

4308
02-15E
March 13, 1973

Board of Directors,
Alberta Petroleum and
Resources Ltd. (NPL),
Ste. 1502 Cambridge Building,
Edmonton, Alberta.


Dear Sirs:

Attached please find a report by David G. Mark entitled:
"Preliminary and Line Cutting Report
on the Pam Claim Group, Strachan Lake,
Kamloops M.D., B.C. February, 1973"

I have studied the report and generally concur with
Mr. Mark's findings.

The property is located on a magnetic lineation which
strikes through the Allies Showing. A magnetic low is
seen to occur within the property boundaries to the north
east of this lineation.

I have studied and generally concur with Mr. Mark's recom-
mendations for further exploration of the property.

Respectfully submitted,

T. B. TOUGH
BRITISH
COLUMBIA
Thomas B. Tough, P.Eng.,
Consulting Geologist
ENGINEER

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4308 MAP.....

PRELIMINARY AND LINE-CUTTING REPORT

on the

PAM CLAIM GROUP

STRACHAN LAKE, KAMLOOPS M.D., B.C.

FEBRUARY, 1973

Pam Claim Group: 20 miles N35W of Kamloops
50° 120° NW

: N.T.S. - 92^I/15E

Report by: David G. Mark,
Geophysicist,
Geotronics Surveys Ltd.,
514-602 W. Hastings Street,
Vancouver 2, B.C.

for: Alberta Petroleum and
Resources Ltd. (NPL),
Ste. 1502 Cambridge Building,
Edmonton, Alberta.

March 7, 1973

Geotronics Surveys Ltd.

Vancouver, Canada

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	Scale
CLAIM MAP	1" = 134 miles
CLAIM MAP AND PROPERTY LOCATION	1" = 4500 feet
LINE CUTTING AND CLAIM LOCATION	1" = 1000 feet
AEROMAGNETIC MAP	1" = 1 mile

SUMMARY

The Pam group consists of 22 contiguous claims located on and around Strachan Lake 20 miles N35W of Kamloops. Access is by the Pass Lake dirt road to Pass Lake and then by logging road to Strachan Lake. The terrain is quite gentle with the elevation varying from 5000 to over 5100 feet.

No work has previously been done on the claims.

From the G.S.C. map of the area, the claims are entirely underlain by Tertiary volcanics of the Kamloops Group. Three miles to the southeast is a window of the Cache Creek group which is largely composed of sediments. At the southern end of this group is the Allies showing. Exploration was done for gold but mineralization also consists of lead and copper sulphides.

The aeromagnetic map on and around the Pam claims appear to largely reflect the Tertiary volcanics. A lineation within the aeromagnetics strikes northwesterly along Cannell Creek through the Allies showing and through Strachan Lake and the Pam claims. The lineation could be a fault and/or a contact.

Lines were cut across the whole property in a northeast-southwest direction and at an interval of 500 feet.

CONCLUSIONS AND RECOMMENDATIONS

The G.S.C. map shows the property to be underlain by Tertiary volcanics. To the southeast is a window of Cache Creek rocks within which is the gold-copper-lead showing of the old Allies Group. The G.S.C. map is very coarse and thus other Cache Creek windows could well occur within the volcanics that are not mapped. This is supported by the government aeromagnetic map which shows a low in the eastern corner of the claim group.

The aeromagnetic lineation that could be a fault and/or a contact is favourable to the Pam claims since it strikes northwesterly through the Allies showing and through the Pam claims.

It is therefore recommended to carry out further work as follows:

- 1) The property should be geologically mapped. Not only will this help in ascertaining whether Cache Creek rocks occur on the property but also assist in interpreting any geophysics or geochemistry carried out.

- 2) A VLF-EM and magnetometer survey should be carried out. It is the writer's experience that both these geophysical methods reflect zones of mineralization in the area.
- 3) The property should be soil sampled and the samples tested for lead, copper, and gold.
- 4) Further work such as an induced polarization survey, trenching, and/or diamond drilling will depend on the above results.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.



David G. Mark
Geophysicist

March 7, 1973

PRELIMINARY AND LINE-CUTTING REPORT
on the
PAM CLAIM GROUP
STRACHAN LAKE, KAMLOOPS M.D., B.C.

INTRODUCTION

This report describes the physical features, the geology and the government aeromagnetics of the Pam claims northwest of Kamloops. It also describes the line-cutting carried out on the claims during February, 1973.

Lines were cut out on the property in anticipation of soil sampling and geophysics being carried out at a later date.

PROPERTY AND OWNERSHIP

The Pam group consists of 22 contiguous claims as shown below and on figures 2 and 3.

<u>Name</u>	<u>Tag Number</u>
Pam 3 - 24 incl.	337165M to 337185M incl.

All the claims are wholly owned by Alberta Petroleum and Resources Ltd. of Edmonton, Alberta.

LOCATION AND ACCESS

The Pam claims are located on and around Strachan Lake 20 miles N35W of Kamloops in a straight line.

The geographical coordinates are 50° 54' N latitude and 120° 37' W longitude.

Access to the claims is by the Pass Lake dirt road to Pass Lake. This road starts approximately 1 mile north of the city centre of North Kamloops along the west side of the North Thompson River. From the agricultural research station at Pass Lake, one travels northwesterly for 0.6 of a mile where one turns west and travels a further 5 miles to a fork in the road. One takes the right road upon which is a bridge across Cannell Creek. The property lies approximately 2.5 miles past the fork.

Pass Lake is accessible by a 2-wheel drive vehicle all year around, the road being kept open in winter. A 4-wheel drive vehicle is recommended from Pass Lake to the property during summer months, and a skidoo during winter months.

PHYSIOGRAPHY

The property is found on the Tranquille Plateau which

forms part of the physiographic unit known as the Thompson Plateau. The terrain is quite gentle. The elevation range is over 100 feet varying from about 5000 feet to over 5100 feet.

The main water source of the immediate area is Strachan Lake which lies within the center of the claims. Parts of the claims are also covered by swamp.

The property lies within the Tranquille forest with the major vegetation consisting of pines, spruce and other conifers.

Pleistocene ice occupied the Thompson Plateau and thus much of the claims area is probably covered by glacial drift which could become quite deep over the flatter areas.

The climate is semi-arid with annual precipitation varying from 11 to 12 inches. Temperatures vary from the high extreme in summer of around 100°F to the low extreme in winter of around 30°F, though the usual temperature during the summer days would be 60°F to 80°F and that in winter 20°F to 40°F.

HISTORY OF PREVIOUS WORK

No work has previously been done on the Pam group of claims.

Work has been done in the area, however. About 3 miles to the southeast is the Allies workings where trenches, shafts and several adits have been dug out during the 20's and 30's.

GEOLOGY

According to the GSC map of the area, the geology of which is done by W.E. Cockfield, the claims group is entirely underlain by Tertiary volcanics of the Kamloops Group. This consists of rhyolite, andesite and basalt with associated tuffs, breccias, and agglomerates.

Cache Creek rocks of Carboniferous age occur 4.5 miles to the east where it is in contact with the Kamloops Group and in a window within the Kamloops Group 3 miles to the southeast.

The Cache Creek rocks consist of argillite, quartzite, hornstone, limestone, sheared conglomerate, breccia, greenstone and serpentine.

Cutting the Cache Creek rocks at the southern end of the window are dykes of light grey and dark grey porphyry. The dark grey porphyry is a dense rock with phenocrysts of hornblende and feldspar.

It is within the dark grey porphyry dyke that the sulphide mineralization of the old Allies prospect occurs. The sulphides are galena, pyrite, and chalcopyrite occurring within quartz veins within the dyke. Up to 1.3 oz/ton of gold is reported.

South of Kamloops are many copper occurrences within both the Iron Mask batholith and the older intruded Nicola rocks close to the batholith. Generally, they are veins, impregnations, stockworks and mineralized shear zones in the country rock with the principle copper minerals being chalcopyrite, bornite, and native copper as well as some chalcocite, cuprite, azurite, and malachite. The main developer of the area is Afton Mines Ltd. which has blocked out so far 40 million tons of 0.65% copper as of June, 1972.

GOVERNMENT AEROMAGNETIC SURVEY

The government aeromagnetic survey was flown on east-west flight lines approximately $\frac{1}{2}$ mile apart. Terrain clearance

was about 1000 feet. The reference sheet for the Pam claims is Tranquille River (see Selected Bibliography). A copy of this map around the Pam claims is given as figure 4 at the end of the report.

The magnetic contours on and around the claims are typical of Tertiary volcanics, that is, the data is high frequency.

There is a northwest trending lineation apparent in the magnetic data that strikes along Cannell Creek and through Strachan Lake. This would be caused either by a rock contact or a fault. The Allies Group prospect is on this lineation 3 miles to the southeast from Strachan Lake. To the southwest of the lineation, the magnetic contours are in the 3000 - gamma range and the magnetic gradient is high. Whereas, to the northeast of the lineation, the contours are in the low 2000 - gamma range and the gradient is lower.

This may reflect 2 different rock types on either side of the lineation or a thicker Tertiary volcanic cover to the southwest.

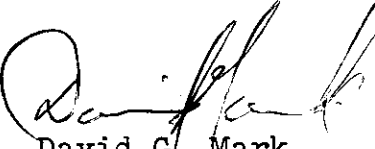
East of Tranquille Lake, the data is much quieter which is a reflection of the underlying Cache Creek rocks. Also the magnetic low of 2060 gammas in the southeast corner of figure 4 is likely a reflection of the Cache Creek window in this area. Taking this into consideration, the small low within the eastern corner of the Pam claims may also be reflecting a Cache Creek window.

DESCRIPTION OF LINE CUTTING

Lines were cut out on the property during February, 1973 in preparation for further work on the property such as soil sampling and geophysics.

The lines were cut out in a northeast-southwest direction to cut across the aeromagnetic lineation. Spacing of the lines is 500 feet. The baseline runs in a northwest-southeast direction along the claim line for the Pam 3 to 13 claims. A total of 16 lines were cut out and are labelled L-60SE to L-15NW. The amount cut out totals 16 line miles.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.


David G. Mark
Geophysicist

March 7, 1973

SELECTED BIBLIOGRAPHY

Aeromagnetic Map, Tranquille River, British Columbia,
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Carr, J.M., Deposits Associated with the Eastern Part of
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Report of the Minister of Mines of British Columbia,
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Cockfield, W.E. Geology and Mineral Deposits of the Nicola
Map-Area, British Columbia, Geol. Surv. of Canada,
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sity of British Columbia, about 1942.

Preto, V.A.G. Geology of the Eastern Part of the Iron Mask
Batholith, Report of the Minister of Mines and
Petroleum Resources, 1967.

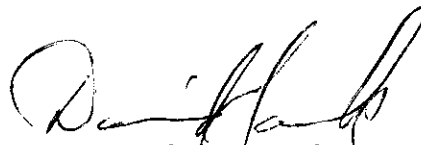
GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at 514-602 West Hastings Street, Vancouver 2, British Columbia.

I further certify that:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practicing my profession for the past four years and have been active in the mining industry for the past seven years.
3. I am an associate member of the Society of Exploration Geophysicists and a member of the European Association of Exploration Geophysicists.
4. This report is compiled from pertinent data in published maps and reports as listed under Selected Bibliography.
5. I have no direct or indirect interest in the properties or securities of Alberta Petroleum and Resources Limited, Edmonton, Alberta nor do I expect to receive any interest therein.



David G. Mark
Geophysicist

March 7, 1973

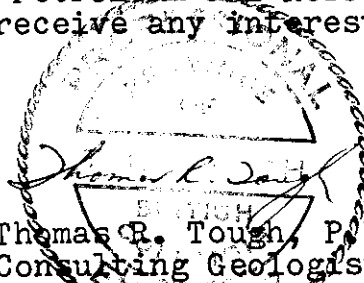
ENGINEER'S CERTIFICATE

I, Thomas R. Tough, of the City of Vancouver, in the Province of British Columbia, do hereby certify that:

I am a Consulting Geologist and an associate with T.R. Tough & Associates Ltd., with offices at 519-602 West Hastings Street, Vancouver 2, B.C.

I further certify that:

1. I am a graduate of the University of British Columbia (1965) and hold a B.Sc. degree in Geology.
2. I have been practising in my profession for the past seven years and have been active in the mining industry for the past fourteen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. I have studied the accompanying report dated February, 1973 submitted by Geotronics Surveys Ltd., written by David G. Mark, B.Sc., Geophysicist and concur with findings therein. I have also made a personal examination of the property on May 6, 1972.
5. I have no direct or indirect interest whatsoever in the property described herein nor in the securities of Alberta Petroleum and Resources Ltd., and do not expect to receive any interest therein.

A circular seal for the Association of Professional Engineers of British Columbia. The seal features a central emblem with a scale of justice and a quill pen, surrounded by the text "ASSOCIATION OF PROFESSIONAL ENGINEERS OF BRITISH COLUMBIA". A signature, "Thomas R. Tough", is written across the seal.
Thomas R. Tough, P. Eng.,
Consulting Geologist

March 13, 1973

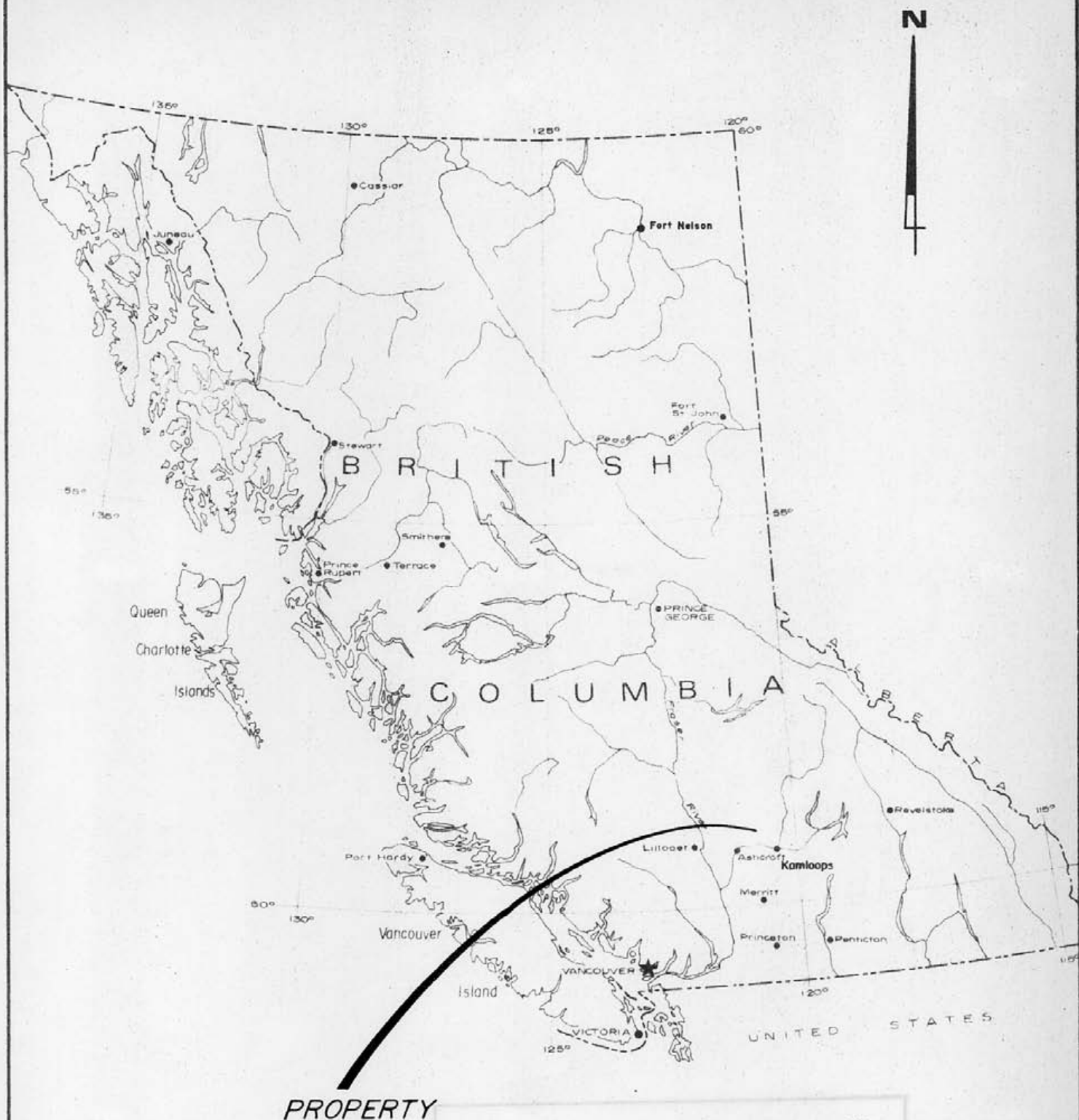


FIG. 1

GEOTRONICS SURVEYS LTD.		
ALBERTA PETROLEUM & RESOURCES LTD.		
PAM CLAIMS		
KAMLOOPS M.D., B.C.		
LOCATION MAP		
SCALE 1" = 134 mi		
DRAWN. PDT	CHECKED.	DATE MARCH '73

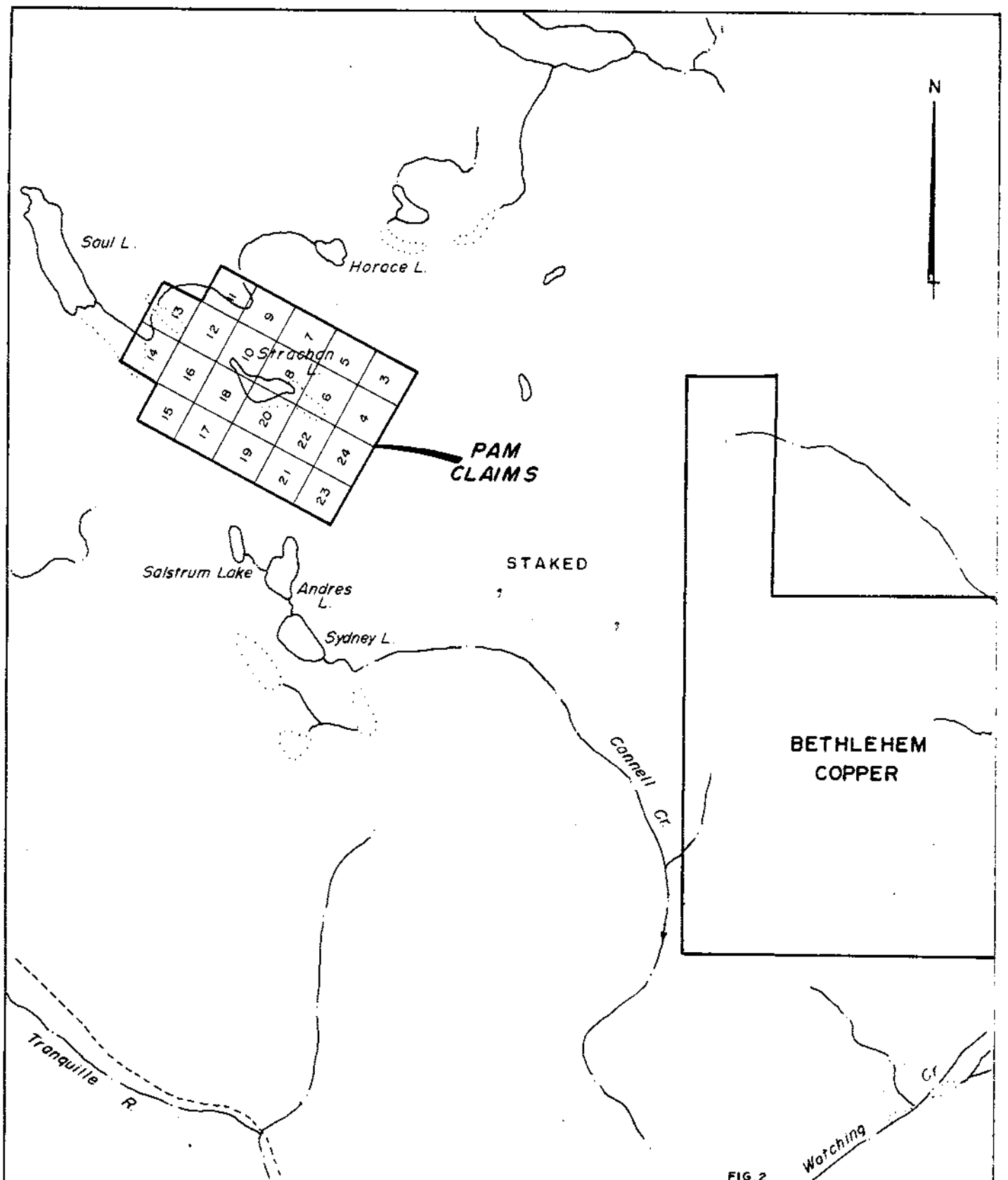
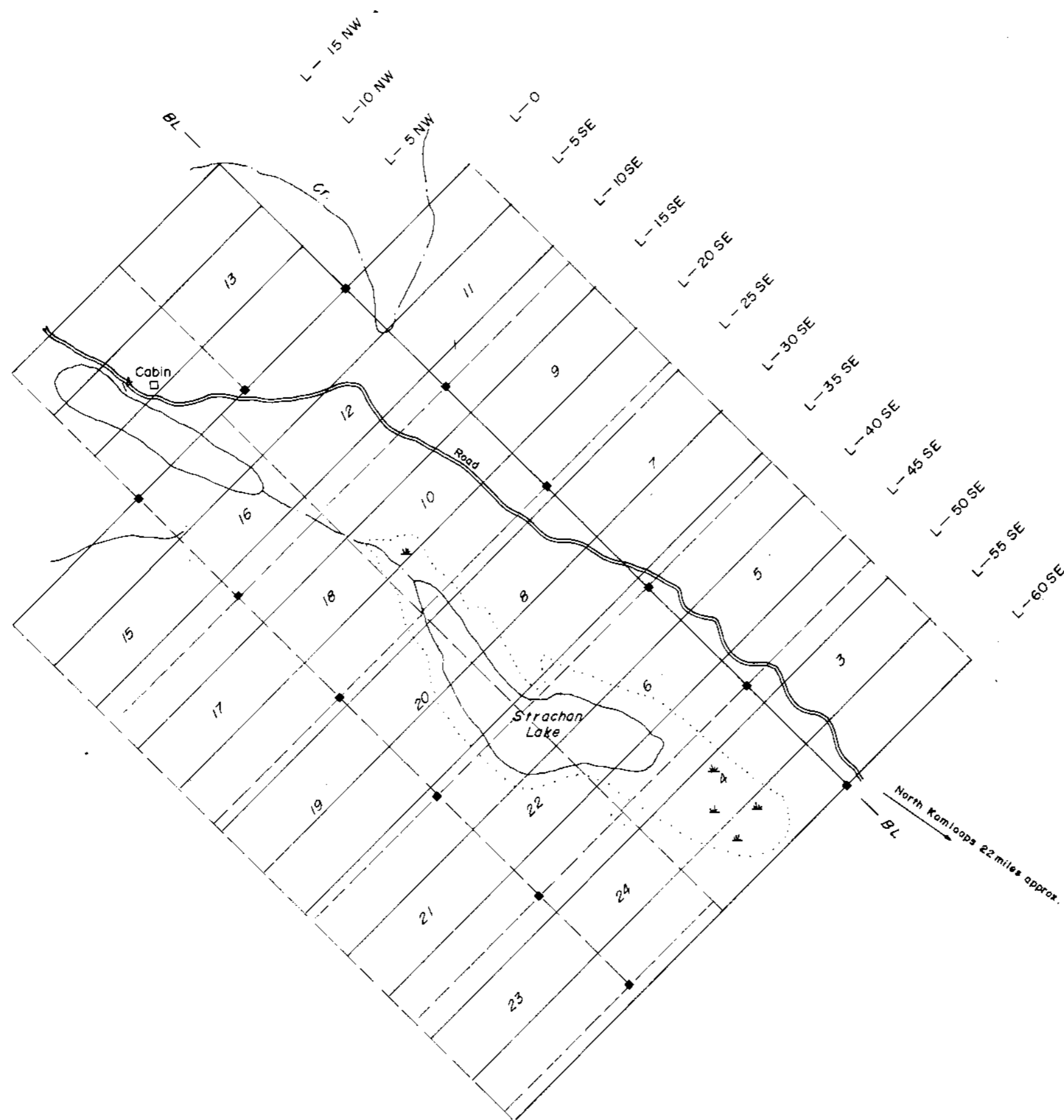


FIG. 2

ALBERTA PETROLEUM & RESOURCES LTD.		
PAM CLAIMS KAMLOGPS M.D., B.C. CLAIM MAP & PROPERTY LOCATION		
GEOTRONICS SURVEYS LTD. PDT DRAFTING SERVICES	SCALE 1" = 4500'	DATE MARCH '73

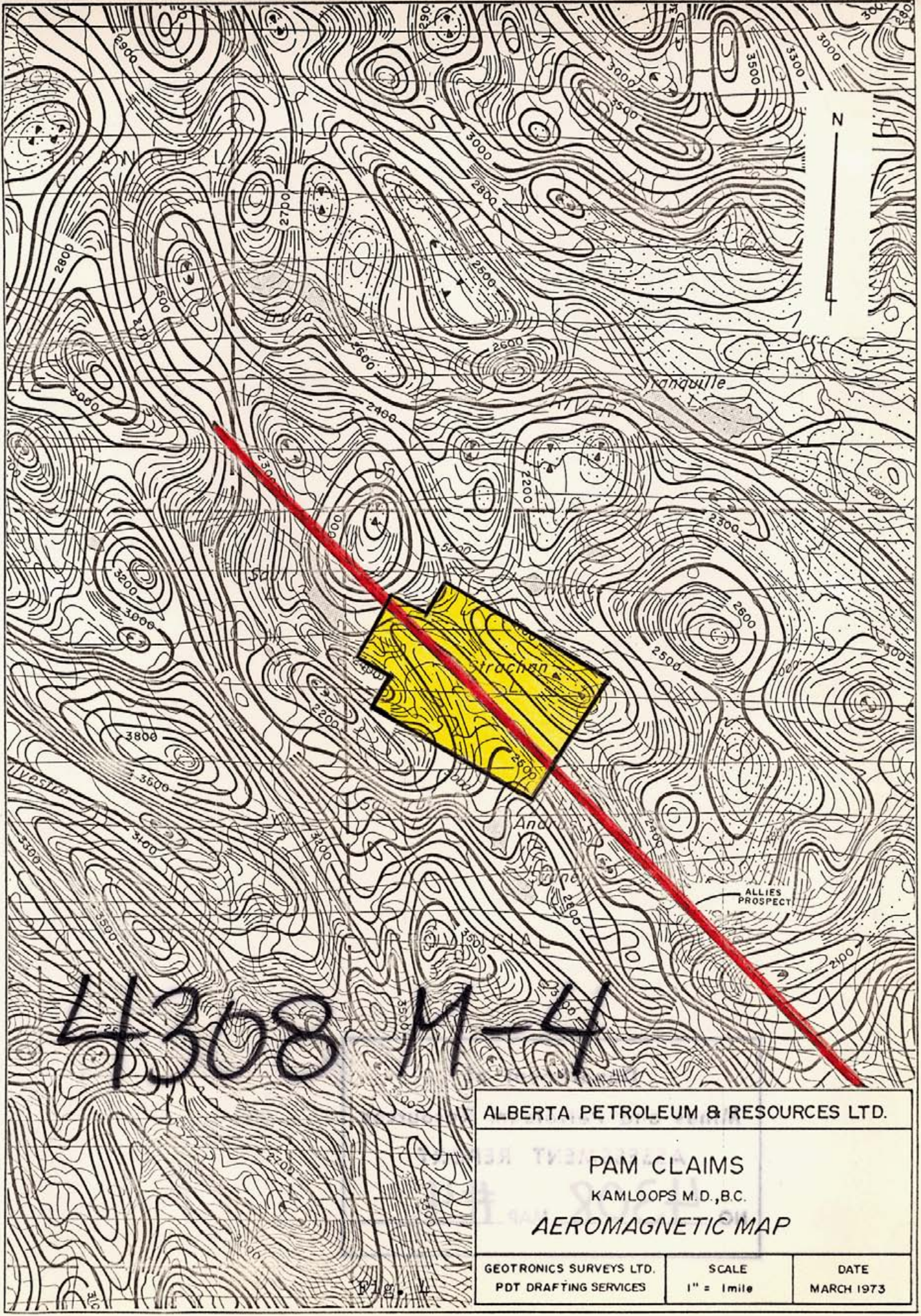


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **4308** MAP **#3**

FIG. 3

GEOTRONICS SURVEYS LTD.
 ALBERTA PETROLEUM & RESOURCES LTD.
 PAM CLAIMS
 KAMLOOPS M.D., B.C.
 LINE CUTTING & CLAIM LOCATION

PDT DRAFTING SERVICES	SCALE 1" = 1000'	DATE MARCH '73	JOB No. 73-28
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44308 M-4

ALBERTA PETROLEUM & RESOURCES LTD.		
PAM CLAIMS KAMLOOPS M.D., B.C.		
AEROMAGNETIC MAP		
GEOTRONICS SURVEYS LTD. PDT DRAFTING SERVICES	SCALE 1" = 1mile	DATE MARCH 1973

COST BREAKDOWN
PRELIMINARY AND LINE-CUTTING REPORT
on the
PAM CLAIM GROUP
STRACHAN LAKE, KAMLOOPS M.D., B.C.

Wages

4-man crew - 10 days @ \$270.00/day \$ 2700.00

Instrument Rental

2 snow mobiles @ \$40.00/day 400.00

1 4-wheel drive @ \$20.00/day 200.00

TOTAL \$ 3300.00

Declared before me at the *City*
of *Langford*, in the
Province of British Columbia, this *18th*
day of *April* 1978, A.D.

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

SUB-MINING RECORDER