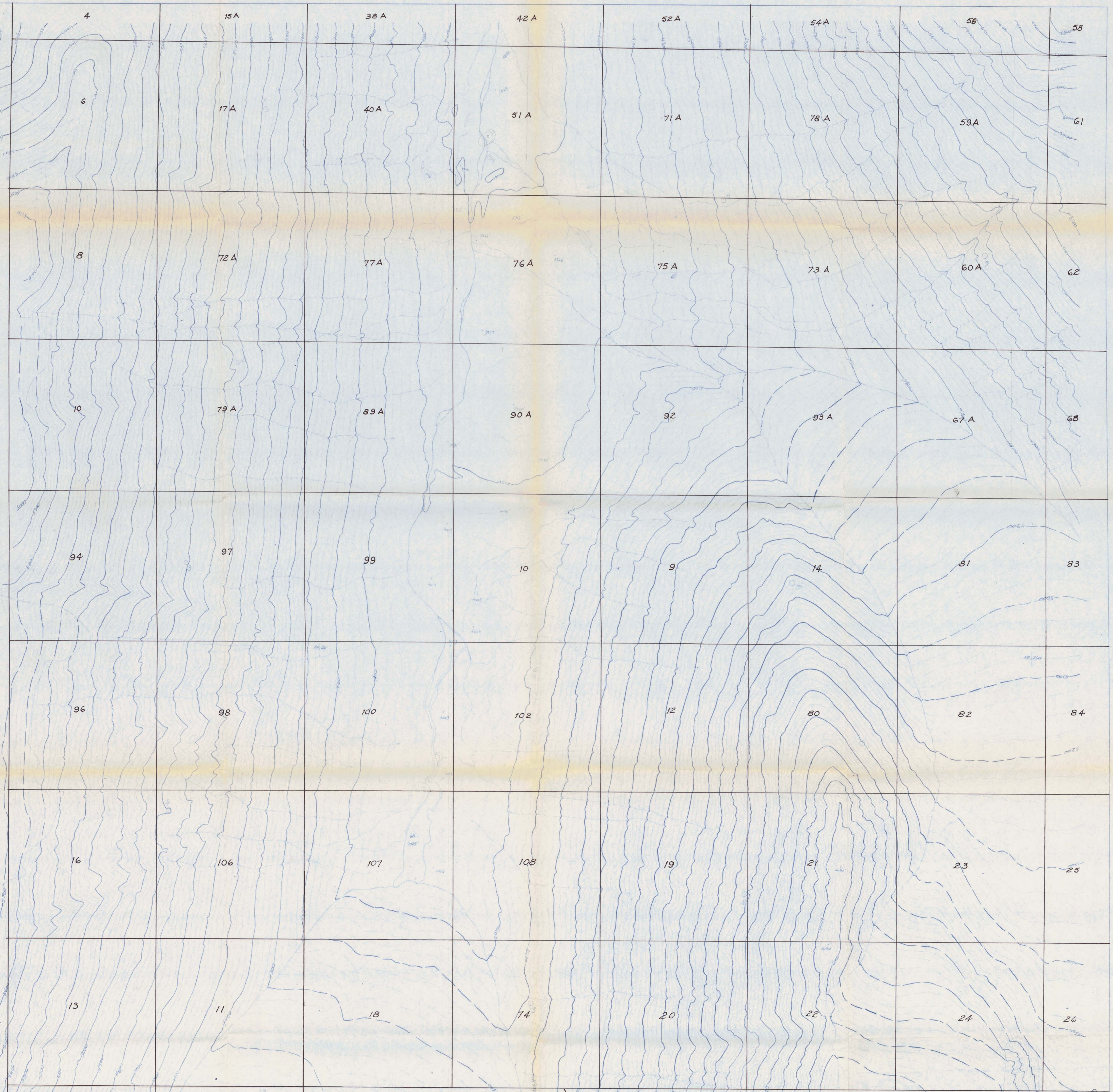
NO. 3421 MAP #3

STIKINE RESOURCES LTD.  
TRAPPER LAKE PROPERTY  
GEOLOGY & AERIAL-PHOTO  
INTERPRETATION PLAN

SCALE  
FEET 580 0 580 1160 1740 FEET

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3421  
MAP #4



KAREN CLAIMS

4321 M-4

STIKINE RESOURCES LTD.				
TATSAMENIE LAKE (WEST)				
PRELIMINARY RECONNAISSANCE TYPE MAPPING				
Compiled by MELHANNEY SURVEYING & ENGINEERING LTD. 1200 West Pender St. Vancouver, B.C.				
SCALE 1" = 400'	CONTOUR INTERVAL 25 FEET	DATE MAY 6, 1967	JOB NO. 05646-0	SHEET NO. 1 OF 1
<small>SCALE AND ELEVATION DATUM BASED ON LIMITED GROUND CONTROL RESULTING IN GOOD RELATIVE, BUT UNCERTAIN ABSOLUTE MAP ACCURACY COMPILED FROM AERIAL PHOTOGRAPHY AT AN APPROXIMATE SCALE OF 1 INCH EQUALS 2540 FEET FLOWN IN 1943</small>				

*[Handwritten signatures]*  
Vice President  
[Signature]



3421 M5

*[Handwritten signature]*

*[Handwritten signature]*