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SUMMARY

Alice Lake Mines Ltd. owns or holds by agreement 45 claims and fractions near Alice Lake on northern Vancouver Island. Roubidoux Beach, the nearest settlement, is away by road.

ENGINEERING REPORT
on the
ALM GROUP
Nanaimo M.D.
for
ALICE LAKE MINES LTD.

Parts of the property have been covered by ground magnetometer surveys, the whole has been covered by an aeromagnetic survey and an extensive diamond drilling program was carried out in 1969. Most of the ground work was done over the intrusive areas.

by
M.K. Lorimer, P.Eng.

virtually unexplored limestone areas geologically favourable for the occurrence of replacement-type deposits.

NTS 92L/6W

It is recommended that ground magnetometer and geochemical surveys be made of the limestone areas in the northern half of the property.

A first-phase program to cost about \$25,000 is detailed, to be followed, if warranted, by a second phase to cost at least another \$25,000.

report taken from VSE, Alice
Lake Mines Ltd. (N.P.L.)

S U M M A R Y

Alice Lake Mines Ltd. owns or holds by agreement 42 claims and fractions near Alice Lake on northern Vancouver Island. Rumble Beach, the nearest settlement, is six miles away by road.

The claims cover a contact between limestone and dioritic intrusions. Lead, zinc and copper minerals, with minor gold and silver, occur in skarn zones and as replacements in the limestone.

Parts of the property have been covered by ground magnetometer surveys, the whole has been covered by an aero-magnetic survey and an extensive diamond drilling programme was carried out in 1969. Most of the ground work was done over the intrusive areas.

The virtually unexplored limestone areas appear to be geologically favourable for the occurrence of replacement-type deposits.

It is recommended that ground magnetometer and geochemical surveys be made of the limestone areas in the northern half of the property.

A first-phase programme to cost about \$22,800 is detailed, to be followed, if warranted, by a second phase to cost at least another \$23,000.

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ENGINEERING REPORT
on the
ALM GROUP
Nanaimo M.D.

INTRODUCTION:

The following report is based on the writer's knowledge of the described property gained through his supervision of a three-month drilling programme in 1969 and on a study of the reports listed in the Bibliography.

This report is essentially a compendium and up-dating of information obtained through several years of work and contains recommendations for further exploration work.

LOCATION:

The ALM Group consists of 42 claims and fractions located west of Alice Lake and north of Victoria Lake in the northern quarter of Vancouver Island. The nearest community is Rumble Beach about six miles away. Access to the property is by two miles of paved road and four miles of good logging road on which certain restrictions are in effect.

The area is rugged but not precipitous. It was formerly covered by a heavy forest growth but much of it has now been logged. The logging debris and thick second growth make walking difficult in places. However, there are so many old roads that access to most parts of the property can be gained with little effort.

Elevations range from 185 feet (57 metres) at Alice Lake to 1200 feet (370 metres) at the centre of the property.

The geographic location is 50°26'N, 127°25'W, the National Topographic System area is 92L/6W and the Mining Division is Nanaimo. Map 1.

The climate is mild with heavy precipitation in the fall, winter and early spring months. Mining operations could be carried out on a year-round basis.

TITLE:

The property consists of 42 contiguous two-post claims and fractions staked to almost encircle six Crown Grants held by others. Pertinent information obtained from the Vancouver Mining Recorder's office on 22 August, 1980, is tabulated below:

CLAIM(S)	RECORD NUMBER	EXPIRY DATE	OWNER
AJX 1-9	28748-56	5 Jun 82	} Alice Lake Mines Ltd.
AJX 10 Fr.	28758	5 Jun 82	
AJX 11	28757	5 Jun 82	
AJX 12 Fr.	28900	5 Jun 82	
AJ 1-4 Frs.	28759-62	5 Jun 81	
O'CLANCY "P" Fraction	16320	16 Apr 83	
Production Lease	18975	20 Dec 81	
ALM 1-8	574-81	17 Apr 81	E. Kelland
ALM 9-16	582-89	17 Apr 81	A. Yurick
ALM 17-24	No record	-	-

The ALM 17-24 Claims are reported to have been staked by R. Cohen and recorded on 17 April, 1980.

The first 18 claims listed above, i.e., from the AJX 1 to the "P" Fraction Production Lease, were grouped as the ALM Group on 30 May, 1980.

The locations of these claims are shown on Map 2.

The writer checked the staking of many of these claims in 1969 and found them to be staked in accordance with the provisions of the Mineral Act and in approximately the described locations.

GEOLOGY:

The claims area covers a curved and often ill-defined contact between Triassic crystalline limestone of the Quatsino Formation on the north and east, and Jurassic rocks of the Island Intrusion on the south and west. Map 2.

The whole region has been subjected to intense block faulting. The faults commonly form the boundaries

between different formations and within the blocks, minor faulting has resulted in random displacement of veins and mineralized zones.

The limestone formation present on the property is part of a larger body that is the host for many of the mineral occurrences of the region. It has a northwesterly strike and a general dip to the southwest, but locally, especially near contacts and intrusions, these attitudes vary. Interbedded volcanics are common.

The intrusive is essentially a stock of quartz diorite and granodiorite with which are associated numerous dykes and sills that appear in the limestone.

The metallic minerals of economic interest in the area are galena, sphalerite and chalcopyrite with minor gold and silver. The galena and sphalerite occur in skarn zones and as replacements in limestone. Copper occurs as both chalcopyrite and bornite in skarn zones where magnetite is a prominent constituent.

On the subject property, galena and sphalerite, with or without pyrite and pyrrhotite, appear to be more important than the copper minerals which seem to be largely confined to the Crown-granted claims (held by others) in the centre of the area. However, copper mineralization has been noted on Alice Lake claims south of the Crown grants.

HISTORY:

This area has periodically attracted attention since about the turn of the century. Numerous pits and trenches, and a few adits, attest to wide-spread metallic mineralization at, or close to, the limestone-intrusive contact. At one time a small mine, with flotation mill, was in operation on a vein on the O'Clancy claim that averaged 2.0 ft. wide, 0.47 oz/ton in gold, 4.1 oz/ton in silver, 5.5% lead and 6.7% zinc. (A.J. Arland, P.Eng.).

The present owners acquired basically the same ground as they hold today in the late 1960's.

By 1969, active exploration was under way. Ground magnetometer surveys of selected areas (see Map 3) were made in the period June-August, 1969. Based on the results of these surveys, and on other, earlier, information, an extensive drilling programme was undertaken. Most of the holes

were drilled on the "P" Fraction in the southeastern part of the property, an area underlain by intrusives with numerous mineralized veins and zones. The remainder of the holes were on the O'Clancy, Olga (Lot 171) and Big Zinc Claims. (The last two are no longer held.) Metallic mineralization was found to be widespread.

In the spring of 1970, an aeromagnetic survey was made.

The owners entered into an agreement with Pond-eray Exploration Company Ltd. in 1973 to put the property into production under an operation company, Zeballos Development Company Ltd. A report by L.J. Siega, P.Geol. (Alta.) in 1974 gave the proven reserves, mainly on the "P" Fraction, as 51,000 tons grading 8.7 percent zinc and 0.95 ounces silver to the ton. A production lease was obtained for the "P" Fraction.

Little work has been done in recent years.

DISCUSSION:

Although considerable work has been done on this property in the past, most of it has been concentrated on the west and south, areas largely underlain by intrusives. It seems that more likely locations for economic mineral deposits would be in the limestone to the north where geologic conditions appear favourable for the occurrence of replacement bodies. Likely areas are along or near the limestone-intrusive contact, and adjacent to dykes and sills within the limestone, areas covered by the O'Clancy and ALM 7-16 Claims, and by the AJ 2, 3 and 4 Fractions.

Apart from the southern half of the O'Clancy Claim, the northern part of the property can be considered as virtually unexplored by modern methods.

As a first step, a ground magnetometer survey on a fairly close-spaced grid would serve to delineate the main contact and the locations of dykes, sills and other intrusives.

At the same time, soil samples could be taken. It might be argued that a geochemical survey in an area of heavy precipitation and over ground that has been disturbed

by logging operations would be unreliable. However, if done coincidentally with the magnetometer survey, the cost would be moderate and the results, used in conjunction with the magnetometer results, should be of some assistance in establishing target areas. The magnetometer, in itself, would be incapable of detecting lead, zinc or copper. Target areas could then be subjected to more intensive geophysical surveying or drilling.

CONCLUSIONS:

The property merits a further expenditure of funds on exploration.

The most favourable area is the northern part where limestone is in contact with, and has been intruded by dioritic rocks.

The possibilities of finding replacement metallic deposits in the limestone are good.

RECOMMENDATIONS:

In accordance with the foregoing discussion and conclusions it is recommended that a phased exploration programme be undertaken as follows:

Phase 1:

1. Lay out a base line along the location line of the ALM 7-16 Claims and extending across the O'Clancy Claim.
2. Run cross lines at 200-foot (60-metre) intervals normal to the base line and extending from the northern boundaries of the Crown Grants to the northern boundaries of the ALM 7-16 Claims, and including the northern half of the O'Clancy Claim. Map 3.
3. Take magnetometer readings at 200-foot (60-metre) intervals along the cross lines.
4. Take a soil sample from each magnetometer station and have the samples analyzed for lead, zinc and copper.

Phase II:

When the results of Phase I are available, check target areas by:

1. Detailed geophysical work and/or
2. Test drilling.

COSTS:

The estimated costs of the recommended programme are:

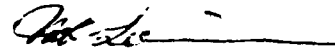
Phase 1:

1. Base line	£1000
2. Magnetometer and geochemical survey. 24 line-miles @ \$400	9600
3. Assaying. 620 samples @ \$3.55	2200
4. Interpretation, plotting, reports	3000
5. Engineering and supervision	1500
6. Transportation (Engineers & supervisors)	1000
7. Accomodation " "	500
8. Head office administration	1000
9. Miscellaneous and contingencies @ 15%	3000
	<hr/>
TOTAL PHASE 1	£22800

Phase 11:

Costs will depend on the results of Phase 1 but allowance should be made for:

1. Detailed geophysical surveying	3000
2. Test diamond drilling. 500 feet @ \$40/ft. including all costs	20000
	<hr/>
TOTAL PHASE 11	\$23000
TOTAL BOTH PHASES	\$45800



M.K. Lorimer, P.Eng.

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- Muller, J.E., Northcote, K.E., Carlisle, D., Geological Survey of Canada, Geology and Mineral Deposits of Alert-Cape Scott Map Area, Paper 74-8, 1974.
- Siega, L.J., B.Sc., P.Geol., Geological Report on "P" Fraction and "Catherine" Crown Grant, Private Report, 1974.

CERTIFICATE OF QUALIFICATIONS

I, MALCOLM KEITH LORIMER, of the City of Vancouver, B.C.,
Mining Engineer, hereby certify:

1. THAT I am a practising Mining Engineer and reside at
3082 West 27th Avenue, Vancouver, B.C.
2. THAT I am a graduate of the University of British
Columbia and hold a Bachelor of Applied Science degree
in Mining Engineering granted in 1950.
3. THAT I have been practising my profession for over
twenty-nine years.
4. THAT I am a member of the Association of Professional
Engineers of the Province of British Columbia.
5. THAT the following is a true record of my employment
and experience:

1950-52 General engineering, Consolidated Mining and
Smelting Company of Canada Limited, Kimberley, B.C.

1952-56 Chief Engineer, Pioneer Gold Mines of B.C. Ltd.,
Pioneer Mines, B.C.

1956-57 Chief Engineer, Buchans Mining Co. Ltd., Buchans,
Nfld.

1957-59 Chief Engineer and Mine Superintendent, Cowichan
Copper Company Ltd., Lake Cowichan, B.C.

1959-65 General exploration work for various companies,
mostly in southern British Columbia.

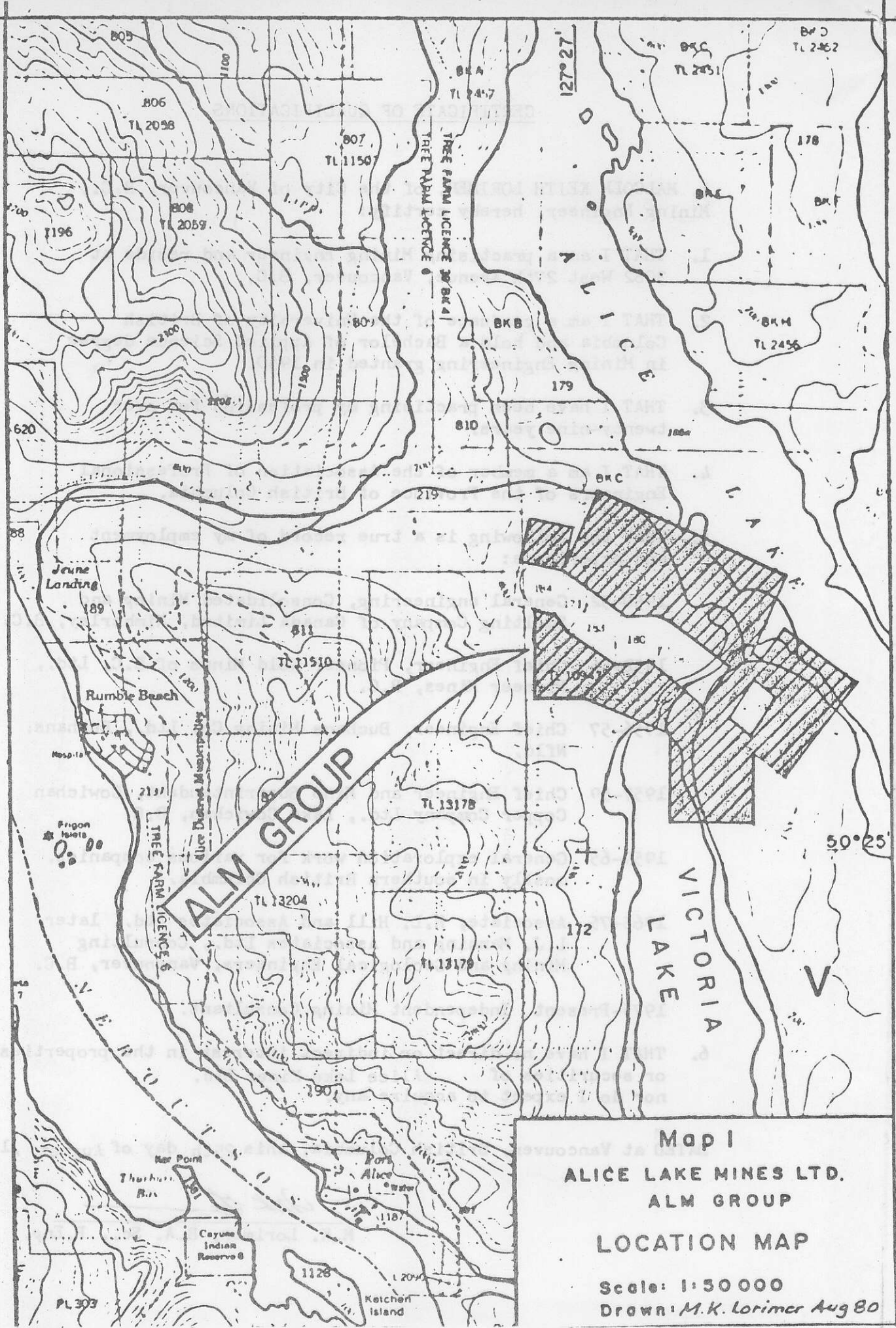
1965-75 Associate, H.L. Hill and Associates Ltd., later
L.J. Manning and Associates Ltd., Consulting
Mining and Geological Engineers, Vancouver, B.C.

1975-Present Independent Mining Consultant.

6. THAT I have no direct or indirect interest in the properties
or securities of Alice Lake Mines Ltd.
nor do I expect to acquire any.

DATED at Vancouver, British Columbia, this 25th day of August, 1980

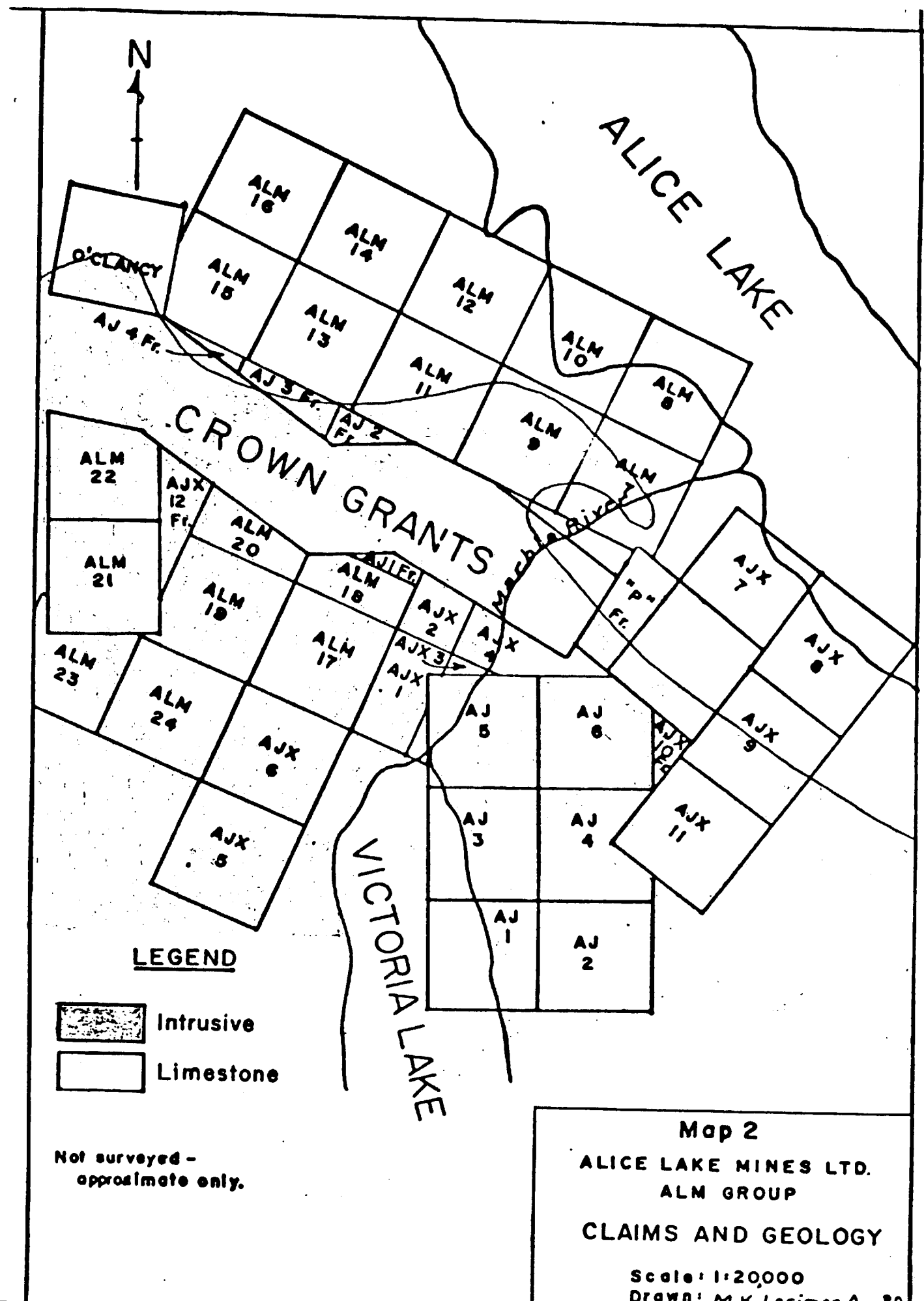

M.K. Lorimer, B.A. Sc., P.Eng.



ALM GROUP

Map I
ALICE LAKE MINES LTD.
ALM GROUP
LOCATION MAP

Scale: 1:50 000
 Drawn: M.K. Lorimer Aug 80



ALICE LAKE

CROWN GRANTS

VICTORIA LAKE

MARCH 19 RIVER

O'CLANCY

AJ 4 F.

ALM 22
ALM 21

AJX 12 F.

ALM 23

ALM 20

ALM 24

ALM 19

AJX 5

ALM 18

AJX 6

ALM 17

AJX 1

AJX 2

AJX 3

AJX 1

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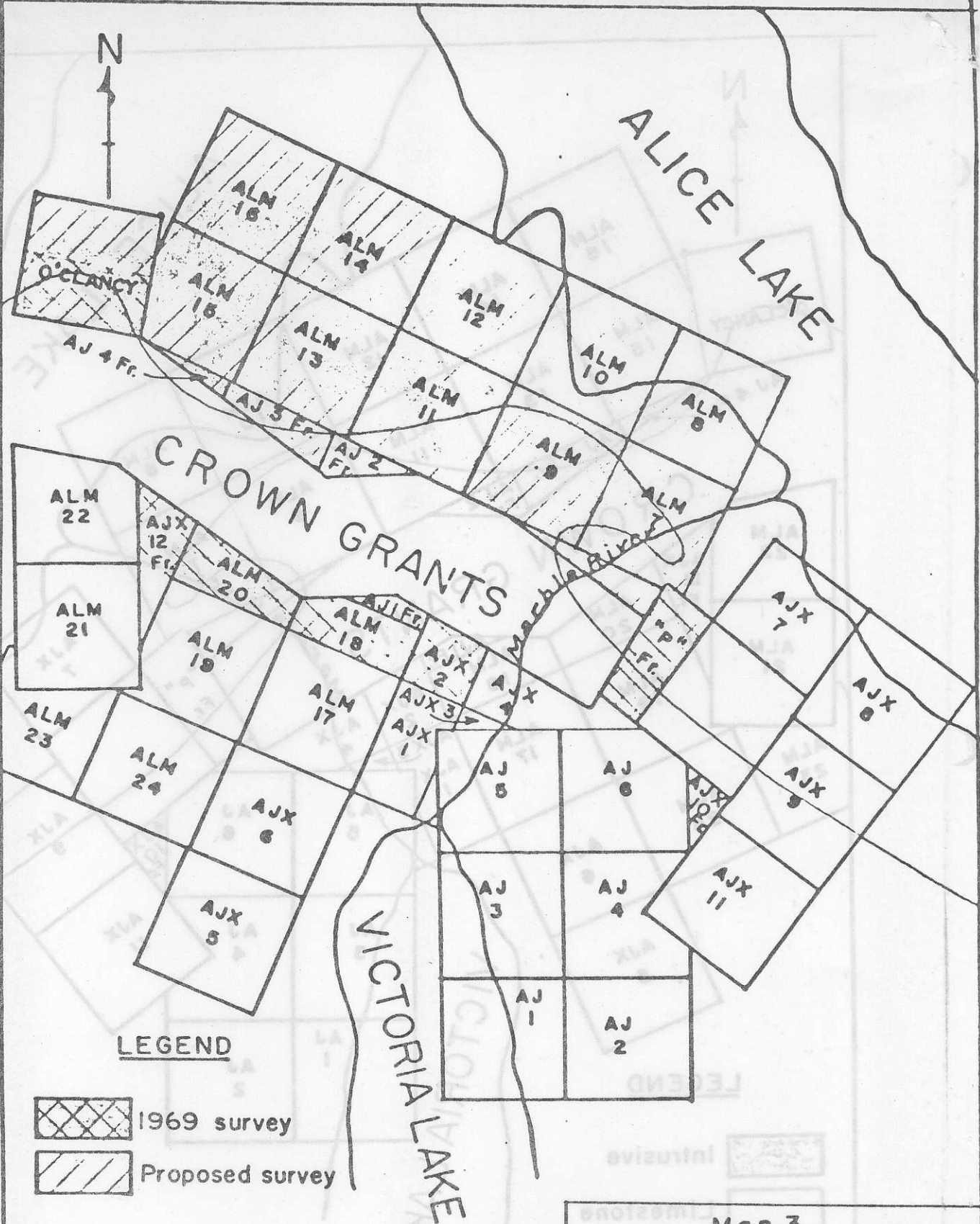
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LEGEND

-  1969 survey
-  Proposed survey

Not surveyed -
approximate only.

Map 3
ALICE LAKE MINES LTD.
ALM GROUP
MAGNETOMETER SURVEYS

Scale: 1:20,000
 Drawn: M.K. Lorimer, Aug 80