# REPDRT on the property of <br> PERREX RESOURCES INC. 

Harker, Elliott and Thackeray Townships
Northeast Ontario
...CnEP
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Timmins, Dntario,
October 7, 1985.
R. J. Bradshaw, P. Eng., Geologist.

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Perrex Resources Inc. holds a contiguous group of 103 unpatented mining claims in Harker, Elliott and Thackeray Townships in northeastern Ontario. The property is accessible by a truck road running south for eight kilometres from highway 101. This main westerly trending route provides access to Timmins, a distance of 106 kilametres or Kirkland Lake via intersecting highways.

Based on alrborne magnetic maps coupled with Township geological maps published by the Ontario government, it is apparent that the Perrex property overlies the same geological rock units which host gold deposits recently discovered to the northeast in Holloway Township. These rock units strike northeast and dip south.

Government maps display limited exposure of the more resistent mafic volcanic rocks which implies that the rock assemblage in the area is dominantly of this type. The magnetic profiles, intensive exploration to the northeast, and twa previous drill holes on the Perrex property indicate that the relatively thick mafic volcanic units are interbedded with sediment-tuff horizons. These units are the loci for shear faulting and accompanying alteration.

To the northeast in Holloway Township, adjacent to the Harker Tounship boundary, Barrick Resources and Canamax Resources have outlined significant gold deposits in the sediment-tuff units. There is apparently substantial evidence that these deposits are
syngenetic having, therefore, considerable potential for economic size and uniform distribution of gold.

It has been reported in press releases that Barrick has outlined a deposit of 1.3 million tons averaging 0.18 oz . gold per ton. Sinking of a 1200 foot ( 366 metre) shaft is now underway to provide underground access for further exploration and development.

Also to the northeast of the Perrex property, about 3.5 kilometres, is present a thin rhyolite unit which hosts significant gold mineralization. This mineralization, although stratabound, is likely epigenetic. Mineralized fluids have been channeled into the fractured relatively incompetent rhyolite.

Both the rhyolite and sediment-tuff bed or equivalent units cross the Perrex property. These rocks merit special attention in the search for gold. Formulation of an exploration programme on the Perrex claims must take into consideration the widespread deep overburden and lack of rock exposure.

A minimum programme costing approximately $\$ 150,000$. is recommended. This programme initially includes establishment of base lines and grids, stripping and mapping of one specific area of outcrop, a limited magnetic survey and attendant contingencies estimated to cost $\$ 19,000$. The base lines will provide control for the location of 28 overburden drill holes to acquire till samples in the search for gold dispersion trains having a source in the favourable rock units. This orilling, sampling, analyses and documentation is estimated to cost $\$ 56,000$. Finally, besed on
results of these programmes, a minimum 3000 feet of diamond drilling will be required. At an estimated overall cost of $\$ 25$ per foot, this work would cost $\$ 75,000$.

Significant gold values encountered in this preliminary programme would be the subject of an interim review and report and necessitate substantial additional orilling.



## INTRODUCTION

Dfficers of Perrex Resources Inc. have requested the writer to prepare a report on their 103 claim property in Harker, Elliott and Thackeray Townships. Although very little work has been undertaken on this drift-covered property, it is considered to be a gold prospect. It lies generally on strike with goldbearing rock units several kilometres to the northeast.

Pertinent Ontario government publications describing the geology and geophysics of the area, described under Refarences, are the main source of data and interpratation presented in this report. On September 25th, the writer examined the only known area of rock exposure on the property. Also over the past several years the writer has undertaken aix other projects in the area.

Based on an interpretation of the geology of the region and taking into consideration the tarrain and widespread deap overburden cover, a programme for exploration of the gold potential is proposed for the property.

## PROPERTY

The property consists of 103 contiguous, unpatented claims distributed in three Townships as follows:

| Harker Township | Days Work <br> Completed | Expiry Date |
| :--- | :---: | :--- |
| L738275 to 738290 inclusive - 16 | 60 | Mar. 1, 1987 |
| L737975 to 737979 inclusive - 5 | 60 | Feb. 27, 1987 |
| L738601 to 738606 inclusive -6 | 60 | Mar. 9, 1987 |
| L738054 to 738060 inclusive -7 | 60 | Mar. 1, 1987 |
| L738078 to 738085 inclusive -8 | 60 | Mar. 1, 1987 |



## Elliott Tounship

| L73852 to 738529 inclusive -2 | 50 | Mar. 1, 1986 |  |
| :--- | :--- | :--- | :--- |
| L738834 to 738835 inclusive -2 | 60 | Mar. 19, 1987 |  |
| L738836 to 738837 inclusive -2 | 50 | Mar. 19, 1986 |  |
| L738843 | -1 | 50 | Mar. 19, 1986 |
| L738844 to 838845 inclusive -2 | 60 | Mar. 19, 1987 |  |
| L738607 to 738610 inclusive -4 | 60 | Mar. 9, 1987 |  |
| L738404 to 738408 inclusive -5 | 60 | Mar. 1, 1987 |  |
| L739232 to 739246 inclusive -15 | 60 | Mar. 23, 1987 |  |

Thackergy Township

| L738838 to 738840 inclusive -3 | 80 | Mar. 19, 1987 |  |
| :--- | :--- | :--- | :--- |
| L738841 | -1 | 60 | Mar. 19, 1986 |
| L738842 | -1 | 50 | Mar. 19, 1986 |
| L738524 to 738525 inclusive -2 | 50 | Apr. 25, 1986 |  |
| L738526 to 738527 inclusive $-\frac{2}{9}$ | 50 | Mar. 1, 1986 |  |

The above information provided by the office of Perrex Resources has been confirmed by the Mining Recorder at Kirkland Lake, Ontario

In order to keep the claims in good standing, the claim holder is required to undertake assessment work each year. Over a
period of five years 200 days is required, including 20 days the first year, 40 days for each of the second, third and fourth years, and 60 days work in the fifth year. Thereafter, providing the claim holder is willing to undertake the cost of a land survey, the claims may be leased from the Crown with the payment of annual rental fees.

Various types of exploration work qualify for assessment work credits. For example, each foot of diamond drilling is equivalent to one dey essessment work. Each type of geophysical survey or a geological survey, satisfying government guidelines, may qualify for 20 days assessment work per cleim.

Perrex have already undertaken 50 to 80 days assessment work on the claims in the form of geophysical surveys and reverse circulation orilling. Some of the claims expire in March and April of 1906. Prior to this period, further work should be undertaken te keep the claims in good standing. The reverse circulation drilling was completed on a 41 claim group adjacent to the northeast.

## LOCATION AND ACCESS

Most of the claim group is situated in the southeast corner of Harker Township. The common corner of Harker, Elliott and Thackeray Townships is located 106 kilometres east of Timmins and 34 kilometres north of Kirkland Lake, Ontario.

Highway 101 which runs westerly from the Quebec provincial boundary through Matheson and Timmins is the main transportation
route in the area. It lies just south of the north boundary of Harker Township.

A truck road which runs southerly from highway 101 along the east side of the Ghost River provides access to the centre of the claim group and the south boundary of Harker Township.

The provincial government is currently surveying a new road from Kirkland Lake to highway 101 near the east boundery of Harker Township to provide better sarvica for development of gold mines in the area. This road will provide easy and quick access to the property from Kirkland Lake.

PREVIOUS WDRK

Interest in the area of the Parrex property stems mainly from the recent gold discoveries to the northeast in Holloway Township.

Just east of the Harker-Holloway Township boundary Barrick Resources have outlined 1.3 million tons averaging 0.1802. gold per ton on their McDermott property (Northern Miner, June 1985). Barrick are sufficiently encouraged that an underground test is to be undertaken on their deposit. Adjacent to Barrick, Canamax Resources have also encountered significant gold values. These new discoveries account for the provincial government's decision to proceed with a new road between Kirkland Lake and highway 101 adjacent to these properties.

Also northeast of the Perrex Resources property Newmont Exploration are currently evaluating a gold deposit on the Don Hurd property in Harker Township.

Perrex Resources et al own a 41 claim group between the Don Hurd claims and the subject property. Dver the past faw years Perrex have completed geophysical surveys and an overburden sampling programme using reverse circulation drilling equipment. This property has recently been optioned to Sherritt Gordon Mines Limited whom are expected to undertake a diamond drilling programme. Elsewhere in the area, particularly to the north adjacent to highway 101, several other companies are active.

Only a limited amount of wark has previously been completed on the Perrex group of 103 claims. Recently, as described In a report by Mary Greer (March, 1985), the north sector of the property has been cavered by magnetic and VLF electromagnatic surveys. The survey area includes claims 1738054 to 738060 inclusive, L. 738275 to 738290 inclusive, L738078, and L738079.

Within the above area, apparently on claim L738055, Amax Exploration Inc. (Canamax) previously drilled a hole in 1968. This hole and one other, 1.6 kilometres to the southwest, were drilled to test coincident induced polarization and electromagnetic anomalies.

GEOLOGY
General
The geology of the region is documented in various Onterio
government reports including Geology of Harker Township by $J$. Satterly published in 1952 and Geology of Thackeray, Elliott, Tannahill and Dokis Tounship by L. S. Jensen in 1978. A series of alrborne geophysical plans also assist the interpretation of the geology. These include maps 80598, 80599, BO60B and 80609 published in 1984 by the Ontario Geological Survey which display results of an electromagnetic survey and a total intensity magnatic survey.

Within the property bounderies rock exposure is almost nonexistent. Geology of the property is, therefore, based on projections from arees having some rock exposure as shown on Map 1951-4, the government airborne geophysical survey (1984) and two holes drilled by Amax (Canamax) in 1968.

The only known area of rock exposure was examined by the writer. This outcrop is situated on claim L738607, Elliott Township, in the southeast sector of the property. With respect to a newly established grid on the property, the area of exposure lies between Lines 0 and $4 E$ at $13+00$ South. Generally the same sequence of rock was observed as displayed on Figure 3 by Jensen (1978). Stripping by the writer, however, revealed a narrow north trending diabase dyke, a pyritized, aheared and laminated mafic tuff, apparently a few metres wide, and a intermediata flow top breccia which may either be a flost or equivalent to the rock classified by Jensen as a hyaloclastite. Carbonate-filled fractures in the braccia are splashed with pyrite and chalcopyrite.

The terrain traversed by the writer has been recently
timbered. Second growth includes alders and jackpine. Except along the course of the Ghost River and its tributaries, which have steep embankments, relief in the area is not significant.

## Regional Genlogy

Harker and Elliott Townships are aituated almost centrally within a vast assemblage of mainly volcanic and sedimentary rocks which trend easterly for about 350 kilometres, termed the Abitibi Greenstone Belt.

Particularly nearby major east trending faults the Abitibi rocks host gold mineralization as exemplified by the numerous past and present producers at Kirkland Lake and Timminsin Ontario and Val D'Or and Rouyn-Noranda in Quebec. The east trending PorcupineDestor fault in the north half of Harker Township is in proximity to many gold mines over its 300 kilometre length.

The northeasterly trending volcanic-sedimentary rock assemblage on the Perrax property is part of the Kinojevis Group which is more than 10 kilometres thick. These rocks form the north limb of a synclinorium which widens and plunges eastward toward the provincial boundary.

Local Geology
The one known area of rock exposure on the Perrex claim group is located on the south flank of a prominent magnetic linear which strikes northeasterly for several kilometres. The most northerly outcrops which are closest to the higher magnetic susceptibilities include dark coloured diabasic and gabbroic flows and
pillow lava．It is thereby suggested that the broad megnetic linear，underlying most of the southeast sector of the property， is underlain by similar mafic volcanics．

Along the north flank of the above described magnetic high are a geries of poorly defined magnetic lows，forming a parallel linear，which interrupt the otherwise gently descending magnetic profile．This northeasterly trending feature crosses the centre of the property and to the northeast may correspond to a rhyolite horizon depicted on Satterly＇s map（1951－4）．

The magnetic profile finally descends to form a trough representing a well defined northeasterly trending linear．This feature appears to be truncated by a northwesterly trending fault a few kilometres east of the property．Further to the northeast， the linear if projected，corresponds to the assumed Ghostmount fault（Satterly，1951－4）．

Within the Perrex property a number of airborne conductor intercepts are present within the linear magnetic low．Pyritized graphite intersected in the 1968 Amax drililing would account for these conductars．This drilling indicates a section of variably sheared，carbonatized，chloritized and partially graphitic tuffs and argillite 100 to 200 metres thick bounded by mafic volcanic rocks．

The unit trends more or less uniformly southwest except for a section several hundred metres long in the vicinity of the
southwest corner of Harker Township. Here the linear shows a perceptible change in direction. This warp may be attributed to folding or faulting or a combination thereof.

To the northwest of this unit the steeply ascending magnetic profile indicates the presence of a thick unit of mafic volcanics confirmed in part by one of the Amax (1968) holes.

This whole assemblage dips and faces to the south. There is little evidence on the alrborne magnetic aurvey plans for the cross faults depicted on D.G.S. map 2368 of Elliott Township. On the other hand there is substantial evidence for the presence of northeasterly trending shear faults. The Amax drilling in 1968 intersected widespread shearing in the sediment-tuff horizon in the northwest sector of the property. Also, if the Ghostmount fault (Map 1951-4) were projected southwestwards, it may correspond to the sediment-tuff unit.

## Economic Geology

The potential on the Perrex property is mainly based on the recent discoveries of gold mineralization by Barrick Resources and Canamax $R_{e}$ sources, several kilometres to the northeast in Holloway Township.

Barrick Resources plans to sink a 1200 foot (366 metres) shaft to undertake underground tests and ultimataly make a production decision by the fall of 1986 (Northern Miner, June, 1985). Their deposit of 1.3 million tons, greding 0.18 oz g gold per ton, is situated adjacent to the south of the Porcupine-Destor fault:
near the west boundary of Holloway Township.
The Barrick deposits and gold mineralization discovered by Canamex Resources are apparently located in an altered aedimenttuff unit either coinciding with or a few hundred metres north of the horizon marked by the Ghostmount fault. Field geologists active in the area generally surmise that these deposits are stratabound and derived from a paleoplacer in the sediments (personal communications). Such an origin implies uniform dimansions and grade.

Gold-bearing mineralization on the recently optioned Don Hurd property in the east-central sector of Holloway Township is also confined to a specific rock unit. Quartz stringers and veins follow a fracture zone in a rhyolite unit. Although the gold mineralization is stratabound it is unlikely that it was originally deposited during the rock forming processes.

Other gold deposits in the area display the typical characteristics of an epigenetic quartz lode. Following fractures, faults and other zones of weaknesses the mineralization is erratic in dimensions and distribution. Most significant deposits of this type are spatially if not genetically related to the PorcupineDestor fault.

In Amax hole KX-27-68, apparently drilled on Perrex claim L760149, a seven foot section from 675 to 682 feet assayed 0.01 oz . gold per ton. No metal assays were provided in the log of hole KX-28-68 on claim L738055. Canamax (Amax) officials imply that no
samples were taken in this hole.

## CONCLUSIONS

Government published geological and geophysical maps and reports suggest that the area is underlain by a thick sequence of mainly volcanic rocks which strike northeasterly and dip south. Two arill holes on the Perrex property (1968), rock exposure to the northeast, coupled with more intensive exploration work reveals that substantial beds of generally altered sediment-tuff are present in the immediate area. These units, formed during quiescent periods of vulcanism, are represented by magnetic linears of low magnetic susceptibility. They are less resistent to erosion and seldom exposed.

To the northeast in Halloway Townshin these sediment-tuff units apparently host important gold deposits being developed by Barrick Resources and Canamax Resources.

So far of secondary importance are the existence of thin rhyolite units to the east which host gold-bearing quartz lode deposits. The Don Hurd property on strike about 3.5 kilometres to the northeast displays this type of mineralization.

It is apparent that both the sediment-tuff and rhyolite units cross the Perrex property. These horizons particularly where disrupted by shear or cross faults merit special attention. The government airborne magnetic survey does not indicate significant displacement of magnetic linears that would represent cross faulting.

Shear faulting within a sediment-tuff unit has been reported in the Amax diamond drill logs. This unit, which crosses the narthwest sector of the Perrex property, displays a warped configuration in the northwest corner of Elllott Township (claim L.738528).

A ground megnetic survey covering about 10 claims, centred by L73852B, would assist in outilning this structure which may be influenced by cross faulting.

Geophysical methods are not likely to detect minaralization associated with gold because of the widespread deep overburden present on the claim group. Overburden sampling, using reverse circulation equipment, is therefore considered to be the best technique for finding diamond drill targets.

## RECOMMENDATIDNS

Initially, it is recommended that two base lines be established on the property to provide location control for the exploration work herein proposed. These parallel picket lines are spaced at 1050 metres as shown on Figure 4. The southwest portion of the north line is offset to the south to accommodate positioning of reverse circulation drill holes and a magnetic survey grid. Similarly the locations of proposed reverse circulation drill holes are shown on Figure 4. More specifically, the programme recommended for the Perrex property is as follows.

1. Establishment of bese lines -
10 kilometres @ $\$ 185$ per km . . . . . . . . $\$ 1,850$.
2. Establishment of geophysical survey grid with picket lines at 100 metre intervals centred by claim L738528 -
14 kilometres $\$ 185$ per km . . . . . . . . 2,590.
3. Magnetic survey -
15 km @ $\$ 100$ per km ..... 1,500.
4. Stripping and mapping of outcrop situated on claim L738408 . . . . . . . . . . . . . . . . 3,000.
5. Drilling two tiers of reverse circulation holes at 400 metre intervals along base lines - 28 holes $@$ $\$ 2000$ each including superviaion and analyass . . . 56,000.
6. Diamond drilling a minimum of 3000 feet eatimated to cost $\$ 25$ per foot including superviaion, recording and assaying ..... 75,000.
7. Contingencies ..... 10, 060.
$\$ 150,000$.
The reverse circulation drill holes have been located parallel to and south of linear magnatic lows interpreted to represent horizons of sadiment-tuff or rhyolite. By sampling and analyzing the till beds within the Quaternary section, gold may be detected representing a dispersal train from a source to the north up-ice.

The stripping and mapping of the outcrop area on claim L738408 is proposed to assist detailed prospecting and provide a better understanding of the local geology.

Laboratory and analytical work on the till samples coupled with an interpretation of the airborne and ground magnetic surveys is expected to indicate zones having potential for gold
mineralization. Should significant gold values be encountered by the preliminary drill programme proposed, substantial addtional drilling would be required and form the subject of an interim review and report.

Timmins, Ontario,


Respectfully submitted, SHIELD GEOPHYSICS LIMITED, October 7, 1985.
R. J. Bradshaw, P. Eng., Geologist.

## REFERENCES

| $\begin{aligned} & \text { Bradshaw, R.J. } \\ & 1984,85 \end{aligned}$ | Report on the property of Perrex Resources Inc (41 claims) Harker Township, Ontario. |
| :---: | :---: |
| $\begin{aligned} & \text { Greer, Mary } \\ & 1985 \end{aligned}$ | Magnetic and Electromagnetic Survey on Airborne Group ( 24 claims), Harker Township, Ontario. |
| $\begin{gathered} \text { Jensen, L. } 5 . \\ 1978 \end{gathered}$ | Geology of Thackeray, Elliott, Tannahill and Dokis Tounships, Dntario Geological Survey Report 165. |
| $\begin{gathered} \text { Satterly, J. } \\ 1951 \end{gathered}$ | Geology of Harker Township, Ontario Department of Mines, Map 1951-4 enclosed. |
|  | Maps |
| $\begin{array}{ll} 80598, & 80599, \\ 80608,80609 \\ 1984 & \end{array}$ | Alrborne Electromagnetic and Total Intensity |
|  | Magnetic Survey for the Ontario Geological |
|  | Survey, Townships of Garrison, Harker, |

## CERTIFICATE

I, Ronald J. Bradshaw, residing at R. R. 2, Airport Road, a consulting geologist with office facilities at R. R. 2, Airport Road, Box 630, Timmins, Ontario, do hereby certify that:

I attended Queen's University, Kingston, Ontario, and graduated with an Honours B.A. degrees in Geological Sciences in 1958.

I am a Fellow of the Geological Association of Canada, a Member of the Canadian Institute of Mining and Metallurgy and of the Association of Professional Engineers of Ontario.

This report is based on the listed References and my visit to the property on September 25, 1985.

I have no direct or indirect interest in the property, shares or securities of the Company or any affiliate, nor do I expect to receive any such interest.

Rimming, Ontario,
October 7, 1985.
R. J. Bradshaw, P. Eng., Geologist.




Mr. Alex H. Perron Perrex Resources Inc.


Re: Interpretation of magnetic data, Harker-Holloway Gold Area

Dear Mr. Perron,
This is a progress report on the study that we are currently carrying out of the available magnetic data in the Harker-Holloway area.

## Work Completed

At the present time we have acquired, processed and interpreted aeromagnetic data covering approximately three townships, surrounding your properties. The data we have used are the OGS-Questor magnetics, flown at a line spacing of 200 m and an altitude of 120 m . You already have the published total intensity maps and some second vertical derivative data in the area. After testing several filters we decided on a vertical magnetic gradient map (first vertical derivative) and prepared this at scale 1:31,680 ( 1 inch to $\frac{1}{2}$ mile). A copy of this map in Applicon colour is attached to this letter.

Our interpretation is based primarily on the vertical gradient data but refers also to the total magnetic field. A preliminary interpretation map is presented with this letter.

The ground magnetic survey data on your Airborne Property has been digitized and processed, but interpretation has only just started. We have processed the data and obtained a good vertical magnetic gradient map at scale 1 inch to 400 feet. This is available now in Applicon colour and as contours on mylar. Some computer modelling has been done in the more interesting parts of the property. We expect the study to be completed early in July.

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Interpretation of Airborne Data
The interpretation map agrees moderately well with the geological mapping by Satterly (1951) and the more recent compilation of Jensen and Langford (1985). Accordingly, we have adopted the stratigraphic nomenclature used in the later publication.

Magnetically, however, several of the mapped units breakdown into distinct sub-units of significance. Specifically, Unit 5 (the magnesium-rich tholeiitic sequence) sub-divides into a typical basaltic sequence (Unit 5), a slightly iron-rich aequence (Unit 5a) and a predominantly sedimentary sequence (Unit 5b). The: significance of these particular subdivisions rests in their close correlation with the mineralized zone on the Barrick property and their widespread occurrence on your own properties in Harker Township and adjacent areas.

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trending shears or fracture zones, and have delineated these more accurately, we think, than they are shown on available geological compilations. Since these zones appear to closely control the gold mineralization in the area we have taken considerable pains to identify them in the vicinity of your properties. We have been able to recognise four such zones in the vicinity of your Airborne Property, and these zones also cross some of your other properties.

The Ghostmount zone, according to our interpretation, lies some 2,000 feet to the north of the zone that you have so far been concentrating on. The latter zone appears to parallel the Ghostmount Zone for almost 9 miles, flanking the predominantly sedimentary Unit 5b over most of its length. While this zone is clearly of interest, we would recommend testing the interpreted Ghostmount Zone extension at this time. Using the Barrick property as a model, we would recommend gvoiding areas where the sedimentary unit is thickest. Brittle fracturing appears to be a major control, and the magnesium-rich tholeijtites would appear to be the most favourable units in this regard.

Two additional zones cut the northwestern and southeastern corners of your Airborne Property. These zones lie in or adjacent to Unit 6 - the iron-rich tholeiititic sequence. The ground geophysics indicates, however, considerable banding within this sequence, suggesting interlayered magnesium-rich and/or sedimentary members. These could be of considerable interest in your future drilling program.

Specific drilling recommendations should follow the close examination of the ground magnetic data.

Cross-faulting in a N-S to NW-SE direction has been easy to recognise throughout the area. We do not regard this faulting as an important control for the gold mineralization. However, the displacements on these faults are indicative of the competence of the country rocks and a guide to where brittle fracturing may have occured.

Recommendations
Four NE trending shear or fracture zones appear to traverise the Perrex Resources Airborne Property and adjacent ground to the west and east in which you hold an interest. Additional zones may be present on other ground you hold in the area. These fracture zones resemble in their magnetic characteristics and geological context the major silicified breccia zone of Barrick Resources, referred to as the McDermott Zone. Accordingly, a serious program of gold exploration is justified.

We believe that the drilling by Perrex and Amax to date has been concentrated on a zone that flanks a substantial sequence of sedimentary rocks in the lower part of the Kinojevis Group. While there is a good possibility of gold mineralization in this zone, we recommend at this time that you concentrate on similar zones in the predominantly magnesium-rich metavolcanic sequence. This is well developed on your properties.

We recommend that the ground magnetometer coverage be extended southward and westward and that the data on the Sherritt-Perrex Joint Venture be analysed and interpreted.

Drilling should re-commence on the Airborne Property, based on the ground magnetometer interpretation that is currently being carried out.

Yours very truly,
PATERSON, GRANT \& WATSON LIMITED


## Paterson, Grant \& Watson Limited

## Consulting




З2DOSNW@396 63.4954 HARKER

Mr. Alex H. Perron
Perrex Resources Inc.
103 Government Road East Kirkland Lake, Ontario P2N lA9

## Re: Interpretation of IP Data, Airborne Group, Harker Township

Dear Mr. Perron,
We enclose prints of the IP pseudo-sections and a preliminary interpretation of the IP survey recently carried out by Mertens and MacNeil on your Airborne Property in Harker Twp.

## Work Completed

The IP survey covered 3.2 line miles of profile at six separations, with a dipole spacing of 100 feet, and 0.5 line miles of coverage at five separations and a dipole spacing of 200 feet.

The survey was performed at two frequencies, 0.3 and 5.0 Hz , using a frequency-domain IP system consisting of a Phoenix Geophysics IPT-1 transmitter and an IPV-1 receiver.

The survey commenced on July 15, 1986 and was completed on July 21, 1986.

The results are presented in the form of seven pseudo-sections showing apparent resistivity, Metal Factor and Frequency Effect. The locations of the survey lines and the IP responses are shown in preliminary form in the attached Preliminary IP Interpretation Map.

The survey was carried out to look for zones of sulphide mineralization in the vicinity of three target areas selected as a result of an interpretation of ground magnetic data, and reported on in our letter of June $23,1986$.

## Interpretation

## Target A

This magnetic target was selected on the basis of a suspected NE-striking fault, possibly connecting to the northeast with the Ghostmount structure. A secondary but important control is the presence of small but conspicuous bodies of iron-rich volcanics lying to the south and adjacent to the interpreted fault. This environment is very similar to that of the McDermott gold deposit.

The IP survey confirms faulting in the vicinity and a suspected thickening of overburden near the magnetically interpreted fault. This also coincides with the Ghost River.

To the north and south of the fault (and river) there are some extremely weak/indefinite IP anomalies that could represent minor sulphide concentrations in bedrock, flanking NE trending shears or faults. The zones are too weak for quantitative interpretation.

The northern zone occurs on Line 32 W only, although the fault continues through Line 40W. It appears to lie at a depth of about 50 feet but a depth based on the magnetic data of 80 feet is observed 300 feet to the northwest. Likewise, a depth of up to 200 feet or more is interpreted from the resistivity approximately 300 feet to the southwest.

Magnetically, the zone occurs 100 feet south of a steeply dipping contact with unit 6 (iron-rich tholeiites), probably within magnesium-rich tholeiites or mixed tholeiites and metasediments.

This target is not considered of high priority but we recommend a drill hole at $42+00 \mathrm{~N}$ on Line 32 W , inclined $60^{\circ} \mathrm{N}$, to intersect the zone at a hole depth of about 200 feet.

The second zone lies approximately 200 feet south of the magnetically interpreted fault and adjacent to sharp bedrock irregularities indicated on the resistivity data. Again, the IP response is weak or indefinite, and the zone is too narrow for reliable estimates of possible sulphide concentration. It does not register at the 200 foot dipole separation, indicating that it must be less than about 50 feet in width.

The location of this zone is extremely interesting from a magnetic/geological viewpoint. It coincides almost exactly with the axis of a magnetic low, flanking an interpreted band of iron-rich unit $5 a$ within the predominantly magnesium-rich tholeiitic sequence unit 5. This environment is almost identical to portions of the McDermott gold deposit.

A drill hole is strongly recommended to test this zone on Line 32 W . A suggested location is $36+00 \mathrm{~N}$, inclined $60^{\circ} \mathrm{N}$, to intersect the zone at a whole depth of about 300 feet.

## Target B

This target was selected to cover an interpreted fault or shear inclined at about $20^{\circ}$ from the main NE trending structure drilled earlier in 1986. It was selected on the basis of certain geological similarities with the McDermott zone and evidence in the earlier drilling of minor gold values in the magnesium tholeiites near the ends of the two holes.

The IP data confirm the relatively strong anomaly near the south ends of Lines 32 W through 40W. Faulting is suggested by the resistivity data in the vicinity of the magnetically interpreted fault.

On Line 36 W the $I P$ response appears to extend northward at depth, terminating at an apparent fault-contact with iron-rich volcanics. This environment, taken together with the results of the previous drilling, justify a hole roughly in the location recommended on the basis of the ground magnetic data.

A recommended location is $24+00 \mathrm{~N}$, the hole inclined $60^{\circ} \mathrm{N}$ to intersect the fault at a hole depth of about 300 feet.

Target $C$
This target is on the strike extension of the structure previously drilled with holes $P X-86-1$ and $P X-86-2$. It was chosen on the basis of an apparent increase in the iron content of the volcanic/ metasedimentary sequence, together with magnetic patterns that are not unlike those at the McDermott zone. Some INPUT anomalies occur to the north of target $C$, and the IP lines were extended to cover these.

Weak IP anomalies were registered on all three lines adjacent to the magnetically interpreted fault. The fault itself is confirmed by the resistivity data. On Line 56 W the IP response is definite and is interpreted to lie at a depth of 50 to 100 feet. On the other two lines the response is indefinite and is believed to be at a depth greater than 100 feet.

Drilling is recommended on Line 56 W at $19+00 \mathrm{~N}$. The hole should be inclined at $60^{\circ} \mathrm{N}$. The center of the zone is expected to be intersected at a hole depth of about 250 feet.

A second, much stronger IP anomaly was registered under the input anomalies some 800 feet further north, on all three lines. The IP response resembles strongly the ones on Lines 32 W through 40 W which are believed to be caused mainly by graphite in mixed metasediments and pyroclastics. Faulting is suggested by the resistivity data both to the north and the south of the zone.

The IP response is also similar to that of the McDermott zone where pyrite is believed to be responsible. A-slight drop in apparent resistivity over the zone compares with a similar drop over the McDermott deposit. Low resistivity on Iines 32 W through 40 W is attributed to overburden thickening and, possibly, graphite. Over the McDermott zone the overburden actually thins and the zone is highly silicified. The drop in resistivity is probably, therefore, due to the pyrite mineralization.

In the zone on Lines 56 W through 64 W it is probable that the drop in resistivity is associated with graphite. However, the zone is displaced from the interpreted center of the metasedimentarypyroclastic sesquence, and probably lies within magnesium tholeiites. On this basis it would appear to justify drilling.

A recommended location is $26+00 \mathrm{~N}$ on Line 56 W , inclined at $60^{\circ} \mathrm{N}$ to intersect the center of the zone at a hole depth of about 200 feet.

## Recommendations

Five drill holes have been recommended, totalling approximately 2.900 feet as follows:

Target A

| Hole NO. 1 | 500 feet | Line $32 \mathrm{~W}, 42+00 \mathrm{~N}$ |
| :--- | :--- | :--- |
| Hole NO. 2 | 800 fet |  |

Target B
Hole No. 4600 feet Line $36 \mathrm{~W}, 24+00 \mathrm{~N}$

## Target C

Hole No. 3
Hole No. 5
500 feet
Line 56W, 19+00N
500 feet
Line 56W, $26+00 \mathrm{~N}$

We would also recommend delaying the drilling pending completion of ground magnetic work to the southwest and a review of the magnetic data on the 4l-claim block to the northeast. It is possible that additional targets will be uncovered by these studies that could alter priorities or possibly point to additional targets of interest within the present study area.

Yours sincerely,
PATERSON, GRANT \& WATSON LIMITED


Norman R. Paterson, Ph.D., P.Eng.
Encl.
NRP/rm

MFMORANDUM ON THE RECONNAISSANCE INDUCED POLARIZATION
AND RESISTIVITY TEST SURVEY ON THE AIRBQRYE GRYDEOLOGICAL SUAVEY
MATHESON AREA, ONTARIO
FOR
PERREX RESOURCES INC.
At the request of Perrex Resources Inc., we have completed a brief reconnaissance induced polarization and resistivity Test Survey near Matheson, Ontario. The reconnaissance Test Survey was completed on a small grid that covered the position of airborne electromagnetic anomalies previously located.

The induced polarization and resistivity Test Survey was planned in an attempt to detect, and outline, any zones of metallic mineralization that might be present in the subsurface. For the reconnaissance Test Survey an electrode interval of $x=200 \mathrm{ft}$ was used. Previous measurements using $x=100 \mathrm{ft}$, on two lines, had shown a considerable thickness of conductive overburden.

The results of the reconnaissance Test Survey are shown on the following attached data plots. The results have been plotted using the pseudosection format.

| Line 4 | 44W | $x=200^{\prime}$ |  | No | IP 5428-1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Line 4 | 40W | $x=200{ }^{\prime}$ | " | " | IP 5428-2 |
| Line 3 | 36W | $x=200{ }^{\prime}$ | " | " | IP 5428-3 |
| Line 3 | 32W | $x=200{ }^{\prime}$ | " | " | IP 5428-4 |
| Line 2 | 28W (South Part) | $\mathrm{x}=200{ }^{\prime}$ | " | " | IP 5428-5 |
| Line 28 | 28W (North Part) | $\mathrm{x}=20{ }^{\prime}$ | " | " | IP 5428-6 |
| Line 2 | 28W | $x=100{ }^{\prime}$ (prev. data) | " | " | IP 5428-7. |
| Line 2 | 24W (South Part) | $x=200^{\circ}$ | " | " | IP -5428-8 |


| Line 24W (North Part) | $x=200^{\circ}$ | $"$ | $"$ | IP 5428-9 |
| :--- | :--- | :--- | :--- | :--- |
| Line 20W (South Part) | $x=200^{\circ}$ | $"$ | $"$ | IP 5428-10 |
| Line 20W (North Part) | $x=200^{\circ}$ | $"$ | $"$ | IP 5428-11 |
| Line 16W (South Part) | $x=200^{\circ}$ | $"$ | $"$ | IP 5428-12 |

The presence of the conductive overburden layer can be seen on each of the apparent resistivity pseudosections. This is the case even for the measurements using $x=200 \mathrm{ft}$. The longest line surveyed was Line 32 W (Dig. No. IP 5428-4). Along the entire line, the apparent resistivities increase for the larger values of ( $n$ ). The least thickness of overburden appears to be at the south end of the data plot. To the north, the thickness of the overburden is variable. On all of the lines surveyed, the higher apparent resistivities measured for $n=3$ and $n=4$ indicate that the electrode intervals are large enough to be influenced by the bedrock parameters.

The attached phase IP results from the Barrick Resources Ore Zone in northeastern Ontario and the Golden Hope-Teck Exploration Orebody in north-western Quebec indicate the character of the IP and resistivity anomaly to be expected from a zone of gold-bearing, metallic sulphide mineralization, beneath an appreciable thickness of conductive overburden.

The background IP effects measured during the reconnaissance Test Survey are fairly low in magnitude. Therefore, the anomaly detected on the three, or four, westernmost lines on the grid is quite definite. The anomaly is largest in magnitude, and the source is indicated to be at the least depth, on Line 44W. As shown on the Plan Map Sketch (Dig. No. IPP 3141) the anomalous zone obviously extends to the west of the area covered by the Test Survey.


On Line 44 W , the source is indicated to be at a relatively shallow depth; 1.e., the $n=1$ measurement for $x=200 \mathrm{ft}$ is anomalous. Therefore, the source could be better located, and more fully evaluated, by making measurements using $x=100 \mathrm{ft}$.

The anomalous zone located during the Test Survey has the characteristics that we would expect from the type of source that is of geologic importance in the area. It is obvious that additional investigation is warranted.

Further, the extension of the reconnalssance survey into other areas could be expected to successfully locate any other zones of metallic mineralization that might be present.



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MCDERMCTT GOLD PROPERTY HARKER A HC__ ENAY TWPS / ONTARIO
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surface projection of anomalous zone
OEFINITE



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surface projection of anomalous zone
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INTERUALS 1，－1．5

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## FEREEA RESOURCES IHC.

MATHESON, ONTAFIO
LINE NO - -ZQN

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FPEQUENCY (HERTZ)

1. HZ

NOTE- CONTOURS
AT LOGAFITHMIC
INTERUALS. 1,-1.5
$-2,-3,-5,-7,5,-10$


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FREQUENCY GHERTZ:
1.0 HZ

NOTE- CONTOURS
AT LOGARITHMIC
INTERUALS. $1,-1.5$
-2,-3,-5,-7 5,-19


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MATHESON, GNTRFIC

LINE NO.-24W





## FERREA FEGOURCES INC.

MATHESON, ONTAFIO

LINE NO. -24W


FREQUENEY (HERTZ) 1. HZ
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INTERUALS. 1.-1.5
$-2,-3,-5,-75,-10$


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MATHESON, ONTARIO
    LINE NO,-でEW
```

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NOTE - CONTOURS
AT LOGARITHMIE
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$-2,-3,-5,-75,-18$


## $(3)$

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57


## FERREX RESOURCES IHC.



FPEQUENCY (HERTZ)

1. HZ

NOTE- CONTOUPS
AT LOGARITHMIC
INTERUALS. $1,-1.5$
$-2,-3,-5,-7.5,-10$


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## FEREE: RESOURCES IHC. <br> MATHESON, ONTAFIG <br> LINE NO.-ミЄW




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1. HZ

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FERRER REGOURCES IHC.

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MATHESON GHTAFID
LINE NO - -44 W
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FREQUENCT (HERTZ:
1.9 Hz

HOTE- CONTOURS
AT LOGAPITHMIC
INTERUALS. 1,-1.5
$-2,-3,-5,-5,-10$


## Byy

FHOEHIX GEOFHYSICS LTD


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\text { FEB } 121987
$$

Mr. Phil Hum, O.M.E.P.

Ministry of Northern Development and Mines, Room 4650, Whitney Block, Queen's Park, Toronto, Ontario MFA IW3

Dear Mr. Hum,

| RE: | Perrex Resources Inc. |
| :--- | :--- |
|  | 103 Group |
| Harker-Elliott \& Thackeray Townships, |  |
|  | Larder Lake Mining Division, |
|  | District of Cochrane, Ontario |

Further to our telephone conversation re the subject property on February 9, 1987, I understand that you have on file the diamond drill logs by Mr. David Constable as well as the cost report on the program.

This letter report is designed to cover the geological aspects of the program as Mr. Constable is away at this time and to fill in the missing data that you requested.

## LOCATION AND ACCESS

The Perrex Resources Inc. 103 Group is located principally in Harker Township with extensions into the adjoining townships of Elliott to the south and Thackeray to the southwest in northeastern Ontario, some 30 kms north of Kirkland Lake and 30 kms west of the Ontario - Quebec border (see Figure 1 after Hinse, 1984).

Road access is from Highway 101 than southerly on former logging roads.

The property is entirely covered by swamp and overburden.

## PROPERTY AND TITLE

The property contains 103 unpatented mineral claims controlled by Perrex Resources Inc. The claim numbers and record dates are outlined below (see Figure 2 after Hinse, 1984).

HARKER TOWNSHIP
L-738275 to L-738290 inclusive 16
L-737975 to L-737979 inclusive
L-738601 to L-738606 inclusive
L-738054 to L-738060 inclusive
L-738078 to L-738085 inclusive
L-738399
L-738400 to L-738403 inclusive
L-760147 to L-760156 inclusive
L-738522 to L-738523 inclusive
L-738611 to L-738612 inclusive

DAYS WORK COMPLETED

60
60
6
7
8
1
4
10
2
2

RECORDING
DATES
March 1, 1984
February 27, 1984
March 9, 1984
March 1, 1984
March 1, 1984
February 27, 1984
March 1, 1984
March 1, 1984
March 1, 1984
March 9, 1984

ELLIOTT TOWNSHIP
L-738528 to L-738529 inclusive
L-738834 to L-738835 inclusive
L-738836 to L-738837 inclusive
L-738843
L-738844 to L-738845 inclusive
L-738607 to L-738610 inclusive
L-738404 to L-738408 inclusive
L-739232 to L-739246 inclusive $\quad 15$
33
THACKERAY TOWNSHIP
L-738838 to L-738840 inclusive 3
L-738841
L-738842
L-738524 to L-738525 inclusive
L-738526 to L-738527 inclusive

DAYS WORK COMPLETED

50
60
50
50
60
60
60
60

80
60
50
50
50

RECORDING DATES

March 1, 1984
March 19, 1984
March 19, 1984
March 19, 1984
March 19, 1984
March 9, 1984
March 1, 1984
March 23, 1984

March 19; 1984
March 19, 1984
March 19, 1984
April 25, 1984
March 1, 1984



Previous work on the property includes G.J. Hinse, P. Eng., May 22, 1984, who reviewed the property and outlines magnetic and electromagnetic ground surveys and a basal till sampling program; R.J. Bradshaw, P. Eng., October 7, 1985, reviewed the property; Phoenix Geophysics Ltd., March 7, 1986, undertook the initial induced polarization survey which was later followed by additional induced polarization surveys by Paterson, Grant and Watson Ltd., June - July, 1986. Ground magnetics and VLF-EM was done by Perron's Inc. during 1984 and 1985. Diamond drilling was undertaken in 1986 and the core logged by David Constable, Consulting Geologist.

Several major mining companies are actively engaged in exploration and development in what has become known as "The Harker Holloway Gold Camp». Cominco, Newmont, Kerr Addison and American Barrick all have adjoining claims to the Perrex properties, as do Grandad, Silverhawk and Lenora. The most significant discovery to date is what is called the McDermott Zone by American Barrick being some 2 to 3 miles from the Perrex boundary, followed by the Canamax discovery close by and several very encouraging results by Lenora of the Kasner Group. American Barrick announced drill indicated probably and possible ore reserves as at December 31, 1985, of $2,841,000$ tons averaging 0.197 ounces of gold per ton; since that time they are now converting their exploration shaft into a production shaft and are daily increasing ore reserves with the intent of a production decision. Canamax is similarly increasing reserves and is at a production decision stage. It is noteworthy that of the several gold horizons in the area, at least three pass through the Perrex ground (see Figure 3).

To the immediate northeast, on the Sherritt-Perrex-Amble property, some 34 overburden reverse circulation holes were drilled. All completed holes (33) gave up measurable gold values, the most significant of which was $35,400 \mathrm{ppb}$ or approximately 1.1 ounces per ton. Induced polarization surveys, as well as magnetometer and VLF surveys have been on portions of the holdings, primarily in the vicinity of several airborne indicated anomalies (see Figure 3). Limited diamond drilling has ensued in order to test geological structure beneath a cumbersome overburden covering of most of the property; these holes have returned encouraging anomalous gold values up to .04 ounces per ton and have indicated structure significantly similar to that of the McDermott ore bearing zones.


FIGURE 3

Geologically the 103 Group of Perrex Resources Inc. overlies Archean rocks of the Kinojevis Group of the Abitibi Greenstone Belt within the Superior Structural Provinces. (See Figure 4 after L.S. Jensen (1986) Ontario Geol. Survey., Misc. Paper 129.)

DRILL PROGRAM 1986
Heath \& Sherwood Drilling of Kirkland Lake, Ontario were contracted to penetrate the overburden and core drill bedrock using B.Q. equipment.

The following holes were drilled: (See Figure 5)


Other holes drilled but not part of O.M.E.P. Grant were:
PX 86-4
$671^{\prime}$

* PX 86-5
$522^{\prime}$

Diamond drill holes 86-1D (933'), 86-2 (595'), 86-3 (645'), 86-4 (671')
and 86-5 (522') were located in a magnetically low trough between two parallel
east-northeast trending magnetically high zones.

The area drilled is devoid of outcrops; vertical depth of overburden is: Hole 86-1D, $162^{\prime}$; $86-2,134^{\prime} ; 86-3,135^{\prime} ; 86-4,100^{\prime}$; and $86-5,81^{\prime}$. Hole $86-1 \mathrm{D}$ and $86-2$ drilled from station 20 N on Lines 44 W and 36 W respectively indicate the following geological and grade correlations.

* Note to file -collar clata is not available for this hole.


Geological map of the Lake Abittlbl area.

FIGURE 4 PERREX RESOURCES INC. 103 GROUP



From the above, the stratigraphy is correlatable between holes 86-ID and 86-2 with a massive flow giving away stratigraphically upwards to a sequence of tuffaceous beds and interlayered flows which in turn passes to a sedimentary basin above which flows cover the sedimentary horizon. The sedimentary horizon was originally black mud which in time became a pyriticbearing, bedded but sheared, black argillaceous graphitic zone of metasedimentary rock.

Gold values have been noted to occur within this metasedimentary interflow horizon. In general lower gold values are noted in hole 86-2 than in 86-ID. Similarly, the intersected width of the horizon is greater in hole

86-1D than in 86-2.

The above mentioned gradients in both width of pyritic horizon and more importantly, in grade of gold noted, indicate that a larger and possibly rich gold-bearing basin may be developing to the west of hole 86-1D.

Respectfully submitted,

A. D. Drummond, Ph. D., P. Eng.
D.D.H. GEOMANAGEMENT LTD.


## DIAMOND DRILL RECORD LogGed br D. Constable

PROPERTY _ Perrex Property - Harker Township 103

latitude $\qquad$ bearing of hole $\qquad$ DEPARTURE $\quad 20+00 \mathrm{~N}$ dip of hole $\qquad$ $50^{\circ}$ ELEYATION $\emptyset$ DIP TESTS $\qquad$ NIL


| footage |  |  |
| :---: | :---: | :---: |
| FROM | 10 |  |
|  |  |  |
|  |  |  |
| 0.0. | 85.0 |  |
| 85.0 | 160.0 |  |
|  |  |  |
|  |  | bl |
|  |  | fin |
|  |  | The |
|  |  |  |
| 160.0 | 165.0 |  |
|  |  |  |
|  |  | 2-5\% |
|  |  | is |
|  |  |  |
|  |  |  |
|  |  | bl |
|  |  |  |

Hole abandoned in AQ core due to extreme overburden depth and
blocky ground.
End of Hole Px-86-1A is at $165.0^{\prime}$

STARTED April 7/86 COMPLETED_April 12/86 DEPTH__ $165.0^{\prime}$
D.D.H. No. Px-86-1A $\qquad$ PAGE $1 / 1$

BQ Core
$-1$

4 CLAIM No. $L 738056$
N 1738055
-DIRECTION AND DISTANCE FROM
NE. CLAIM POST
SAMPLE FOOTAGE


DIAMOND DRILL RECORD LogGE Br D. Constable Constable Consultina Inc.
PROPERTY Perrex Property - Harker Township 103
latitude $\qquad$ BEARING OF HOLE DIP OF HOLE $\qquad$ $-50^{\circ}$ DIP TESTS $\qquad$ NIL
L.

DEPARTURE $19+00 \mathrm{~N}$
$\qquad$ COMPLETED April 17/86
D.D.H. No. PX-86-1B PAGE $1 / 1$ DEPT
BQ Core


DIAMOND DRILL RECORD Locged by D. Constable Constable Consulting Inc
PROPERTY _ Perrex Property - Harker Township 103 03

 BQ Core


S
DIAMOND DRILL RECORD LogGe by D. Constable
Constable Consulting Inc.
PROPERTY - Perrex Resources Inc. - Harker Twp. Property 103

| LATITUDE _ $44+00 \mathrm{~W}$ | bearing of hole | STARTED April 19/86 |
| :---: | :---: | :---: |
| DEPARTURE _ $20+10 \mathrm{~N}$ | DIP OF HOLE $\quad-65^{\circ}$ | COMPLETED April 29/86 |
| ELEVATION _ - | DIP TESTS -65 at 315' \& 933' | DEPTH 933.01 |


| footage |  | DESCRIPTION | $\begin{array}{\|c} \text { SAMPLEE } \\ \text { No. } \end{array}$ | footage |  | $\begin{aligned} & \text { SAMPLE } \\ & \hline \text { LENGTH } \end{aligned}$ | AsSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | T0 |  |  | FROM | 10 |  | u ppo |  |  |  |  |
| 0.0 | 181.0 | Casing |  |  |  |  |  |  |  |  |  |
|  |  | $0^{\prime}$ - $66.0{ }^{\text {c Clay }}$ |  |  |  |  |  |  |  |  |  |
|  | . | $66.0^{\prime}-181.0^{\prime}$ Boulders and sand. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 181.0 | 212.0 | Graphitic and Carbonated Sediments |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Alternating black and grey beds, hard, fine-grained with bedding |  |  |  |  |  |  |  |  |  |
|  |  | at $40^{\circ}$ to CA. blocky. |  |  |  |  |  |  |  |  |  |
|  |  | 181.0 - 186.5 only 4.0' of core recovered ( $75 \%$ recovery in | 4701 | 181.0 | 186.4 | 5.4 | $\begin{aligned} & 70 \\ & 50 \\ & \hline \end{aligned}$ |  |  |  |  |
|  |  | graphitic - pyritic-quartz-veined rock (conductive). |  |  |  |  |  |  |  |  |  |
|  |  | 186.5-191.9 grey carbonate with disseminated (1\%) pyrite | 4702 | 186.4 | 191.7 | 5.3 | 10 |  |  |  |  |
|  |  | 191.9 - 194.0 black graphitic rock with $3-5 \%$ pyrite as beds and | 4703 | 191.7 | 194.1 | 2.4 | 20 |  |  |  |  |
|  |  | disseminates (conductive). |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | : |  |  |  |  |  |
|  |  | 194.0-212.0 grey carbonated greywacke contains more silica and, | 4704 | 194:1 | 201.6 | 7.5. | Nil |  |  |  |  |
|  |  | is harder. Bedding is indistinct and pyrite dissemintes | 4705 | 20.1 .6 | 204.8 | 3.2 | Nil |  |  |  |  |



## DIAMOND DRILL RECORD LogGed by D. Constable

 Constable Consulting_Inc.PROPERTY $\qquad$ BEARING OF HOLE____________________ STARTED
D.D.H. No. $P x-86-1 D$ $\qquad$ PAGE 3/10
latitude DIP OF HOLE COMPLETED F CLAIM No.

DEPARTURE $\qquad$
DEPTH

- DIRECTION AND DISTANCE FROM ELEVATION DIP TESTS DEPTH NE. CLAIM POST

| FOOTAGE |  | DESCRIPTION |
| :---: | :---: | :---: |
| FROM | 10 |  |
|  |  | \$1\% of the unit. |
|  |  |  |
|  | $\because$ | . . . |
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|  |  |  |
|  |  | . ${ }^{\text {a }}$ |
| - |  | . . . . |
|  |  |  |
|  |  | $\cdots$ |
|  |  | From 298.0' onwards erratic white quartz veins increase and by |
|  |  | $307.5{ }^{\prime}$ rock becomes distinctly grey-brown in colour and pyrite content. |
|  |  | increases to $1 \%$ disseminates in section 311.9-315.1'. |


| $\underset{\substack{\text { SMPLLE } \\ \mathrm{Noo} \\ \hline}}{ }$ | footage |  | $\left\{\begin{array}{l} \text { SAMPLE } \\ \text { LENGTH } \end{array}\right.$ | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FROM | 10 |  | Au cob |  |  |  |  |
| 4739 | $247: 7$ | 251.6 | 3.9 | 10 |  |  |  |  |
| 4740 | 251.6 | 255.0 | 3.4 | Nil |  |  |  |  |
| 4741 | 255.0 | 259.0 | 4.0 | NiL |  |  |  |  |
| 4742 | 259.0 | 263.0 | 4.0 | Nil |  |  |  |  |
| 4743 | 263.0 | 267.6 | 4.6 | Nil |  |  |  |  |
| 4744 | 267.6 | 270.0 | 2.4 | Ni 1 |  |  |  |  |
| 4745 | 270.0 | 274.1 | 4.1 | 10 |  |  |  |  |
| 4746 | 274.1 | 277.6 | 3.5 | Nil |  |  |  |  |
| 4747 | 277.6 | 281.5 | 4.9 | Nil |  |  |  |  |
| 4748 | 281.5 | 285.0 | 3.5 | Nil |  |  |  |  |
| 4749 | 285.0 | 288.9 | 3.9 | Nil |  |  |  |  |
| 4750 | 288.9 | 293.0 | 4.1 | Nil. |  |  |  |  |
| 4751 | 293.0 | 296.0 | 3.0 | Nil |  |  |  |  |
| 4752 | 296.0 | 299.7 | 3.7 | Nil |  |  |  |  |
| 4753 | 299.7 | 303.6 | 3.9 | Nil |  |  |  |  |
| 4754 | 303.6 | 307.6 | 4.0 | 10 |  |  |  |  |
| 4755 | 307.6 | 311.9 | 4.3 | Nil |  |  |  |  |
| 4756 | 311.9 | 315.0 | 3.1 | Nil |  |  |  |  |

DIAMOND DRILL RECORD logged by_D. Constable Constable Consulting_Inc.
PROPERTY $\qquad$

D.D.H. No. $\mathrm{Px}-86-1 \mathrm{D}$ _ PAGE 4/10


BQ Core

| Footage |  | DESCRIPTION | $\begin{gathered} \text { SAMPLE } \\ \mathrm{Noo.} \end{gathered}$ | footage |  | $\begin{aligned} & \text { SAMPLE } \\ & \text { LENGTH } \end{aligned}$ | AU PD | ASSAY |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | T0 |  |  | FROM | 10 |  |  |  |  |  |  |
| 315. | 346.2 | Black Graphitic Sediments |  |  |  |  |  |  |  |  |  |
|  |  | Blocky, black, silicified and quartz veined containing 1-4\% | 4720 | 3.15 .0 | 318.0 | 3.0 | Nil |  |  |  |  |
|  |  | Dyrite as beds and disseminates. Bedding is at $48^{\circ}$ to CA . | 4721 | 318.0 | 321.4 | 3.4 | 10 |  |  |  |  |
|  |  |  | 4722 | 321.4 | 325.0 | 3.6 | 10 |  |  |  |  |
|  |  |  | 4723 | 325.0 | 328.9 | 3.9 | 10 |  |  |  |  |
|  |  |  | 4724 | 328.9 | 333.6 | 4.7 | Nil |  |  |  |  |
|  |  |  | 4716 | 333.6 | -336.6 | 3.0 | 20 |  |  |  |  |
|  |  |  | 4717 | 336.6 | 341.7 | 5.1 | 10 |  |  |  |  |
|  |  |  | 4718 | 341.7 | 346.3 | 4.6 | 30 -20 |  |  |  |  |
| 346. | 485.6 | Carbonated Mafic Metasediments and Pyroclastics |  |  |  |  |  |  |  |  |  |
|  |  | Starts out grey-brown then gradually becomes greener. Average | 4719 | 346.3 | 352.0 | 5.7 | Nil |  |  |  |  |
|  |  | hardness, fine-grained, blocky. Contains graphitic conformable pyritic | 4757 | 352.0 | 356.0 | 4.0 | Nil. |  |  |  |  |
|  |  | beds from 373.1' to 374.8' and 395.2' to 396.5'. Rock al so contains | 4758 | 356.0 | 358.4 | 2.4 | Nil |  |  |  |  |
|  |  | good bedding at $32^{\circ}$ to CA and irreqularly-distributed pyrite crystals | 4759 | 358.4 | 361.5 | 3.1 | Nil |  |  |  |  |
|  |  | disseminated throughout the rock. | 4760 | 361.5 | 365.0 | 3.5 | $\begin{array}{r} 20 \\ \mathrm{Ni}+2 \end{array}$ |  |  |  |  |
|  |  | Grain size and textures change throughout this section from fine- | 4761 | 365.0 | 368.9 | 3.9 | Nil |  |  |  |  |
|  |  | to-medium-grained and from well-bedded to unbedded. | 4715 | 368.9 | 370.8 | 1.9 | Ni |  |  |  |  |

$\qquad$ BEARING OF HOLE $\qquad$ STARTED COMPLETED
D.D.H. No. Px-86-1D
page 5/10
latitude
$\qquad$ dIP OF HOLE $\qquad$ $\stackrel{N}{N}$
CLAIM No.
DIRECTION AND DISTANCE FROM
ELEVATION DIP TESTS $\qquad$ DEPTH
NE. CLAIM POST B.Q. Core


| $\begin{gathered} \text { SAMPLE } \\ \text { No. } \end{gathered}$ | Footage |  | SAMPLELENGTH | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FROM | T0 |  | Au PD |  |  |  |  |
| 4762 | 370:8 | 375.0 | 4.2 | 10 |  |  |  |  |
| 4763 | 375.0 | 378.8 | 3.8 | Nil |  |  |  |  |
| 4764 | 378.8 | 381.7 | 2.9 | Nil |  |  |  |  |
| 4765 | 381.7 | 385.0 | 3.3 | Nil |  |  |  |  |
| 4766 | 385.0 | 389.1 | 4.1 | Nil |  |  |  |  |
| 4767 | 389.1 | 392.7 | 3.6 | Nil |  |  |  |  |
| 4758 | 392.7 | 394.6 | 1.9 | Nil |  |  |  |  |
| 4769 | 394.6 | 396.5 | 1.9 | 20. |  |  |  |  |
| 4770 | 396.5 | 399.9 | 3.4 | Nil |  |  |  |  |
| 4771 | 399.9 | 405.0 | 5.1 | 20 |  |  |  |  |
| 4772 | 405.0 | 408.8 | 3.8 | $\begin{array}{r} N 11 \\ \hline \end{array}$ |  |  |  |  |
| 4773 | 408.8 | 413.0 | 4.2 | Nil |  |  |  |  |
| 4774 | 413.0 | 416.8 | 3.8 | Nil |  |  |  |  |
| 4775 | 416.8 | 421.6 | 4.8 | 10 |  |  |  |  |
| 4776 | 421.6 | 423.4 | 1.8 | Nil |  |  |  |  |
| 4777 | 423.4 | 425.6 | 2.2 | Nil |  |  |  |  |
| 4778 | 425.6 | 428.0 | 2.4 | Nil |  |  |  |  |

DIAMOND DRILL RECORD LOGGED BY D. Constable
property
latitude $\qquad$ BEARING OF HOLE STARTED
DEPARTURE DIP OF HOLE COMPLETED Constable Consulting Inc. DEPTH 4

ELEVATION DIP TESTS $\qquad$ DEPTH
BO Core

| footage |  | DESCRIPTION | SAMP |
| :---: | :---: | :---: | :---: |
| FROM | 10 |  | No |
|  |  |  | 47 |
|  |  |  | 478 |
|  | : |  | 478 |
|  |  | $\cdots$ | 478 |
|  |  | At 444.3' a $2^{\prime \prime}$ - wide quartz-carbonate vein contains $1 / 2^{\prime \prime}$ | 478 |
|  |  | chalcopyrite crystals. | 478 |
|  |  |  | 478 |
|  |  | $\cdots$. . | 478 |
|  |  | From 466.3-485.6' rock becomes intensely carbonated and | 47 |
|  |  | pyritized ( $3-5 \%$ ) as beds and disseminated. Rock also becomes criss- | 47 |
|  |  | crossed by conformable and unconformable white quartz-carbonate veinlets | 47 |
|  |  | comprising 15 to $100 \%$ of the rock. | 47 |
|  |  | Conformable OUT Contact at $32^{\circ}$ to CA. | 47 |
|  |  | . | 47 |
|  |  |  | 47 |
|  |  |  | 47 |
|  |  |  | 47 |


| SAMPLE | footage |  | SAMPLE LENGTH | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | FROM | T0 |  | Au Dob |  |  |  |  |
| 4779 | 428.0 | 432.4 | 4.4 | Nil |  |  |  |  |
| 4780 | 432.4 | 437.0 | 4.6 | Ni 1 |  |  |  |  |
| 4781 | 437.0 | 442.0 | 5.0 | Nil |  |  |  |  |
| 4782 | 442.0 | 445.0 | 3.0 | Nil |  |  |  |  |
| 4783 | 445.0 | 448.8 | 3.8 | Nil |  |  |  |  |
| 4784 | 448.8 | 452.7 | 4.9 | Ni 1 |  |  |  |  |
| 4785 | 452.7 | 457.5 | 4.8 | Nil |  |  |  |  |
| 4786 | 457.5 | 462.3 | 4.8 | Nil. |  |  |  |  |
| 4787 | 462.3 | 466.6 | 4.3 | Nil |  |  |  |  |
| 4725 | 469.2 | 471.3 | 2.1 | 20 |  |  |  |  |
| 4726 | 471.3 | 472.0 | 0.7 | Nil |  |  |  |  |
| 4727 | 472.0 | 475.0 | 3.0 | 20. |  |  |  |  |
| 4728 | 475.0 | 479.5 | 4.5 | 140 |  |  |  |  |
| 4795 | 629.9 | 634.4 | 4.5 | 60 |  |  |  |  |
| 4796 | 636.4 | 640.5 | 4.1 | 10 |  |  |  |  |
| 4729 | 479.5 | 480.7 | 1.2 | Nil |  |  |  |  |
| 4730 | 480.7 | 485.6 | 4.9 | Nil |  |  |  |  |

## DIAMOND DRILL RECORD LogGe br ._ D. Constable

 Constable Consulting_Inc.PROPERTY $\qquad$ beAring of hole STARTED
departure DIP OF HOLE COMPLETED
eleyation
$\qquad$ DIP TESTS $\qquad$ DEPTH
BQ Core

| Foor |  |  | SAMPLE | footage |  | SAMPLE | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | T0 | DESCRIPTION | No. | FROM | - 10 |  | Au Dob |  |  |  |  |
| 485. | 501.0 | Black Graphitic Metasediment |  | . |  |  |  |  |  |  |  |
|  | . | Black, blocky, soft and well-bedded, fine-grained and, in macro- | 4731 | 485.6 | 489.1 | 3.5 | 50 |  |  |  |  |
|  | $\cdots$ | scale, brecciated. Contains 3\% pyritic beds and disseminated graphite | 4732 | 489.1 | 493.0 | 3.9 | 30 |  |  |  |  |
|  |  | is intercalated withbrown pyritized argillite and, in detail, even chert. | 4733 | 493.0 | 497.0 | 4.0 | 60 |  |  |  |  |
|  |  | So at $33^{\circ}$ to CA. | 4734 | 497.0 | 501.0 | 4.0 | 30 |  |  |  |  |
|  |  | Conformable OUT Contact. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 501. | 699. | Carbonated Metasediments and Pyroclastics |  |  |  |  |  |  |  |  |  |
|  |  | Green, soft, fine-grained and of variable texture. Contains | 4735 | 501.0 | 502.9 | 1.9 | Ni] |  |  |  |  |
|  |  | irregular white quartz-carbonate veinlets and only traces of dissemenated | 4736 | 502.9 | 505.1 | 2.2 | Nil |  |  |  |  |
|  |  | pyrite. | 4737 | 505.1 | 541.2 | 6.1 | 30 |  |  |  |  |
|  |  |  | 4788 | 511.2 | 515.0 | 3.8 | Nil |  |  |  |  |
|  |  |  | 4789 | 515.0 | 518.9 | 3.9 | NiI |  |  |  |  |
|  |  |  | 4790 | 518.9 | 522.3 | 3.4 | Nil |  |  |  |  |
|  |  | Rock becomes more brecciated by 523.0' and shows signs of flow-top | 4791 | 522.3 | 525.9 | 3.6 | 60 |  |  |  |  |
|  |  | textures. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

DIAMOND DRILL RECORD LogGed by D. Constable
PROPERTY


DIAMOND DRILL RECORD Loged by_D. Constable Constable Consulting_Inc.

( $\left\{\begin{array}{l}\text { D.D.H. No. PX-86-1D } \\ \text { CLAIM NO. . PAGE } 9 / 10 \\ \text { NE. CLAIM POST }\end{array}\right.$

| footage |  | DESCRIPTION | $\begin{gathered} \text { SAMPLE } \\ \text { No. } \end{gathered}$ | Footage |  | $\begin{aligned} & \text { SAMPLE } \\ & \text { LENGTH } \end{aligned}$ | AU Ppb | Assar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | 10 |  |  | FROM | 80 |  |  |  |  |  |  |
|  |  | At 692.5 a small bleb of chalcopyrite. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 699.6 | 933.0 | Mafic (Mg - Tholeiitic) Flow |  |  |  |  |  |  |  |  |  |
|  |  | Green, massive, soft, slightly carbonated, low magnetic suceptibility |  |  |  |  |  |  |  |  |  |
|  |  | medium-grained and homogenous except for irregular quartz-carbonate |  |  |  |  |  |  |  |  |  |
|  |  | veinlets. Trace to nil sulfides. |  |  |  |  |  |  |  |  |  |
|  |  | Gradational IN Contact, then from 715.0-725.0' gradually increasin |  |  |  |  |  |  |  |  |  |
|  |  | grain size until a nearly intrusive (Dioritic) texture. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | From 742.3-743.2' and from 747.5-750.5' quartz-carbonate | 4797 | 742.6 | 745.9 | 3.3 | 20 |  |  |  |  |
|  |  | filled shear zones with $1 \%$ pyrite. | 4798 | 745.9 | 750.5 | 4.6 | 10 |  |  |  |  |
|  |  | Again a quartz-carbonate-filled shear zone from 755.4-757.3' and | 4799 | 755.4 | 757.4 | 2.0 | $\mathrm{Ni}]$. |  |  |  |  |
|  |  | from 758.6-759.0 (minor chalcopyrite) and from 763.8-764.3'. | 4800 | 758.6 | 759.0 | 0.4 | Nil |  |  |  |  |
|  |  | . ${ }^{\text {a }}$ | 4501 | 763.7 | 764.2 | 0.5 | Nil |  |  |  |  |
|  |  | From 787.6 - 788.5 white quartz-carbonate vein lined with chlorite. |  |  |  |  |  |  |  |  |  |
|  |  | From 847.0 onwards vesicles are filled with a mixture of quartz and |  |  |  |  |  |  |  |  |  |
|  |  | chlorite and appear black. |  |  |  |  |  |  |  |  |  |



DIAMOND DRILL RECORD Locged by D. Constable
Property _ Perrex Resources Inc.-Harker Township Property 103
 BQ Core

| footage |  | DESCRIPTION | SAMPLE | footage |  | SAMPLE | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | 10 |  |  | FROM | 10 |  | 0 LOD |  |  |  |  |
| 0.0 | 145.0 | Casing |  |  |  |  |  |  |  |  |  |
|  |  | $0^{\prime}$ - 72.0' Clay |  |  |  |  |  |  |  |  |  |
|  | $\because$ | 72.0' - 145.0' Boulders and Sand |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 145.0 | 400.0 | Mafic Metasediments and Pyroclastics |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Dark Green, average hardness, with fragments and beds(?) at $48{ }^{\circ}$ to | 4522 | 145.7 | -147.0 | 1.3 | Nil |  |  |  |  |
|  |  | CA. Rock is extremely chloritic and carbonated. Contains trace to | 4523 | 147.0 | 150.9 | 3.9 | 10 |  |  |  |  |
|  |  | $1 \%$ disseminated pyrite and $2 \%$ fine irregular white quartz-carbonate vein | 4524 | 150.9 | 154.2 | 3.3 | Nil |  |  |  |  |
|  |  | lets. | 4525 | 154.2 | 157.1 | 2.9 | Nil |  |  |  |  |
|  |  | . | 4526 | 157.1 | 159.6 | 2.5 | Nil |  |  |  |  |
|  |  |  | 4527 | 159.6 | 161.4 | 1.8 | Nil. |  |  |  |  |
|  |  |  | 4528 | 161.4 | 165.0 | 3.6 | 30 |  |  |  |  |
|  |  |  | 4529 | 165.0 | 167.9 | 2.9 | 70790 |  |  |  |  |
|  |  |  | 4530 | 167.9 | 171.4 | 3.5 | Nil |  |  |  |  |
|  |  |  | 4531 | 171.4 | 173.5 | 2.1 | Nil |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

D.D.H. No. PX-86-2 PAGE $1 / 7$
$\square$
CLAIM No. L 738055

DIRECTION AND DISTANCE FROM NE. CLAIM POST

DIAMOND DRILL RECORD Logged by_ D. Constable
PROPERTY $\qquad$ bearing of hole STARTED
departure $\qquad$ DIP OF HOLE $\qquad$ COMPLETED DEPTH BQ Core

| Footage |  | DESCRIPTION | $\begin{array}{\|c} \text { SAMPLE } \\ \text { No- } \end{array}$ | foditage |  | SAMPLELENGTH | Assar |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | 10 |  |  | From | \%0 |  | Au ppy |  |  |  |  |
|  |  | From-173.3-177.i graphitic-matrix-breccia with green metaseds. | 4532 | 173.5 | 177.3 | 3.8 | NiL |  |  |  |  |
|  |  | as fragments. Contains 1-2\% pyrite disseminates. Poor conduction. | 4533 | 177.3 | 181.5 | 4.2 | Nil |  |  |  |  |
|  |  |  | 4534 | 181.5 | 183.1 | 1.6 | Nil |  |  |  |  |
|  |  |  | 4536 | 186.7 | 189.9 | 3.2 | Nil |  |  |  |  |
|  |  |  | 4537 | 189.9 | 192.1 | 2.2 | 10 |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | From 190.3-194.6' Graphitic beds and matrix for breccia zone | 4538 | 192.1 | - 194.5 | 2.4 | Nil |  |  |  |  |
|  |  | contains both pyritic beds and disseminated pyrite ( $2 \%$ ) as well as quarta | 4539 | 194.5 | 197.1 | 2.6 | Nil. |  |  |  |  |
|  |  | veins with green metaseds. as fragments. So at $50^{\circ}$ to CA . Poor. |  |  |  |  |  |  |  |  |  |
|  |  | conductor. |  |  |  |  |  |  |  |  |  |
|  |  | . From 196.7-198.9' Graphitic Unit with fragments of green metased. | 4540 | 197.1 | 199.4 | 2.3 | Nil |  |  |  |  |
|  |  |  | 4541 | 199.4 | 203.3 | 3.9 | 10 |  |  |  |  |
|  |  |  | 4542 | 203.3 | 206.8 | 3.5 | 10 |  |  |  |  |
|  |  |  | 4543 | 206.8 | 210.0 | 3.2 | 20 |  |  |  |  |
|  |  |  | 4544 | 210.0 | 213.5 | 3.5 | 10 |  |  |  |  |
|  |  |  | 4545 | 213.5 | 216.7 | 3.2 | Nil |  |  |  |  |
|  |  |  | 4546 | 216.7 | 220.0 | 3.3 | Nil |  |  |  |  |

( D.D.H. NO. PX-86-2 PAGE $2 / 7$

ELEVATION DIP TESTS
$\qquad$
$\square$

DIAMOND DRILL RECORD LogGed by D. Constable
Constable Consultant Inc.
PROPERTY $\qquad$ BEARING OF HOLE TARTED $\qquad$


FOOTAG DIP OF HOLE COMPLETED
DEPARTURE DIP OF HOL $\qquad$ DEPTH

| footage |  | DESCRIPTION | $\begin{gathered} \text { SAMPLE } \\ \mathrm{No.} \end{gathered}$ | FFOOTAGE |  | $\left\{\begin{array}{l} \text { SAMPLE } \\ \text { LENGTH } \\ \hline \end{array}\right.$ | Au ppg | ASSAY |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM. | 10 |  |  | FROM | 70 |  |  |  |  |  |  |
|  |  | From 224.0-233.8' Conformable Graphitic breccia unit. Fair | 4548 | 224.0 | 225.6 | 1.6 | Nil |  |  |  |  |
|  |  | conduction | 4549 | 225.6 | 230.0 | 4.4 | Nil |  |  |  |  |
|  | * |  | 4550 | 230.0 | 233.8 | 3.8 | Nil |  |  |  |  |
|  |  |  | 4551 | 233.8 | 236.6 | 2.8 | Nil |  |  |  |  |
|  |  | From 235.1-236.5 Graphitic breccia again. | 4552 | 236.6 | 241.0 | 4.4 | Nil |  |  |  |  |
|  |  |  | 4553 | 241.0 | 244.0 | 3.0 | Nil |  |  |  |  |
|  |  |  | 4554 | 244.0 | 247.1 | 3.1 | Nil |  |  |  |  |
|  |  |  | 4555 | 247.1 | 250.4 | 3.3 | Nil/Ni |  |  |  |  |
|  |  |  | 4556 | 250.4 | 255.0 | 4.6 | Nil |  |  |  |  |
|  |  |  | 4557 | 255.0 | 259.9 | 4.9 | Nil |  |  |  |  |
|  |  | - From 145.0 - 250.0' there are small areas of purple colour and |  |  |  |  |  |  |  |  |  |
|  |  | above average silicification for example from 233.8-235.11 and from |  |  |  |  |  |  |  |  |  |
|  |  | 236.5 to 244.0. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Silica floods with purple colour and pyrite (1-2\%) from 260.5 to | 4558 | 259.9 | 263.0 | 3.1 | Ni |  |  |  |  |
|  |  | 262.8', 264.4 to $267.7,271.9$ to $274.4{ }^{\prime}, 283.3$ to $284.5^{\prime}$ | 4559 | 263.0 | 264.6 | 1.6 | Nil |  |  |  |  |
|  |  |  | 4560. | 264.6 | 267.7 | 3.1 | Nil |  |  |  |  |

DIAMOND DRILL RECORD Logged by D. Constable
PROPERTY $\qquad$ BEARING OF HOLE DIP OF HOLE $\qquad$ COM
DEPARTURE $\qquad$ DIP TESTS $\qquad$ DEPTH $\qquad$
ELEYATION $\qquad$ DEP
$\qquad$ PAGE 4/7 .

| $\underbrace{\substack{\text { SAMPLE }}}_{\text {No. }}$ | footage |  | SAMPLE LENGTH | Au PDo | Assar |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FROM | T0 |  |  |  |  |  |  |
| 4561 | 267.7 | 271.6 | 3.9 | Nil |  |  |  |  |
| 4562 | 271.6 | 274.6 | 3.0 | Nil |  |  |  |  |
| 4563 | 274.6 | 277.6 | 3.2 | Nil |  |  |  |  |
| 4564 | 277.8 | 280.4 | 2.6 | Nil |  |  |  |  |
| 4565 | 280.4 | 283.5 | 3.1 | Nil |  |  |  |  |
| 4566 | 283.5 | 284.5 | 1.0 | 50/60 |  |  |  |  |
| 4567 | 284.5 | 288.1 | 3.6 | Nil |  |  |  |  |
| 4568 | 288.1 | 289.9 | 1.8 | Nil |  |  |  |  |
| 4569 | 289.9 | 293.7 | 3.8 | Nil |  |  |  |  |
| 4570 | 293.7 | 297.9 | 4.2 | Nil |  |  |  |  |
| 4571 | 297.9 | 301.5 | 3.6 | 10 |  |  |  |  |
| 4572 | 301.5 | 305.0 | 3.5 | Nil |  |  |  |  |
| 4573 | 305:0 | 307.9 | 2.9 | Nil |  |  |  |  |
| 4574 | 307.9 | 314.3 | 6.4 | Nil |  |  |  |  |
| 4575 | 314.3 | 316.4 | 2.1 | NiI |  |  |  |  |
| 4576 | 316.4 | 319.9 | 3.5 | Nil |  |  |  |  |
| 4577 | 319.9 | 325.0 | 5.1 | Nil |  |  |  |  |

DIAMOND DRILL RECORD LogGed br D. Constable Constable Consultant_Inc.
PROPERTY $\qquad$ bearing of hole STARTED
D.D.H. No. Px-86-2 _ PAGE $5 / 7$
latitude
$\qquad$ DIP OF HOLE COMPLETED

CLAIM No.
dIRECTION AND DISTANCE FROM ELEYATION $\qquad$ DIP TESTS $\qquad$ DEPTH NE. CLAIM POST

| Footage |  | DESCRIPTION | $\begin{aligned} & \text { SAMPLLE } \\ & \text { Noos } \end{aligned}$ | footage |  | SAMPLE LENGTH | Assay |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From | 10 |  |  | FROM | 10 |  | Au pob |  |  |  |  |
|  |  |  | 4578 | 325.0 | 327.6 | 2.6 | Nil |  |  |  |  |
|  |  |  | 4579 | 327.6 | 332.4 | 4.8 | Nil |  |  |  |  |
|  | : |  | 4580 | 332.4 | 335.0 | 2.6 | Nil |  |  |  |  |
|  |  |  | 4581 | 335.0 | 337.0 | 2.0 | Nil |  |  |  |  |
|  |  | - | 4582 | 337.0 | 341.1 | 4.1 | 30 |  |  |  |  |
|  |  |  | 4583 | 341.1 | 344.4 | 3.3 | Nil |  |  |  |  |
|  |  | Silica flood with. increasing brown colour and finely disseminated | 4584 | 344.4 | 347.0 | 2.6 | Nil |  |  |  |  |
|  |  | pyrite (up to $10 \%$ ) from 345.0 to 356.0 | 4585 | 347.0 | 351.1 | 4.1 | 60/50 |  |  |  |  |
|  |  |  | 4586 | 351.1 | 355.6 | 4.5 | 10 |  |  |  |  |
|  |  | From 356.0' onwards rock regains softness and green colour | 4587 | 355.6 | 359.8 | 4.2 | Nil |  |  |  |  |
|  |  |  | 4588. | 359.8 | 364.0 | 4.2 | Nil |  |  |  |  |
|  |  |  | 4589. | 364.0 | 367.8 | 3.8 | Nil. |  |  |  |  |
|  |  |  | 4590 | 367.8 | 370.9 | 3.1 | Nil |  |  |  |  |
|  |  | By 370.9' rock shows signs of breccia texture, intensifying to | 4591 | 370.9 | 374.0 | 3.1 | Nil |  |  |  |  |
|  |  | the area of 391.51 | 4592 | 374.0 | 377.3 | 3.3 | 310/200 |  |  |  |  |
|  |  |  | 4593 | 377.3 | 380.9 | 3.6 | Nil |  |  |  |  |
|  |  |  | 4594 | 380.9 | 385.0 | 4.1 | Nil |  |  |  |  |



| FOOTAGE |  | DESCRIPTION | SAMPLE <br> No. | footage |  | $\begin{aligned} & \text { SAMPLE } \\ & \text { LENGTH } \end{aligned}$ | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | 70 |  |  | FROM | 10 |  | Au DDD |  |  |  |  |
|  |  |  | 4595 | 385:0 | 388.7 | 3.7 | Nil |  |  |  |  |
|  |  |  | 4596 | 388.7 | 393.3 | 4.6 | Nil |  |  |  |  |
|  | $\because$ | - | 4597 | 393.3 | 395.5 | 2.2 | Nil |  |  |  |  |
|  | - |  | 4598 | 395.5 | 398.5 | 3.0 | 30 |  |  |  |  |
| 400.0 | 595.0 | Mafic Flow (Mg. Tholeilte) |  |  | - | . |  |  |  |  |  |
|  | $\therefore$ | - |  |  |  |  |  |  |  |  |  |
|  |  | Dark green, minor vesicles present and a $2-3 \%$ irregular white gtz- | 4599 | 398.5 | 402.7 | 4.2 | 20 |  |  |  |  |
|  |  | carb. veinlets. Content varies from average to above average hardness | 4600 | 402.7 | 406.8 | 4.1 | Nil. |  |  |  |  |
|  |  | Pyrite content trace to $1 \%$ disseminates. | 4601 | 406.8 | 411.5 | 4.7 | Nil |  |  |  |  |
|  |  |  | 4602 | 411.5 | 416.2 | 4.7 | 430 |  |  |  |  |
|  |  | . . . . . | 4603 | 416.2 | . 421.2 | 5.0 | Nil |  |  |  |  |
|  |  | - . . . | 4604 | 421.2 | 424.4 | 3.2 | Nil . |  | . |  |  |
|  |  |  | 4605 | 424.4 | 427.8 | 3.4 | NiL |  |  |  |  |
| . |  | Bottom of 1st flow is at 489.4' |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | From 489.4 to $505.3^{\prime}$ classic flow breccia top with fragments and |  |  |  |  |  |  |  |  |  |
|  |  | infills of white atz-carbonate. |  |  |  |  |  |  |  |  |  |

## DIAMOND DRILL RECORD LogGed by D. Constable

 Constable Consultant Inc.PROPERTY $\qquad$ STARTED COMPLETED
DEPARTURE DIP OF HOLE

ELEVATION DIP TESTS DEPTH $\qquad$




ELEYATION
$\emptyset$ DIP TESTS $-51^{\circ}$ (Corrected)at $200^{\prime}$

DEPTH
BQ Core

| footage |  |  |
| :---: | :---: | :---: |
| FROM | TO |  |
| 0.0 | 174.0 |  |
|  |  |  |
| . | $:$ |  |
|  | : |  |
|  | - | . |
| 174.0 | 360.0 |  |
|  |  |  |
|  |  |  |
|  |  | Show |
|  |  | Med |
|  |  | . . |
| - |  | at |
|  |  | inf |
| - |  |  |
| - |  |  |
|  |  |  |
|  |  |  |

Dark to Olive Green, soft, extremely blocky and light weight rock. Shows extensive weathering and alteration, particularly epidolization. Medium grained. Very little carbonate content.

- Epidote - lined selvages and frequently observed (pillow selvages ?) at 270.8 and 282.5 Önly minute sulfide (pyrite) bleb are observed at infrequent intervals.

Sel vages again at $296.0,310.2,320.0,321.7,333.5,340.2$ and 344.7

Last $2^{\prime}$ of flow is fine-grained.


DIAMOND DRILL RECORD logged by D. Constable
PROPERTY $\qquad$ STARTED__
COMPLETED__
DEPTH
BQ CORe
D.D.H. No. Px-86-3 PAGE $2 / 4$
latitude bearing of hole
$N$
CLAIM No.
DIRECTION AND DISTANCE FROM
DEPARTURE DIP OF HOLE

| footage |  | DESCRIPTION | SAMPLE | FOOTAGE |  | $\begin{array}{\|l\|l\|} \hline \text { SAMPLE } \\ \text { LENGTH } \\ \hline \end{array}$ | Assar |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | 10 | DESCRIPTION | No. | FROM | 10 |  | Au 0 ab |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 360.0 | 381.0 | Hyaloclastic |  | . |  |  |  |  |  |  |  |
|  | : | . |  |  |  |  |  |  |  |  |  |
|  |  | Dark green, blocky, fragmental with both definite fragments and |  |  |  |  |  |  |  |  |  |
|  |  | shadowy fragments often collapsed. Bedding is at $60^{\circ}$ to CA . |  |  |  | . |  |  |  |  |  |
|  |  | NIL sulfides. - |  |  |  |  |  |  |  |  |  |
| 381.0 | 529.2 | Mafic Volcanic Flow Mg-Tholeiites |  | . |  |  |  |  |  |  |  |
|  |  | - |  |  |  |  |  |  |  |  |  |
|  |  | Dark Green, vesicles and amygdules. |  |  |  |  |  |  |  |  |  |
|  |  | Epidolized-gtz-pyrite selvages at 421.9 and 427.5 |  |  |  |  |  |  |  |  |  |
|  |  | . Rock still extremely blocky with only coarse pyrite cubes (trace) |  |  |  |  |  |  |  |  |  |
|  |  | At 430.0-2" wide fault zone - calcite and gauge. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | At 470.3-4" wide fault gauge |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Salvage at 505.3 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

DIAMOND DRILL RECORD LogGed by D. Constable
PROPERTY
LATITUDE
DEPARTURE $\qquad$ BEARING OF HOLE $\qquad$ STARTED $\qquad$ Constable Consulting علـ

## D.D.H. No. PX-86-3

 PAGE $3 / 4$DEPARTURE DIP OF HOLE $\qquad$ COMPLETED $\qquad$ DEPTH BQ Core

\& CLAIM No. NE. CLAIM POST

ELEVATION DIP TESTS $\qquad$

$\square$

## DIAMOND DRILL RECORD LogGed br D. Constable

$\qquad$ Constable Consultant Inc.
$\qquad$ PROPERTY __ Perrex Resources Inc.-Harker Townhip Property 103


$\left\{\begin{array}{l}\text { D.D.H. No. PX-86-3_ PAGE 4/4 } \\ \text { CLAIM NO. } \\ \text { NE. CLAIM POST }\end{array}\right.$
 End of Hole Px-86-3 is at 645.0 ${ }^{\text {i }}$

DIAMOND DRILL RECORD LogGed by D. Constable



PROPERTY PERREX RESOURCES INC._ PROPERTY 103

| STARTED |  |
| :---: | :---: |
|  | COMPLETED |
| - $-50^{\circ}$ at 300' | DEPTH 671.0' |


D.D.H. No. $\mathrm{PX}-86-4$ $\qquad$ PAGE 2 of 5

LATITUDE $\qquad$ BEARING OF HOLE $\qquad$ COMPLETED 671.01 SAMPLE
No.

| FOOTAGE |  | PLE | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FROM | T0 | TH |  |  |  |  |  |
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DIAMOND DRILL RECORD Logged by _ o constable -

## PROPERTY <br> PERREX RESOURCES INC. <br> Property 103

$\qquad$ BEARING OF HOLE STARTED dIP OF HOLE
$\qquad$

N
$F$ CLaim No.
DEPARTURE NIP OF HOLE $\frac{-50^{\circ}}{-50^{\circ} \text { at } 200^{\prime}-\quad-50^{\circ} \text { at } 300^{\prime}}$ COMPLETED $\qquad$ -DIRECTION AND DISTANCE FROM ELEVATION DIP TESTS $-50^{\circ}$ at $400^{\prime}-50^{\circ}$ at $500^{\prime}$ DEPTH $671.0^{\circ}$ $\qquad$ NE. CLAIM POST


DIAMOND DRILL RECORD Locgeo br D. Constable constable consuling inc.
Property 103


DIAMOND DRILL RECORD Logged by d. constable
CONSTABLE CONSULIING ING.
PROPERTY P_ PERREX RESOURCES INC. Property 105


$\qquad$ STARTED

DEPARTURE DIP OF HOLE COMPLETED

$$
\mathbf{D}_{1}
$$

$$
\ldots
$$

$\square$ NE. CLAIM POST


DIAMOND DRILL RECORD Locged by D. Constable

LATITUDE
DEPARTURE
BEARING OF HOLE
STARTED $\qquad$ DIP OF HOLE -48 at 96 $8^{\prime}$ - $-48^{0}$ at $300^{\prime}$ COMPLETED DIP TESTS $-48^{\circ}$ at $96^{\prime}$ at $400^{\prime}-48^{\circ}$ at $300^{\prime}$
$5220^{\circ}$

SAMPLE
E FOOTAGE CLAIM No
-DIRECTION AND DISTANCE FROM NE. CLAIM POST


DIAMOND DRILL RECORD logged by D. constable


Foes - is

Mr. Phil Hum, O.M.E.P.
GMO CEASE

Ministry of Northern Development and Mines,
Queen's Park,
Toronto, Ontario
MFA IW3
Dear Mr. Hum,
RE: Perrex Resources Inc. 103 Group
Harker-Elliott \& Thackeray Townships, Larder Lake Mining Division, District of Cochrane, Ontario

Further to our telephone conversation re the subject property on February 9, 1987, I understand that you have on file the diamond drill logs by Mr. David Constable as well as the cost resort on the program.

This letter report is designed to cover the geological of the program as Mr. Constable is away at this time an in the missing data that you requested.
OMER

## LOCATION AND ACCESS

The Perrex Resources Inc. 103 Group is located principally in Harker Township with extensions into the adjoining townships of Elliott to the south and Thackeray to the southwest in northeastern Ontario, some 30 kms north of Kirkland Lake and 30 kms west of the Ontario - Quebec border (see Figure 1 after Hinse, 1984).

Road access is from Highway 101 than southerly on former logging roads.

The property is entirely covered by swamp and overburden.

## PROPERTY AND TITLE

The property contains 103 unpatented mineral claims controlled by Perrex Resources Inc. The claim numbers and record dates are outlined below (see Figure 2 after Hinse, 1984).

|  |  | DAYS WORK <br> COMPLETED |
| :--- | ---: | ---: |
| HARKER TOWNSHIP |  | 60 |
| L-738275 to L-738290 inclusive | 16 | 60 |
| L-737975 to L-737979 inclusive | 5 | 60 |
| L-738601 to L-738606 inclusive | 6 | 60 |
| L-738054 to L-738060 inclusive | 7 | 60 |
| L-738078 to L-738085 inclusive | 8 | 1 |
| L-738399 |  | 4 |
| L-738400 to L-738403 inclusive | 60 |  |
| L-760147 to L-760156 inclusive | 10 | 60 |
| L-738522 to L-738523 inclusive | 2 | 60 |
| L-738611 to L-738612 inclusive | 2 | 60 |
|  |  |  |


| RECORDING <br> DATES |
| :--- |
| March 1, 1984 |
| February 27, 1984 |
| March 9, 1984 |
| March 1, 1984 |
| March 1, 1984 |
| February 27, 1984 |
| March 1, 1984 |
| March 1, 1984 |
| March 1, 1984 |
| March 9, 1984 |

DAYS WORK
COMPLETED
50

```
ELLIOTT TOWNSHIP
```

L-738528 to L-738529 inclusive L-738834 to L-738835 inclusive L-738836 to L-738837 inclusive L-738843
L-738844 to L-738845 inclusive L-738607 to L-738610 inclusive L-738404 to L-738408 inclusive L-739232 to L-739246 inclusive

|  |
| ---: |
| 2 |
| 2 |
| 2 |
| 1 |
| 2 |
| 4 |
| 5 |
| 15 |
| 33 |

THACKERAY TOWNSHIP

RECORDING DATES

March 1, 1984
March 19, 1984
March 19, 1984
March 19, 1984 March 19, 1984 March 9, 1984 March 1, 1984 March 23, 1984

March 19, 1984
March 19, 1984
March 19, 1984
April 25, 1984
March 1, 1984



## PREVIOUS WORK

Previous work on the property includes G．J．Hinse，P．Eng．，May 22， 1984，who reviewed the property and outlines magnetic and electromagnetic ground surveys and a basal till sampling program；R．J．Bradshaw，P．Eng．，October 7， 1985，reviewed the property；Phoenix Geophysics Ltd．，March 7，1986，undertook the initial induced polarization survey which was later followed by additional induced polarization surveys by Paterson，Grant and Watson Ltd．，June－July， 1986．Ground magnetics and VLF－EM was done by Perron＇s Inc．during 1984 and 1985．Diamond drilling was undertaken in 1986 and the core logged by David Constable，Consulting Geologist．

Several major mining companies are actively engaged in exploration and development in what has become known as＂The Harker Holloway Gold Camp＂． Cominco，Newmont，Kerr Addison and American Barrick all have adjoining claims to the Perrex properties，as do Grandad，Silverhawk and Lenora．The most significant discovery to date is what is called the McDermott Zone by American Barrick being some 2 to 3 miles from the Perrex boundary，followed by the Canamax discovery close by and several very encouraging results by Lenora of the Kasner Group．American Barrick announced drill indicated probably and possible ore reserves as at December 31，1985，of $2,841,000$ tons averaging 0.197 ounces of gold per ton；since that time they are now converting their explora－ tion shaft into a production shaft and are daily increasing ore reserves with the intent of a production decision．Canamax is similarly increasing reserves and is at a production decision stage．It is noteworthy that of the several gold horizons in the area，at least three pass through the Perrex ground（see Figure 3）．

To the immediate northeast, on the Sherritt-Perrex-Amble property, some 34 overburden reverse circulation holes were drilled. All completed holes (33) gave up measurable gold values, the most significant of which was $35,400 \mathrm{ppb}$ or approximately 1.1 ounces per ton. Induced polarization surveys, as well as magnetometer and VLF surveys have been on portions of the holdings, primarily in the vicinity of several airborne indicated anomalies (see Figure 3). Limited diamond drilling has ensued in order to test geological structure beneath a cumbersome overburden covering of most of the property; these holes have returned encouraging anomalous gold values up to .04 ounces per ton and have indicated structure significantly similar to that of the McDermott ore bearing zones.


Geologically the 103 Group of Perrex Resources Inc. overlies Archean rocks of the Kinojevis Group of the Abitibi Greenstone Belt within the Superior Structural Provinces. (See Figure 4 after L.S. Jensen (1986) Ontario Geol. Survey., Misc. Paper 129.)

DRILL PROGRAM 1986
Heath \& Sherwood Drilling of Kirkland Lake, Ontario were contracted to penetrate the overburden and core drill bedrock using B.Q. equipment.

The following holes were drilled: (See Figure 5)

| Hole No. | Location | Dip | Brg. | Length | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PX 86-1A | 44W, 20N | $-50^{\circ}$ | $332{ }^{\circ}$ | 165.0' | Overburden |
| PX 86-1B | 44W, 19N | $-50^{\circ}$ | $332^{\circ}$ | $191.0^{\prime}$ | Overburden |
| PX 86-1C | 43+95W, 19 N | $-50^{\circ}$ | $332{ }^{\circ}$ | $235.0^{\prime}$ | Overburden |
| PX 86-10 | $44 \mathrm{~W}, 20+10 \mathrm{~N}$ | $-65^{\circ}$ | $332^{\circ}$ | $933.0^{\prime}$ | Overburden to 181.0' |
| PX 86-2 | $36 \mathrm{~W}, 19+75 \mathrm{~N}$ | -65 ${ }^{\circ}$ | $332^{\circ}$ | $595.0^{\prime}$ | Overburden to $145.0^{\prime}$ |
| PX 86-3 | 32W, 7N | $-50^{\circ}$ | $332^{\circ}$ | $645.0^{1}$ | Overburden to 174.0' |
| Subtotal |  | 2,764.0' |  |  |  |

Other holes drilled but not part of O.M.E.P. Grant were:
PX 86-4
$671^{\prime}$
PX 86-5 $522^{\prime}$

Diamond drill holes 86-1D (933'), 86-2 (595'), 86-3 (645'), 86-4 (671') and 86-5 (522') were located in a magnetically low trough between two parallel east-northeast trending magnetically high zones.

The area drilled is devoid of outcrops; vertical depth of overburden is: Hole $86-10,162^{\prime} ; 86-2,134^{\prime} ; 86-3,135^{\prime} ; 86-4,100^{\prime}$; and $86-5,81^{\prime}$. Hole $86-10$ and $86-2$ drilled from station 20 N on Lines 44 W and 36 W respectively indicate the following geological and grade correlations.


Geological map of the Lake Abltibl area.

FIGURE 4 PERREX RESOURCES INC., 103 GROUP



From the above, the stratigraphy is correlatable between holes 86-ID and 86-2 with a massive flow giving away stratigraphically upwards to a sequence of tuffaceous beds and interlayered flows which in turn passes to a sedimentary basin above which flows cover the sedimentary horizon. The sedimentary horizon was originally black mud which in time became a pyriticbearing, bedded but sheared, black argillaceous graphitic zone of metasedimenmary rock.

Gold values have been noted to occur within this metasedimentary interflow horizon. In general lower gold values are noted in hole 86-2 than in 86-ID. Similarly, the intersected width of the horizon is greater in hole

86-1D than in 86-2.

The above mentioned gradients in both width of pyritic horizon and more importantly, in grade of gold noted, indicate that a larger and possibly rich gold-bearing basin may be developing to the west of hole 86-10.

## $\ddagger$

Respectfully submitted,

A. D. Drummond, Ph. D., P. Eng.
D.D.H. GEOMANAGEMENT LTD.


February 9, 1987


050
FEB 191987
Mr. Phil Hum,
O.M.E.P.

OnCe Crate
Ministry of Northern Development and Mines, Room 4650, Whitney Block, Queen's Park, Toronto, Ontario MFA IW3

Dear Mr. Hum,

```
RE: Perrex Resources Inc.
    103 Group
    Harker-Elliott & Thackeray Townships,
    Larder Lake Mining Division,
    District of Cochrane, Ontario
```

Further to our telephone conversation re the subject property on February 9, 1987, I understand that you have on file the diamond drill logs by Mr. David Constable as well as the cost report on the program.

This letter report is designed to cover the geological aspects of the program as Mr. Constable is away at this time and to fill in the missing data that you requested.

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The property is entirely covered by swamp and overburden.

## PROPERTY AND TITLE

The property contains 103 unpatented mineral claims controlled by Perrex Resources Inc. The claim numbers and record dates are outlined below (see Figure 2 after Hinse, 1984).

| HARKER TOWNSHIP |  | DAYS WORK COMPLETED | $\begin{gathered} \text { RECORDING } \\ \text { DATES } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| L-738275 to L-738290 inclusive | 16 | 60 | March 1, 1984 |
| L-737975 to L-737979 inclusive | 5 | 60 | February 27, 1984 |
| L-738601 to L-738606 inclusive | 6 | 60 | March 9, 1984 |
| L-738054 to L-738060 inclusive | 7 | 60 | March 1, 1984 |
| L-738078 to L-738085 inclusive | 8 | 60 | March 1, 1984 |
| L-738399 | 1 | 60 | February 27, 1984 |
| L-738400 to L-738403 inclusive | 4 | 60 | March 1, 1984 |
| L-760147 to L-760156 inclusive | 10 | 60 | March 1, 1984 |
| L-738522 to L-738523 inclusive | 2 | 60 | March 1, 1984 |
| L-738611 to L-738612 inclusive | 2 | 60 | March 9, 1984 |


| ELLIOTT TOWNSHIP |  | DAYS WORK COMPLETED | $\begin{aligned} & \text { RECORDING } \\ & \text { DATES } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| L-738528 to L-738529 inclusive | 2 | 50 | March 1, 1984 |
| L-738834 to L-738835 inclusive | 2 | 60 | March 19, 1984 |
| L-738836 to L-738837 inclusive | 2 | 50 | March 19, 1984 |
| L-738843 | 1 | 50 | March 19, 1984 |
| L-738844 to L-738845 inclusive | 2 | 60 | March 19, 1984 |
| L-738607 to L-738610 inclusive | 4 | 60 | March 9, 1984 |
| L-738404 to L-738408 inclusive | 5 | 60 | March 1, 1984 |
| L-739232 to L-739246 inclusive | 15 | 60 | March 23, 1984 |
|  | 33 |  |  |
| THACKERAY TOWNSHIP |  |  |  |
| L-738838 to L-738840 inclusive | 3 | 80 | March 19; 1984 |
| L-738841 | 1 | 60 | March 19, 1984 |
| L-738842 | 1 | 50 | March 19, 1984 |
| L-738524 to L-738525 inclusive | 2 | 50 | April 25, 1984 |
| L-738526 to L-738527 inclusive | 2 | 50 | March 1, 1984 |




## PREVIOUS WORK

Previous work on the property includes G.J. Hinse, P. Eng., May 22, 1984, who reviewed the property and outlines magnetic and electromagnetic ground surveys and a basal till sampling program; R.J. Bradshaw, P. Eng., October 7, 1985, reviewed the property; Phoenix Geophysics Ltd., March 7, 1986, undertook the initial induced polarization survey which was later followed by additional induced polarization surveys by Paterson, Grant and Watson Ltd., June - July, 1986. Ground magnetics and VLF-EM was done by Perron's Inc. during 1984 and 1985. Diamond drilling was undertaken in 1986 and the core logged by David Constable, Consulting Geologist.

Several major mining companies are actively engaged in exploration and development in what has become known as "The Harker Holloway Gold Camp". Cominco, Newmont, Kerr Addison and American Barrick all have adjoining claims to the Perrex properties, as do Grandad, Silverhawk and Lenora. The most significant discovery to date is what is called the McDermott Zone by American Barrick being some 2 to 3 miles from the Perrex boundary, followed by the Canamax discovery close by and several very encouraging results by Lenora of the Kasner Group. American Barrick announced drill indicated probably and possible ore reserves as at December 31, 1985, of $2,841,000$ tons averaging 0.197 ounces of gold per ton; since that time they are now converting their exploration shaft into a production shaft and are daily increasing ore reserves with the intent of a production decision. Canamax is similarly increasing reserves and is at a production decision stage. It is noteworthy that of the several gold horizons in the area, at least three pass through the Perrex ground (see Figure 3).

To the immediate northeast, on the Sherritt-Perrex-Amble property, some 34 overburden reverse circulation holes were drilled. All completed holes (33) gave up measurable gold values, the most significant of which was $35,400 \mathrm{ppb}$ or approximately 1.1 ounces per ton. Induced polarization surveys, as well as magnetometer and VLF surveys have been on portions of the holdings, primarily in the vicinity of several airborne indicated anomalies (see Figure 3). Limited diamond drilling has ensued in order to test geological structure beneath a cumbersome overburden covering of most of the property; these holes have returned encouraging anomalous gold values up to .04 ounces per ton and have indicated structure significantly similar to that of the McDermott ore bearing zones.


## REGIONAL GEOLOGY

Geologically the 103 Group of Perrex Resources Inc. overlies Archean rocks of the Kinojevis Group of the Abitibi Greenstone Belt within the Superior Structural Provinces. (See Figure 4 after L.S. Jensen (1986) Ontario Geol. Survey., Misc. Paper 129.)

## DRILL PROGRAM 1986

Heath \& Sherwood Drilling of Kirkland Lake, Ontario were contracted to penetrate the overburden and core drill bedrock using B.Q. equipment.

The following holes were drilled: (See Figure 5)


Other holes drilled but not part of O.M.E.P. Grant were:
PX 86-4
$671^{\prime}$

* PX 86-5
$522^{\prime}$

Diamond drill holes 86-1D (933'), 86-2 (595'), 86-3 (645'), 86-4 (671') and 86-5 (522') were located in a magnetically low trough between two parallel east-northeast trending magnetically high zones.

The area drilled is devoid of outcrops; vertical depth of overburden is: Hole 86-1D, $162^{\prime}$; 86-2, $134^{\prime}$; 86-3, 135'; 86-4, $100^{\prime}$; and 86-5, 81'. Hole 86-1D and $86-2$ drilled from station 20 N on Lines 44 W and 36 W respectively indicate the following geological and grade correlations.

* Note to file -collar clata is not available for this hole.


103 GROUP



From the above, the stratigraphy is correlatable between holes 86-ID and 86-2 with a massive flow giving away stratigraphically upwards to a sequence of tuffaceous beds and interlayered flows which in turn passes to a sedimentary basin above which flows cover the sedimentary horizon. The sedimentary horizon was originally black mud which in time became a pyriticbearing, bedded but sheared, black argillaceous graphitic zone of metasedimentary rock.

Gold values have been noted to occur within this metasedimentary interflow horizon. In general lower gold values are noted in hole 86-2 than in 86-ID. Similarly, the intersected width of the horizon is greater in hole

86-1D than in 86-2.

The above mentioned gradients in both width of pyritic horizon and more importantly, in grade of gold noted, indicate that a larger and possibly rich gold-bearing basin may be developing to the west of hole 86-1D.

Respectfully submitted,

A. D. Drummond, Ph. D., P. Eng. D.D.H. GEOMANAGEMENT LTD.





| DIAMOND DRILL RECORD LogGed by D. Constable |  | Constable Consulting Inc. |
| :---: | :---: | :---: |
| Property __ Perrex | S Inc. - Harker Twp. Property 103 | D.D.H. No. PX-86-1D PAGE $1 / 10$ |
| LATITUDE 44+00 W | BEARING OF HOLE____ STARTED April 19/86 | CLAIM No. $\frac{L}{738056}$ |
| DEPARTURE _ $20+10 \mathrm{~N}$ | _ DIP OF HOLE__ $-65^{\circ}$ ___ COMPLETED_April 29/86 | N-direction And distance from |
| ELEVATION | . DIP TESTS $-65^{\circ}$ at 315' \& 933'__ ${ }^{\prime}$ DEPTH___ $933.0^{\prime}$ | NE. CLAIM POST |











| DIAMOND DRIL RECORD Locece or 0 . Costate |  |  |  |  |
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| 4562 | 271.6 | 274.6 | 3.0 | Nil |
| :--- | :--- | :--- | :--- | :--- |
| 4563 | 274.6 | 277.6 | 3.2 | Nil |


| 4564 | 277.8 | 280.4 | 2.6 | Nil |
| :--- | :--- | :--- | :--- | :--- |

 \begin{tabular}{l|l|l|l|l|l}
4566 \& 283.5 \& 284.5 \& 1.0 \& $50 / 60$ <br>
\hline

 

\hline 4567 \& 284.5 \& 288.1 \& 3.6 \& Nil <br>
\hline 4568 \& 288.1 \& 289.9 \& 1.8 \& Nil <br>
\hline
\end{tabular}

| 4569 | 289.9 | 293.7 | 3.8 | Nil |
| :--- | :--- | :--- | :--- | :--- |

 \begin{tabular}{l|l|l|l|l|l|}
\hline 4571 \& 297.9 \& 301.5 \& 3.6 \& 10 <br>
\hline

 

4572 \& 301.5 \& 305.0 \& 3.5 \& Nil <br>
\hline

 

4573 \& 305.0 \& 307.9 \& 2.9 \& Nil

 

4574 \& 307.9 \& 314.3 \& 6.4 \& Nil <br>
\hline

 

4575 \& 314.3 \& 316.4 \& 2.1 \& NiI

 

4576 \& 316.4 \& 319.9 \& 3.5 \& Nil <br>
\hline

 

\hline 4577 \& 319.9 \& 325.0 \& 5.1 \& Nil <br>
\hline
\end{tabular}




| F00 |  | description | SAMPLE | Foo | TACE | SMMPLE | ASSAY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | description |  | From | 10 |  | Aunob |  |  |  |  |
|  |  |  | 4595 | 385:0 | 388.7 | 3.7 | Nil |  |  |  |  |
|  |  |  | 4596 | 388.7 | 393.3 | 4.6 | Nil |  |  |  |  |
|  | - |  | 4597 | 393.3 | 395.5 | 2.2 | Nil |  |  |  |  |
|  |  |  | 4598 | 395.5 | 398.5 | 3.0 | 30 |  |  |  |  |
| 400. | 595.0 | Mafic Flow (Mg. Tholeiite) |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Dark green, minor vesicles present and a $2-3 \%$ irregular white gtz- | 4599 | 398.5 | 402.7 | 4.2 | 20 |  |  |  |  |
|  |  | carb. veinlets. Content varies from average to above ajverage hardness | 4600 | 402.7 | 406.8 | 4.1 | Nil. |  |  |  |  |
|  |  | Pyrite content trace to $1 \%$ disseminates. | 4601 | 406.8 | 411.5 | 4.7 | Nil |  |  |  |  |
|  |  |  | 4602 | 411.5 | 416.2 | 4.7 | 430 |  |  |  |  |
|  |  |  | 4603 | 416.2 | 421.2 | 5.0 | Nil |  |  |  |  |
|  |  |  | 4604 | 421.2 | 424.4 | 3.2 | Nil |  |  |  |  |
|  |  |  | 4605 | 424.4 | 427.8 | 3.4 | Nil |  |  |  |  |
|  |  | Bottom of 1st flow is at 489.4' |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | From 489.4 to 505.3' classic flow breccia top with fragments and |  |  |  |  |  |  |  |  |  |
|  |  | Is of white atz-carbonate |  |  |  |  |  |  |  |  |  |















## D.D.H. GEOMANAGEMENT LTD.

February 9, 1987


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F-j \text {. }
$$

Mr. Phil Hum, O.M.E.P.
C...P COB

Ministry of Northern Development and Mines, Room 4650, Whitney Block, Queen's Park,
Toronto, Ontario
M7A IW3

Dear Mr. Hum,

| RE: | Perrex Resources Inc. |
| :--- | :--- |
|  | 103 Group |
|  | Harker-E11 jot \& Thackeray Townships, |
|  | Larder Lake Mining Division, |
|  | District of Cochrane, Ontario |

Further to our telephone conversation re the subject property on February 9, 1987, I understand that you have on file the diamond drill logs by Mr. David Constable as well as the cost report on the program.

This letter report is designed to cover the geological of the program as Mr. Constable is away at this time an in the missing data that you requested.
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C \cdot M E-\vec{F}
$$

The Perrex Resources Inc. 103 Group is located principally in Harker Township with extensions into the adjoining townships of Elliott to the south and Thackeray to the southwest in northeastern Ontario, some 30 kms north of Kirkland Lake and 30 kms west of the Ontario - Quebec border (see Figure 1 after Hinse, 1984).

Road access is from Highway 101 than southerly on former logging roads.

The property is entirely covered by swamp and overburden.

PROPERTY AND TITLE
The property contains 103 unpatented mineral claims controlled by Perrex Resources Inc. The claim numbers and record dates are outlined below (see Figure 2 after Hinse, 1984).

```
HARKER TOWNSHIP
L-738275 to L-738290 inclusive }1
L-737975 to L-737979 inclusive 5
L-738601 to L-738606 inclusive 6
L-738054 to L-738060 inclusive 7
L-738078 to L-738085 inclusive 8
L-738399
L-738400 to L-738403 inclusive
L-760147 to L-760156 inclusive
L-738522 to L-738523 inclusive
L-738611 to L-738612 inclusive
```



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RECORDING DATES

March 1, 1984
February 27, 1984
March 9, 1984
March 1, 1984
March 1, 1984
February 27, 1984
March 1, 1984
March 1, 1984
March 1, 1984
March 9, 1984

L-738528 to L-738529 inclusive 2
L-738834 to L-738835 inclusive 2
L-738836 to L-738837 inclusive 2 L-738843
L-738844 to L-738845 inclusive L-738607 to L-738610 inclusive L-738404 to L-738408 inclusive L-739232 to L-739246 inclusive

THACKERAY TOWNSHIP

| L-738838 to L-738840 inclusive | 3 | 80 | March 19, 1984 |
| :--- | :--- | :--- | :--- |
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March 1, 1984
March 19, 1984
March 19, 1984
March 19, 1984
March 19, 1984
March 9, 1984
March 1, 1984
March 23, 1984
33
50
60
50
50
60
60
60
60

9



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103 GROUP
Geological map of the Lake Abitibl area.
PERREX RESOURCES INC.,

FIGURE 4



From the above, the stratigraphy is correlatable between holes 86-ID and 86-2 with a massive flow giving away stratigraphically upwards to a sequence of tuffaceous beds and interlayered flows which in turn passes to a sedimentary basin above which flows cover the sedimentary horizon. The sedimentary horizon was originally black mud which in time became a pyriticbearing, bedded but sheared, black argillaceous graphitic zone of metasedimentary rock.

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A. D. Drummond, Ph. D., P. Eng.
D.D.H. GEOMANAGEMENT LTD.


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