REPORT

ON

GEOLOGICAL MAPPING

OF

CONSOLIDATED BELLEKENO MINES LIMITED PROPERTY

SHARRON LAKE AREA, PATRICIA MINING DIVISION

DISTRICT OF KENORA, ONTARIO

INTRODUCTION

During the period 7th August to 16th August, 1963, the writer examined the outcrops and mapped the property in the vicinity of the showings.

Mapping was carried out on all six claims of the property and the results of reconnaissance traverse and general geology are plotted on the accompanying map at a scale of 1" to 100'.

From the results of the aero survey and field evidence, the general geology map (scale 1" = 3/4 mile), shows the major faulting in the area.

An electromagnetic and magnetometer survey was also carried out on the property during the above period.

PROPERTY, LOCATION AND ACCESS

The property is comprised of six claims, totalling 240 acres, situated west of Clamshell Lake which is in the Sharron Lake Area of the Patricia Mining Division in the district of Kenora, Ontario.

The claim numbers of the property are as follows:

Pa 32347	Pa 32348
Pa 32354	Pa 32353
Pa 32355	Pa 32356

The property lies approximately 15 miles east of Sioux Lookout on the west of Clamshell Lake and can be reached by air from Sioux Lookout, or alternatively by the Canadian National Railways at McDougall Mills when travel is continued by boat to Clamshell Lake.

HISTORY

The first geological work was carried out in 1897 by W. A. Parks and later in 1906 W.H. Collins included the area in his National Trans-Continental Railway reconnaissance. The area around Sioux Lookout was surveyed in 1931 by Hurst and later in 1936. Horwood mapped the area between Sioux Lookout and Sturgeon Lake and it was during this period the area around Split Lake and Alcona were mapped in detail.

TOPOGRAPHY

The area has numerous lakes scattered throughout, which are usually joined by streams or swamps. The area is flat with small hills rarely rising 100' above the swamp level.

rhyolite, diorite and tuffs. This band continues across the area and broadens to the west.

The Keewatin series is intruded by two granitic stocks which differ in age.

The younger granitic intrusives are only found in the immediate area around Split Lake and consist of granite, granodiorite, granite porphyry and quartz diorite.

The older granitic intrusives bound the north of the area and also occur to the east and south of Clamshell Lake. To the east of the lake the granite wedges out and cannot be traced on the west side of the lake.

These older intrusives consist of granite, granodiorite and diorite.

There are two major faults in the area shown on map (1" = 3/4 mile) which are striking N 50° E which can be traced for four miles. Other faulting in the area is minor and strikes northeast which is the general formation strike of the area.

GEOLOGY OF THE PROPERTY

The rock types found on the property are andesite, dacite, diorite, rhyolite and quartz porphyry.

The andesite is a grey-green, fine grained rock and is the most abundant rock type. In some cases the andesite

was found to grade into a basaltic rock type. The accessory mineral in the andesite is magnetite and concentration of magnetite occurs across the property. The andesite is well sheared and acid solutions have consolidated in the cracks and fractures. Pyrite is occasionally found in small quantities.

The dacite, occurring as small flows, is grey-green in colour.

The diorite is similar in colour to dacite and contains large grains of quartz.

The rhyolite is a buff grey and fine grained. These flows are found to grade into a fine grained quartz porphyry. Occasionally small amounts of pyrite occur.

The magnetite concentrations in the andesite can be traced across the area on the same strike as the formations. i.e. N 30° E. It is possible that there could exist a band of sediment in the formation.

Shearing, which strikes northeast has produced local alteration.

In faulted areas the hornblende crystals in the andesite are developed and rock becomes a hornblende gneiss. In the main mass of andesite, chlorite, calcite and quartz are developed as secondary minerals.

The strike of the formations on the property is N 30° E and dips 80° to the southeast at the north of the property and 60° to the southeast at the south of the property.

Rhyolite and pegmatite dykes strike in the same direction as the two sets of shears namely:-

(a) N 30° E

(b) S 81° E.

Also there occurs two andesite dykes in the rhyolite flows. Quartz veins were found in a few of the rhyolite dykes.

Grain graduation is observed in the rhyolitic flows with chilled edges of rhyolite on the boundary grading to quartz porphyry towards the centre of the flow.

There are no granitic intrusions in the property though the surrounding area is bounded by it. A wedge of granite occurs on the east of Clamshell Lake but cannot be traced into the property.

Sediments do not occur on the property or in the area but there is a possibility that there might exist a thin band of iron formation across the property but no evidence was found in the field.

During the Pleistocene era the ice in the area has come from the directions N 70° E heaving a deposit of clays, gravel and boulders.

STRUCTURE

The faulting in the area is shown on map. The main faulting was determined primarily by aero surveying and topography.

Fault 'A' can be traced 1,000 feet across claim Pa 32353 where the rock is highly altered and the rock becomes a hornblende gneiss. The strike of the two major faults through the area is N 50° E.

Three minor faults can be traced in claims Pa 32347 and Pa 32348. These can be traced across the property and extend south about 1,000' striking at the same angle as the formation at N 30° E.

Two sets of shears are well developed on the property having strikes (a) N 30° E and dipping 74° to the southeast and (b) S 82° E and dipping 75° to the northeast. The former is the predominant shear direction.

Acid solutions have solidified in these shear zones leaving the rock veined, with vein widths of 1" to 2" but in some cases more. These quartz and feldspar veins terminate within a few feet.

Dykes in the area are mainly rhyolite or pegmatite and have strike directions as the shears. The dykes are rarely more than 10' wide or extend more than 30 feet. Small quartz veins are common in the rhyolite dykes but are usually narrow and wedge out within a few feet.

Two andesite dykes occur in the rhyolite flow in Claim Pa 32355.

ECONOMIC GEOLOGY

The only mineral of economic value on the property is gold. All exposed quartz veins were examined with this in mind. The quartz veins are all narrow and run only for short distances. In two places quartz lenses were found. Quartz veins were found in the andesite, rhyolite and diorite and have the same strikes as the shears.

Samples were taken from prominent quartz veins and sent for assay, the results of which are shown on the accompanying table.

The main gold showing is in Claim Pa 32354 where a quartz vein 2' by 25' is situated in a rhyolite dyke (sample 602). The rhyolite dyke strikes S 85° E and dips at 73° to the north.

Another rhyolite dyke 100' south host contains a low value gold (sample 603). The dyke 2 1/2' wide strikes at S 85° E and also dips 73° to north.

Another quartz lens at 225 feet north of post 3 of claim Pa 32355 yielded only traces of gold and silver.

Samples of quartz from other veins in the property yielded only traces of gold and silver. The location of the samples and sample numbers are shown on the map (1" = 100').

SUMMARY AND RECOMMENDATIONS

The zones of high mineralization occur in rhyolite dykes and appear in claim Pa 32354. The main gold showing occurs in a quartz lens in a rhyolite dyke 50' west at 400' north on Line 128. The dyke strikes S 85° E and dip at 73° to the north. The lens is 2' wide and can be traced for 25'.

A second rhyolite dyke containing a quartz vein occurs 100' south of above dyke on Line 128 and is situated 40' to the west of the picket line. The dyke has the same strike of S 85° E and dips 73° north.

The remainder of the quartz veins on the property show traces of gold and silver.

Stripping of above showings along strike is recommended and if veins are found to continue along strike for lengths of 100' or more then diamond drilling should be considered.

Respectfully submitted,

SCOPE MINING AND EXPLORATION
CONSULTANTS LIMITED

T.M. Kerr, Bsc. P. Eng.

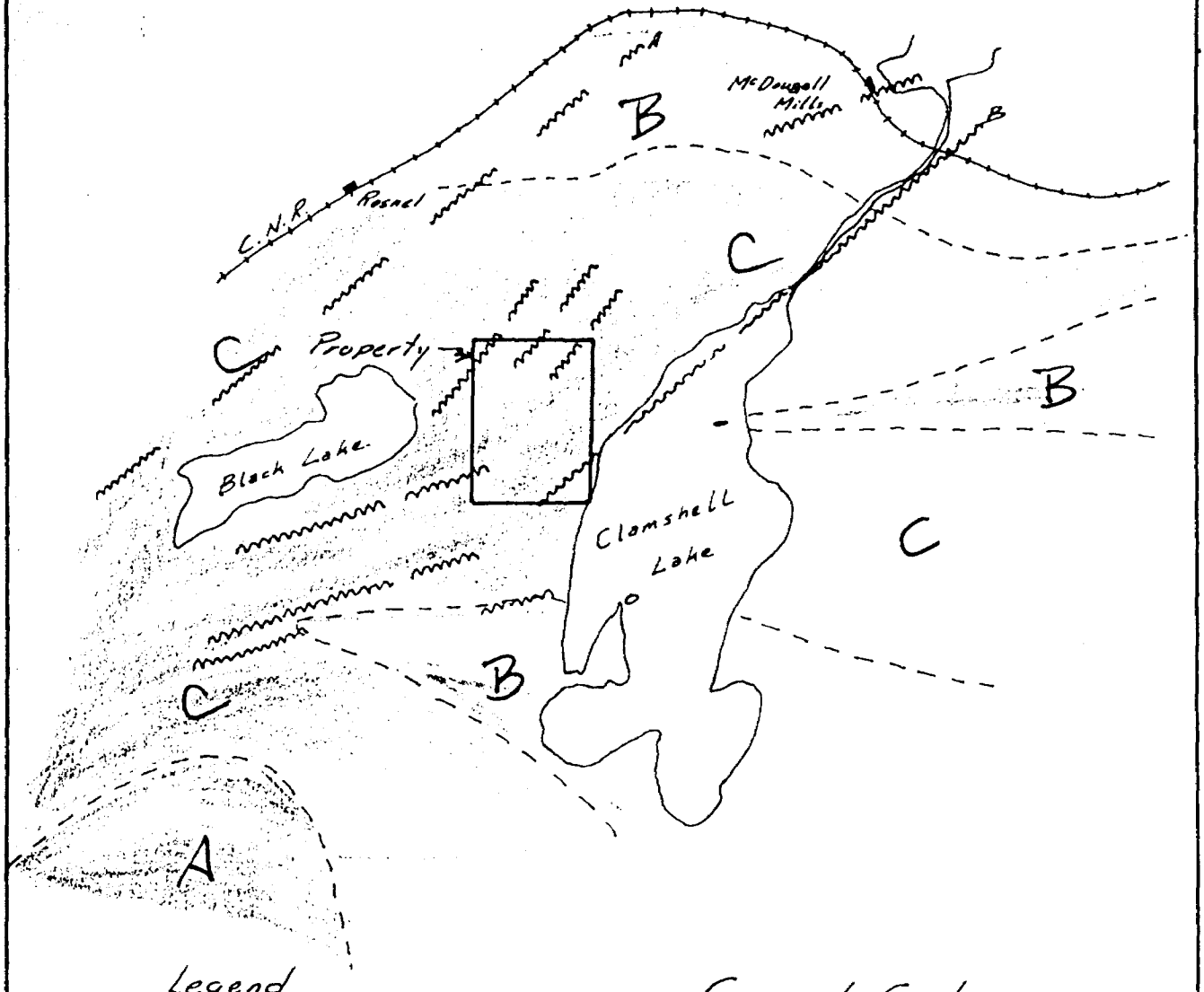
Toronto, Ontario

August 27, 1963.

APPENDIX

REPORT ON ASSAY FROM X-RAY LAB

Sample No.	Gold oz./ton	Silver oz./ton
601	Trace	nil
602	18.2	nil
603	0.06	trace
604	trace	trace
605	trace	trace
606	trace	trace
607	trace	trace
608	trace	trace
609	trace	nil
610	trace	trace
611	trace	trace
612	trace	nil



Legend

A — Younger Intrusives

B — Older Intrusives

C — Keewatin-Type Rocks
Greenstone: Andesite, Basalt
Diorite, Rhyolite, Breccia, Tuff

Fault

Note: A and B are major faults, the others are minor.

General Geology

CONSOLIDATED BELLEKENO MINES LIMITED

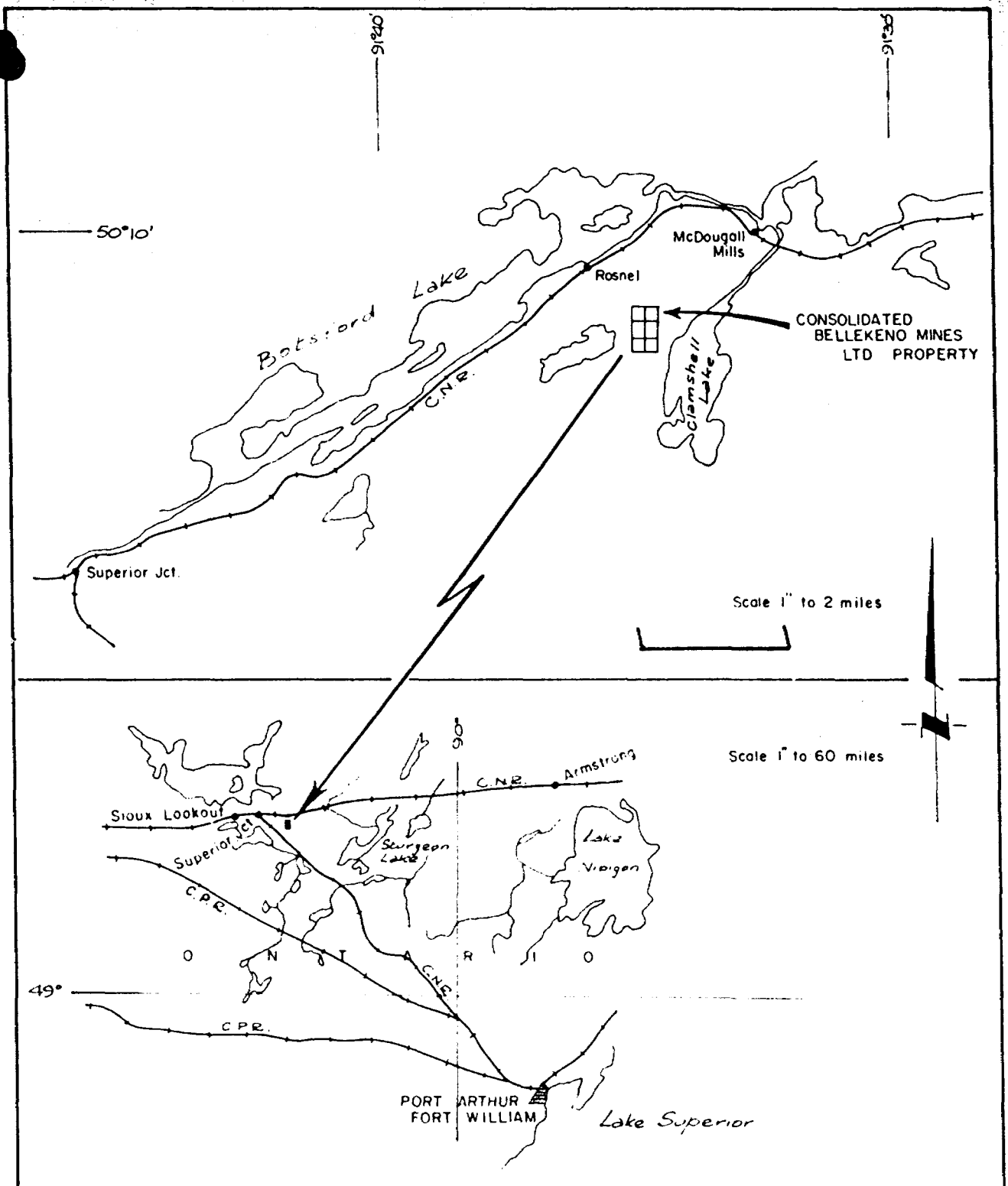
SHARRON LAKE AREA

Patricia Mining Division – District of Kenora

Ontario

Scale 1" = 3/4 mile

Scope - 1963



CONSOLIDATED BELLEKENO MINES LTD.

SHARRON LAKE AREA PROPERTY

PATRICIA MINING DIVISION ONTARIO

LOCATION MAPS

REPORT ON

MAGNETIC AND ELECTROMAGNETIC SURVEYS

SHARRON LAKE AREA PROPERTY

OF

CONSOLIDATED BELLEKENO MINES LIMITED

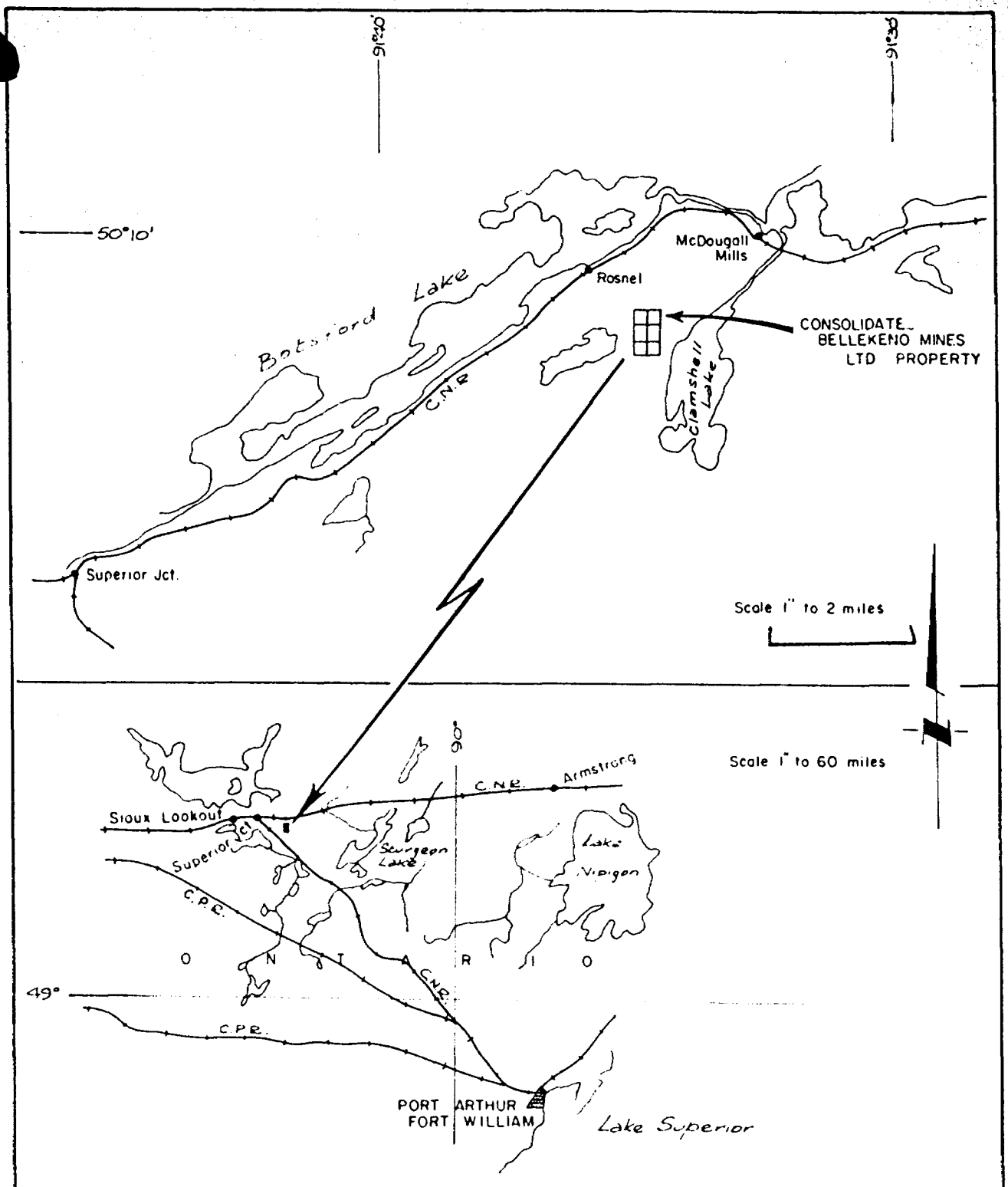
PATRICIA MINING DIVISION

DISTRICT OF KENORA, ONTARIO

INTRODUCTION

Magnetic and electromagnetic surveys were carried out on the Sharron Lake Area Property of Consolidated Bellekeno Mines Limited during the first part of August, 1963. The surveys were carried out on grid lines cut and chained by the representatives of Consolidated Bellekeno Mines Limited. The Electromagnetic Survey located two weak conductive zones, and one questionable conductive zone. The Magnetic Survey indicated five major areas of magnetic highs. The conductive zones appear to coincide with moderately high magnetic features.

The high magnetic values appear to be mainly due to the presence of concentrations of disseminated magnetite in the lava flows. At the present time it does not seem advisable to carry out further work on the basis of the geophysical results alone, although further geological prospecting may present additional information which would make a reconsideration of the geophysical results advisable.



CONSOLIDATED BELLEKENO MINES LTD.

SHARRON LAKE AREA PROPERTY

PATRICIA MINING DIVISION ONTARIO

LOCATION MAPS

LOCATION AND ACCESS

The Sharron Lake Area property of Consolidated Bellekeno Mines Limited comprises six contiguous unpatented mining claims containing an area of approximately 240 acres. The claim group comprises the following claims: Pa 32347; Pa 32348; and Pa 32353 to Pa 32356 inclusive.

The property is located approximately a mile southeast of Rosnel siding on the trans-continental line of the Canadian National Railways, which is in turn located about 15 miles east of the town of Sioux Lookout, Ontario.

It is accessible by water from McDougall Mills to Clamshell Lake which is within 1/4 mile of the eastern boundary of the property. McDougall Mills is a flag stop on the C.N.R. Clamshell Lake is suitable for float-plane landing and can be reached by a 10 minute float-plane trip from Sioux Lookout.

GEOPHYSICAL SURVEYS

The Surveys were carried out on a cut grid. The baseline was oriented approximately N 49° E with traverse lines at right angles to, and at 200 foot intervals along the baseline. Stations were located at 100 foot intervals along the traverse lines for the purpose of carrying out both surveys. In the case of the magnetometer survey 50 foot stations were paced in and read wherever the results warranted it.

The results of the surveys are presented on separate plan maps each to a scale of 1 inch to 100 feet.

ELECTROMAGNETIC SURVEY

A vertical transmitting loop, Electromagnetic Survey unit was employed to carry out the survey. Measurement was made of the dip angle from vertical of the resultant electromagnetic field at two frequencies, 1000 cycles per second and 5000 cycles per second. The results are presented in profile form along the traverse lines at a scale of 1 inch equals 10 degrees of dip angle from the vertical. A motor-generator powered transmitting unit was employed enabling the survey traverses to be made at separations of up to 1200 feet. A total of three transmitter set-ups were required to cover the property, and these are indicated on the map. Two weak and short conductive areas were located and one questionable zone. The results are discussed below.

ZONE 'A'

This weak conductive zone is located at 3 + 00 N on Line 128. It appears to be associated with the south flank of a moderate magnetic high. There is no apparent extension of the zone to adjacent lines.

ZONE 'B'

This weak conductive zone is located at 13 + 00 S on

Line 134. It is also associated with a magnetic anomaly with the actual cross-over at the apex of the anomaly. There is no apparent extension of the zone to adjacent lines although there is the possibility that it extends off the property to the East.

ZONE 'C'

This is a questionable, weak zone extending from 3 + 00 N on Line 142 to 3 + 00 N on Line 144. There is no associated magnetic high, and the results indicate a poor, weak conductive zone.

All the conductive zones located are weak and do not in themselves warrant further attention unless geological information renders them significant.

MAGNETIC SURVEY

A Sharpe A-2 Magnetometer with a scale constant of 20 gammas per scale division was employed to measure the variation of the vertical magnetic field. Throughout the course of the survey base stations were read at intervals of at least every two hours, and all magnetic observations were corrected for drift and diurnal variations. The magnetic results are plotted in gamma values at each station and contoured at intervals of 0 gamma, 600 gammas, 800 gammas, 1500 gammas, 2000 gammas, 3000 gammas and 4000 gammas.

The general overall background was found to be approximately 500 gammas and the magnetic relief was generally low. In most cases the relief was of the order of 1000 to 1500 gammas with some isolated highs of relief 5000 to 6000 gammas. There are five main areas of magnetic highs and numerous small isolated highs which in most cases can be associated with one of the major areas.

AREA I

This area lies on the southwest corner of the property and forms a tongue of narrow linear magnetic closures approximately parallel to and lying along the baseline. It extends from west of the property to Line 130. From Line 118 to Line 122 it extends from 6 + 00 S to 5 + 00 N and then narrows at Line 124 to extend in width from 1 + 50 S to 2 + 50 N. Enclosed within the general area are three linear features. The first having a width of 100 feet extends from 1 + 50 N on Line 120 where it reaches a maximum value of 3000 gammas to 3 + 00 N on Line 124. The second feature falls along and just north of the baseline from Line 120 to Line 128. The maximum of this feature being 6600 gammas occurs at 1 + 50 N on Line 128, and there is a closure of 3000 gammas in the area Line 126 to Line 128 and 0 + 50 N to 1 + 50 N. The third feature is a high of 3000 gammas centered

on 4 + 50 to 5 + 00 S on Line 120. On Line 128 from 3 + 00 to 3 + 50 N there is an isolated magnetic high of 1400 gammas. It is on the south flank of this anomaly that the weak conductive zone 'A' occurs.

AREA II

This is a wide, low, linear magnetic feature extending from Line 134, 1 + 00 N to the northeast corner of the property with maxima of 2400 and 1600 gammas at 4 + 00 N, Line 140 and 6 + 00 N, Line 144. An isolated high of 1700 gammas occurs at 4 + 00 N on Line 134. Areas I and II suggest a zone of a high degree of concentration of magnetite in the lavas extending from the southwest to the northeast corner of the property.

AREAS III AND IV

These occur in the southeast section of the property and constitute a group of small and in some cases isolated magnetic highs. The most prominent of these occur at 3 + 00 S and 8 + 00 S on Line 134 where highs of 5500 and 3000 gammas respectively occur. Farther to the south on Line 134 at 13 + 00 to 13 + 50 S a high of 1600 gammas occurs which coincides with the weak conductive Zone 'B'.

Similarly at 10 + 50 S on Line 132 a high of 1700 gammas occurs. Highs of 1600 gammas also occur at 6 + 50 to 7 + 00 S on Line 140 and 3 + 00 to 4 + 00 S on Line 142.

AREA V

This area extends from 10 + 00 N Line 126 to 9 + 00 N on Line 128 and reaches a maximum of 1400 gammas. To the east is a small isolated high of 1400 gammas located at 7 + 00 N on Line 130.

Random examination of the outcrop during the course of the survey suggests that the main cause of the magnetic highs is due to varying concentrations of disseminated magnetite throughout the lavas. This is especially true in the area of Line 128 from the baseline to 1 + 50 N. The highs at 3 + 00 S on Line 134 and 6 + 00 N on Line 144 also appear to be directly explained in this manner as well as the general high just south of the baseline between Lines 120 and 122.

The general trend of the magnetics is N 40° E with local variations, in particular in the southeast corner of the property where the trend swings to the north to approximately N 20° E. This is suggestive of a possible flexure in the lava flows and should be taken into consideration in interpretation of the geologic structure.

CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey located two short and weak conductive zones which appear to coincide with moderate magnetic highs. The conductive zones were not strong enough to

suggest economic occurrences of copper - lead - zinc. If further geological information indicates a relationship between economic gold occurrences, and these conductive zones they should be further investigated, but in themselves they do not warrant further attention.

The magnetometer survey located five major areas of magnetic highs. The major magnetic features appear to be due to the presence of varying concentrations of magnetite in the lavas. The results suggest a linear concentration of magnetite in the lavas extending across the property from the southwest to northeast corners. In some instances there appears to be finely disseminated sulphides associated with the magnetite. Moderate magnetic highs appear to coincide with the two conductive zones 'A' and 'B'.

It is recommended that the geophysical results be further considered in light of the geological information before any decision on future work is considered. If further geological prospecting should indicate a relationship between the geophysical results and economic gold occurrences, then the results should be further examined in this light. At the present time it does not seem adviseable to carry out further work on the basis of

the geophysical results alone.

Respectfully submitted,

SCOPE MINING AND EXPLORATION
CONSULTANTS LIMITED

David K. Fountain

David K. Fountain, B.A.Sc.

Toronto, Ontario,

August 23, 1963.

SEE ACCOMPANYING

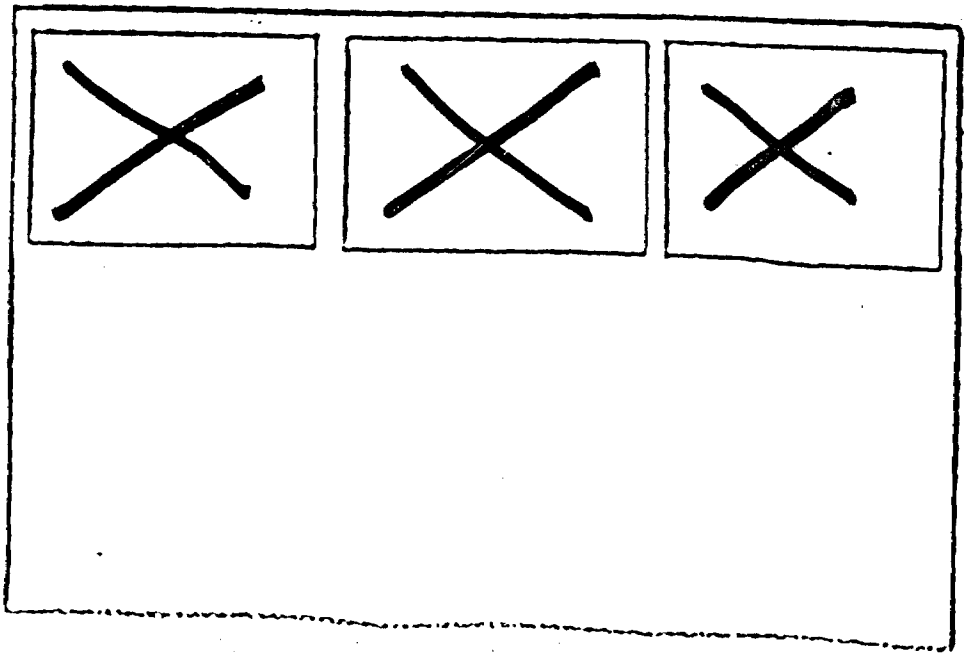
MAP(S) IDENTIFIED AS

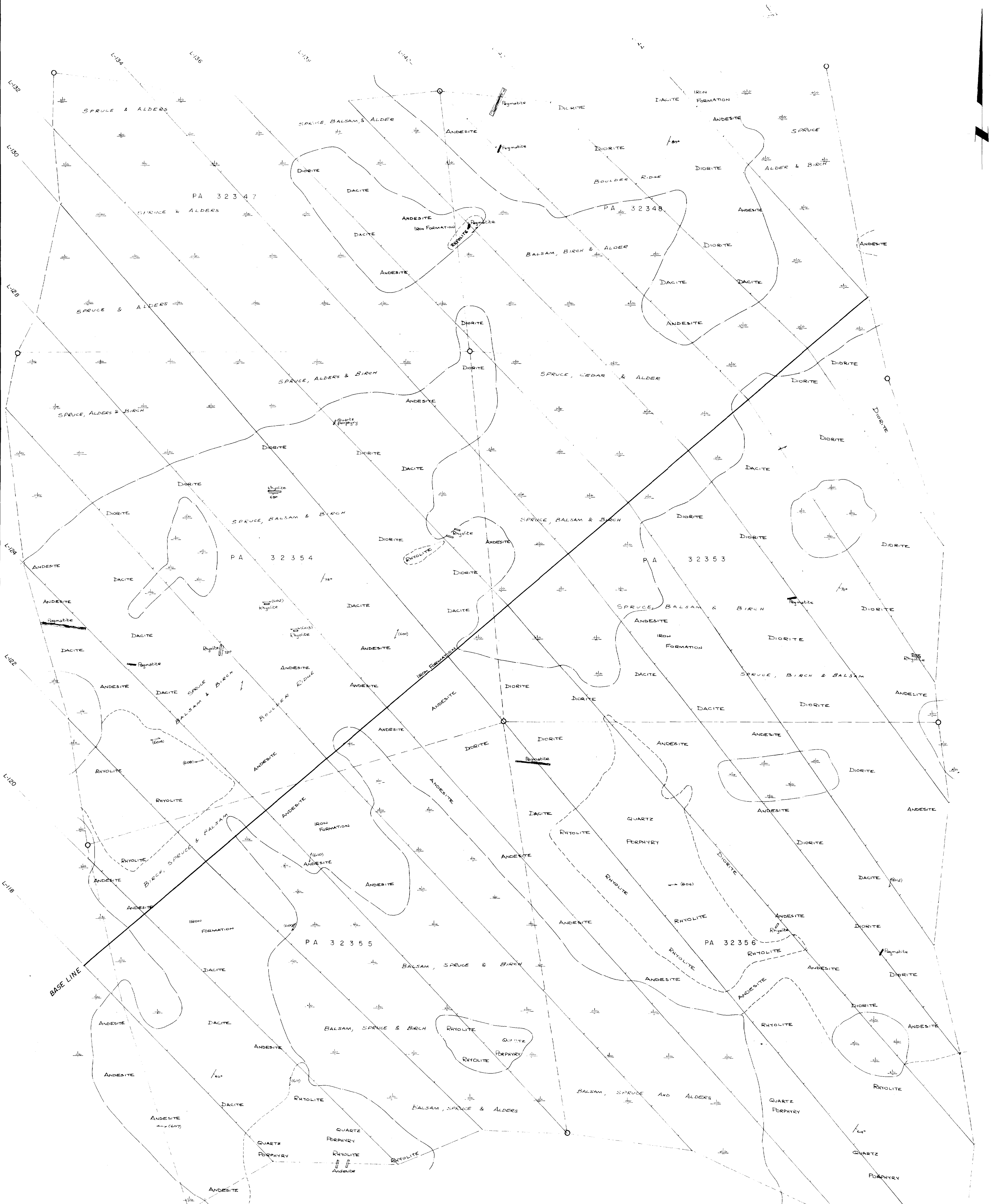
52T/04NE-0017-#1

#2

#3

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (X)





LEGEND

	SWAMP
	QUARTZ VEIN
60°	STRIKE AND DIP
	DYKES
(607)	SAMPLE NUMBER

CONSOLIDATED BELLEKENO MINES LIMITED

SHARRON LAKE AREA PATRICIA MINING DIVISION

DISTRICT OF KENORA, ONT.

52J/04NE-0017-#1

GEOLOGY

PLAN MAP

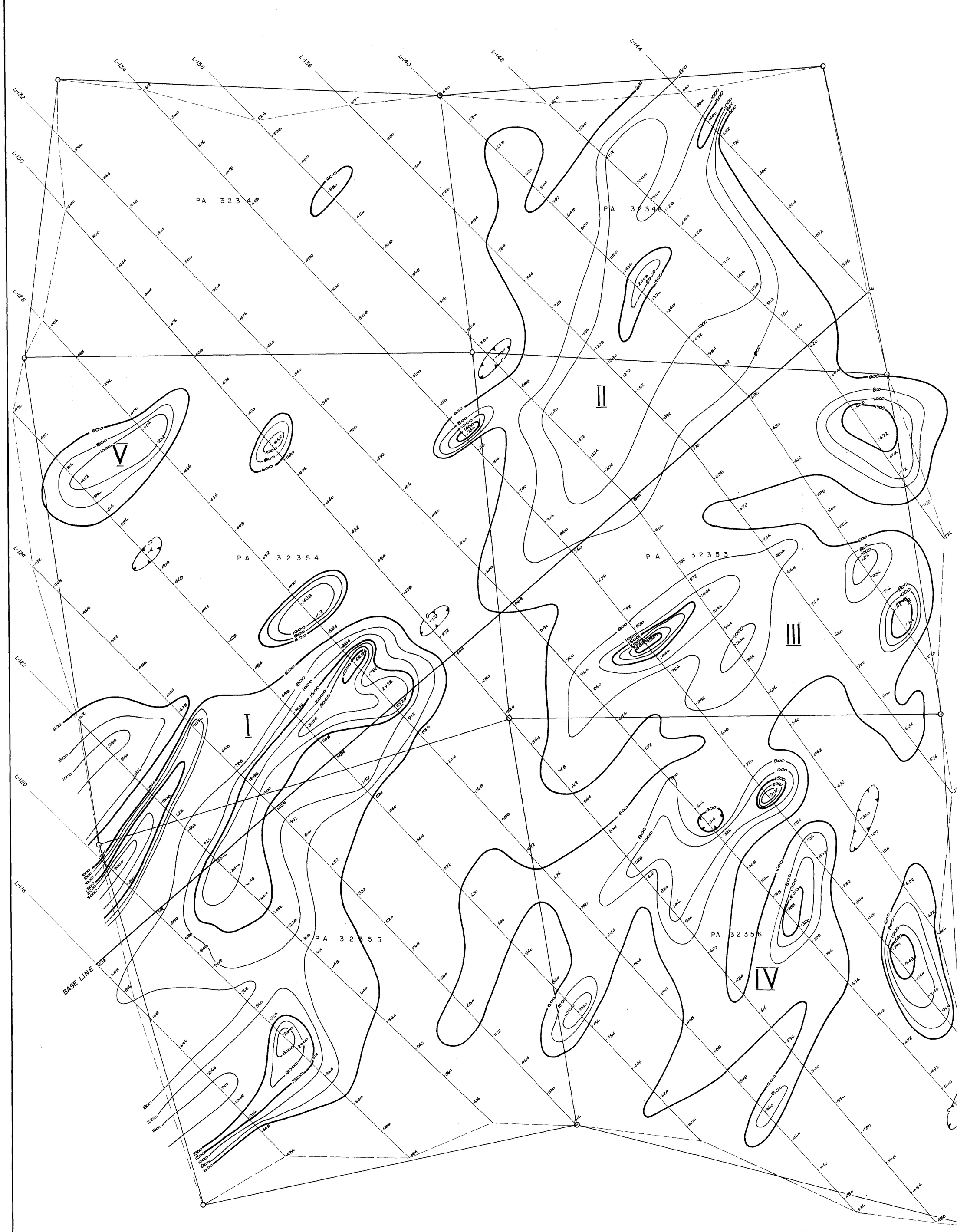
SCALE - 1" to 100'

REGISTERED PROFESSIONAL ENGINEER D. W. SULLIVAN PROVINCE OF ONTARIO

August 1963

52J04NE0501 52J04NE0017 SHARRON LAKE

#63.1245



LEGEND

- STATION VALUE – Magnetic variation in gammas
- MAGNETIC VARIATION CONTOUR- 0ᵹ, 800ᵹ, 1000ᵹ, 2000ᵹ, 3000ᵹ
- MAGNETIC VARIATION CONTOUR- 600ᵹ, 1500ᵹ, 4000ᵹ
- CLAIM POST– Relative to grid
- CLAIM BOUNDARY
- BLAZED CLAIM BOUNDARY
- PA 32355 CLAIM NUMBER

CONSOLIDATED BELLEKENO MINES LIMITED

SHARRON LAKE AREA PATRICIA MINING DIVISION

DISTRICT OF KENORA, ONT.

MAGNETOMETER SURVEY

PLAN MAP

SCALE - 1" to 100

August 1963

52J/04NE-0017-#2

David K. Fraser Esq. B.A.Sc.

L-132 L-134 L-136 L-138 L-140 L-142 L-144

L-130 L-128 L-124 L-122 L-120 L-118

BASE LINE

PA 32357

PA 32348

PA 32354

PA 32353

PA 32355

PA 32356

T-1 T-2 T-3

A A' B B' C C'

LEGEND

- DIP ANGLE FROM VERTICAL – Resultant electromagnetic field
- LOW FREQUENCY (1000 cps)
- HIGH FREQUENCY (5000 cps)
- T-1 TRANSMITTER LOCATION
- CONDUCTIVE ZONE
- CLAIM POST – Relative to grid
- CLAIM BOUNDARY
- BLAZED CLAIM BOUNDARY
- PA 32355 CLAIM NUMBER

CONSOLIDATED BELLEKENO MINES LIMITED

SHARRON LAKE AREA PATRICIA MINING DIVISION

DISTRICT OF KENORA, ONT.

ELECTROMAGNETIC SURVEY

PLAN MAP

52J/04NE-0017-#3

SCALE - 1" to 100'

August, 1963

David R. Hamilton B.A.Sc.