LYNX-CANADA EXPLORATIONS LTD.
SPARTAN RESOURCES INC.
BENNETT LAKE PROPERTY
GENERIC REPORT

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## TABLE OF CONTENTS

INTRODUCTION SECTION 1
MAGNETIC SURVEY ..... SECTION 2
ELECTROMAGNETIC SURVEY ..... SECTION 3
GEOLOGICAL SURVEY ..... SECTION 4
GEOCHEMICAL SURVEYS ..... SECTION 5
TRENCHING ..... SECTION 6
DIAMOND DRILLING ..... SECTION 7
CONCLUSIONS ..... SECTION 8
REFERENCES ..... SECTION 9

## SECTION 1

## INTRODUCTION

This report is presented to fullfill the requirements of The Ontario Mineral Exploration Program Act. 1980 in Application for Grant or Certificate of Entitlement to Tax Credit for Designated Program OM83-3-C-y is made in the name of:

## 354.

> LYNX CANADA EXPLORATIONS LTD. $520-25$ ADELAIDE STREET EAST TORONTO ,ONTARIO

LOCATION and ACCESS
The claim group is located north of Bennett and McPherson Lakes on the Bennett Township map sheet (M-1920), in the Kenora Mining Division.

The property lies midway between Atikokan and Fort Francis approximatly 6 km north of Hiway \#11. The town of Mine Centre is the closest populated centre where supplies may be purchased.

Access to the claim group is via bush road from Hiway \#ll to either Bennett Lake or McPherson Lake then by boat and/or foot to the claim group. Camp is established at McPherson Lake in a cottage rented from Mr. Ted Labelle. Sapawee.

PROPERTY
The Bennett Lake claim group consists of 65 unpatented mining claims as follows:

| K759817 - K759750 inclusive | 1 |
| :--- | ---: | ---: |
| K759821 - | 30 |
| K759777 - K759795 inclusive | 19 |
| K676190 - K676196 inclusive | 7 |
| K655361 - K655368 inclusive | 8 |

All claims are recorded in the Kenora Mining Division on plan M-1920, Bennett Lake

GRID-LINECUTTING
An exploration grid totalling 116 km has been established to cover all claims..Line spacing is 100 m with stations established at 25 m intervals. The baseline trends east-west from L32+00w to L22+00E and trends 45 degrees from $L 22+00 \mathrm{E}$ to $\mathrm{L} 40+00 \mathrm{E}$. A detailed grid was cut for follow-up geophysics from line 19 west to line 27 west. This grid was cut with 50 meter spacings and centres. Even closer grid lines were cut with 25 meter spacing and centres
from Mnes 23-27 west.
SUMMARY OF EXPLORATION
This report details the results of a major exploration program undertaken by Lynx Canada Explorations Ltd.Surveys include complete coverage of all claims with linecutting, VLF-EM, magnetometer, soil and humus surveys. Prospecting and a geological survey was completed on the western half of the property. A detailed grid described above was the focus for follow-up geophysics including magnetometer and VLF-EM. Furthermore, a trenching program occured as a result of a promising gold showing. In addition to the above work four diamond drill holes were drilled for a total of 1274 feet.

PREVIOUS WORK (1)
1896-1899: Developmental work first began on the property in 1886. Several test pits and a shaft was sunk to 75 feet ( 23 metres) with 20 feet ( 6 metres) of drifting and 13 feet ( 4 metres) of crosscutting at the 45-foot level ( 14 metres) were completed. In addition, on the north shore of Bennett Lake (formerly Cedar Lake) a 16-foot adit ( 5 metres) was driven northward. A five stamp mill was erected in 1898 through which 125 tons of core were milled All the work was completed by the Independence Mining and Development Company Ltd. No further exploration work is known to have taken place on this property.

1910: The patented claims which were surveyed in 1897 lapsed in 1910 and became open ground.

1915: The property was acquired by J.A. Kennedy, et al.
1980: The property was visited by S.L. Fumerton of the Ontario Geological Survey and 11 sampled and detailed geological mapping is completed. At that time, the property was held by R.J. McLean Jr., E. Walton, M.J. Strangis, A.E. Dalby, and J.W. Richardson.

1982: The property was visited by the Atikokan Economic Geologist Program where sampling was conducted.

General Geology and Structure of Independence Mine:

The Independence Mine is structurally situated (within 0.5 km ) north of the Quetico Fault. The area is underlain by steeply dipping, west striking felsic to mafic metavolcanics. The metavolcanics are composed of sericite-chlorite-carbonate schist which may have originally represented a felsic fragmental rock, such as a tuff of lapilli tuff which underwent intense shearing and silicification. These felsic tuffs are intercalated with mafic tuffs and epiclastic and chemical metasediments. Fumerton (1981) describes the country rock as a felsic quartz crystal tuff in which the quartz clasts commonly have a blue tint.


#### Abstract

Shearing is prominent throughout the Independence Mine property, striking east-west with near vertical dips.

Mineralogy of the Independence Mine:

The main quartz vein was reported by Bow (1899) to be up to 60 feet (18 metres) in length on surface and up to 2 feet ( 0.6 metres) wide. Fumerton (1981) indicated that there are numerous small, discontinuous quartz veins occurring at various attitudes within a host rock of felsic tuff. The veins appear to be associated within east-west trending lenticular shear zones. Visible mineralization consist of pyrite, chalcopyrite, galena, sphalerite and gold; with accessory minerals including sericite, chlorite and carbonate.


The principal workings of the Independence Mine exploited narrow and discontinuous quartz veins in a sheared quartz crystal tuff.

Tonnage and Grade Estimates:

None recorded.
Past Production:

During 1898, Independence Mining and Development Co. Ltd. produced 121 ounces of gold from 125 tons of ore giving a grade of 0.97 ounces of gold per ton. (Ferguson et al, 1971)

Chemical analysis of the Independence Mine:

Bow (1899) reported alleged gold values of 0.39 ounces per ton in the host rock adjacent to the main quartz vein, which contains erratic gold mineralization of up to 7.76 ounces gold per ton. Eight selected grab samples from a rock dump near the shaft were collected by Fumerton (1981) giving values obtained from samples of quartz vein material from trace to 0.96 ounces gold per ton. A sample of the host rock, barren of sulphide mineralization, contained trace amounts of gold, whereas host rock samples with some sulphide mineralization contained between trace and 0.04 ounces gold per ton. Twelve samples collected from the adit on the north shore of Bennett Lake contained trace amounts of gold.

Samples collected by the Atikokan Economic Geologist Program gave low results.

## SECTION 2

## MAGNETIC SURVEY

Instrumentation
The survey was performed by Phanton Exploration Services Ltd.using a Scintrex MP-2 portable proton-precession magnetometer. A Scintrex MBS-2 magnetic base station was used to record and correct for diurnal variations.

The MP-2 has an accuracy of $+/-1$ gamma in a field of 50,000 gammas. However, actual survey accuracy is proportional to the degree of care used in applying diurnal corrections.

Theory of Operation
Magnetic variations are caused by variations in magnetization of the rock from station to station. This magnetization exists because of the presence of minerals with high magnetic susceptability. The most common minerals to affect the earths magnetic field are magnetite, pyrrhotite, and ilmenite. Magnetometers are used to measure this variation.

The MP-2 is a proton precession magnetometer. This magnetometer utilizes the precession of spinning protons in a volume of kerosene to measure the total magnetic field intensity.

When the hydrocarbon is subjected to an electric current the spinning protons are temporarily polarized. When the current is removed the spin of the protons causes them to precess about the direction of the ambient magnetic field.The signal generated by the precessing protons is directly proportional to the intensity of the total magnetic field. The magnetic intensity measured is the magnitude of the earths magnetic field vectorindependant of its direction.A change in the total field intensity is referred to as an anoly.

Survey Procedure
Data was collected at 25 m intervals using a Scintrex MP-2 proton magnetometer. Field data was then referred to the $\log$ of a base station recorder ( Scintrex MBS-2 ) which operated continuousiy throughout the survey for correction. The corrected data is plotted at a scale of 1:2500 and contoured.

Discussion of Results
A large number of magnetic anomolies were identified over the four map sheets covering the claim group. The following tables indicate the location, strike length,strength, possible source and conductivity of any associated EM conductor.

Me magnetometer survey proved usefull in sorting-out the various types of iron formation present on the property. The sulphide facies iron formation usually has a magnetic signature of 2000-5000 gammas, the magnetite iron formations have a magnetic signature between 6000 and 21000 gammas. There are many magnetic highs on the property that show no VLF response, these may may be due to non-conducting magnetite bearing flows or sediments.

The background magnetics are lower on the eastern part of the grid than the west.

Detailed Magnetometer Survey

A detailed grid was cut for the purpose of follow-up geophysics. A coincident VLF and mag. anomaly (ie.flanking) between lines 23-27 west was clearly defined and outlined as a result of detailed readings. The anomaly is explained as magnetite and pyrrhotite which were observed in drill holes number one and two.

Another coincident anomaly to the south (ie.L-2W/1+75S) was also drilled (BL-3-84). This hole reveiled pyrrhotite and this is thought to be the cause of the magnetic anomaly. Other magnetic responces. within the detailed area appear to be isolated with a general trend east-west. This east-west trend was exspected based on the local strike outlined by the geological survey.

## SECTION 3

## ELECTROMAGNETIC SURVEY

Instrumentation

A VLF-EM survey was performed by Phantom Exploration Services Ltd.using a Geonics EM-16 unit.

Theory of Operation

VLF-transmitting stations operating for military communication have vertical antenna. The vertical antenna creates a concentric horizontal magnetic field . When these magnetic fields encounter conductive bodies in the ground, a secondary field is created. The VLF receiver measures the vertical components (inphase and quadrature) of these secondary fields.

The EM-16 is a sensitive receiver covering the frequency bands of the VLF-transmitting station with means of measuring the vertical field components.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis,the other is horizontal.

The signal from one of the coils (vertical) is first minimized by tilting the instrument. The tilt angle is calibrated in percent. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from another coil,after being shifted by 90 degrees.

Thus if the secondary signals are small compared to the primary horizontal field, the mechanical tilt angle is an accurate meaure of the vertical real-component, and the compensation 90 degree signal from the horizontal coil is a measure of the quadrature vertical signal.

Survey Procedure

Readings were taken at 25 m intervals over the entire grid. Both the dip angle and the quadrature were noted at each station. The transmitting station used was Cutler, Maine.

To take a reading the refrence coil ("T") in the lower end of the handle is oriented along the magnetic lines 90 degrees to the station direction. This is acheived by swinging the instrument back and forth until a minimium sound intensity is heard. The quadrature dial is then adjusted until the sound is further minimized.The dip is then read from the inclinometer and the
quadracure from the dial.The same direction is always faced when readings are taken.

Discussion of Results

A total of 81 EM-16 anomolies were identified over the four map sheets that cover the claim group. The following tables provide the location, strike length,filter response (Fraser Filter), conductivity,magnetic response, and remarks on possable source.

Many EM-16 conductors are due to topographic features such as drainage and cliffs.However, the EM-16 did detect numerous bedrock conductors. The EM-16 detected a number of sulphide and magnetite rich iron formations as well as conductive zones with no associated magnetic signature.

The quadrature/in-phase ratios are a good check on the apparent conductivity of the anomolies and proves usefull in classifying the conductors. The VLF responses were between weak and moderate with very few anomolies of high conductivity.

Detailed Electromagnetic Survey

In the fall a detailed grid was cut for both mag. and EM follow-up surveys The detail was concerned with better definition of anomaly "N" (see previous section). Results from this survey outlined a good to moderate responce with a strike length of 375 meters. This responce was thought to be caused by a sulphide bearing horizon which drill holes one and two confirmed.

Other anomalies although not as strong in responce or over as great a strike length were also defined more clearly. Drill hole number four tested a strong EM responce from L-24+50W to L25+50W at $1+75$. There were sufficient sulphides in the dril core to explain this EM conductor.

| MAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | A | $\begin{aligned} & \text { 28. East } \\ & 4+50 \mathrm{~S} \end{aligned}$ | 0 to 100 | STRONG | POOR | 2000 | SWAMP? |
| 1 | B | $\begin{gathered} 29 \mathrm{Er} \text { to } 30 \mathrm{E} \\ 2+50 \mathrm{~S} \end{gathered}$ | 100 to 200 | jur <br> FAIR | P00R | FLANKING | SWAMPY,HAS A 2000 GAMMA MAG FLANKING IT |
| 1 | C | $27 E \text { to } 29 E$ | 200-300 | WEAK | POOR | FLANKING DIPOLE | 1900 GAMMAS |
| 1 | D | $\begin{array}{r} 24 \mathrm{E} \\ 2+60 S \end{array}$ | 0 to 100 | STRONG | POOR | NONE | SWAMP EDGE |
| 1 | E | $\begin{aligned} & 23 E \\ & 0+65 S \end{aligned}$ | 0 to 100 | STRONG | POOR. | NONE | SWAMP? |
| 1 | F | $\begin{aligned} & 24 \mathrm{E} \\ & 0+85 \mathrm{~N} \end{aligned}$ | 0 to 100 | WEAK | POOR | NONE | TOPOGRAPHY? |
| 1 | H, G | $\begin{aligned} & 26 \mathrm{E} \text { to } 28 \mathrm{E} \\ & 2+65 \mathrm{~N} \end{aligned}$ | 100-200 | STRONG TO WEAK | POOR | NONE | OPEN MARSH |
| 1 | HH | $\begin{aligned} & 25 E \\ & 2+90 N \end{aligned}$ | 0 to 100 | STRONG | POOR | NONE | AS ABOVE |
|  |  |  |  |  |  |  |  |


| VAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | I | $\begin{gathered} 29 \mathrm{E} \text { to } 30 \mathrm{E} \\ 1+75 \mathrm{~N} \end{gathered}$ | 0 to 100 | WEAK | POOR | NONE | SWAMP? POSSIBLE EXTENSION OF "J" |
| 1 | J | $\begin{gathered} 33 \mathrm{E} \text { to } 34 \mathrm{E} \\ 1+35 \mathrm{~N} \end{gathered}$ | 100-200 | PAIR | POOR | 2900 |  |
| 1 | K | $\begin{aligned} & 38 \mathrm{E} \\ & 0+50 \mathrm{~N} \end{aligned}$ | 0 to 100 | STRONG | MODERATE | FLANKING $(1200)$ |  |
| 1 | L | $\begin{aligned} & 28 E \text { to } 37 E \\ & 1+50-3+00 N \end{aligned}$ | $900+$ | WEAK TO STRONG | MODERATE TO GOOD | 3-4000 | Best response on lines 28E and 30E(3-4000ganamas mag) Majority of conductor correlates to an open marsh and swamp. |
| 1 | M | $\begin{aligned} & 37 \mathrm{E} \\ & 3+50 \mathrm{~N} \end{aligned}$ | 100+ | MODERATE | MODERATE | 6000 | Open to the east, VLF enhanced by the lake. |
| 1 | N | $\begin{aligned} & 35 \mathrm{E} \\ & 8+00 \mathrm{~N} \end{aligned}$ | 0 to 100+ | WEAK | POOR | Minor 300 Gam -ma low |  |
| 1 | 0 | $\begin{gathered} 31 \mathrm{E} \text { to } 34 \mathrm{E} \\ 7+25 \mathrm{~N} \end{gathered}$ | $300+$ | WEAK | MODERATE TO GOOD | 2500 | Mag only on the one line (31E). There is a possibly of two different conductors. |
|  |  |  |  |  |  |  | - |


| MAP | \# | -. CATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | A | $5 \frac{5}{E-75 S} \div E$ | 0 to 200 | Strong | Moderate | 3100 | These conductors are |
| 2 | B | $\begin{aligned} & 7 E=0 \text { 8E } \\ & 7+0 \text { to } 8+00 \\ & \text { Eouth } \end{aligned}$ | 100 to 200 | Strong | Good | 2000 | iron formation along the shores of McPhearson Lake. The conductor seems to truncate around 12 E |
| 2 | C | $1 C \equiv \begin{gathered} \pm 014 \mathrm{E} \\ -\mathrm{JOS} \end{gathered}$ | 200+ | Strong | Good | 4-8000 |  |
| 2 | D | $1 \text { 1玉 } \underset{\Xi+50 \mathrm{SOS}}{ } 14 \mathrm{E}$ | $150+$ | Strong | Poor | $\begin{gathered} \text { Flanking? } \\ (2100) \end{gathered}$ |  |
| 2 | E, F | $\begin{array}{ll} 5 E & 5+00 S \\ 6 E & 5+00 S \end{array}$ | 0 to 100 | Weak | Poor | None | Swamp? |
| 2 | G,G¢ | $\begin{gathered} 5 E=018 \mathrm{E} \\ 5-J S \end{gathered}$ | 1300+ | Strong | Poor | Spot Highs | Corresponds to an open drainage system which has enhanced the VLF response. Mag correlation on lines $5 E$ and 14 E . |
| 2 | H | $\because 7 \Xi$ | 0 to 100 | Weak | Poor | None | Swamp? |


| MAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | I | $\begin{gathered} 18 \mathrm{E} \text { to } 20 \mathrm{E} \\ 1+00 S \end{gathered}$ | 300+ | Strong | Moderate to Good | None | Swampy ground has enhanced the VIF response however the conductivity upgrades this conductor |
| 2 | II | $\begin{aligned} & 21 \mathrm{E} \text { to } 22 \mathrm{E} \\ & \mathrm{BL} \text { to } 0+25 \mathrm{~N} \end{aligned}$ | 100-200 | Weak | Poor | 2000 | Mag and shorter strike make this interesting |
| 2 | J | $\underset{0+25 N^{13 E}}{ }$ | 100-200 | Weak | Poor | Yes | Has a moderate dipole (120-2400 gammas) with it |
| 2 | K | $\begin{gathered} 5 E \text { to } 6 E \\ 0+35 S \end{gathered}$ | 100-200 | Strong | Poor | None | Swamp? |
| 2 | L | 5 E to 22E | $1700+$ | Strong | Moderate | Spot Highs | VLF response enhanced by swamp, Mag correlation on lines $5 \mathrm{E}, 6 \mathrm{E}, 10 \mathrm{E}$ to 12 E , 14 E to $15 \mathrm{E}, 17 \mathrm{E}$ to 22 E . A very high mag(9000) probably due to magnetite |
| 2 | M | $\begin{gathered} 18 E \text { to } 22 E \\ 5+00 N \end{gathered}$ | $400+$ | Strong | Moderate | None | VLF enhanced by swamp |
|  |  |  |  |  | $\cdots$ | $\cdots$ |  |


| MAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { (mENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | $N$ | $\begin{gathered} 12 \mathrm{E} \\ 5+00 \mathrm{~N} \end{gathered}$ | 0 to 100 | Pair | Poor | None | Lake effect |
| 2 | 0 | $\begin{gathered} 5 E \text { to } 16 E \\ 9+00 \mathrm{~N} \end{gathered}$ | $1100+$ | Strong | Poor to Moderate | Yes(2000) | A series of dipoles along the strike length of this conductor suggests a pinch and swell morphology. Maybe a sulphide iron formation. |
| 2 | P | $\begin{gathered} 7 \mathrm{E} \\ 8+25 \mathrm{~N} \end{gathered}$ | 0 to 100 | Strong | Moderate | Yes | ```A minor low (200) flanking it.``` |
| 2 | Q | $\stackrel{5 \mathrm{E}}{10+50 \mathrm{~N}}$ | 0 to 100 | Strong | Poor | None | Beaver swamp. |
| 2 | R | $\begin{gathered} 7 \mathrm{E} \text { to } 11 \mathrm{E} \\ 10+50 \mathrm{~N} \end{gathered}$ | $400+$ | Strong | Poor | Yes | Mag correlation on lines 9E to 11E•(2000), sulphide iron formation? VIF enhanced by the swamp edge. |
| 3 | A | $\begin{gathered} 12 W \text { to } 15 W \\ 6+50 \mathrm{~S} \end{gathered}$ | 300 to 350 | Strong | Moderate | Questionable | Very strong VLF (swamp?) Mag correlation is inconclusive. |
| 3 | B | $\begin{gathered} 10 W-11 W \\ 7+50 S \end{gathered}$ | 200-300 | Weak to Moderate | Poor | None - | "A" \& "B" are probably the same conductor |


| MAP | $\#$ | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | C | $\begin{aligned} & 5 W \text { to } 7 W \\ & 7+50 S \end{aligned}$ | 200 to 300 | Weak | Poor | None | Swamp? |
| 3 | D | $\begin{aligned} & 3 E \text { to } 1 W \\ & 6+50 S \end{aligned}$ | 300 to 400 | Moderate to Strond | Poor | None | Possible mag on 2W. Swamp system causing much of VLF |
| 3 | E | $\begin{aligned} & 1 W \text { to } 13 W \\ & 3+00-5+00 \$ \end{aligned}$ | $1200+$ | Moderate to Stron\& | Poor to Pair | Questionable | A very long conductor which swampy topography. Mag suggests correlation, however VLFcuts across; the mag trends in some cases. |
| 3 | F | $\begin{gathered} 1 \mathrm{E} \text { to } 1 \mathrm{~W} \\ 4+50 \mathrm{~S} \end{gathered}$ | 200 to 300 | Fair | Poor to Pair | Yes | Line 0 has a mag low(277) |
| 3 | G | $\begin{aligned} & 4 \mathrm{E} \\ & 4+50 S \end{aligned}$ | 0 to 100 | Moderate | Poor | None | V1F response Hanks a 5400 gamma high on line 3E, How ever there was no VIF on that line. |
| 3 | H | $\begin{aligned} & 0 \text { to } 4 \mathrm{E} \\ & 1+50 \text { to } 300 \text { s } \end{aligned}$ | 400 to 500 | Strong | Poor | Questionable | VLF response follows an open marsh. |
| 3 | I | $\begin{gathered} 1 E \text { to } 3 E \\ 1+00 S \end{gathered}$ | 200 to 300 | Moderate | Poor | None | Swamp edge? |
|  |  |  |  |  |  |  |  |


| MAP | $\#$ | LOCATION | STRIKE LENGTH (meters) | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | J | $\begin{gathered} 1 W \\ 0+50 S \end{gathered}$ | 0 to 100 | Moderate | Poor | None |  |
| 3 | K | $3 W$ to 12 W baseline | 1200-1300 | Moderate | Moderate to Poor | Yes | 2500 gamma mag along the BI (sulphide Iron formation?) |
| 3 | KK | $\begin{gathered} 5 \mathrm{~W} \text { to } 6 \mathrm{~W} \\ 0+25 \mathrm{~N} \end{gathered}$ | 100 to 200 | Moderate | Moderate to Poor | Yes | Same as "K" |
| 3 | L | $\begin{aligned} & 11 \mathrm{~W} \text { to } 12 \mathrm{~W} \\ & 0+75 \mathrm{~S} \end{aligned}$ | 200 to 300 | Moderate to Strong | g Moderate | Questionable | VLF enhanced by a creek anc its marshland. |
| 3 | M | $\begin{gathered} 13 W \text { to } 15 W \\ 2+50 \mathrm{~s} \end{gathered}$ | 200-300 | Moderate to strong | Poor $\cdot$ | Yes(2500) | VLF the same as "L" but has mag associated with it. |
| 3 | N | $\begin{gathered} 13 \mathrm{~W} \\ 1+00 \mathrm{~N} \\ \hline \end{gathered}$ | 0 to 100 | Strong | Poor | $\begin{aligned} & \text { Flanking } \\ & \text { dipole } \end{aligned}$ | Sulphide Assemblage? |
| 3 | 0 | $\begin{aligned} & 11 \mathrm{~W} \text { to } 12 \mathrm{~W} \\ & 2+00 \mathrm{~N} \end{aligned}$ | 100 to 200 | Strong | Moderate | Yes(3000) | ```Possible Iron Formation (sulphide)``` |
| 3 | P | $\begin{gathered} 7 W-8 W-9 W \\ 2+00 N \end{gathered}$ | 0 to 100 | Weak to Moderate | Weak | Yes(4000) | A group of three one line VLF responses with the bes being on line 7 W . This cor. relates with a 4000 mag hi high. (sulphide IF) |


| MAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | Q | $\begin{aligned} & 2 E \text { to } 4 W \\ & 2+00-3+00 N \end{aligned}$ | 600 to 700 | Strong | Poor to Moderate | Questionable | VIF enhanced by swamp. Runs parallel to a long iron formation to the north("R" and "S") |
| 3 | $\mathrm{R}, \mathrm{S}$ | $\begin{aligned} & 4 \mathrm{E} \text { to } 11 \mathrm{~W} \\ & 4+00-6+00 N \end{aligned}$ | 1500-160p | Strong | Poor to Good | Yes(2-22000) | Characterized by a series of dipoles along its strike length. Extremely high mag values, probably due to a magnetite bearing IF. R\& $S$ are grouped because they a probably the same horizon. |
| 3 | T | $\left\lvert\, \begin{array}{cl} 4 E \text { to } & 1 W \\ 7+00-8+00 N \end{array}\right.$ | 500 to 600 | Moderate to Stron | Poor to Moderate | Questionable | Mag data indicates a high on line $2 E$ however this may be due to a fiafic intrusive rather than the conductor. |
| 3 | U | $\begin{aligned} & 12 \mathrm{~W} \text { to } 14 \mathrm{~W} \\ & 5+00 \mathrm{~N} \end{aligned}$ | 0 to 100 | Moderate to Strong | Moderate to Good | Questionable | A number of VLF responses lie within a broad mag high This could be due to local folding of the IF described for " $R$ " \& " $S$ ". |
|  |  |  |  |  | . |  |  |


| MAP | \# | LOCATION | STRIKE LENGTH (meters) | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | A | $\left\|\begin{array}{c} 27 W \text { to } 32 W \\ 10+00-11+00 \\ \text { South } \end{array}\right\|$ | 5+00-6+00 | Weak to Strong | Poor | Flanking | This conductor is located on the north flank of a 2-3000 gamma magnetic tren (sulphide IF?) |
| 4 | B | $\begin{aligned} & 32 W \text { to } 33 W \\ & 8+50 \mathrm{~S} \end{aligned}$ | 1-200 | Weak | Good | Yes | A 5500 gamma magnetic anomaly is coincident with this short conductor. |
| 4 | C | $\therefore{ }_{8 \rightarrow 50 \mathrm{~S}}^{30 \mathrm{~W}}$ | 1-200 | Weak | Good | Yes | This conductor lies along the same magnetic trend as described in "B". |
| 4 | D | $\begin{aligned} & 31 \mathrm{~W} \text { to } 34 \mathrm{~W} \\ & 5 \mathrm{~S} \text { to } 8 \mathrm{~S} \end{aligned}$ | $300+$ | Weak to Moderate | Moderate to Good | Yes | A very complex series of mag trends which may or may not represent a fold since the trends seem to be converging at line $31 \mathrm{w}, 6+00 \mathrm{~S}$. The high values point to a magnetite type IF.Two old trenches were found over the conductors on line 34 W |
| 4 | E | 21W to 32W | 11-1200 | Weak to Strong | Weak to Moderate | Spot Highs | VLF response has been enhanced by a swamp system, however a mag dipole.on lines 27 W and 28 W would warrent futher attention: |



| MAP | \# | LOCATION | $\begin{aligned} & \text { STRIKE } \\ & \text { LENGTH } \\ & \text { (meters) } \end{aligned}$ | FILTER RESPONSE | CONDUCTIVITY | MAGNETICS (GAMMAS) | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4 | L | $\begin{aligned} & 19 W-20 W \\ & 5+50 S \end{aligned}$ | 2-300 | Moderate to Strong | Poor | Minor | Minor low of 950 gammas on Line 19W |
| 4 | M | $\begin{aligned} & 22 W \\ & 6+00 S \end{aligned}$ | 1-200 | Strong | Moderate | Yes | Bull's eye mag of 9000 gammas over this strong conductor |
| 4 | N | $\begin{aligned} & 24 \mathrm{~W}-27 \mathrm{~W} \\ & 0+75 \mathrm{~S}-0+50 \mathrm{~N} \end{aligned}$ | 3-400 | Strong | Good to Moderate | Yes | 3600 gammas Maf with a strong VLF response (sulphide iron formation) |
| 4 | 0 | $\begin{aligned} & 31 W \\ & 0+75 \mathrm{~N} \end{aligned}$ | 2-300 | Strong | Poor to Moderate | Yes | A mag high of 4-7000 gammas associated with this anomaly is probably due to a Magnetite I.F. |
| 4 | P | $\begin{aligned} & 30 \mathrm{~W} \\ & 2+50 \mathrm{~N} \end{aligned}$ | 1-200 | Strong | Moderate | Yes | Straddles a dipole possibly due to a sulphide iron formation |
| 4 | Q | $\begin{aligned} & 26 W \\ & 3+00 N \end{aligned}$ | 4-500 | Moderate to Strop | Poor | Flanking | ill defined mag trend to the south of conductor. VLP enhanced by swamp topography |
| 4 | R | ${ }_{5+00 N^{24 W}}$ | 1-200 | Strong | Poor | Yes .. | Flanking a $3-4000$ gamma high to the north. Sulphide I.F. |



## SECTION 4

GEOLOGICAL SURVEY

The aforesaid grid was mapped and prospected during the spring, summer and early fall period of 1984 at a scale of 1:2500.

REGIONAL GEOLOGY

The Bennett Lake Property occurs in the Wabigoon Subprovince and is located north of the Quetico fault. The area consists mainly of metavolcanic and metasediments that are situated south of the Hillyer Creek Dome and north of the "Seine Series" metasediments.

The regional strike tends approximately in an east-west direction and dips steeply to the south or vertical.

PROPERTY GEOLOGY

The area mapped on the Bennett Lake property during the 1984 field season corresponds withlines $16+00 W$ through $34+00 W$ inclusive. Generally speaking, the geology is quite variable and changes in lithology occur quite abruptly on the property.

The legend insert on the next page outlines the geological units mapped and these in turn will be discussed in the order as they appear on the legend.

MAFIC VOLCANICS:

Mafic Volcanics comprise the most abundant rock type on the property. Most mafic volcanics on the property appear to be undefined and are massive to weakly foliated. Grain size varies from an ash (finegrained) to a more tuffaceous (medium grained) rock type. Some areas within this rock type contain quartz carbonate stringers. Although these areas are relatively scant it is of importance to note their relative location close to contacts (i.e. L-19 + OOW near baseline extending north).

INTERMEDIATE VOLCANICS:

There appears to be two distinct and easily recognizable intermediate volcanic lithologies. The first type of intermediate volcanic unit is a
discontinuous and interfingered lithology that is mainly comprised of tuffaceous volcanics. Structurally they appear in lenses that are stringy and thin with a fine to medium grained texture. Foliated to weakly foliated these intermediate volcanics are conformable to other geological units. In some instances these units may actually be an intermediate tending more towards a mafic rather than a true intermediate rock type. However, for better geological definition and mapping identification these have been defined as a separate lithology.

The second intermediate lithology is physically significant by virtue of the fact that opalecent bluequartz-eyes are recognized in an Intermediate tuff. Also within this lithology one may observe a quartz-feldspar porphyry with and without quartz-eyes. The most prominent area with these lithologies displayed, occurs along the baseline from $19+00 \mathrm{~W}$ to $27+00 \mathrm{~W}$. This lithological unit is quite large in size extending roughly to $2+50 \mathrm{~N}$ and $0+75$ South.

FELSIC VOLCANICS:

Felsic volcanics on the property generally appear as small and discontinuous bands, south of the baseline. These tuffs to crystal tuffs are generally fine to medium grained and contain a great deal of silicification. Banding within the crystal tuffs is quite common with most felsics reveiling foliation. These volcanics are conformable and quite similar in size and structure to some Intermediate volcanics with which they are of ten associated.

To the north of the property larger stratabound flesic volcanic bands appear. They are thicker and more continuous. These are interbanded/bedded with sediments, mafic and intermediate volcanics. Although they are more abundant than felsic in the southern portion of the property they are similar rock types in terms of structure and grain size.

METASEDIMENTS :

Sediments are found in two distinct segments of the property. To the north of the property, sediments are interlayered with felsic volcanics, iron formations and mafic volcanics. These lithologies are approximately 25 meters in width and are thinly laminated wackes and siltstones. These fine grained sediments are lenses that are discontinuous along strike. Some segments display quartz veining and oxidation.

The second area of sedimentary deposition is an extremely broad zone to the south and west portion of the property. This may represent the end of a sedimentary unit that may be pinching out. Alternatively, this may be a large sedimentary unit that has been interfingered with volcanics.

The unit consist of alternatively bands of wacke, siltstone and argillite. The intercalated fine grain metasediments are in some zones contorted and carbonatized. These metasediments lie conformable to regional
strike There are, however, a series of unique folds that may be important for structural consideration south of the baseline on lines $33+00 \mathrm{~W}$ to $29+$ 00W ( related to the sedimentary and volcanic contact). The sediments although stratagraphically significant in size have not as yet proved significant in economic terms (i.e. gold results).

BANDED IRON FORMATIONS:

The Banded Iron Formations as typically expected occur within metasediments. These cherty units contain varying amounts of sulphides and are associated with oxidation weathering. These relatively thin units (i.e. 1/2 meter - 10 meters) in width are discontinuous and conformable with other geological units. The economic significance of these iron formations has. yet to be determined, however, economic values have been attained in the: trenched areas close to what is believed to be an iron formation. Therefore, there may be a relationship that drilling can confirm.

FELSIC DYKE ROCK:

A unique felsic dyke that cross cuts strike and intrudes country rock south of the baseline (i.e. $5+005$ ) between lines $29+00 \mathrm{~N}$ to $31+00 \mathrm{~N}$. This dyke is massive to weakly foliated and contains sulphide mineralization. Assays are not encouraging.

STRUCTURE:

The Bennett Lake property is generally massive-foliated and is steeply dipping to the south. Little identifiable faulting occurs throughout the property, however, a fault is evident at line $19+00 \mathrm{~N}$ north of the baseline. Trenching at line $25+00 \mathrm{~W}$ was shown there is a possible faul oriented in a north-south direction. Evidence for this comes from the offset shown in the detailed geophysics.

SUMMARY:

1. The complexity of geology on the property related to a variety of lithological units and abrupt changes in geology over small distances, suggests that important details related to economic mineralization may have been missed by this survey.
2. This geological survey has outlined geological units that could aid in the prospecting of the property.

## TRENCHING

A soil geochemical survey completed in the 1983 field season reveiled an extremely high sample result (i.e. 0.05 oz .ton/Au) at location $25+00 \mathrm{~N}$, $0+25 N$. Follow-up prospecting (in 1984) lead to a major trenching effort just south of this location (baseline) which resulted in a showing with extremely high values (see trench plan). The economic significance of this zone is yet undetermined, however, the geological environment has been established as a unique setting.

A highly weathered ("latheritized") iron formation of significant width (i.e. 10 meters) was uncovered with the aid of a bulldozer and backhoe. Bedrock within this zone was not detected to a depth of approximately 15 feet. High gold and silver values were sampled at the contact between banded sediments and mafic volcanics (i.e. wall rock). Within the wallrock, quartz veins and sulphides plus, telluride mineralization are identified. This zone is coupled with a good magnetic response indicative of magnetite. A strong VLF-EM conductor couples the magnetic anomaly and is thought to be a response to sulphide and possibly pyrrhotite mineralization.

In addition to high gold and silver values a unique occurrance of native tellurium and altaite were uncovered. These minerals were identified using , x-ray diffraction methods for mineral determination conducted at the University of Toronto's, mining laboratory.

## SECTION 6

GEOCHEMICAL SURVEYS

A soil geochemistry survey and an organic (humus) geochemical survey have been completed on the Bennett Lake property.

Samples were taken,where possable, at 25m intervals on grid lines spaced at 100 m . It was endeavoured to collect soil samples at each station, however, because of abundant low-lying of ten swampy ground, and an erratically developed soil profile,soil was not always available.At stations with no soil development,organic (humus) samples were collected.

Sampling was attempted at 2175 grid stations. From this 880 soil samples (42.9\%) and 1172 humus samples (57.1\%) were collected.A combined sample coverage of 94.3\% was realized.

SOIL SURVEY

Soil samples were collected at stations with a developed soil profile. The B-horizon was the sampled horizon.Samples were collected with a grub hoe and stored in kraft soil bags. Each bag was marked with the line number and station of the sample site

The soil profile is locally well developed but is generally poorly developed to absent.The B-horizon usually occurs beneath $2 "-18^{\prime \prime}$ of leached, puggy, grey, Al-horizon soil. The B-horizon is of ten rocky, probably of ten being glacial till cover.

All soil samples were analyzed at Technical Service Laboratories, Mississauga, Ontario.All samples were analyzed for gold, zinc and copper.

Values for each element are plotted on the accompanying maps at a scale of 1:2500.Gold is plotted as ppb,copper and zinc are plotted as ppm.

GOLD

Values range from (5 to ) 1000ppb ( $0.04 \mathrm{oz} /$ ton on check assay). The mean value and standard deviation calculated from 861 samples are 9.6 ppb and 16.6 ppb respectivly.

Gold values as plotted are not amenable to contouring because of the high number of no-soil locations. Instead , a symbol map is presented with the following divisions,

| $18-34$ | ppb | $1-2 x$ Standard Deviation |
| :--- | :--- | :--- |
| $35-51$ | ppb | $2-3 x$ Standard Deviation |
| $52-85$ | ppb | $3-5 x$ Standard Deviation |


| $86-119 \mathrm{ppb}$ | $5-7 x$ Standard Deviation |
| ---: | ---: |
| $120-153 \mathrm{ppb}$ | $7-9 \times$ Standard Deviation |
| $154-187 \mathrm{ppb}$ | $9-11 \times$ Standard Deviation |
|  | $>187 \mathrm{ppb}$ |

Gold value are erratic,forming several areas with "bullseye" anomolies and only several anomolous "zones".Highly anomolous areas are:

| $\mathrm{L} 22+00 \mathrm{~W}$ | Independance Shaft |  | 630 ppb |
| :--- | :--- | :--- | :--- |
| $\mathrm{L} 25+00 \mathrm{~W}$ | $0+25 \mathrm{~N}$ |  |  |
| $\mathrm{~L} 19+00 \mathrm{~W}$ | $5+25 S$ |  |  |
|  |  | 1000 ppb | $(0.04 \mathrm{oz} /$ ton $)$ |
|  |  | $0.01 \mathrm{oz} /$ ton $)$ |  |

The west map sheet also has numerous other weaker anomolies that are being followed-up. The area west of Ll0+00W has a much higher percentage of anomolies than east of this line.

DETAILED GOLD SOIL SURVEY

A detailed gold geochemical survey with 25 meter spacing and 25 meter centres occured as a result of some high gold values in the soil (ie.see above values). The grids boundaries roughly cover $\mathrm{L}-19$ to 27 N and from $1+25 S$ to $2+00 \mathrm{~N}$.

Detailed soil sampling for gold, resulted in erratic values ranging from n.d. to 464 ppb . No significant zones and or halo effects can be interpreted from the gold values, in soils.

```
COPPER-ZINC
```

Two copper/zinc anomoly were detected during the course of the survey. Locations are as follows:

|  |  | Zn | Cu | Au |
| :--- | :--- | :--- | :--- | :--- |
| L25+00W | $1+75 S$ | 2400 | 550 | 120 ppb |
| L26+00W | $1+00 S$ | 3000 | 425 | 12 ppb |

The data is plotted on the accompanying maps at a scale of $1: 2500$.

DETAIL COPPER AND ZINC SOILS

Detailed follow-up for copper and zinc on a portion of the detailed gold geochemistry grid proved more successful. The main area of concentration lies between lines 24 and 27 west and from the baseline to $2+005$. Within this zone there are some interesting zinc results. Values for zinc geochemistry (ie. soils) range from 40 ppm to 3000 ppm . Copper values roughly couple with zinc values in two zones. Copper values range from 8 ppm to 1350 ppm . A
diamond drill hole ( $\mathrm{BL}-4-84$ ) tested the copper and zinc anomalies on line 25 west. Drill core from this hole shows calcopyrite and sphalerite.

ORGANIC SURVEY

Humus samples were taken at stations with poor to no-soil development. Samples of decayed or decaying "forest litter" were collected by "scooping" with a grub hoe or hand: Samples were taken from the A-horizon immediately below actively growing vegetation.

All samples were analyzed for gold by the neutron activation method at Nuclear Activation Services Limited,Hamilton, Ontario.

Gold values range from <lppb to 1000 ppb . The mean and standard deviation calculated from 1037 samples are 2.9 ppb and 4.6 ppb respectively.

Data is plotted at a scale of $1: 2500$ on the accompanying maps.Results are presented as a symbol map in the same manner as for the gold-soil survey with divisions at :

| $6-10 \mathrm{ppb}$ | $1-2 x$ Standard Deviation |
| ---: | :--- |
| $11-15 \mathrm{ppb}$ | $2-3 x$ Standard Deviation |
| $16-25 \mathrm{ppb}$ | $3-5 x$ Standard Deviation |
| $26-35 \mathrm{ppb}$ | $5-7 x$ Standard Deviation |
| $36-45 \mathrm{ppb}$ | $7-9 x$ Standard Deviation |
| $46-55 \mathrm{ppb}$ | 9-11x Standard Deviation |
|  | $>55 \mathrm{ppb}$ |
| $11 x$ Standard Deviation |  |

Gold values are erratic with several strong "bullseye" anomolies.The strongest anomolies occur at:

$$
\begin{array}{rrr}
\mathrm{L} 31+00 \mathrm{~W} & 10+25 \mathrm{~S} & 1000 \mathrm{ppb} \\
\mathrm{~L} 20+00 \mathrm{~W} & 2+00 \mathrm{~N} & 620 \mathrm{ppb}
\end{array}
$$

Most anomolies occur on the west grid sheet with no anomolies occuring east of $\mathrm{LlO+OOE}$.

## SECTION 7

DIAMOND DRILLING

To the west end of the Bennett lake property, four drill holes were drilled in December of 1984. All four holes were collared on claim *676196. Enclosed within this report are copies of the drill record, longitudinal sections and assay results.

Holes number one and two were drilled to test a coincedent mag. and VLF anomaly. Drill hole BL-1-84 was 328 feet long and collared at L24+92N/0+35S. The drill hole in addition to testing a mag and VLF anomaly also tested a gold and tellurium showing on surface adjacent to a highly weathered and trenched zone. A vertical projections from down the hole to surface suggest this weathered zone consisted originally of massive sulphides (ie.pyrite, pyrhotite,sphalerite). Assay results from these two holes where considered anomalous although no ore-grades were encountered.

Theobjective of the third drill hole (BL-3-84) collared at L22+08W/0+24S was designed to test the old mine shaft. The hole was drilled to a depth of 253 feet and results from this hole were less than encouraging with quartz veins displaying an extremely bullish tendancy. Results from throughout the shaft area (ie.adjacent rock, mine dump, drill hole ect.) have not given any evidence for the justification of the Independance mine.

The fourth hole drilled (BL-4-84) was drilled to test a gold/zinc soil anomalies plus, test a mag. and VLF geophysical anomalies. This hole was collared at L $24+85 W / 2+105$. Results for this 293 foot hole, were not good however; sulphides including pyrite, pyrhotite and sphalerite were encountered in the core.

## CONCLUSIONS

1.) Proton Precession Magnetometer and VLF Electromagnetic surveys were successful in defining potential zones of mineralization for follow-up exploration.
2.) The trenching program that occurred in the latter part of the summer established a good gold showing with economic values on surface. Furthermore, a unique assemblage of minerals were identified including native telurium and altaite (gold-silver-lead teluride). However, drilling failed to confirm the showing at depth but, there is still a need to determine the structural and genetic aspects of the showing. The Royal Ontario Museum's Department of Earth Sciences has expressed interest in looking at this showing and possibly spending a period of time this upcoming summer working on this area.
3.) Geological mapping on this property, although simplisitcally shown on the maps provided is much more complex. Abrupt changes in lithological units over small distances occurr within some areas. These changes may have resulted in possible mineralized zones being overlooked during mapping procedures. The mapping program has outlined areas that are worthy of prospecting.
4.) Although no significant results were attained from the drill program under taken in the late fall, anomalous values up to $0.1202 /$ ton were encountered. There are still anomalies that have not been tested that warrant further investigation.

## SECTION 9

## REFERENCES

1.) Ontario Department of Mines, Volumes 1899,1900,1902.
2.) Ontario Department of Mines, Young 1960.
3.) Ontario Department of Mines, Fumerton 1981.
4.) M.R.C. No. 13, Ferguson et al, 1971.
5.) Resident Geologists Files, Kenora and Thunderbay.

Map References:
1.) Map 2443 Kenora-Fort-Frances Sheet ( Blackburn,1973-78).
2.) Map P2405 Calm Lake Area
3.) Aeromagnetic map 11426
4.) O.D.M. Geological Compliation Map 2115
5.) Map 190b Bennett-Tanner Area(Young 1960).

Submitted by:

Peter Mordant

Randy Crowley


LYNX-CANADA EXPLORATIONS LIMITED
DIAMOND DRILL RECORD
Hole No
Commenced Navember 29, 1984 Completed December 1,1984 Drilling Co. Norwescon
Core Size B Caning Left in Hole _-_feet

Claim No. .___
Scale: $1^{\prime \prime}=1000^{\prime}$





LYNXCANADA EXPLORATIONS LIMITED
DIAMOND DRILL RECORD

| Pootage |  | D E S S C R R I P P T | $\begin{gathered} \text { Sample } \\ \text { No. } \end{gathered}$ | From | To | Length | ${ }_{\mathrm{ppb}}^{\mathrm{Au}}$ | ${ }_{\mathrm{ppm}}^{\mathrm{Ag}_{\mathrm{ppm}}}$ | ${ }_{\mathrm{ppm}}^{2 \boldsymbol{n}}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Prom | To |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 183 | 185 | Sulphide Iron Formation (massive sulphide) | 10642 | 183 | 184 | 1 ft | 79 | <0.1 |  |  |  |  |
|  |  |  | 10643 | 184 | 185 | 1 ft . | 180 | <0.1 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 185 | 193.5 | Sulphide Iron Formation with up to $35 \%$ sulphides (py, po, cpy), alteration bands | 10646 | 185 | 186 | 1 ft . | 370 | 3.0 |  |  |  |  |
|  |  | of chlorite and biotite plus magnetite | 10647 | 186 | 187 | 1 ft . | 106 | 4.2 |  |  |  |  |
|  |  |  | 10648 | 187 | 188 | 1 ft | 50 | 2.6 |  |  |  |  |
|  |  |  | 10649 | 188 | 189 | 1 ft . | 180 | 0.8 |  |  |  |  |
|  |  |  | 10650 | 189 | 190 | 1 ft . | 1886 | 14.2 |  | 0.055 | 02/tol | Au |
|  |  |  | 10651 | 190 | 191 | 1 ft | 3841 | 24.4 |  | 0.112 | 02/tor | Au |
|  |  |  | 10652 | 191 | 192 | 1 ft . | 800 | 22.9 |  |  |  |  |
|  |  |  | 10653 | 192 | 193.5 | 1.5 E | 123 | 8.1 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 193.5 | 208 | Banded felsic - Intermediate volcanic with sulphides up to 30\%, po, py. | 10654 | 193.5 | 195 | 1.5 ft | 118 | 8.2 |  |  |  |  |
|  |  |  | 10655 | 195 | 192 | 2 ft . | 50 | <0.1 |  |  |  |  |
|  |  |  | 10656 | 197 | 199 | 2 ft . | 106 | 3.2 |  |  |  |  |
|  |  |  | 10657 | 199 | 201 | 2 ft . | 165 | 0.1 |  |  |  |  |
|  |  |  | 10658 | 201 | 203 | 2 ft | 45 | $<0.1$ |  |  |  |  |
|  |  |  | 10659 | 203 | 204 | 1 ft . | 45 | < 0.1 |  |  |  |  |
|  |  |  | 10660 | 204 | 205 | 1 ft . | 80 | < 0.1 |  |  |  |  |
|  |  |  | 10661 | 205 | 207 | 2 fre | 112 | 0.5 |  |  |  |  |
|  |  |  | 10662 | 207 | 208 | 1-fter | 270 | 1.2 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 208 | 228 | Massixe blacky fracture Intermediate tralcanic with chlorite alteration and | 10663 | 218.5 | 221 | 2.5_f | 53 | <.0.1 |  |  |  |  |
|  |  | blue quartz-eyes. | 10676 | 230 | 231 | 1 ft | 26 | 0.6 |  |  |  |  |
| 228 | 233.5 | Contact rone that is highly altered conchlorite arid biotite adjacent to sulphidea | 10664 | 231 | 233 | 2 fft | 97 | <0.1 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 233.5 | 251.5 | Sulphide Iron Pormation po, py, in addition hands of chlorite and hiotite- | 10665 | 233.5 | 235 | 1.5fi | 34 | 0.6 |  |  |  |  |
|  |  | alteration, massive sulphides.in segments | 10666 | 235 | 237 | 2 ftte | 116. | 1.1 |  |  |  |  |
|  |  |  | 10667 | 237 | 238 | 1 fte | 168 | 0.4 |  |  |  |  |
|  |  |  | 10668 | 238 | 239 | 1 ft . | 266 | 1.2 |  |  |  |  |
|  |  |  | 10669 | 239 | 240 | 1 fte | 292 | 2.7 |  |  |  |  |
|  |  |  | 10670 | 240 | 241.5 | . 5 ft. | 116 | 1.1 |  |  |  |  |
|  |  |  | 10671 | 241.5 | 243 | . 5 ft | 160 | 0.1 |  |  |  |  |
|  |  |  | 10672 | 243 | 244 | 1 fte | 224 | 1.3 |  |  |  |  |
|  |  |  | 10673 | 244 | 245 | 1 fte | 132 | 3.6 |  |  |  |  |
|  |  |  | 10674 | 245. | 246 | 1 fte | 64 | 1.2 |  |  |  |  |
|  |  |  | 10675 | 246 | 247 | 1 ftic | 96 | 4.5 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

LYNXCANADA EXPLORATIONS LIMITED
DIAMOND DRILL RECORD

Hole N o $\mathrm{DH}-1-84$
Sheet No $\quad 4$

| Footare |  | D ESACRIP TION | $\begin{array}{\|l} \text { Sample } \\ \text { No. } \end{array}$ | From | To | Length | ppb | $\underset{\mathrm{Ppm}}{\mathrm{Ag}}$ | 2npm |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Prom | T0 |  |  |  |  |  |  |  |  |  |  |  |
|  |  | contindien | 10677 | 247 | 248 | 1 ft. | 96 | 2.1 |  |  |  |  |
|  |  |  | 10678 | 248 | 249 | 1 ft . | 88 | 2.7 |  |  |  |  |
|  |  |  | 10672 | 242 | 250 | 1 ft. | 1235 | 8.1 |  | 0.036 | 02/ton | $\mathrm{Au}^{\text {a }}$ |
|  |  |  | 10680 | 250 | 251.5 | 1.5 ff | . 2606 | 26 |  | 0.076 | Oz/tor | $\mathrm{Au}^{\text {a }}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 251.5 | 260.5 | Intermediate - Mafic volcanic with bands of chlorite and sulphides up to 5\%, blue | 10681 | 251.5 | 254 | 2.5 ft | . 471 | 4.6 |  |  |  |  |
|  |  | quartz eyes, quartz stringers. | 10682 | 254 | 257 | 3 ft . | 55 | <0.1 |  |  |  |  |
|  |  |  | 10683 | 257 | 260.5 | 3.5 ft | 1440 | 4.8 |  | 0.042 | 02/ton | $\mathrm{Au}^{\text {a }}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 260.5 | 262 | Sulphide Iron Pormation (massive sulphides) | 10684 | 260.5 | 262 | 1.5 ft | . 580 | 3.9 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 262 | 268 | Intermediate - Volcanic with disseminated sulphides up to 5\%, - zone of $60 \%$ po | 10685 | 262 | 264 | 2 ft . | 41 | 0.4 |  |  |  |  |
|  |  | $(266-267)+$ cpy less 1\% | 10686 | 264 | 265.5 | 1.5 ft | 1097 | 3.1 |  | 0.032 | 02/tor | Au |
|  |  |  | 10687 | 265.5 | 267 | 1.5 ft | 352 | 1.1 |  |  |  |  |
|  |  |  | 10688 | 267 | 268 | 1 ft . | 2160 | 12.29 |  | 0.063 | 02/ton | Au |
|  |  |  | 10689 | 268 | 270 | 2 ft . | 229 | 2.9 |  |  |  |  |
|  |  |  | 10690 | 270 | 273 | 3 ft . | 83 | 0.2 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 268 | 295 | Intermediate volcanic vith small stretch blue quartz ejes, disseminated sulphides |  |  |  |  |  |  |  |  |  |  |
|  |  | up to 5\% |  |  |  |  |  |  |  |  |  |  |
|  |  |  | 10691 | 273 | 277 | 4 ft . | 76 | $<0.1$ |  |  |  |  |
|  |  |  | 10692 | 277 | 280 | 3 ft . | 114 | < 0.1 |  |  |  |  |
|  |  |  | 10693 | 280 | 283 | 3 ft . | 78 | < 0.1 |  |  |  |  |
|  |  |  | 10694 | 283 | 286 | fte. | 87 | < 0.1 |  |  |  |  |
|  |  |  | 10695 | 286 | 289 | 3 ft . | 191 | 0.9 |  |  |  |  |
|  |  |  | 10696 | 289 | 292 | 3 ft . | 20 | 0.3 |  |  |  |  |
|  |  |  | 10697 | 292 | 295 | 3 ft. | 25 | 0.9 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 295 | 328 | Intermediate - Felsic yolcanic banded sulphides (15\%) with quartz stringers and | 10698 | 225 | 298. | 3_f5, | 12. | 0.4 |  |  |  |  |
|  |  | blue quartz eyes. | 10692 | 298 | 301 | 3 fte | 72 | 22 |  |  |  |  |
|  |  |  | 10700 | 301 | 307 | 6 fte. | 197 | 3.3 |  |  |  |  |
|  |  |  | 10520 | 307 | 310 | 3 ft | 548 | 1.7 |  |  |  |  |
|  |  |  | 10521 | 310 | 313 | 3 fte . | 49 | <0.1 |  |  |  |  |
|  |  |  | 10522 | 313 | 316 | 3 ffer | 36 | 0.6 |  |  |  |  |
|  |  | END OF HOLE 328 | 10523 | 316 | 319 | 3 ft . | 15 | 0.1 |  |  |  |  |
|  |  |  | 10524 | 319 | 321 | 3-fte. | 18 | $<0,1$ |  |  |  |  |
|  |  |  | 10525 | 321. | 324 | 4.ft. | $<5$ | 0.4 |  |  |  |  |
|  |  | ---.-... |  |  |  |  |  |  |  |  |  |  |
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## LYNX-CANADA EXPLORATIONS LIMITED

## DIAMOND DRILL RECORD




LYNX-CANADA EXPLORATIONS LIMITED
DIAMOND DRILL RECORD


DIAMOND DRILL RECORD
Hole No_n_ $\mathrm{BL}_{3}^{-2}$ Sheet No_ 3 -


LYNX-CANADA EXPLORATIONS LIMITED

## DIAMOND DRILL RECORD



| Pootare |  | D E S C C R I P P T I O | $\begin{aligned} & \text { Sample } \\ & \text { No. } \end{aligned}$ | From | To | Length | $\mathrm{Au}_{\mathrm{ppb}}$ | $\stackrel{\mathrm{Ag}}{\mathrm{Ppm}}$ | $\begin{aligned} & \mathrm{pn} \\ & \mathrm{ppm} \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Prom | To |  |  |  |  |  |  |  |  |  |  |  |  |
| 205.5 | 328.0 | continued |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 253.0-260.0 very well bedded zone with f.g. minor quarz veining |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 264-265 white quartz vein, chlorite garnet |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 277-279.0 sphalerite in narrow stringers 2 mm wide running parallel to core |  |  |  |  |  |  |  |  |  |  |  |
|  |  | for $2^{\prime}$ - |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 279-283.0 well banded pyrite in well banded sediments. $\leq 67$ in places |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 288-293.0 very well banded sediment - tuff with |  |  |  |  |  |  |  |  |  |  |  |
|  |  | stratiform pyrite bands |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 289-290 5\% py |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 314.5-328.0 gradtional zone into unit below increasing amounts of |  |  |  |  |  |  |  |  |  |  |  |
|  |  | chlorite and biotite |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 318-328 quartz veining in chloritic tuff some epidote. |  |  |  |  |  | - |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 328 | 4001 | Mafic Volcanic Rock |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | - chloritic and biotite rich |  |  |  |  |  |  |  |  |  |  |  |
|  |  | - biotite defines a crude foliation $30^{\circ}$ to core axis |  |  |  |  |  |  |  |  |  |  |  |
|  |  | - numerous quartz and quartz carbonate veins $\leq 2^{\text {-" }}$ wide. |  |  |  |  |  |  |  |  |  |  |  |
|  |  | - eradational and alternating contact with above urit to $331.0{ }^{\prime}$ |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 341-343 quartr -carbonite - chlorite biotite_zone |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 355-357 * - - * - - |  |  |  |  |  |  |  |  |  |  |  |
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|  |  | END OF HOLE 400' |  |  |  |  |  |  |  |  |  |  |  |
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Paţent
Claim No676196
Scale: $1^{\prime \prime}=1000^{\circ}$

| Footare |  | D E S C C R I P P T I O O N | $\begin{gathered} \text { Sample } \\ \text { No. } \end{gathered}$ | From | To | Length | $\begin{aligned} & \mathrm{Au} \\ & \mathrm{ppb} \end{aligned}$ | Ag ppm | $\begin{gathered} \mathrm{Zn} \\ \mathrm{ppm} \end{gathered}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | To |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 51 | Internediate yolcanic with blue quaitz eyes (woakly foliated) | 10589 | 5 | 10 | 5 | 345 | <-1. |  |  |  |  |
|  |  | -5.5 quartz stringer with 27 pyrite mineralization | 10590 | 10 | 13 | 3 | 26 | <, 1 |  |  |  |  |
|  |  | - $10.5^{\prime} 2^{\prime \prime}$ quartz stringer (bullish) | 10591 | 19 | 21. | 3 | 39 | <. 1 |  |  |  |  |
|  |  | - 20-21' quartz stringer with 27 sulphide mineralization | 10592 | 23 | 26 | 3 | 23 | < 1 |  |  |  |  |
| * |  | - 24-25' quartz vein $4^{\prime \prime}$ wide with less than $1 \%$ sulphides | 10593 | 32 | 37 | 5 | 16 | 1 |  |  |  |  |
|  |  | - 32-37 well banded zone with handed and disseminated_ sulphides_up to 27 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 51 | 253 | banded intermediate rolcanic rith hlue quarts exes | 10594 | 51 | 56 | 5 | 5 | <. 1 |  |  |  |  |
|  |  |  | 10595 | 63 | 68 | 5 | 26. | <. 1 |  |  |  |  |
|  |  | -63-65 f.g. disseminated sulphides less than 1\% | 10596 | 68 | 73 | 5 | 30 | <, 1 |  |  |  |  |
|  |  | -68-71' 2 quartr yeins hoth 2 1/2'1 wide (bullich) | 10597 | 77 | 82 | 5 | 101 | <, 1 |  |  |  |  |
|  |  | - $74{ }^{\circ} 2$ zone : : or band of chlorite | 8914 | 73 | 77 | 4 | $<5$ | <. 1 |  |  |  |  |
|  |  | -. 77-80 disseminated sulphides less than 17 | 8915 | 82 | 86 | 4 | 540 | K. 1 |  |  |  |  |
|  |  | - 86-95 sone of banded sulphides up to 28 plus a $3^{\prime \prime}$, quartr veine | 10598 | 86 | 91 | 5 | 26 | R. 1 |  |  |  |  |
|  |  |  | 10599 | 91 | 95 | 5 | 6 | <, 1 |  |  |  |  |
|  |  | - 91-93 ${ }^{\text {- }}$ quartz vein with sulphides up to 17 plus Coze | 8916 | 95 | 92 | 4 | 5 | C. 1 |  |  |  |  |
|  |  |  | 10600 | 99 | 104 | 5 | 42 | <, 1 |  |  |  |  |
|  |  | - 128-128.5 ${ }^{\prime}$ band of chlorite | 8917 | 104 | 109 | 5 | 13 | <, |  |  |  |  |
|  |  | - 142.5-144 band of chlorite. | 8918 | 109 | 114. | 5 | 16 | <, |  |  |  |  |
|  |  | - 151-154 well banded volcpnics with chlorite and hiotite | 8919 | 114 | 119 | 5 | 18 | < |  |  |  |  |
|  |  | - bands of alteration plus bands of quartz veinlets and sulphides | 8920 | 119 | 124 | 5 | 12 | K.1 |  |  |  |  |
|  |  | Up to 3\% | 8901 | 130 | 135 | 5 | 20 | < 1 |  |  |  |  |
|  |  | -188-190 banding as above. | 8902 | 140 | 145 | 5 | $<5$ | K. 1 |  |  |  |  |
|  |  | - 195 - well banded volcanics with bands of chlorite, biotite, quartr and | 8903 | 145 | 148 | 3 | 38 | <, 1 |  |  |  |  |
|  |  |  | 8904 | 153 | 157 | 4 | 23 | <, |  |  |  |  |
|  |  |  | 8905 | 169 | 173 | 4 | 5 | <1 |  |  |  |  |
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LYNX-CANADA EXPLORATIONS LIMITED
DIAMOND DRILL RECORD

## Hole No___ 3

| Footare |  | DESCRIPTION | Sample | From | To | Length | Au$\ldots$ | Au ppm | $\begin{array}{\|c\|} \hline \mathrm{zn} \\ \text { ppm } \\ \hline \end{array}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | To |  |  |  |  |  |  |  |  |  |  |  |
|  |  | - 197' - 81' auartz yoin (bullich) | 8906 | 176 | 179 | 3 | 230 | < 1 |  |  |  |  |
|  |  | - 208' quartz vein $=$ to core axis I'' wide | 8907 | 185 | 188 | 3 | 2 | $<1$ |  |  |  |  |
|  |  |  | 8908 | 195 | 129 | 4 | 5 | <, |  |  |  |  |
|  |  |  | 8909 | 207 | 209 | 2 | 5 | <, 1 |  |  |  |  |
|  |  |  | 8910 | 219 | 2215 | 2.5 | 5 | < 1 |  |  |  |  |
|  |  |  | 8911 | 230 | 235 | $5{ }^{\prime}$ | 10 | < 1 |  |  |  |  |
|  |  |  | 8912 | 240 | 244 | $4^{\text {P }}$ | 7 | $<.1$ |  |  |  |  |
|  |  |  | 8921 | 200 | 202 | $2{ }^{\prime}$ | 5 | < 1 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
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## LYNX-CANADA EXPLORATIONS LIMITED

## DIAMOND DRILL RECORD

| $\begin{aligned} & \text { Hole No. } 4 \\ & \text { Property Bennett Sheet } 1 \\ & \hline \end{aligned}$ |  |
| :---: | :---: |
|  |  |
| Township Bennett Lake |  |
| Location | $L 24+85 \mathrm{~W}$ |
|  | $2+105$ |


| Length | 293 |
| :---: | :---: |
| Bearing | $360^{\circ}$ |
| Dip | $-50^{\circ}$ |
| Objective | to test soil. |
|  | EM + MAG |
|  | Anomalies |

Commenced Dec._13, 1984



North Completed Dec. $17,1984 \ldots \ldots$
Core Size B_Q
Casing Left in Hole 13 feet


Remarks


LYNX-CANADA EXPLORATIONS LIMITED
DIAMOND DRILI RECORD


## LYNX-CANADA EXPLORATIONS LIMITED

DIAMOND DRILL RECORD


LYNX CANADA EXPLORATIONS

ALICE 'A' PROPERTY

Submitted by: Peter Mordant
For Lynx Canada Explorations Ltd.

The following report details the results of a major exploration effort undertaken by Lynx-Canada Explorations Limited, of Toronto. The property examined is called the Alice"A" after an occurence that is almost completely sorrounded by the claim group. The program occurred during the summer and fall of 2984.Exploration procedures consisted: of two geophysical surveys, including a proton precession magnetometer and very low frequency electromagnetic survey, a geological survey, prospecting, and a basal till sampling program. All surveys include the appropriate maps at a scale of 1:2500. Sample results from mapping prospecting and basal till sampling are also included within this report. Furthermore this is a preliminary report since additional exploration is still considered at the time.

## LOCATION and ACCESS

The property is located south of the Little Turtle River in the areas of Bennett Lake (M-2392) and Little Turtle River (M-2433) in the Kenora Mining Division. The property lies 50 km . west of Atikokan, Ontario and north of highway \#ll. An abandoned town of Glenorchy is situated within the eastern third of the property. Access is obtainable via the Bowe's Camp road and the Martin's or Glenorchy road which intersects highway \#ll. The Bowe's Camp road roughly dissects the claim group in half. Access by foot along old logging roads and by boat along the Little Turtle River is possible from the above road.

PROPERTY

The Alice"A" property consists of 73 unpatented mining claims as follows:

| $759737-54$ | 18 |
| :--- | ---: |
| $759757-76$ | 20 |
| $759797-803$ | 7 |
| 759809 | 1 |
| $762446-9$ | 4 |
| $762701-23$ | 24 |

73
All claims are recorded in the Kenora Mining Division on plans M-2433 and M-2392.

PREVIOUS WORK

The area of major interest is the Alice"A' prospect.Although the prospect is not within the claim group, it is sourrounded to the north, east and west. Furthermore, since the local strike trends in an east-west direction there is no doubt that the horizon containing the Alice A deposit strikes through the Lynx property.

## Alice"A" History (1)

1894: The first reported trenching, sampling and surface observation was in 1894. A three foot ( 0.9 meter) deep trench disclosed a network of veins striking parallel to the schistose country rock. The property consisted of two mining claims Kl90 and K191.

1897: The property was owned and developed by the American-Canadian Gold Mining Company of West Superior, Wisconsin, with Mr.J.3. Hillier, president and Mr.G.H. Hillier, manager. Intial work began in July, 1897 and consisted of trenching across the structure with test pits approximately 10 feet (3 meter) sunk at each end.

1898: American-Canadian Gold Mining sank shafts approximately 200 feet
(61 meters) apart with a number of small test pits for test purposes. Shaft No.1, 46 feet ( 14 meters) deep has cross-cut north 30 feet ( 9 meters) at a depth of 40 feet ( 12 meters), and shaft No. 2,200 feet ( 61 meters) east of No.l,is 70 feet ( 21 meters) deep with a cross-cut at a depth of 60 feet (18 meters) running 19 feet ( 6 meters) south.

Fall 1898: One two-stamp Tremaine mill was installed for test purpose with a 3 ton per day capacity. Approximately 150 to 200 tons of ore, taken partly from the shafts and partly from the various test pits on the property were treated. The Alice"A" Mine is reported to have been sold to an English Company under an agreement to install a large mill of 100 or more stamps. As shaft sinking continues. Shaft No. 1 reaches a depth of 95 feet ( 29 meters) with a cross-cut driven northward 35 feet ( 11 meters) at a depth of 60 feet (18 meters)

1900: The English Company had difficulty raising the money required to build a 100 stamp mill. The property reverted back to the crown.

1926: Mr. H.K.Bridger staked six claims covering the Alice"A" and optioned them to G.B. Butterworth. Butterworth formed an association known as "The Mining Group" to provide financing. Development work includes trenching, pitting and cleaning out old open cuts and shafts for test purposes.

1980: Property was staked by Redding.
1982: Property was staked by B.Portelance of Thunder Bay,Ontario.
1983: The Property owner is presently unknown. Contact person is B.Portelance of Thunder Bay, Ontario.

Geology and structure of the mine:
The Alice"A" prospect is situated between the east-west trending quetico Fault and the northeast-northwest trending Seine River Fault. The area is underlain by steeply dipping east-west striking, felsic to mafic volcanics. The metavolcanics are composed of sericite-chlorite-carbonate schists which may have originally represented a sheared and silicifed rhyolite flow or a felsic fragmental rock such as a tuff or lapilli-tuff. Mafic metavolcanics, present as chlorite schists are encountered on the north portion of the property. Shearing is prominant throughout the Alice"A" property, the shearing strikes east-west with dips of 80 degrees north to vertical.

The shear zone was observed to be approximatly 90 meters in width, however, old reports indicate a width of 800 feet ( 244 meters). The Alice"A" property is located approximately 0.5 km . south of the east-trending Quetico Fault.

Mineralogy of the Mine:
Quartz-carbonate veins and stockwork appear associated within east-trending lenticular shear zones. The host rocks are felsic to mafic pyroclastic rocks. The quartz-carbonate veining is very erratic varying in width from 1 cm to over 20 cm and shearing but more or less parallel to the shearing. Visible mineralization consists of pyrite, chalcopyrite, galena, sphalerite and gold with accessory minerals including sericite, chlorite and carbonate.

Economic features of the Mine:
Tonnage and grade estimates; 1898 initial reports indicate that the formation was gold bearing throughout, over a width of 800 feet. Speculation on a low grade, large tonnage operation is recorded. A mill test in 1898 of 10 tons of unsorted material taken from both shafts and various test pits gave an average value of $\$ 10.80$ per ton. Further milling of samples from various workings gave results from $\$ 2.00$ to $\$ 64.00$ per ton and an average of $\$ 12.00$ gold and a small silver value.

## Previous Property work

1975 Hanna Mining completed a magnetometer,CEM and MaxMin II surveys plus a geological mapping and diamond drilling program over the western portion of the property.

## GRID-LINECUTTING

An exploration grid totalling 117 km was cut over the entire property (40+00West-43+00East). A baseline was cut in an east-west direction with wing lines perpendicular to the baseline at 100 meter intervals. Chained stations along the baseline and winglines were established with a 25 meter spacing.

## MAGNETIC SURVEY(2)

Instrumentation
The survey was performed using a Scintrex MP-2 portable proton-precession magnetometer.A Scintrex MBS-2 magnetic base station was used to record and correct for diurnal variations.

The MP-2 has an accuracy of $+/-1$ gamma in a field of 50,000 gammas. However, actual survey accuracy is proportional to the degree of care used in applying diurnal corrections.

Theory of Operation
Magnetic variations are caused by variations in magnetization of the rock from station to station. This magnetization exists because of the presence of minerals with high magnetic susceptability. The most common minerals to affect the earths magnetic field are magnetite, pyrrhotite, and ilmenite. Magnetometers are used to measure this variation.

The MP-2 is a proton precession magnetometer. This magnetometer utilizes the precession of spinning protons in a volume of kerosene to measure the total magnetic field intensity.

When the hydrocarbon is subjected to an electric current the spinning protons are temporarily polarized. When the current is removed the spin of the protons causes them to precess about the direction of the ambient magnetic field. The signal generated by the precessing protons is directly proportional to the intensity of the total magnetic field. The magnetic intensity measured is the magnitude of the earths magnetic field vectorindependant of its direction.A change in the total field intensity is referred to as anomoly.

Survey Procedure
Data was collected at 25 m intervals using a Scintrex MP-2 proton magetometer. Field data was then referred to the $\log$ of a base station recorder ( Scintrex MBS-2 ) which operated continuousiy throughout the survey for correction. The corrected data is plotted at a scale of 1:2500 and contoured.

Discussion of Results
The Proton Mangnetometer Survey conducted over the property was very useful in outlining its many magnetic trends. In general there are three major magnetic trends present on the property; 1) The Main Zone 2) The South Zone and 3) The Southwest Zone.

The Main zone is a broad magnetic expression located between $3+00$ south and extends the entire length of the property. It is approximately 500 to 600 meters wide and probably represents a volcanic flow and/or tuff bearing disseminated magnetite or pyrrhotite.

An interesting morphological feature of this trend is the "lobes" which appear along the northern boundary of the unit. These lobes appear to be related to the unit but have somehow been pinched away from the trend. It is felt that these feature's are probably structurally related and possibly

## -6-

due to a cross folding of the unit. The data along the southern boundary of the unit is incomplete and it is impossible to say whether these features were repeated there. Since these lobes appear to be strucurally related, the anomalies found within them ("J" "K" and "E" ) could present interesting exploration targets.

The several anomalous trends found within this main zone are described as follows:

Trend "A" is located on lines 17E to $43 E$ between $2+00$ and $3+00$ South. It has a strike length of greater than 2700 meters with the highest values being on lines $21 E$ and $25 E$ ( 2200 gammas). It is overlapped by trend " $B$ " on lines 17 E to 22E (actually this overlap may be due to an entirely aeperate trend but has been included in "A" for this discussion.) Unfortunately the data on trend "A" is incomplete and the magnetics over the south half of the trend was not available due to the position of the grid. The width of the trend seems to be fairly broad so it is thought that this may be to a magnetic or sulphide bearing horizon within a main volcanic unit.

Trend "B" is located directly above "A" and is found between lines 22E and 4 W . It has strike length of 2600 meters and is positioned along the baseline at $0+00$. The highest values ( 2400 to 3000 gammas) are found on lines 13E to 16E and lines 19E TO 20E. This trend is believed to be mineralogically similar to trend "A".

Trend "C" ia a long discontinous anomaly between lines 9E to 17W. It has a strike length of approximately 2600 meters and is found between 1-200 north. The best responces are on lines 11 W to 17 W ( 3000 to 5000 gammas). The responce is broad and it is believed the high values within this trend are due to a narrow magnetic and / or sulphide enriched horizon.

Trend "D" is a short anomaly which is located on lines 2E to 3W at approximately $1+00$ South. It has a strike length of about 500 meters with the highest value ( 2000 to 2300 gammas) being on lines 1 W and 2 W . This relatively short trend could be interesting depending on which exploration model one is working with.

Trend "E" is one of the anomalies that occurs in a "lobe" which was discussed in the introductory comments above. Like"D", this trend has a relatively short strike length ( 700 meters) and $1 s$ made all the more attractive by its spatial relationship to the rest of the main zone. It occurs between lines $18 E$ to $25 E$ and between $3+50$ and $4+50$ North with the highest values being on lines 19, 23 and $24 E$. The low values would seem to indicate that the anomaly was due to a sulphide rather than an oxide assemblage.

Trend "F" is an incomplete responce as it strikes off the west edge of the grid. Itis located beween $2-2+50$ North and the highest values are between 1500 and 1800 gammas. This anomaly is probably due to disseminated sulphides or magnetite.

Trend "G" is open at both ends and is located along the lower contact of the main zone between lines 29 W and 40 W ( $1+00$ to $2+00$ south). It is similar to the majority of the trends on the grid in that it has a number of discontinous high values (up to 2700 gammas) along its strike length and is fairly broad. These magnetic highs may represent different parallel horizons within the trend. The lower values and the dipole on line24N would seem to indicate that the anomaly is due to a sulphide assemblage (ie.pyrrhotite/pyrite).

Trends "J" and " $K$ " have relatively short strike lengths and like "E" are found in one of the structural "lobes" between lines 15 W to $21 \mathrm{~W}(2+50$ to $3+50$ north). They have lower values (1500 to 1900 gammas) and may represent
interesting targets for the reasons previously discussed.
Trend "L" is a one line dipole responce on 23 W , $1+00$ south. It is open to the east and probably to a suphide assemblage.

The southwest zone is another broad unit loosely separated from the main zone by a narrow band of 900 gamma values. It has two anomalies of significance within it " "H" and "FF".

Trend " H " is a wide responce and open to the west. It is located on lines 37W to 40 W between $5+00$ and $7+00$ south. This trend is different from the usual type of responce found on the grid in that its values are marginally higher and they occur over a greater width. This greater width may be due to structural thickening during deformation of a mineralized horizon. I would be inclined to say that magnetite may be the primary cause for this trend.

Trend"FF" is a two line responce which is very similar in morphology to " $\mathrm{H}^{\prime}$. It is located on lines 28 W and 29 W at $7+00$ south and is by far the strongest responce on the grid. Its high gamma values are probably due to. magnetite.

The south zone is found on lines 4 W to 6 E at about $9+00$ south and is open at both ends. It is not as discontinous as most of the other trends and is fairly narrow and well defined between lines 0 to 4 W . The values are silghtly higher for this anomaly (2000 to 3400 gammas) however it is difficult to say whether a magnetite or sulphide assemblage is the cause of this trend.

There were only two anomalies due to culture on the grid and both were caused by the CPR railway tracks which cut the southwest and southeast corners of the property. The usual precautions should be taken when looking at any data around the many bush roads which criss-cross the claim block.

All in all the magnetic survey was extremely useful in deliniating a number of interesting geological feature's on the grid.

Instrumentation
A VLF-EM survey was performed using a Geonics EM-16 unit.A Crone Radem VLF-EM unit was used between $\mathrm{L}-40+00 \mathrm{~W}$ and $\mathrm{L}-34+00 \mathrm{~W}$.

Theory of Operation [EM16]
VLF-transmitting stations operating for military communication have vertical antenna.The vertical antenna creates a concentric horizontal magnetic field . When these magnetic fields encounter conductive bodies in the ground, a secondary field is created.The VLF receiver measures the vertical components (inphase and quadrature) of these secondary fields.

The EM-16 is a sensitive receiver covering the frequency bands of the VLF-transmitting station with means of measuring the vertical field components.

The receiver has two inputs, with two receiving coils built into the instrument. One coil has normally vertical axis, the other is horizontal.

The signal from one of the coils (vertical) is first minimized by tilting the instrument. The tilt angle is calibrated in percent. The remaining signal in this coil is finally balanced out by a measured percentage of a signal from another coil,after being shifted by 90 degrees.

Thus if the secondary signals are small compared to the primary horizontal field, the mechanical tilt angle is an accurate meaure of the vertical real-component, and the compensation 90 degree signal from the horizontal coil is a measure of the quadrature vertical signal.

Survey Procedure [EM16]
Readings were taken at 25 m intervals over the entire grid. Both the dip angle and the quadrature were noted at each station. The transmitting station used was Cutler,Maine.

To take a reading the refrence coil ("T") in the lower end of the handle is oriented along the magnetic lines 90 degrees to the station direction. This is acheived by swinging the instrument back and forth until a minimium sound intensity is heard. The quadrature dial is then adjusted until the sound is further minimized. The dip is then read from the inclinometer and the quadrature from the dial. The same direction is always faced when readings are taken.

Discussion of Results
Unlike the Proton Magnetometer Survey the VLF Survey was not very success ful in defining any conductive zones as good exploration targets.

The majority of the grid is very flat and swampy and as a result is prone to producing anomalies which are essentially caused by conductive clays found in the old river channels, shears, ect.

The anomalies which were located by the VLF tended to be broad and reflecing a river channel type of responce rather than a bonafide bedrock conductor.

This of course does not mean that every conductor on the property should be written off as a topographic responce, however the data has to be looked at very carefully in order to sort these problems out.

Actually very few VLF responces corresponded to the major magnetic trends. The conducters, in many cases, cut across the trends rather than to follow them with only one or two crossovers seeming to correlate with the magnetic highs. This situation creates a problem in trying to grade the conductors since one is left with no clear answers as to what might be the cause of the anomalies. The quaderature will help to some extent however a detailed geological survey in the vicinity of some of these conductors hopefully will sort some of these problems out. Unfortunately sufficient outcrop exposure will be a problem in this area so one may be forced to do a more expensive geophysical survey such as IP in order to resolve these difficulties

The data between lines 33 W and 40 W was collected using a Radem VLF and as a result there is no quaderature data collected over these lines. It should be noted that the frazer filtered values produced over these lines will be lower because of the difference in measurements between the Radem and .the Geonics system, ( The Radem measures dip angle in degrees while the Geonics EM-16 measures the dip in precent).

A complete list of all the VLF conductors with there relative comments can be found in the next section.

TAELE OF VLF RESULTS


REMARKS


QQQ i 3 W TO $4 \mathrm{~W} \quad 11+00+$ : POOR $\quad$ POOR I YES I VERY MUCH THE SAME $19+25$ SOUTH : 1 I 1 IS "QQ" CORRELATING i i i IAS "EQ" CORRELATING
: WITH THE SAME

## TABLE OF VLF RESULTS

| CON | LOCAT ION | STRIKE LENGTH METERS | FILTER RESPONSE | PROFILE RESPONSE | MAG |  | REMARKS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ; | 1 \| | 1 | 1 | 1 |  | MAGNETIC TREND. VERY WEAK |  |  |  |  |  |
|  | ; | 1 1 | 1 | 1 | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| R | : 2W TO 1E | $13+00+$ | I PODR TO | : POOR | 1 NO |  | SWAMP? |  |  |  |  |  |
|  | :11+50 SOUT |  | FAIR |  | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | 10 TO 6W | 1600 | POOR TO | 1 POOR | NO |  | SWAMP? |  |  |  |  |  |
|  | 111+50 T0 | 1 | GOOD | 1 |  |  | 1 |  |  |  |  |  |
|  | : $\quad 11+7$ | 1 |  | 1 |  |  |  |  |  |  |  |  |
|  | 1 NORTH |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| T | 13W TO 4E | 1700 | FAIR TO | 1 POOR | - NO |  | SWAMP? |  |  |  |  |  |
|  | 19+50-10+00 | 1 | GOOD | 1 | I |  |  |  |  |  |  |  |
|  | 1 NORTH |  |  | 1 | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| U | 14E TO 6E | $1200+$ | 1 GOOD | 1 PODR | 1 NO |  | I CORRELATERS TO ROAD |  |  |  |  |  |
|  | 111+50-12N |  |  | 1 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| $v$ | 12W TO 9W | : 700 | ! FAIR TO | 1 POOR | ; ND | : TOPOGRAPHIC |  |  |  |  |  |  |
|  | : 7+50-B+00 |  | GOOD | 1 | ; |  |  |  |  |  |  |  |
|  | : NORTH | 1 i | 1 | 1 | 1 | 1 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| W | 1 SE TO 5W | 1800 | ; FAIR TO | i POOR | ; NO | : COLLD BE INTERESTING |  |  |  |  |  |  |
|  | $16+50-7+00$ |  | GOOD | 1 | , | : BECAUSE DF LOCATION |  |  |  |  |  |  |
|  | : NDRTH |  |  | ; | 1 |  | ( IE. NOT IN A SWAMP) |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| X | : 1E TO BE | 1700 | 1 POOR TO | - POOR | 1 NO | I THE GOOD RESPONSE : DF THIS TREND COR- |  |  |  |  |  |  |
|  | :4+50-7+00 |  | GODD | ; | i |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ; NORTH | 1 i |  | ; | 1 | I RELATES TO THE ROAD. |  |  |  |  |  |  |
|  | ; | : 1 | 1 | 1 | 1 | : VERY WEAK PROBABLY |  |  |  |  |  |  |
|  | ; | 1 | I | ; | 1 | 1 CAUSED BY SWAMP. |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| $Y$ | 14E TO 7E | 1 300 | - POOR TO | ) POOR | 1 NO | IPROBABLY CAUSED BY |  |  |  |  |  |  |
|  | $13+25-3+50$ |  | FAIR | , | ; |  | THE RIVER |  |  |  |  |  |
|  | l NORTH | 1 ; |  | 1 | 1 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Z | 14 ETO TE | ; 500 i | I POOR TO | 1 PODR | : NO. |  | SWAMP? |  |  |  |  |  |
|  | 12+25-2+50 |  | FAIR |  | 1 |  |  |  |  |  |  |  |
|  | NORTH |  |  | 1 | , |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZ | 16E TO 7E | \| 100 | | 1 FAIR | 1 POOR | : ? | - CORREALTES WITH A <br> ; MAG TREND AS WELL <br> : AS A LOGGING ROAD <br> i. POSSIBLY CULTURE. <br> 14 |  |  |  |  |  |  |
|  | $13+00$ NOFTH |  |  |  | I |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 |  |  | 1 | \% |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | , | $i \quad 1$ |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AA | 19E TD 12E | 13001 | 1 POOR | 1 FOOR | : NO | : PROBABLY CAUSED EY |  |  |  |  |  |  |
|  | $15+50-6+00$ |  |  | 1 | 1 | : THE RIVER |  |  |  |  |  |  |
|  | NORTH |  |  | 1 | 1 | 1 P ${ }^{\text {a }}$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
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TABLE OF VLF RESULTS

| CON | LOCATION | STFIKE <br> LENGTH <br> METERS | FILTER RESPONSE | PRDFILE RESPONSE | MAG | REMARKS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  | $17+50-8+001$ |  | POOR | 1 | 1 | 1 边 |
|  | 1 NORTH |  |  | 1 | 1 | ; |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | $110+50-10+001$ |  | 1 | 1 |  | : THE CONDUCTIV |
|  | NORTH |  |  | 1 |  | 1 IS SLIGHTLY BETTER |
|  | \| |  |  | 1 |  | ITHAN 'AA' AND 'BB'. |
|  |  |  |  |  |  |  |
| DD | :22E TO 30E | 1800+ | GOOD TO | POOR | 1 NO | - OPEN TO THE EAST |
|  | 17+00-8+001 |  | POOR |  |  | PROBABLY CAUSED EY |
|  | 1 NORTH |  |  | 1 |  | THE RIVER. |
|  |  |  |  |  |  |  |
| EE | $\begin{aligned} & 121 E \text { TO 24E } \\ & 14+25-5+25: \end{aligned}$ | 1 300 | $\begin{aligned} & : \text { FOOR TO } \\ & \text { FAIR } \end{aligned}$ | : POOR | $1 ?$ | OCCURS ON THE <br> I NORTH FLANK OF ONE |
|  | 1 SOUTH ; |  |  | 1 | 1. | 1 OF THE MORE INT- |
|  | 1 1 | 11 | 1 | 1 | 1 | IERESTING MAG TRENDS. |
|  |  |  |  |  |  |  |
| FF | : 23E TD 43E : | : 2000+ | - fair to | - PODR TO | : NO | : DPEN TO THE EAST |
|  | :1+75-3+00 |  | - GOOD |  |  | 1 A VERY LONG AND |
|  | NORTH |  |  | 1 | 1 | : FAIRLY STRONG CON- |
|  | ; |  |  | 1 | 1 | [DUCTOR. SPLITS AT 32 |
|  | : 1 |  | ; | 1 | 1 | IEAST, POSSIBLE TOFO |
|  | ; |  |  | 1 | ' | ( ANOMALY AT THIS |
|  | 1 i |  |  | 1 |  | : POINT. |
|  |  |  |  |  |  |  |
| GG | :31E TO 43E ; | $1200+1$ | [FAIR TO | POOR TO | \| NO | - OPEN TO THE EAST |
|  | 13+75-5+50: |  | G GOOD | FAIR |  | IVERY SIMILAR TO 'FF' |
|  | NOFTH |  |  | ) | 1 | : BEST CONDUCTIVITY |
|  | ! 1 |  |  | 1 |  | AROUND LINES 32-33 |
|  |  |  |  |  |  |  |
| HH | 139E TO 40E : | 1001 | FAIR | 1 POQR | NO | SWAMP? |
|  | 16+00-6+50\| | 1 |  | 1 ! | 1 | : - |
|  | ; NORTH \| |  |  |  |  | 1 |
|  |  |  |  |  |  |  |
| 11 | :29E TO 38E : | 900+ | POOR | 1 POOR | NO | SWAMP? |
|  | 16+50-7+001 |  |  | 1 | 1 | 1 ) |
|  | NORTH |  |  |  | 1 | 1 ( 1 |
|  |  |  |  |  |  |  |
| JJ | [18E TO 20E | 200 | FAIR | 1 POOR | 1 ? | ISWAMPY GROUND, HOW- |
|  | 10+75 NORTH | 1 |  | 1 l | 1 | : EVER IT IS FOUND |
|  | 1 1 |  |  | 1 | 1 | : ON THE NORTHERN |
|  | I : |  |  | ! | ! | IFLANK OF A MAGNETIC |
|  | ; |  |  | , | , | ; TREND. |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

The Alice"A" property occurs in the Atikokan-Fort Frances greenstone belt of Northwestern Ontario.This property is located in the Kabigoon Subprovince and is struct

REGIONAL GEOLOGY
The Alice"A" property occurs in the Atikokan-Fort Frances greenstone belt of Northwestern Ontario.This property is located in the Nabigoon Subprovince and is structurally located south of the quetico fault. This area consists mainly of felsic and intermediate volcanics. The "Seine River Series" clastic metasediments are situated to the south of this greenstone belt with the Irene-Eltrut Lake Batholithic complex.

PROPERTY GEOLOGY
The major problem associated with the compilation of a geological map for this property is related to the low percentage of outcrop.A general overview is possible based on geological,magnetic and EM interpretations.

Rock types outlined in the following list represent lithological units mapped on the Alice"A" property.These rock types will be discussed in the same order as ascribed below. References are made to the geology maps that are provided with this report.

1) MAFIC VOLCANIC
2) INTERMEDIATE VOLCANIC
3) FELSIC VOLCANIC

METASEDIMENTS
4) BANDED IRON FORMATION

PLUTONICS
5) MAFIC INIRUSIVE
6) FELSIC-INIEEMEDIATE INIRUSIVE

1) Mafic volcanics comprise a relatively small percentage of the rocks exposed on the property. The most easterly segment of the grid (ie.map 1 of 4) near the baseline reveils a medium grained massive mafic volcanic with minor pyrite mineralization.This may however, be an intrusive (ie.gabbro). Other occurences of mafic volcanics tend to be interfingered with intermediate volcanics and it is thought that these may in fact be part of the same lithological sequence. The differences may be explained by an alteration or colour phase within the lithology.
2) There are three areas of intermediate volcanic outcrop on the property. The first area(on sheet 3 of 4) is near the southern boundary of the property around line 5+00east. This strongly foliated intermediate volcanic is medium to fine grained. Mineralization is isolated to fracture planes with minor pyrite and carbonate.

The second area of outcrop extends over sheets 3 and 4.This intermediate. volcanic is interfingered with felsic volcanics and a banded iron formation near line $14+00$ west, just north of the baseline. Characteristic features include, highly stretched quartz eyes and banded volcanics in segments.

Minor pyrite mineralization is also present.
The third area where intermediate volcanics occur are north of the baseline near line $28+00$ west. This intermediate-mafic volcanic is fine to medium grained in texture with a strong foliation. Both pyrite and carbonate mineralization are observed on fracture planes.
3) Felsic volcanics are the most abundant rock type exposed on the property. They are mainly exposed south of the baseline and in many instances are interbedded with intermediate volcanics. The majority of the felsic volcanics are tuffaceuos in nature and in some outcrops they are siliceous and crystalline. Texture is variable throughout this unit from medium grained to crystalline. The degree of foliation varies from both extremes. Minor pyrite mineralization occurs throughtout lithologies with quartz stringers and carbonate fracture filling.Sericite alteration was observed in highly foiliated to crystalline rocks exposed near $L-24+00 \mathrm{~W}$ and south of the baseline. All units have an eastwest strike and a steep to vertical dip.

An area of abundant outcrop south of the baseline between L-23+00W and L-26+ OOW, exposes felsic tuff to felsic crystal tuff on strike with the Alice"A" prospect.These strongly foliated to schistose rock are very similar in appearance to those at the Alice"A".
4) Banded Iron Formations outcrop in two areas on the property.On L-3+00E near $5+50 \mathrm{~N}$ there is a BIF within an intermediate to felsic volcanic. This iron formation contains bands of chlorite with stringers of quartz and pyrite.Adjacent volcanics are contorted and folded with fine grained stringers of pyrite and quartz. The second banded iron formation is located near $L-14+00 \mathrm{~N}$ and $1+00 \mathrm{~N}$ this lithology displays the same pysical attributes as the previously described.
5) The most easterly part of the grid,north of the baseline, exposes an area of mafic intrusive rocks.This rock unit is isolated in size and is associated with felsic dykes.These mafics are massive and fine to medium grained.
6) A granitc body was observed in the middle of the grid north of the Little Turtle River. This intrusive body is thought to be related to the Irene-Eltrut Lake batholithic complex to the north. The southern contact is identified with metamorphosed felsic volcanics on $[-1+00 \mathrm{~W}$ at $6+75 \mathrm{~N}$. Also identifed within the contact zone (ie. to the west) are mafic volcanics. Where observed, the economic potential of the contact zone does not seem significant.

## SUMMARY PROPERTY GEOLOGY

The geological base maps produced during the summer of 1984 lack a great deal of outcrop and as such dc not represent a good geological picture. In terms of the potential for economic mineralization, emphasis should be placed on the more felsic to intermediate volcanics that exibit greater mineralization. Although no significant mineralization was observed and assay results were not encouraging the lack of outcrop may aid in explaination.

| TAG | $\begin{aligned} & A U \\ & O Z \end{aligned}$ | AU ppb | LOCATION |  | DESCRIPTION |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 11137 |  | 12 | $25+00 e$ | $6+20 n$ | mafic-interm.intrusive,trace py |
| 11138 |  | 5 | $21+00 \mathrm{e}$ | $6+00 n$ | felsic intrusive,trace pyrite |
| 11321 |  | 2 | $39+25 e$ | 3+35n | mafic volc.bnded,gtz stringers |
| 11322 |  | 9 | $39+00 e$ | 6+25n | inter-mafic volc,gtz eyes,M.A. |
| 11323 |  | nd | . $39+00 \mathrm{e}$ | $3+25 n$ | mafic volc.,well bnded, follated |
| 11324 |  | nd | 2+90e | 1+75n | chlorite schist pyrite |
| 11325 |  | nd | 3+60e | $2+65 n$ | interm.volc py,platy follation |
| 11401 |  | 5 | 12+15w | $0+50 n$ | 5 cm gtz vein in felsic xtal tuff |
| 11402 |  | nd | $12+25$ | $0+55 n$ | fel xtal tuff network gtz veining |
| 11403 |  | nd | 12+60w | $0+75 n$ | trench - int vol minor sulfide |
| 11404 |  | nd | 12+45w | $1+35 n$ | py,fe stain int.vol. qtz eyes. |
| 11405 |  | nd | 12+15w | $1+25 n$ | int.vol.blue gtz eyes minor py. |
| 11406 |  | nd | 12+05w | $1+05 n$ | gtz vein 7.5 cm in felsic tuff. |
| 11407 |  | nd | 5+55w | 10+75s | gtz vein in int.volc (poss.float) |
| 11408 |  | nd | 4+10w | $11+40 \mathrm{~s}$ | qtz vein $2-3 \mathrm{~cm}$ carb,fe-stain |
| 11409 |  | nd | 4+00w | $12+50 \mathrm{~s}$ | gtz vein $1-3 \mathrm{~cm}$, int volc gtz eyes |
| 11410 |  | 51 | 3+20w | 12+05s | q.v. 2 cm with tourmaline int/fel |
| 11411 |  | nd | 4+02w | $5+158$ | q.v 15cm,ser.fel.volc. py |
| 11412 |  | nd | 4+05w | $5+158$ | as 11411 |
| 11413 |  | 9 | 3+95w | 4+25s | q.v. ser.fel.tuf py,chl,fe-stain |
| 11414 |  | nd | 3+00w | $5+208$ | q.v.lcm fel.volc. PY, fe-stain |
| 11415 |  | 21 | 3+00w | $5+258$ | sil.f.g.fel.tuff, carb, fe-stain |
| 11416 |  | 6 | 3+25w | $5+25 s$ | q.v.in fel.tuff fe-stain |
| 11417 |  | 11 | $2+38 \mathrm{e}$ | $5+10 n$ | cont. fel-mafic >80\%Si, py, bnded |
| 11418 |  | 14 | $2+38 \mathrm{e}$ | $5+10 n$ | 3rpy cherty sed, ep,ser, hem alt. |
| 11419 |  | nd | $3+10$ e | $5+30 n$ | b.i.f. < $70 \% \mathrm{mag}$, po. |
| 11420 |  | 5 | $3+10 \mathrm{e}$ | $5+90 n$ | q.v. network in gabbrof carb. |
| 11421 |  | nd | $0+85 \mathrm{e}$ | $8+25 n$ | maf.volc. in cont. with grdior. |
| 11422 |  | nd | $1+25 \mathrm{e}$ | $8+90 n$ | maf.volc. away from cont.min.py |
| 11423 |  | 12 | 2+50e | $5+50 n$ | 4cm qtz vein,chl,felds, ep, |
| 11424 |  | nd | $2+55 \mathrm{e}$ | $5+52 n$ | sil.fel, volc.ep,1-2\% diss.py |
| 11425 |  | nd | 2+15e | $5+50 n$ | m.g.mafic volc., ep,py, contorted |
| 11426 |  | nd | 3+25e | $5+40 n$ | B.I.F.south sample 70 \%mag, $2 \% \mathrm{py}$ |
| 11427 |  | nd | 3+25e | $5+90 n$ | B.I.F.north sample see 11426 |
| 11428 |  | nd | $20+10 \mathrm{e}$ | $1+90 \mathrm{n}$ | mafic volc.carb(sid?), py |
| 11429 |  | nd | 12+85w | $1+80 \mathrm{n}$ | contact int-fel.strong fol.carb. |
| 11430 |  | nd | 13+00w | $1+40 n$ | M.A. maf-int.volc.py, carb. |
| 11431 |  | 12 | 13+00w | $0+75 n$ | B.I.F.in sheared int.volc.py, chl |
| 11432 |  | nd | 13+75w | $0+15 \mathrm{~s}$ | q.v.stock. in fel.tuff, pY, carb |
| 11433 |  | nd | 23+00w | $0+55 \mathrm{~s}$ | fel.tuff,blk,ser,q.v.fe stain |
| 11434 |  | nd | 24+90w | 1+758 | q.v.contact fel-maf volc. |
| 11435 |  | nd | 16+15w | 0+50s | q.v locm in fel volc., chl,fe. |
| 11436 |  | nd | 28+78w | 5+82n | q.v.3cm in mafic volc. 5\%py |
| 11437 |  | nd | 4+12w | $7+80 n$ | maf.pendant in diorite, contact |
| 11438 |  | 46 | $42+05 \mathrm{e}$ | 3+128 | fel.xtal tuf.cherty, ser, carb, py |
| 11439 |  | 28 | $42+30 \mathrm{e}$ | 3+15s | cherty contc.zone fel-int.volc bnded min diss+string. pyrite |
| 11440 |  | 101 | 42+05e | 3+20s | int.volc, carb, min. pyrite |

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| nd | 41+05e | 3+30s |
| :---: | :---: | :---: |
| nd | 28+98e | $4+50 n$ |
| 232 | $30+35$ w | 5+90n |
| nd | $32+17 \mathrm{e}$ | $6+02 n$ |
| nd | $33+00 \mathrm{w}$ | $2+65 n$ |
| 245 | $36+00 \mathrm{e}$ | $4+22 n$ |
| nd | $38+00 \mathrm{e}$ | $2+65 n$ |
| nd | 40+00e | $3+88 \mathrm{n}$ |
| nd | 5+85e | $8+50 \mathrm{~s}$ |
| nd | $1+05 \mathrm{e}$ | $12+50 \mathrm{~s}$ |
| nd | 1+92w | $10+25 s$ |
| nd | $41+00 \mathrm{e}$ | $3+00 n$ |
| 239 | $43+00 \mathrm{e}$ | $2+25 n$ |
| nd | $42+85 e$ | $3+75 n$ |
| 151 | 0+85w | $12+00 n$ |
| 169 | $33+00 \mathrm{w}$ | 4+38n |
| nd | $33+00 \mathrm{w}$ | $4+73 n$ |
| nd | 34+05w | 3+60n |
| nd | 2+00w | $4+33 \mathrm{~s}$ |
| nd | 2+15w | $4+35 s 77 ?$ |
| nd | 23+03e | $4+48 \mathrm{n}$ |
| nd | $22+82 \mathrm{e}$ | 3+90n |
| 5 | $21+50 \mathrm{e}$ | $6+65 n$ |
| 9 | $28+00 \mathrm{e}$ | 4+45n |

int.volc,M.A.carb in fractures alter.fel.intr. <3\%py, 10\%biot-ch1 gabbro,m.g. cumulate texture,5\%py gabbro/felsic dike contact, <3\%py mafic volc.,f.g.weak fol., PY felsic dike in maf.volc.f.g.,py int.volc.blue q.eyes,g.strings. mafic-interm. volc., banded interm.volc., $1 * p y$, carb.fractures fel.volc., 4 cm q.v., minor py. gtz.vein, 2 cm, in felsic volc. interm. volc. $\langle 4$ kpy, carb.fract. interm. volc.3\%py, carb.fractures int.volc.carb.frac, (2\% py-cpy granodiorite,biot.rich,gneissic maf.volc.alter. (10\% py.q.v. BIF, <10\% mag in q.v. q.v.pod in maf.gneiss interm.volc chlorite alter. float-gtz vein mafic volc., carb-silic-pyrite felsic tuff,bnded, silicified, py intermediate intrusive gabbroic intrusive

BASAL TILL SAMPLING
A basal till sampling program was conducted during the fall of 1984. The basal till sample is a sample of till taken from the lower till and bedrock interface. This sample is obtained with the aid of an overburden drill. Geochemical anaysis is determine through two processes. First process deals with an atomic adsorption analysis of the till seived to a $\mathbf{- 2 5 0}$ mesh size. The second process and other half of the original sample is put through a heavy metal separation and then analyzed for AU,CU, ZN,AG. Results from the program are listed in the table below.

| SAMPLE* | LOCATION | DEPTH | TILL | HEAVY | PULP | HEAVY (wt. /gr) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3201 | $31+00 \mathrm{~W} / 1+255$ | 17.1 | 3 | 1 |  | 3.83 |
| 3202 | $31+00 \mathrm{~W} / 1+00 \mathrm{~S}$ | 14.1 | 4 | 101 |  | 1.72 |
| 3203 | $31+00 \mathrm{~W} / 0+755$ | 12.1 | 2 | 3 |  | 2.99 |
| 3204 | $31+00 \mathrm{~W} / 0+505$ | 5.1 | 16 | 173 |  | 1.12 |
| 3205 | 29+00W/6+25S | 14.1 | 3 | 2 |  | 3.88 |
| 3206 | 29+00W/6+50S | 14.0 | 1 | 2 |  | 4.33 |
| 3207 | 29+00W/6+75S | 9.1 | 19 | 13 | - | 4.22 |
| 3208 | 29+00W/7+00S | 18.4 | 8 | 3 |  | 7.97 |
| 3210 | $30+00 \mathrm{~W} / 5+00 \mathrm{~N}$ | 11.1 | 13 | 2 |  |  |
| 3211 | $30+00 \mathrm{~W} / 5+25 \mathrm{~N}$ | 5.1 | 7 | 3 |  | . 90 |
| 3214 | $30+00 \mathrm{~N} / 6+00 \mathrm{~N}$ | . 9 | 5 | 2 |  | 5.88 |
| 3215 | $30+00 \mathrm{~W} / 6+25 \mathrm{~N}$ | 1.8 | 2 | 2 |  | 2.65 |
| 3216 | $1+00 \mathrm{~W} / 1+255$ | 9.1 | 1 |  |  |  |
| 3217 | $1+00 \mathrm{~W} / 0+055$ | 15.1 | 1 | 2 |  | 6.50 |
| 3218 | $1+00 \mathrm{~W} / 0+755$ | 18.1 | 15 | 3 |  | 8.83 |
| 3219 | 4+00W/1+75S | 5.1 | 1 | 50 |  | . 96 |
| 3220 | $4+00 \mathrm{~W} / 1+505$ | 12.0 | 8 |  |  | 3.90 |
| 3221 | $4+00 \mathrm{~W} / 1+25 S$ | 14.0 | 4 | 4 |  | 6.40 |
| 3222 | $3+00 \mathrm{~W} / 4+005$ | 2.0 | 1 | 1 |  |  |
| 3223 | $3+00 \mathrm{~W} / 3+755$ | 8.1 | 4 | 4 |  | 2.53 |
| 3224 | $3+00 \mathrm{~W} / 3+505$ | 8.0 | 3 | 6 |  | 2.03 |
| 3225 | 3+00W/3+25S | 9.0 | 1 | 10 |  | 1.80 |

## SUMMARY OF EXPLORATION

This report details the results of a major exploration program undertaken by Lynx Canada Explorations Ltd. Surveys include complete coverage of all claims with linecutting,VLF-EM, magnetometer, and geological survegs. In addition to this a basal till sampling program was undertaken to test various targets. A diamond drill program is pending at this time based on more basal till sampling and the results of such sampling.

## CONCLUSIONS

1. Due to a lack of outcrop on the property, a full understanding of the geological environment based on the mapping program was not possible. However, the geophysical (ie.magnetometer + VLF) surveys suggest an east-west trend that allows one to infer structural and geological horizons. Thus, if one combines geology and geophysics a more general senario can be deduced. This senario is still very general for gold exploration.
2. The basal till sampling technique is a good method for sampling in areas with excessive overburden.An overburden situation was the case for most of the geophysical anomalies on this property. The proximity of the sample location with respect to the bedrock and till interface, results in a sample analysis that is a good representation of bedrock. Some anomalous values were obtained through the basal till method.

RECOMMENDATIONS

1. Although a good deal of work has been done on the Alice " $A$ " property there is still not a good deal information about its geological environment. Therefore, it is thought that there is still a need to collect data and to prove/disprove anomalies outifned in this preliminary phase. Possible methods to meet this end could include, more detailed geophysics and more advanced techniqes for better definition of anomalous zone.
2. Further basal till sampling on anomalies previuosly tested with higher than background values plus, areas untested may lead to increased knowledge of areas.
3. Ultimately diamond drilling will prove/disprove anomalies in terms of there gold potential. A drilling program should only be undertaken once other less exspensive methods have been exhausted and have outlined anomalies worthy of such a program.

REFFERENCES

1. Ontario Geological Survey,Assessment Files, Toronto.
2. Phantom Explorations,Thunderbay.
3. Lynx-Canada Explorations, in file reports.

SUBMITTED BY:

PETER MORDAUNT
JANUARY 1985


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THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):
(1) The Seine River Prospect, Lynx-Canada $\rightarrow$ Toronto file $\# 2.7417$, Report of Explorations, R. Crowley, Nov. 14/84, Work \# 207 for 1984.
(2) Lynx-Camada Explorations, Drill Holes $\rightarrow$ Toronto file HepBuRN LARE DDR*11, SR-1-84 to SR-4-84, Jan-Feb/84. Report of Work \#242 for 1984.
(3) Liynx-Conada Explorations Ltd., Sparton $\rightarrow$ Toronto file \#2.7573, Report of Resources Inc., Bennett Lake Property, General work \# 270 for 1984. Report, P. Mordant + R. Crowley.
-The Geology + Trenching Sections of this report only.
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(1) Lynx-Canada Explorations, ALICE "A" Property,
P. Mordant, Jan./85
a) Magnetic + Electromagnetic Surveys $\rightarrow$ Toronto file ${ }^{\#} 2.6748$, Report of work * 105 for 1984
b) Geology Survey
$\rightarrow$ Toronto file ${ }^{*} 2.7798$, Report of work \#316 for 1984
NoTE: Geology Maps were kept with the remaining non-camparable material to provide grid reference for the Basal Till Sample locations.












