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of \$

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REPORT

ON

THE GLEN MINERAL CLAIM GROUP

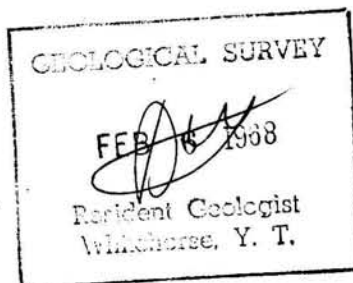
OF

ALICE LAKE MINES LTD. N. P. L.

AT

BURWASH CREEK,

YUKON TERRITORY



REPORT ON THE GLEN MINERAL CLAIM GROUP

BURWASH CREEK, YUKON TERRITORY

INTRODUCTION, SUMMARY AND CONCLUSIONS

The Glen property on Burwash Creek, Yukon Territory was visited during the period August 3rd to August 7th, 1967. An exposure of copper and nickel bearing sulphides was examined, the locations of several moderate to weak electromagnetic anomalies were visited, and part of the property was geologically mapped.

It was observed that the copper and nickel showing is near a contact between serpentized basic intrusive rock and a large body of siliceous to calcareous sedimentary material. The sediment may lie on the footwall of a sill, but it is presently believed to be included within the sill. A basic intrusive contact is a favourable environment for pyrrhotite - pentlandite - chalcopyrite deposits.

Two long electromagnetic anomalies more or less conform with contacts between sediments and the basic intrusion. The horizontal trace of one anomaly is parallel to the known sulphide showing and passes within 100 feet of it.

It was concluded that the two most favourable anomalies warrant initial investigation by about 1400 feet of diamond drilling in four shallow holes. More detailed electromagnetic surveying is required in order that the holes may be located to best advantage.

A third anomaly should be initially investigated by prospecting and surface trenching along the bank of Tetamagouche Creek.

A budget of \$25,300 will be required for the proposed initial investigations on this property.

LOCATION AND MEANS OF ACCESS

The Glen group is about 180 miles northwest of Whitehorse and five miles southwest of Mile 1104 of the Alaska Highway. In summer, it is easily accessible by a placer mining company's private road along Burwash Creek. In winter, it is accessible only by walking or by helicopter. The construction of a six mile all-weather road across the Burwash Uplands from Mile 1100 to the property would present no problem.

PROPERTY HISTORY AND OWNERSHIP

The nickel-copper showing on Burwash Creek is said to have been discovered in the early 1950's. The showing was tested by three short diamond drill holes, but to the best of the writer's knowledge no serious work was done in the surrounding area.

Fifty-six of the Glen claims were located by H. Gloslee and his associates during the period December 6, 1966 to February 2, 1967. These claims were transferred to Alice Lake Mines Ltd. on August 21, 1967. Four additional claims staked on the writer's recommendation in August, 1967 are said to have been granted, but their record numbers are not known to the writer. These four new claims do not encompass any location in which specific work is recommended in this report.

In July 1967, about one-third of the property was electromagnetically and magnetically surveyed by Eagle Geophysics Ltd. with favourable and encouraging results.

The property comprises the following quartz mineral claims:

<u>Claim</u>	<u>Record Number</u>
Glen 1-24 inclusive	Y 11400 - Y 11423
Glen 25-56 inclusive	Y 11840 - Y 11871
Glen 56-60 inclusive	Unknown (Recent staking)

PHYSICAL FEATURES OF THE AREA

The property lies at an average elevation of 4500 feet at the foot of the Kluane Range. It is bisected by the steep-walled, three hundred feet deep canyon of Burwash Creek. This canyon and its tributary, Tetamagouche Creek are the only major physical features on the property. Beyond the canyon walls the topography is gently rolling.

There is abundant bedrock outcrop on cliffs along the two major creeks, but most of the property is overlain by more than 100 feet of glacial till.

The area has been both logged and burned, and there is no useful timber on the property.

Burwash and Tetamagouche creeks are permanent streams with heavy seasonal flows.

GENERAL GEOLOGY

The Glen property is mainly underlain by cherty limestone, argillite, quartzite and greenstone of the Cache Creek Group. These are intruded by buff, siliceous, medium grained feldspar porphyry

tentatively identified as latite and by tabular bodies of greenish grey to black, fine to medium grained, moderately to almost completely serpentized ultrabasic and basic rock.

The basic and ultrabasic bodies are layered sills containing inclusions of the invaded Cache Creek rocks. There is moderate silicification of the invaded sediments near the intrusive contacts. The copper-nickel sulphide showing and the most significant electromagnetic anomaly are on the margin of a very large sedimentary inclusion within a sill believed to be several thousand feet thick.

Bedding and most of the exposed contacts on the property strike ESE and dip about 45° north.

MINERALIZATION

There is a nickel and copper showing at water level on the north bank of Burwash Creek about 600 yards above the mouth of Tetamagouche Creek. Scattered small pods of pyrrhotite and chalcopyrite are exposed in an area 20 feet long and 5 feet wide along a north-dipping contact between serpentized ultrabasic rock and a major sedimentary inclusion. Host rocks for the mineralization are brittle, siliceous altered sediment, and lenses and tongues of grey, medium grained serpentized pyroxenite (?) below the major contact. Individual sulphide pods strike $N 70^{\circ} W$ to $N 50^{\circ} W$ and dip about $70^{\circ} SW$. They are commonly 1/2 inch wide and about 4 inches long, but one 6 inch by 12 inch pod was noted. A selected sample containing about 50% sulphides from several pods was taken by the writer. It assayed 3.56% nickel and 0.73% copper.

Most of the core from three holes drilled on this showing about twelve years ago has been carried away or scattered, but one remaining two foot section contains a few 1/2 inch bands of sulphides.

Six hundred feet west of the main showing, a little disseminated chalcopyrite is exposed along the footwall contact of a small serpentized apophyse within the sediments.

Disseminated pyrite and pyrrhotite are common in silicified sediments along Tetamagouche Creek. Traces of pyrrhotite are widely disseminated in the basic intrusive rocks.

ANOMALIES

In July 1967, an electromagnetic survey covering about two square miles around the nickel-copper showing indicated twelve zones of weak to moderate conductivity. The three most important are:

- (1) Anomaly "A" more or less conforms to the same basic intrusive contact on which the copper-nickel showing is located. The conductor is more than 3200 feet long and has an apparent width of about 60 feet. Most of it is overlain by 100 to 200 feet of glacial till. This conductor passes about 100 feet north of the copper-nickel showing and was therefore missed by the south-dipping holes drilled to test the showing about twelve years ago.
- (2) Anomaly "B" is 1700 feet south of Anomaly "A" and is roughly parallel to it at N 70° W along another contact between sedimentary

and ultrabasic rock. The conductive zone is more than 2400 feet long and has an estimated width of 65 feet. Most of it is overlain by 150 feet to 200 feet of glacial till.

One serpentinite outcrop more or less on strike from the anomaly and 400 feet east of Eagle's final EM survey line contains about 10% very finely divided magnetite. This magnetite could be the cause of conductivity, but the serpentinite contact is inferred to lie north of the magnetite-bearing outcrop. It is expected that the conductor is likely to be near the contact as it is farther west.

- (3) Anomaly "C" indicates a relatively short, (800 feet), weak conductor trending parallel to "A" and "B" about 600 feet from an ultrabasic intrusive contact. At 4S, 34E on the EM grid, it crosses Tetamagouche Creek near an outcrop of leached, iron-stained, light grey, fine grained to aphanitic siliceous to calcareous sediments. These sediments contain up to 5% finely disseminated pyrite and pyrrhotite and a trace of chalcopyrite. On a steep bank directly below the 34E picket, pyrite is highly concentrated in a 1 1/2 ft. wide band of sheared argillite striking S 85° E and dipping 55° north. A random sample of sulphide-bearing siliceous sediment collected at intervals between 26E and 35E along Tetamagouche Creek contained only traces of copper and nickel.

RECOMMENDATIONS AND COST ESTIMATES

Anomalies "A" and "B" should be tested by diamond drilling. However, because there are no good geological controls exposed close to these anomalies, the spotting of holes will necessarily be based solely on geophysical data. Estimations of overburden depth, conductor width and direction of conductor dip are critical. It is, therefore, recommended that the EM survey of the critical areas be repeated on a 200 foot x 50 foot grid. It is further recommended that at least a portion of this detailed survey be duplicated with a second type of EM instrument for comparative purposes.

It is recommended that Anomaly "A" be initially tested with three diamond drill holes each about 350 feet deep. One of these holes should be on any one of lines 6N, 8N or 10N; one should be between 10N and 24N; and one should be between 24N and 30N.

Anomaly "B" should be tested with one hole somewhere between 16N and 26N.

The extensively mineralized area around Anomaly "C" should be thoroughly prospected, and a long cross-trench should be dug in the weathered outcrop west of Tetamagouche Creek along the 4S grid line. If any sulphides of base metals are found, this anomaly will also require detailed surveying and drilling.

The foregoing program should require about one month and should be initiated immediately to be completed before freeze-up.

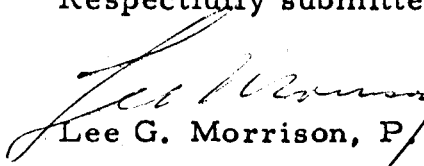
Decisions regarding further drilling or the expansion of the geophysical survey may be based upon the results of this program.

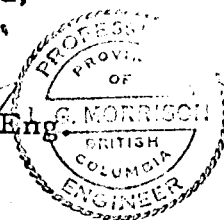
The estimated cost of the initial program is as follows:

(1)	Geophysical detail for hole spotting	1,000
(2)	1400 ft. of AX diamond drilling @ \$12.50 per foot including moving costs	17,500
(3)	Trenching and prospecting at Anomaly "C"	1,100
(4)	Allowance for assaying	500
(5)	Supervision, engineering and overhead	2,900
(6)	Contingencies (10%)	2,300
		<hr/>
		\$ 25,300

Additional funds in the order of \$50,000 should be made available for more detailed diamond drilling if the initial program is successful.

Respectfully submitted,


Lee G. Morrison, P. Eng.



- Encl: (1) Geological Plan of Electromagnetically Surveyed Portion of Glen Group (1" = 600')
- (2) Location Map, Burwash Creek Properties, Alice Lake Mines Ltd.

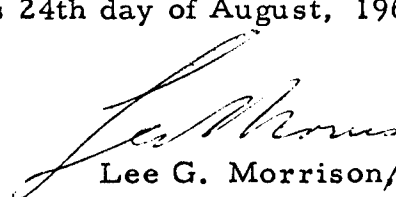
CERTIFICATE

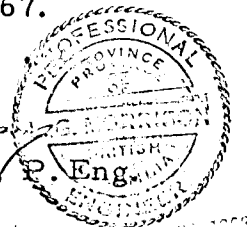
I, LEE G. MORRISON, of the City of Calgary, in the Province of Alberta,

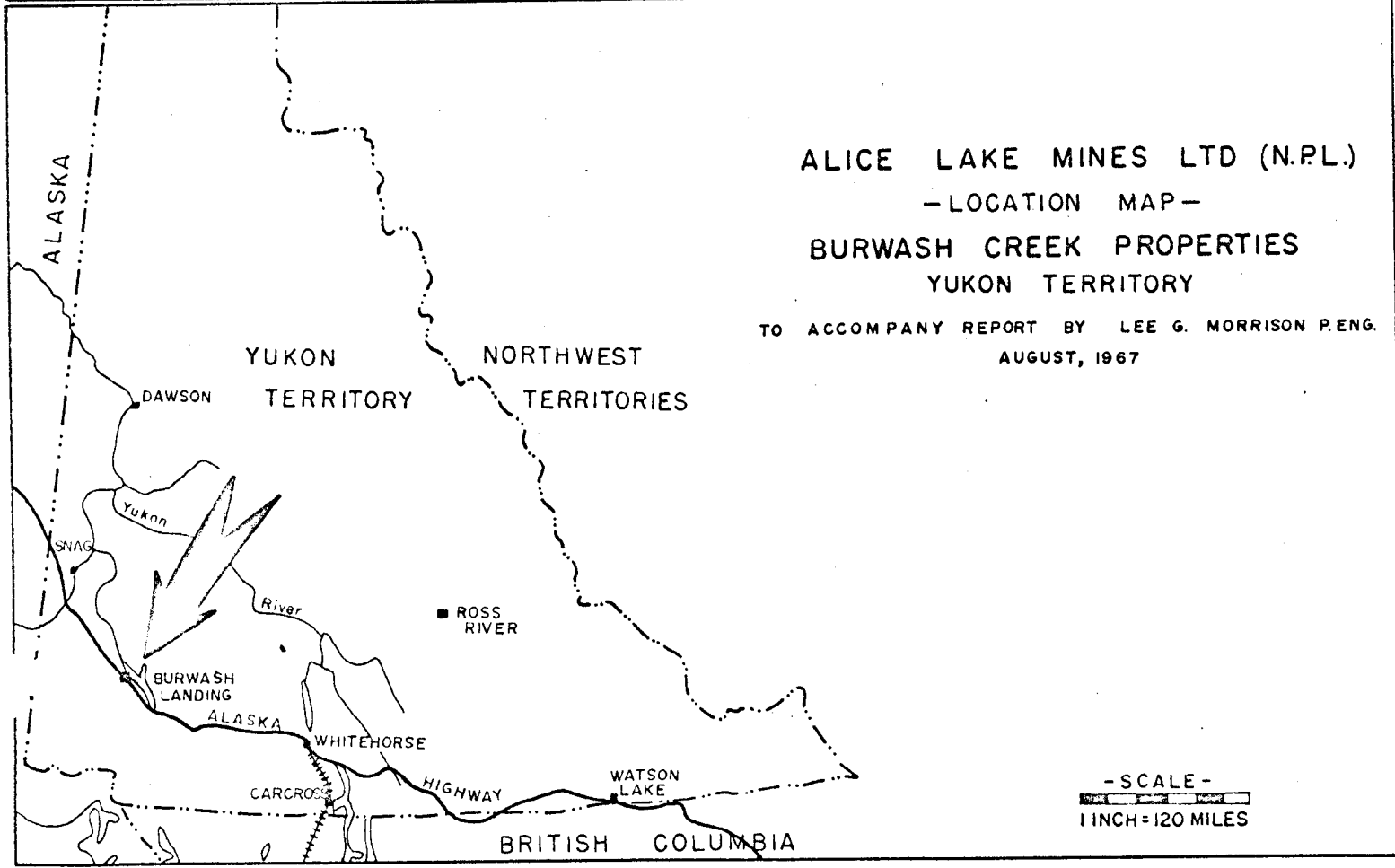
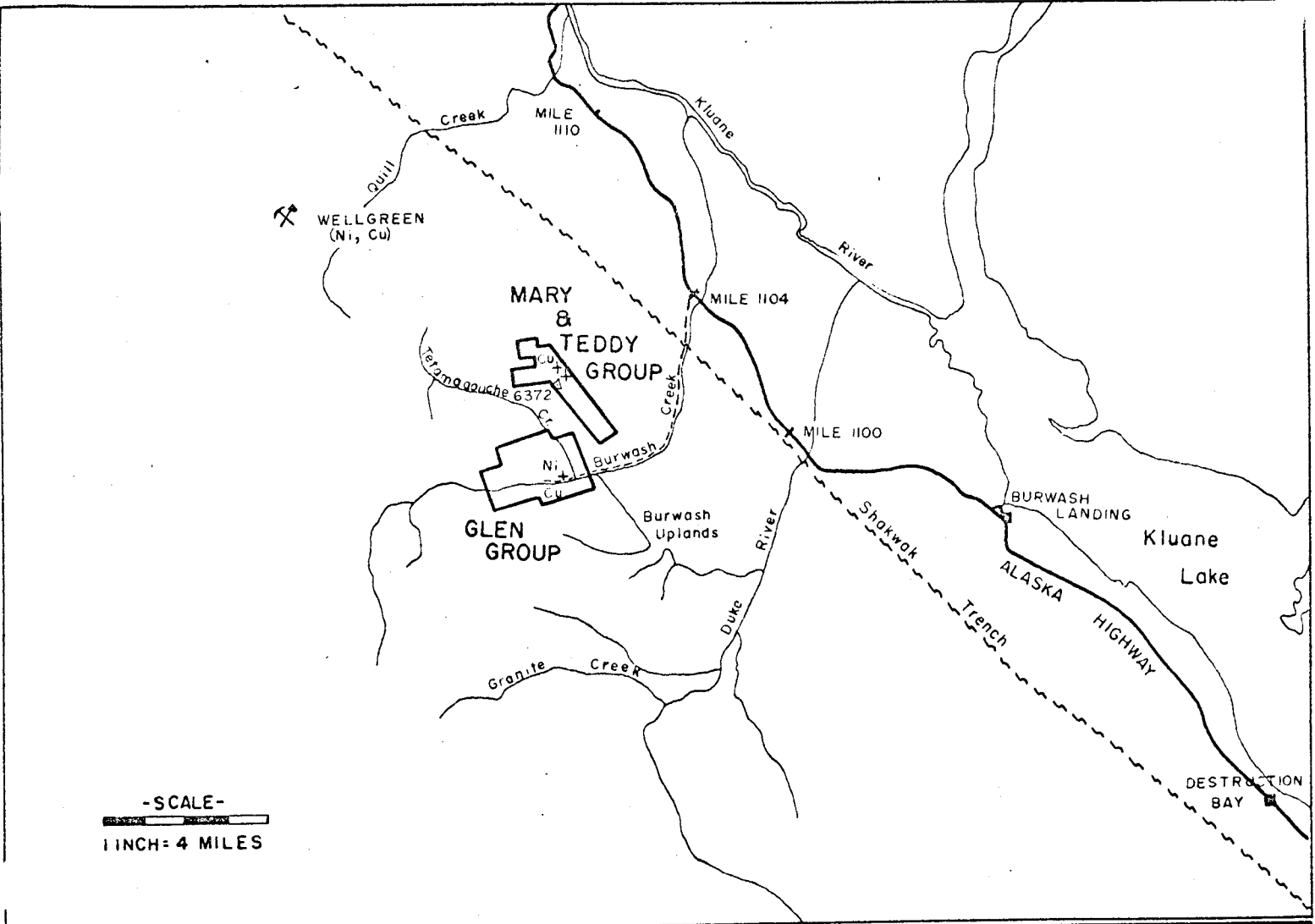
HEREBY CERTIFY:

1. THAT I am a registered Professional Engineer in Alberta, Saskatchewan and British Columbia;
2. THAT I am a graduate of the University of Saskatchewan with the degrees of Bachelor of Arts (1956) and Bachelor of Science in Geological Engineering (1957);
3. THAT I am a Consulting Mining Geologist residing at 1608 - 49th Avenue, S. W., Calgary, Alberta;
4. THAT commencing in 1949, I have been actively engaged in various phases of the mining industry for a total of more than 14 years, and that I have practised as an Exploration Geologist for more than 10 years;
5. THAT two years of my experience has been directly related to nickel deposits in the Sudbury area and in northern Manitoba;
6. THAT the foregoing report is based upon a study of electromagnetic and magnetic survey data provided by Eagle Geophysics Ltd., and upon my personal observations on the property during the period August 3rd to August 7th, 1967;
7. THAT I have no direct or indirect interest in the Glen Group or in Alice Lake Mines Limited.

DATED at Calgary, this 24th day of August, 1967.


Lee G. Morrison, P. Eng.





ALICE LAKE MINES LTD (N.P.L.)
 - LOCATION MAP -
 BURWASH CREEK PROPERTIES
 YUKON TERRITORY

TO ACCOMPANY REPORT BY LEE G. MORRISON P.ENG.
 AUGUST, 1967

32 N 28 N 24 N 20 N 16 N 12 N 8 N 4 N 0+0

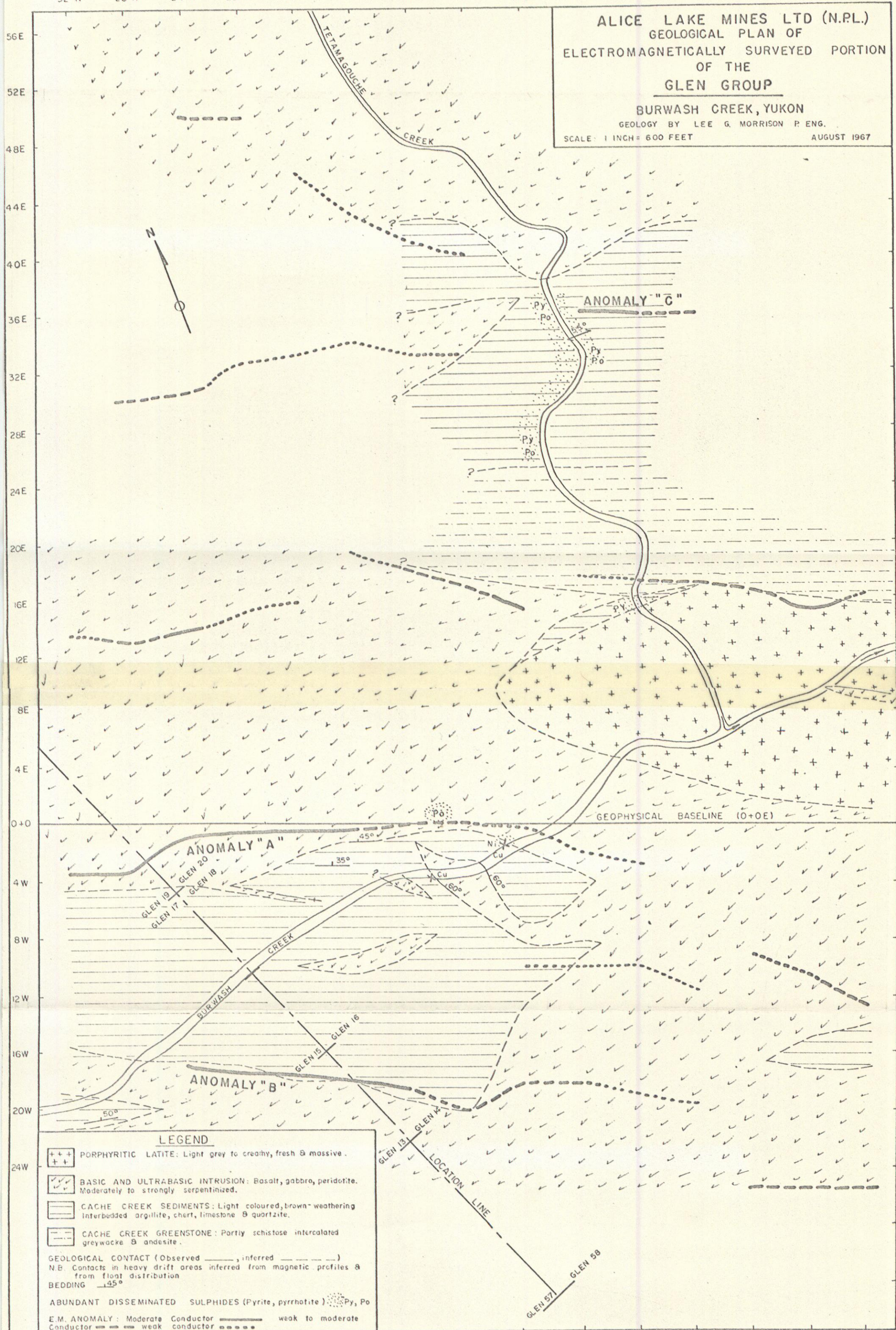
ALICE LAKE MINES LTD (N.P.L.) GEOLOGICAL PLAN OF ELECTROMAGNETICALLY SURVEYED PORTION OF THE GLEN GROUP

BURWASH CREEK, YUKON

GEOLOGY BY LEE G. MORRISON P. ENG.

SCALE: 1 INCH = 600 FEET

AUGUST 1967



LEGEND

- +++ PORPHYRITIC LATITE: Light grey to creamy, fresh & massive.
- Basic and ultrabasic intrusion: Basalt, gabbro, peridotite. Moderately to strongly serpentinized.
- Cache Creek sediments: Light coloured, brown-weathering interbedded argillite, chert, limestone & quartzite.
- Cache Creek greenstone: Partly schistose intercalated greywacke & andesite.
- GEOLOGICAL CONTACT (Observed ———, inferred - - - - -)
- N.B. Contacts in heavy drift areas inferred from magnetic profiles & from float distribution
- BEDDING 45°
- ABUNDANT DISSEMINATED SULPHIDES (Pyrite, pyrrhotite) Py, Po
- E.M. ANOMALY: Moderate conductor ——— weak to moderate conductor - - - - - weak conductor ·····

45 85 125 165 205 245