PIE IX BOULEVARD

010

Leonard Gravenor

B.A. A.R.C.S. (ENGLAND)

CONSULTING ENGINEER

MINING & CHEMICAL

MEMBER OF THE CORPORATION OF PROFESSIONAL ENGINEERS OF QUEBEC

MEMBER OF THE C.I.M.M. AND A.A.A.S.

Montreal. CANADA

April 29th, 1958

Lt.Colonel Gustave H.Rainville, President
Elwood Mining Exploration Co.Ltd.
Suite 5 - 6
1121 Sherbrooke St.West
MONTREAL, Que.

Dear Sir:-

Please find attached hereto a coloured map on a scale of 200 feet to 1 inch showing the outcrop geology of your mining property located in the Schreiber area, Thunder Bay District, Port Arthur Mining Division, Province of Ontario.

This map embodies all the field work that was done by C.Authier last fall and also includes the mineralized zones found by him as well as the "conductors" indicated by McPhar Geophysics Limited on their map bearing No.E-4396 dated August 27th, 1957.

This property, bearing claim Nos.T.B.86760 to 86769 inclusive and T.B.87269, forms only one group located partly in township No.84 and partly in township No.85 of the Port Arthur Mining Division, in Western Ontario. Its total area is approximately 440 acres.

These mining claims were staked in May 1957 as a result of an airborne electromagnetic survey carried out by Aerophysics of Canada Limited in November 1956. This survey, which extended over an area of

about 225 square miles, had indicated three exceptionally strong "conductors" to the south and to the east of the south end of Walker Lake, about one mile northwest of the town of Schreiber. In fact some of the highest results of the entire survey were obtained at that location.

In July 1957, after the ground had been staked, a ground electromagnetic survey was executed by McPhar Geophysics Limited for the purpose of pin-pointing the "conductors" prior to their probing. This work revealed the presence of three linear conductors and a number of scattered "point-conductors" on claim T.B.86769. The strongest conductor was traced for a distance of over 1,200 ft. across mining claim T.B.86768 and consistently yielded cross-overs of about 60 degrees. This conductor was designated Zone "C" by McPhar. Two other persistent conductors, designated Zones "A" and "B", were found to run in an east-west direction in the vicinity of the base line.

The geological work was done for the twofold purpose of (a) primarily, ascertaining if any mineralization was exposed along the indicated conductors or, elsewhere on the property and (b) to determine surface geological conditions. This phase of operations is represented by the accompanying geological map.

The present geological survey was carried out along picket lines spaced 400 feet apart and, consisted almost exclusively of field mapping without the benefit of microscopic or other laboratory work on rock specimens. Nevertheless, it is believed that the primary objectives of this survey have been satisfactorily obtained.

Exploration of this property has, so far, been for base metals, and, to complete the record, it should be stated that the geological work was followed by a limited amount of diamond drilling to probe the three zones previously mentioned.

-o-o-o-o-o-o-o-

SUMMARY AND CONCLUSIONS

A surface geological survey was carried out in the fall of 1957 on a group of 11 mining claims bearing Nos.T.B.86760 to 86769 inclusive and T.B.87269 in the Screiber area of Western Ontario for the twofold purpose of:

a) investigating the cause or causes of certain strong electromagnetic conductors indicated in previous surveys, both airborne and ground;

b) prospecting the ground for the possible presence of base metal mineralization.

Results of this work as well as of a limited amount of diamond drilling executed subsequently showed that:

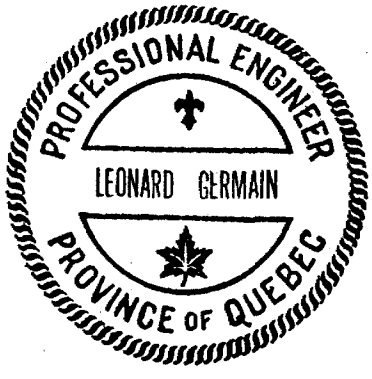
a) conductive Zone "C" was due to massive pyrite-pyrrhotite mineralization with only slight traces of base metals where exposed or cut by drill holes;

b) neither surface geological work nor diamond drilling has given satisfactory explanations of the existence of conductive Zones "A" and "B";

c) although, copper and zinc were found in trace quantities at a number of points on the property, no base metal mineralization was observed or encountered in all the work performed to date on this property.

There might still be an outside chance that commercial base metal mineralization might be found on this property in additional exploration work but, it is our opinion that the property has received a fair going-over and, no additional work of any consequence seems advisable.

-o-o-o-o-o-o-o-o-o-



Elwood Mining Exploration Co.Ltd.(Schreiber Property) - Cont'd)

SURFACE GEOLOGY

The property lies within an area which has been geologized in the past by Collins(1), Hopkins(2), Tanton(3) and, recently, by Harcourt(4). In mapping it, the author has closely followed the nomenclature and rock classification given by Harcourt from whom the following Table of Formations has been reproduced in part to conform to the formations identified on the property itself.

TABLE OF FORMATIONS

QUATERNARY		
Pleistocene:		Sand, gravel, boulder clay;
	(Great Unconformity)	
PRE-CAMBRIAN		
Keweenawan:		Diabase dykes;
	(Intrusive Contact)	
Animikie:		Black sgale, iron formation;
	(Great Unconformity)	
Algoman:		Quartz and feldspar porphyries Hornblende syenite
	(Intrusive Contact)	
Keewatin:		Banded chert and iron formation; Conglomerate, quartzite, limestone; Acidic to intermediate lavas; Basic to intermediate lavas.

---

(1) W.H.Collins: "Report on the Region Lying North of Lake Superior between the Pic and Nipigon Rivers." G.S.C. Pub.No.1081; 1909.
(2) P.E.Hopkins: "Schreiber-Duck Lake Area." Ont.Dept.Min. Vol.XXX; 1921, pt.IV; pp.1-26;
(3) T.L.Tanton: "Nipigon-Schreiber District, Ontario. G.S.C. Summary Report 1920, pt.D; pp.2-7.
(4) G.A.Harcourt: "Southwestern Part of the Schreiber Area." Ont.Dept. of Mines, Vol.XLVII, Part IX, 1938; pp.1-28.

Elwood Mining Exploration Co.Ltd.(Schreiber Property) - Cont'd.

The topography of the property area is typical of the north shore of Lake Superior: very rugged with hills rising to 1,000 ft. above the lake level and sometime with steep cliffs. To a certain extent, the topography reflects the geological and structural features somewhat subdued later by glaciation.

Outcrops are very numerous and large and, except in low ground in valleys, where the bedrock surface is concealed the thickness of overburden is very small. The areas where geochemical soil sampling could be performed on a statistical basis on this property are considered very small indeed, more particulalrly if samples must be taken in glacial drift itself. Bedrock exposures are estimated to cover more than 75% of the property area.

Most of the unconsolidated material covering portions of the bedrock surface consists of peat and clay with occasional gravel.

All the consolidated material exposed at the surface of the property is Pre-Cambrian in age. Keewatin volcanic rocks and associated sediments underlie about 90% of the property area. Together with bands of iron formation and some sediments, they form the basal complex through which, diorite, quartz and feldspar porphyries, syenite and diabase have been intruded. But, the intrusive rocks form only a very small percentage of the rocks exposed at the surface of the property.

K E E W A T I N

The Keewatin-type rocks are represented by andesites, rhyolites, some interbedded conglomerate, quartzite and limestone, and a large band of iron formation. From regional data given by Harcout(op.cit.) it would seem that these rocks were emplaced in the chronological sequence given above.

The andesites underlie the southern tier of mining claims lying between the base line and the C.P.R.track, and, a portion of claim T.B. 86766. They occur as flat-top hills of low elevation, more or less as "plateaus" with generally gentle slopes which do not give any clue as to their structure.

The rhyolites form an irregular band, from 1,200 to 1,500 ft. in width extending in an east-west direction entirely across the property. Their topographical expression is in the form of high hills with some steep sides betraying the presence of large faults. The large outcrop found on claim T.B.86764 represents the highest elevation found on this property.

Interbedded with the rhyolites and, sometimes found along the line of contact between the andesites and the rhyolites, are occurrences of crystalline limestone, locally highly altered and impure. The actual configuration of this sedimentary band could not be determined on account of the paucity of outcrops but, from present indications it is assumed to occur as lenses either within the rhyolites, within the andesites or at the actual contact between the two formations. Most of the limestone occurs in low ground along creeks on the west half of the property.

Elwood Mining Exploration Co.Ltd.(Schreiber Property) - Cont'd.

A band of iron formation, a few hundred feet wide parallels highway No.17 across mining claims T.B.86768 and 87269. This band is not very rich in magnetite,less than 10%, but is very persistent.

North of this band and, in contact with it, are found large outcrops of altered andesites, partially carbonatized and injected with quartz.

Structure Within the Keewatin.

On account of fairly flat dips combined with rugged topography, and, the lack of good marker horizon, it has been practically impossible to ascertain the attitude of the Keewatin rocks within the property itself. From regional work by Harcourt(op.cit.) it would seem that the Keewatin rocks found on this property form part of the south limb of a syncline with unknown plunge.

A glance at the geological map No.47j of the Ontario Department of Mines covering the "Schreiber Area" shows that this volcanic band might be a roof-endant over a large batholithic intrusion of granite-syenite which encircles it in all directions. From the flat dips observed, it is believed that the folded volcanics form a broad syncline.

D I O R I T E

The largest development of diorite is found on claim 86769 at the northeast corner of the property where large exposures are found in contact with greenstone. The intrusive character of this rock has not been determined for lack of field evidence but, its irregular configuration within the greenstone would suggest that it is a plug.

A number of dioritic exposures were also observed at the north end of line 36W as well as on claim T.B.86766 where they exhibit a definitely intrusive character, some of them being located within rhyolites.

A L G O M A N

From regional considerations and, to follow Harcourt(op.cit.) classification, the quartz and feldspar porphyries and the syenites have been placed in the Algoman.

Their greatest development is found within the rhyolites in the western half of claim T.B.86763 and, along the north boundary of claim 86764. A few isolated exposures were also found at other points on the property and, in every case they are within the rhyolites.

These intrusives are probably offshoots and differentiates from the large syenite-granite mass surrounding and probably underlying the volcanics in the Schreiber area.

KEWEENAWAN

A single diabase dyke was traced and, two or three isolated outcrops were observed at scattered points.

Elwood Mining Exploration Co.Ltd.(Schreiber Property) - Cont'd)

A single dyke seems to run across mining claim T.B.86767 in a northwesterly direction. The dyke has been observed along lines 8W, 16W and 20W and, there is practically no doubt that it is continuous across line 12W. Indeed, the outcrops are aligned along a line which coincides with the strikes determined at individual exposures.

Another diabase exposure was observed along line 16W about 250 ft. north of the dyke previously mentioned, and, second outcrop was also seen along line 4W about 400 ft. northwest of the dyke. The relationship of these two last exposures with the dyke, if there is any, is unknown.

Two other isolated diabase exposures were also observed, one along line 0 + 00 and the other along line 68W close to the south boundary of the property.

MINERALIZATION

A number of mineralized zones were observed in the course of the geological survey. In every case, the mineralization consists of pyrite and pyrrhotite with subordinate amounts of marcasite.

The strongest zone runs across claims T.B.86768 and 87269 and has been traced for a distance of about 1,200 ft. Diamond drilling also established its continuity in depth. The zone consists of massive pyrite and pyrrhotite across a width of about 7 feet and is found within a band of lean iron formation. A representative sample of the mineralization yielded traces of zinc by spectrographic examination and, 0.24 ozs. silver and 0.06% copper by assaying. Three diamond drill holes put down across the zone failed to yield better values in base metals and silver.

Some fair pyrite and pyrrhotite mineralization is also present within a very persistent shear zone in the rhyolites on claims 86760 and 86764 a few hundreds of feet north of the base line. The mineralization along that zone is locally massive but, no indications of base metal mineralization was observed.

Another interesting zone was also observed along the north boundary of the property on claim 86763. This zone consists of a quartz vein, about 4 feet wide mineralized with pyrite, pyrrhotite and occasional flecks of molybdenite and chalcopyrite. The vein strikes northeast and occurs in rhyolite close to syenite.

Minute flakes of chalcopyrite were also observed in amphibolitized greenstone close to the contact with crystalline limestone along line 68W some 150 ft. south of the base line. The occurrence is not otherwise mineralized.

No base metal occurrence of possible economic interest was observed anywhere on the property and, none was encountered in the 1,500 ft. of diamond drilling executed.

-o-o-o-o-o-o-o-o-o-

Elwood Mining Exploration Co.Ltd.(Schreiber Property) - Cont'd)

C O M M E N T S

The ground electromagnetic survey had indicated three conductors of interest which were designated Zones "A", "B" and "C" by McPhar Geophysics Limited. The work performed to date at the property can account only for Zone "C" which is obviously due to pyrite-pyrrhotite mineralization of massive nature.

No explanation can yet be given for the presence of Zones "A" and "B" although it is quite possible that one of these two zones coincides in location with the contact between the andesites and the rhyolites. The other zone might also be due to graphite within the crystalline limestone. Diamond drill hole No.2 collared along line 68W and intended to cut these two zones, does not appear to be conclusive and, might not have reached the extension of conditions found at the surface along Zone "A".

Nevertheless, it is our opinion that the property has received a fair test and, with the possible exception of a limited amount of work along Zones "A" and "B", no further expenditures seem warranted for its exploration.

Respectfully submitted,

L. Germain, P.Eng.

PROFESSIONAL ENGINEER
LEONARD GERMAIN
PROVINCE OF QUEBEC

McPHAR GEOPHYSICS LIMITED

ELECTROMAGNETIC SURVEY

of

ELWOOD GROUP, SCHRIEBER, ONTARIO

for

CANABEL SYNDICATE

INTRODUCTION

At the request of Mr. Leonard Germain, Consulting Engineer for Canabel Syndicate, an electromagnetic ground follow-up survey was carried out over a group of 10 claims which had been staked to cover four airborne electromagnetic anomalies shown on the Aerophysics of Canada Map No. F991. These claims, known as the Elwood Group, are located approximately one mile west of Schrieber near Highway No. 17.

The geology of the area is covered by the Ontario Department of Mines report, Vol. XLVII, part 9, 1935.

PRESENTATION OF RESULTS

The results of the survey are shown on the accompanying Map No. E4396 which is on a scale of 1" = 200'.

DISCUSSION OF RESULTS

The conductive zones encountered by the surveying have been labelled alphabetically for ease of discussion.

ZONES A and B

Zone A has been interpreted from a series of conductor-axes

continuous from line 32W to the western boundary of the claim group. There is an apparent change of strike of the zone between lines 44W and 52W which parallels the creek in this area suggesting that both the conductive zone and the creek are controlled by the same structures.

Zone B lies a few hundred feet north of Zone A between lines 56W and 72W and the two zones are almost parallel in this area. East of line 56W the electromagnetic anomalies are somewhat indistinct, but Zone B has been interpreted to swing north and to continue eastward off the grid in the vicinity of line 40W.

Both Zones A and B display good to moderate conductivity throughout their length and both are considered worthy of further examination. Since the dip angle profiles are similar to those which are sometimes found over magnetic material and pryrrhotite mineralization is known to be wide spread in this area it is recommended that a magnetic survey be carried out over both of these zones before spotting the location of test drill holes. If the initial work shows that there is a close correlation between the conductors and the magnetics, a detailed survey on 200 foot lines should be made of the area between lines 44W and 56W where the electromagnetic results indicate a structural complexity.

ZONE C

Zone C has been traced from line 00 to line 16W and probably extends farther east and west. Massive pyrrhotite mineralization is reported in the immediate vicinity of this zone near line 8W and it seems

likely that this and other similar mineralization is the cause of the conductors. A magnetic survey should be carried out over the entire length of Zone C to check this hypothesis. Detail magnetic surveying on 200 foot lines should be carried out between lines 00 and 8W where the electromagnetic results indicate a sharp change in strike direction of the zone. The spotting of test holes should be deferred until the magnetic results are available for study.

ZONE D

Several scattered anomalies were found in the surveying of claim number 86769. Three of these have been interpreted to represent a single continuous conductor; Zone D. The orientation and strike direction of the conductors is difficult to determine on this part of the grid and it is suggested that magnetic survey be carried out over the claim before attempting to carry out further investigations or drilling.

SUMMARY

Aerophysics anomalies 16A and 17A have been correlated with Zones A and/or B.

Aerophysics anomalies 15A and 16B have been correlated with Zone C. The peak value of 15A was apparently not discovered by the survey and possibly was not covered by the ground grid.

McPHAR GEOPHYSICS LIMITED

Frank T. Clifton

F. T. Clifton,
Geophysicist.

DATED: August 23rd, 1957.

D. B. Sutherland

D. B. Sutherland,
Geophysicist.

McPHAR GEOPHYSICS LIMITED

CANABEL SYNDICATE

GEOLOGICAL REPORT - ELWOOD GROUP

September 13th, 1957

INTRODUCTION

Geological field work was undertaken by C. Authier during August, 1957. This work was designed to determine the causes of electromagnetic anomalies obtained during an aerial survey and located precisely by ground work during July, 1957. At the conclusion of Authier's field work the writer spent September 6th and 7th in the field with him. During these two days outcrops representative of each exposed conductive zone were examined.

SUMMARY

Exposures are sufficient in number to explain the great majority of the conductive zones. The dominant sulphides are pyrrhotite and pyrite, frequently with some accompanying marcasite. For the most part these sulphides appear due to the reduction of iron oxides in low grade iron formation, and there is very little evidence for substantial additions of epigenetic sulphides. Two minor exceptions may be noted - a quartz-rich zone carrying minute traces of chalcopyrite with pyrite and pyrrhotite near the north boundary of claim 86763, and a few specks of chalcopyrite in claim 86762 near a conductive zone that corresponds in part with a crystalline limestone.

Total iron content in the only wide band of iron formation on this property, which is well exposed along the highway crossing claim 86768, is far too low for consideration as a potential source of iron. The average grade is estimated at considerably less than 10% over open pit width.

RECOMMENDATIONS

1. Specimen samples of mineralization from zones E, C and D should be submitted for spectrographic analysis to ensure that no unexpected metallic content is overlooked.

2. Trenching to bed rock should be attempted on line 68W between 1 + 40 south and the No. 1 baseline. Such a trench will permit determination as to economic interest of mineralization near the limestone contact. A conductor is present, and very minor chalcopyrite is present at the projected south end of this trench.

3. If no results of economic interest are obtained during steps 1 and 2, it is recommended that the claims not be retained.

DETAILS OF EXAMINATION

A. Zone E represents bands of pyrrhotite, pyrite, and marcasite apparently replacing iron oxides in a chert matrix. This band forms part of a very lean iron formation which extends across claims 87269 and 86768 along highway 17. The government geological map indicates a further extension of this band to the south and east of the Elwood claims.

Unless the observed sulphides carry some unexpected metallic of economic interest, this zone does not warrant further work.

B. Zones C and D

These zones are similar in mineralogical content to zone E, and essentially represent sulphide replacement of oxides in lean iron formation. In both cases, however, the iron formation has a width only to the order of a few feet.

These zones are exposed on claim 86760 and appear to extend west through the low ground along the creek. There is no reason to expect any increment in metallic content west of the area of observation.

C. Mineral occurrence on claim 86762

A conductive zone occurs on each of lines 64, 68 and 72W, south of the creek basin. On line 68W, south of the conductor, a few flecks of chalcopyrite were noted in an amphibolitized greenstone. Immediately north of the conductor is an exposure of crystalline limestone.

This geological association could not be traced to the lines on either side, and, along the observed strike of the limestone, massive volcanics occur to the east. Nevertheless this geological association is of considerable interest, chalcopyrite occurs nearby, and the conductive zone is not exposed. Tonnage possibilities are distinctly limited, but the occurrence may warrant trenching to determine the character of the sulphides.

D. Zone A is a silicified zone near the north boundary of claim 86763. Pyrite and pyrrhotite with minor chalcopyrite occur in this zone, but the percentage of sulphides is low and no conductor occurs. The zone does not appear to warrant additional work.

E. Anomalies on claim 86769 are not strong and in one case at least appear to be associated with a strong N - S fault zone showing no alteration or mineralization along its margins. There appears to be nothing on this claim warranting additional work.

McPHAR GEOPHYSICS LIMITED

J. P. Nowlan.

Dated: September 13th, 1957.

LEGEND

KEWEENAWAN

- Diabase

ALGOMAN

- 7 Porphyry
- 6 Hornblende syenite

POST - KEEWATIN

- Gabbro

KEEWATIN

- Iron formation
- Conglomerate, quartzite, limestone
- 2 Acidic lavas to intermediate
- 1 Basic lavas to intermediate

SYMBOLS

- Diamond drill hole
- Power line
- Highway
- Strike and dip of schistosity
- Swamp
- Escarpment
- Mineralization

TOWNSHIP NO. 85
TOWNSHIP NO. 84

CL. 86769 · CL. 87269 · CL. 86768 · CL. 86763 · CL. 86764 · CL. 86766 · CL. 86767 · CL. 86762 · CL. 86761 · CL. 86760 · CL. 86765

X-1 · X-2 · X-3 · X-4 · X-5 · X-6 · X-7 · X-8 · X-9 · X-10 · X-11

D.D.H. 1 · D.D.H. 2 – 45° · D.D.H. 3 Vertical · D.D.H. 4 Vertical

BASE LINE NO. 1 Bearing 90°

BASE LINE NO. 2 Bearing 90°

Highway 17 · TO HIGHWAY 17 · GRAVEL PIT · Creek · Stream · Swamp · C.P.R.

MASSIVE PYRITE & PYRRHOTITE PITS IN ALTERED IRON FORMATION

MASSIVE PYRRHOTITE & PYRITE IN SILICIFIED ZONE

MOLYBDENITE IN QUARTZ VEIN

PYRITE, PYRRHOTITE SLIGHT CHALCOPYRITE IN SILICIFIED ZONE

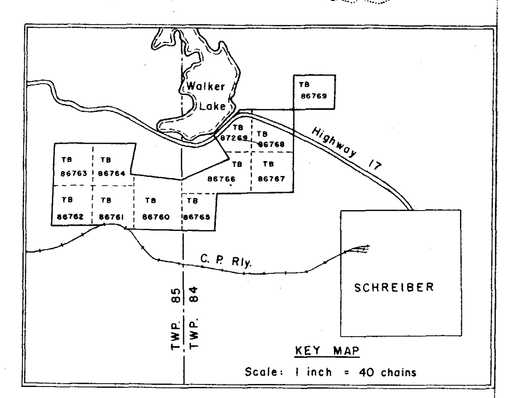
SHEARED VOLCANICS WITH LIGHT PYRITE

BANDED PYRITE IN SHEARED VOLCANICS

WELL MINERALISED WITH PYRITE AND SILICIFIED WITH STRINGERS OF SECONDARY QUARTZ

FINE MAGNETITE IN VOLCANICS

ZONE "A" · ZONE "B" · ZONE "C"



KEY MAP
Scale: 1 inch = 40 chains

NOTE : GEOLOGY BY C. AUTHIER

ELWOOD MINING & EXPLORATION CO. LTD.

BIG DUCK LAKE, ONTARIO

SURFACE GEOLOGICAL MAP

Scale = 1 inch = 200 feet

Approved Apr. 29/58

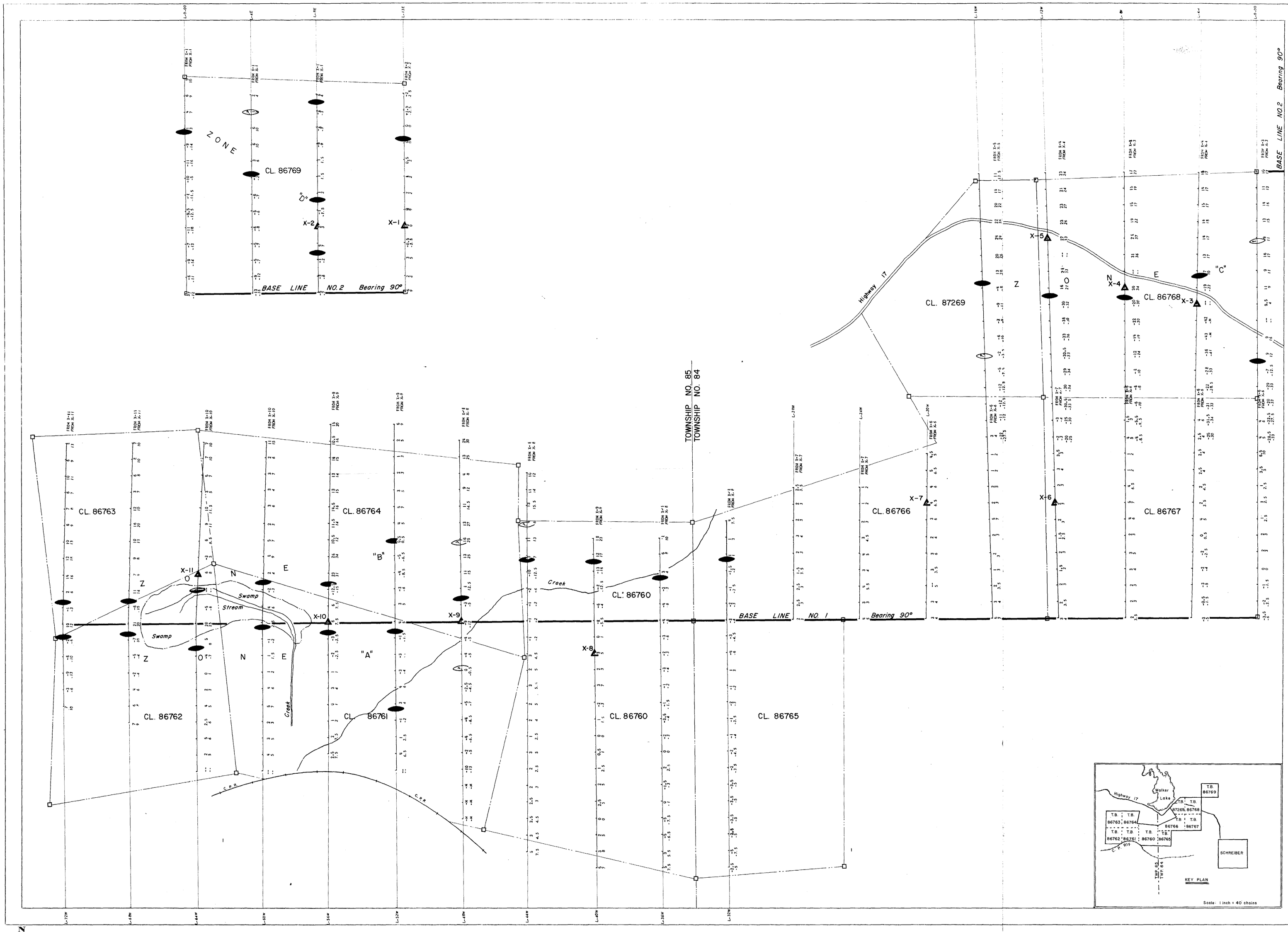
PROFESSIONAL ENGINEER · LEONARD GERMAIN · PROVINCE OF QUEBEC

63961

200

McPHAR GEOPHYSICS LIMITED

ELECTROMAGNETIC SURVEY



N

LEGEND

△ TRANSMITTER LOCATION

RECEIVER TRAVERSE AND 0 —05 READINGS. 1000 C.P.S.

NOTE: CORRESPONDING TRANSMITTER IS INDICATED AT THE END OF EACH SERIES OF READINGS.

RECEIVER TRAVERSE AND 0 —05 READINGS 3000 C.P.S.

CANABEL SYNDICATE

BIG DUCK LAKE AREA . ELWOOD GROUP ONTARIO

SCALE

200 100 0 200 400 600 800 1000 FEET

One Inch = Two Hundred Feet

SYMBOLS

- CONDUCTOR AXIS ESTABLISHED
- POSITION OF CONDUCTOR AXIS UNCERTAIN.
- EXISTENCE OF CONDUCTOR AXIS UNCERTAIN.
- SUGGESTED TEST DRILL HOLE

DRAWN: R. JOHNSTON

DATE: JULY 1957

APPROVED:

DATE: 27 Aug/57.