NTS: 31C/11

REPORT ON GEOLOGICAL MAPPING, PROSPECTING, AND TRENCHING
BLACK RIVER PROPERTY, GRIMSTHORPE TOWNSHIP,
SOUTHERN ONTARIO MINING DIVISION, ONTARIO

PREPARED FOR:

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OPAP Resistration No:
OP92-235

SUMMARY

The Black River property is located in Grimsthorpe Township, 32 km northeast of the town of Madoc, Ontario. Although the Madoc-Bancroft region has shown quite an extensive history of mineral exploration, there is no record of prospecting activities within the area of the Black River property.

The property is underlain by Middle to Late Proterozoic mafic metavolcanic and metasedimentary rocks of the Grenville Structural Province. General trend of these rocks across the property is NW-SE.

During the fall of 1991 a number of gold discoveries were made along the Black River and along a swamp filled extensional lineament to the river. Quartz veins up to 0.5 m wide occur in locally sheared and/or silicified areas of a metasedimentary unit consisting of beds of a quartz-feldspar-biotite rich rock, greywacke, argillites, and graphitic schists. This metasedimentary unit has been traced at various intervals for a distance of over 5 kilometres. Some of the gold showings have been traced for distances greater than 700 metres along this trend.

An electromagnetic survey and a magnetic survey have coincidental conductors and anomalies with some of the known gold occurrences. The surveys have located other targets along the 5 km trend which may be potential host environments for gold mineralization.

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I. INTRODUCTION

SCOPE

This report summarizes the results of the 1992 program of geological mapping, prospecting, and trenching on Black River property, Grimsthorpe Township, Ontario. Maps with the results of this program are appended to this report.

LOCATION AND ACCESS

The Black River property is located in Grimsthorpe Township. The property is approximately 30 km northeast of Madoc, Ontario. Access can be made by following Highway 62 north from Madoc to the village of Gilmour. 4 km east of Gilmour is the turn for the Skootamatta Lake Access Road. The property begins at the intersection of the Skootamatta Lake Access Road and the Lingham Lake Access Road (figure 1).

The property is covered by N.T.S. sheet 31C/11.

PROPERTY AND STATUS

The property consists of twelve contiguous unpatented mining claims consisting of twenty six units of 20 hectacre size (figure 2). The claim numbers are SO1150984 to SO1150986 inclusive, SO1156635, SO1156636, SO1156650, SO1156653, SO1156654, SO1194942, SO1194943, SO1194973, SO1194974.

All claims are held by Mr. R.J. Dillman of London, Ontario.

LOGISTICS

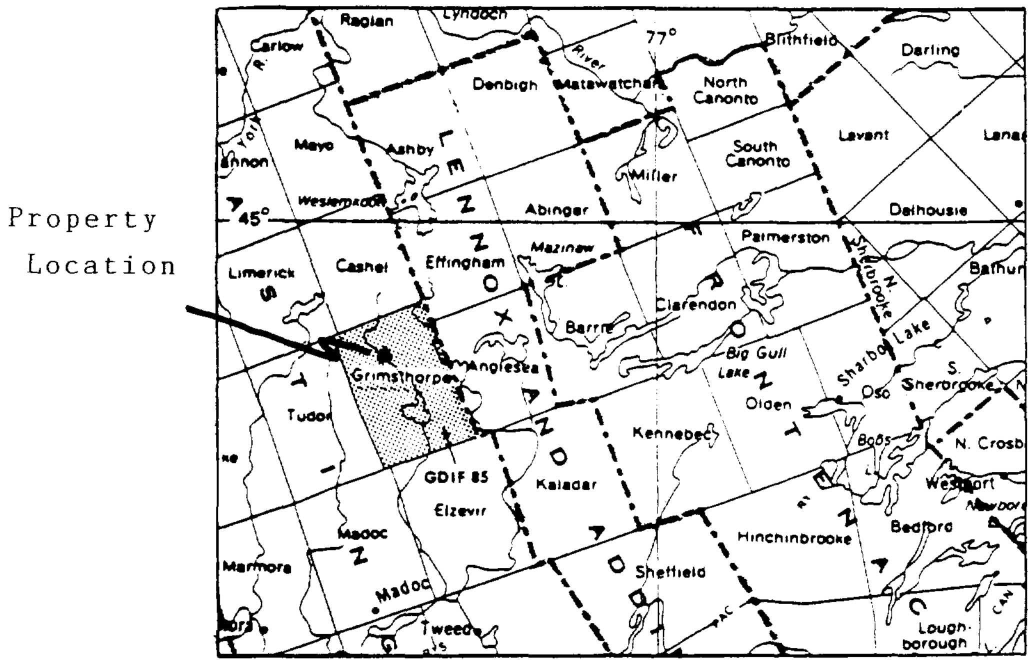
During the 1992 program a cut baseline was extended 3900 metres on a bearing of 300 degrees making the total length of the baseline 5000 m. Crosslines, every 100 m, were flagged and compassed establishing grid coverage over most the river area.

Geological information is plotted on three appended maps at the scale of 1:2,500. Rock sample locations are plotted on the geological maps. Sample descriptions are summarized within this report. Trench plans are plotted on the scale of 1:25 and 1:50. Trench locations are given on each plan and on the geological maps.

Geological mapping, prospecting and trenching have been carried out by Mr. R.J. Dillman between September 21 to November 13, 1992

TOPOGRAPHY AND LAND-USE

Airphotos of the property reveal many small ponds and streams, the largest of which is the Black River. These



1 inch=16 miles

PROJECT LOCATION

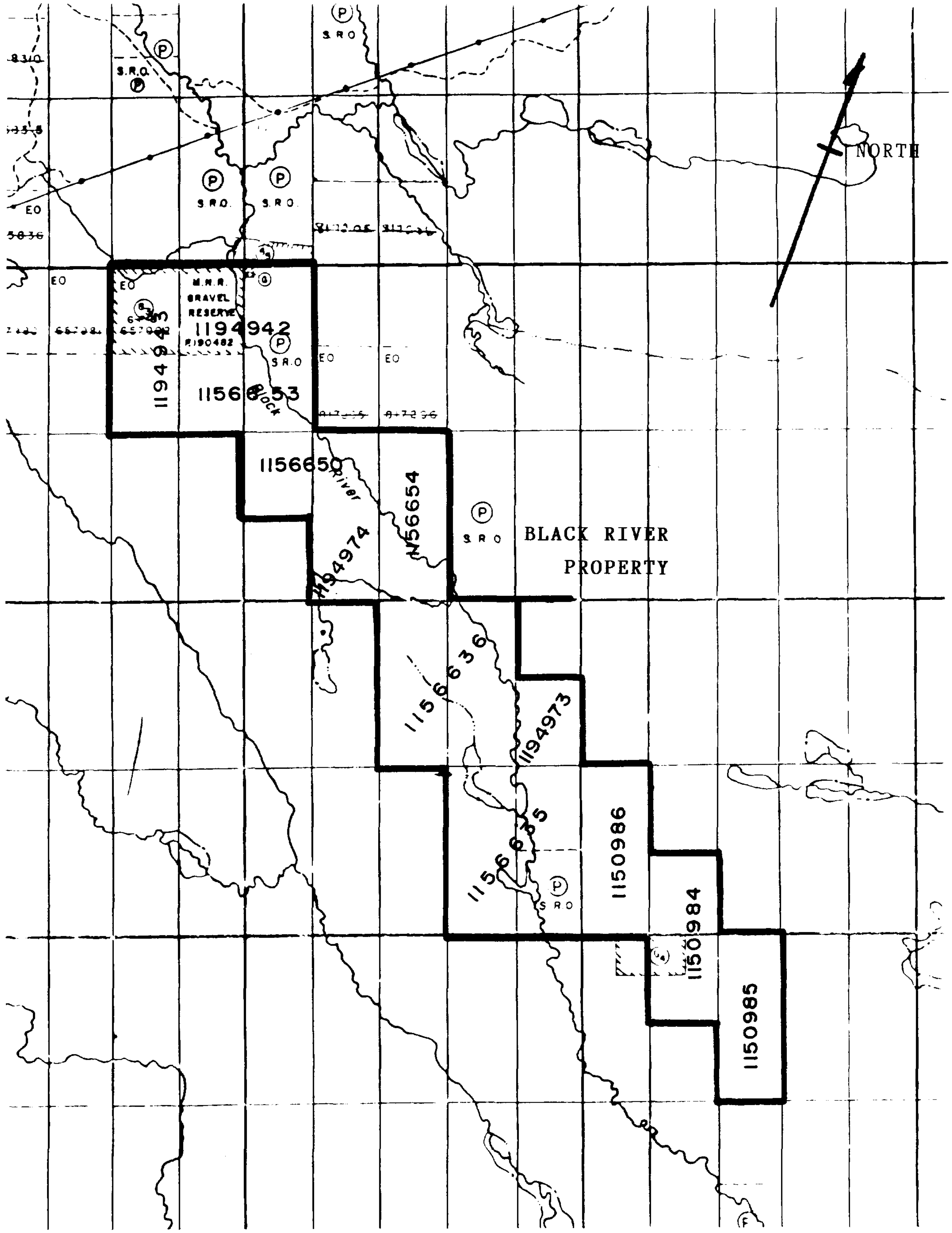


FIGURE 2

BLACK RIVER CLAIM GROUP
GRIMSTHORPE TOWNSHIP, ONTARIO
PLAN: M97

features are confined to topographical lineaments. The largest and most continual set of lineaments prefer a N-NW orientation. These lineaments are offset in places by a weaker set on a NE orientation.

The highest elevations on the property are found east of the Black River. This area is dominated by large outcrops of mafic metavolcanics and shallow overburden consisting of localized till. Outcrop exposure is approximately 75% in this area.

West of the Black River the land is much flatter and outcrop exposure decreases to approximately 10%. Outcrops are confined to the highest elevations and along the sides of depressions. Large areas of land are till covered and most depressions contain swamp or bog.

Most of the overburden on the property is glacial derived. Tills dominate west of the river. They consist of different sized, angular material made up of locally sourced mafic metavolcanic rock and regional sourced, rounded granite boulders. In some isolated areas the tills consist of well-sorted sand and gravel. Striations measured on outcrop surfaces suggest glacial advancement was from N.4 degrees E.

Vegetation on the property is variable. Hardwoods such as birch, maple, and oak grow in the higher elevations. White pine, spruce, and balsam occur in flatter areas. Lower areas have jack-pine, balsam, and alders.

Recently, there has been very limited logging activities conducted west of the Lingham Lake Access Road. Other industrial land-use includes sand and gravel extraction in the north section of the property. Recreational land-use only appears to be hunting and for this purpose a number of small cabins are located within the property boundary.

PREVIOUS EXPLORATION ACTIVITIES

Grimsthorpe Township has a sketchy history of mineral exploration. Except for the 1991 survey no evidence has been found to suggest that the claim group has every been prospected. There is also no report of work filed with the Ministry of Natural Resources for the area of the property.

Mineral exploration, mainly for gold, has been concentrated in the western and northwestern regions of the township. During 1909 to 1914, gold was produced from the Gilmour Mine in lot 30, concession 19. This mine has the only record of production in Grimsthorpe Township.

Talc was discovered in 1910 in lots 8, 9, and 10, concession 5.

Regional geology was first mapped by Meen and Harding (1942). They reported talc occurrences in lot 13, conc. 4. They also reported numerous sulphide occurrences in meta-sedimentary schists in the Lingham Lake area.

In 1954, Stratmat Limited carried out a ground electro-magnetic survey over the talc occurrences in lot 13, conc. 4.

In 1955, drilling was preformed on the claim group referred to as the McMurray Group. A total of 793 feet were drilled to test an arsenic occurrence in lot 33, concession 11.

After 1955, the Gilmour Mine and the area in proximity to the mine appear to be the only area of interest for mineral exploration. Currently this area is held by Homestake Minerals.

In 1990, much of Grimsthorpe Township and neighboring Anglesea Township were mapped by R.M. Easton of the Ontario Geological Survey.

Gold was discovered in the Black River area in 1991 by R.J. Dillman. This resulted in the staking of several claims. He subsequently carried out geological and geophysical surveys over limited portions of the property.

C.A. Wagg of Denbigh, Ontario staked 5 additional claims along the trend of the Black River. These claims were recorded in Dillman´s name.

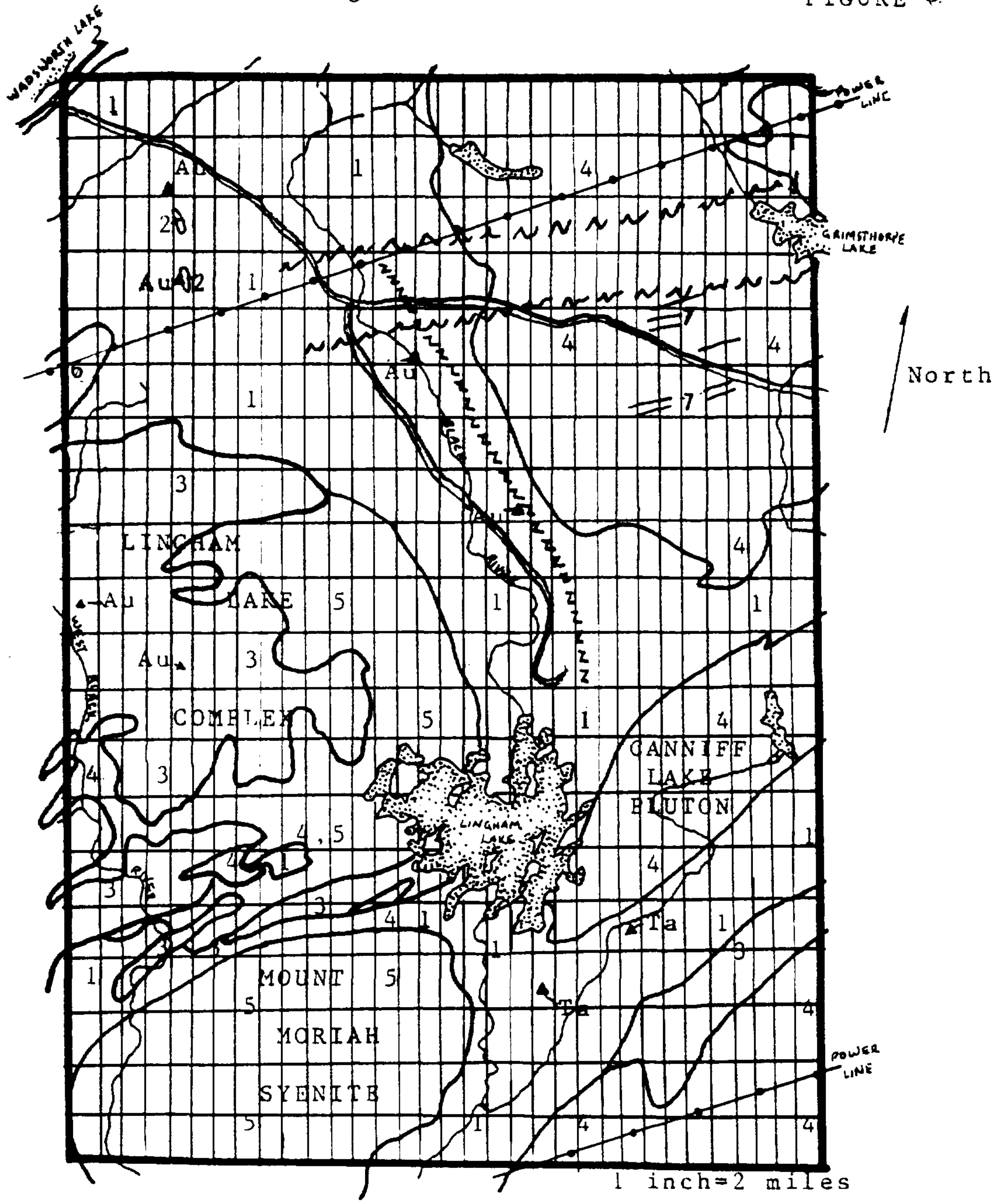
In the summer of 1992, the property was visited by Brian Christie, a geologist representing Homestake Minerals. Mr. Christie undertook limited prospecting, soil sampling, and geological mapping in isolated regions of the claim group. His work led to the discovery of gold in lot 20, concession 16 and what is now known as the Christie Showing. Christie also staked several claims to the north and recorded them in Dillman´s name.

Further staking was conducted in the fall of 1992 by Dillman. A grid was constructed over portions of the new claims for control over geological, magnetic, and electromagnetic surveys. This work has led to the discovery of several more gold showings in the Black River area.

REGIONAL GEOLOGY

Grimsthorpe Township is in the Madoc-Bancroft region of the Grenville Structural Province. The geology of the township is summarized in Figure 3. A sequence of formations is presented in Table 1.

FIGURE 3



GEOLOGY OF GRIMSTHORPE TOWNSHIP

7	diabase	▲	mineral occurrence
6	trondhjemite	Au	gold
5	syenite	Ta	talc
4	granite	NNN	fault
3	diorite		
2	metasediment		
1	mafic metavolcanic		

(modified after Easton and Ford, 1991)

TABLE 1

TABLE OF FORMATIONS

CENOZOIC

RECENT
Swamp, lake, and stream deposits.
PLEISTOCENE
Clay, silt, sand, gravel.

UNCONFORMITY

PROTEROZOIC

INTRUSIVE ROCKS
Granitic and syenitic dikes and sills.
Granitic and syenitic rocks.
Mafic dikes and sills.
Mafic intrusive rocks.

INTRUSIVE CONTACT

METASEDIMENT AND METAVOLCANICS
Carbonate metasediments.
Clastic metasediments.
Felsic Metavolcanics.
Mafic metavolcanics.

(modified after Meen, 1942)

Grimsthorpe Township is equally divided between mafic metavolcanic rocks and igneous intrusive complexes. All rocks are of the Middle to Late Proterozoic.

Mafic metavolcanics consist of intrusive and extrusive, fine-grained basaltic and coarser-grained gabbroic flows. Between flows schists may occur which can be sedimentary derived and/or be related to volcanism.

At least five large, separate plutonic bodies intruded into the mafic metavolcanic-metasedimentary sequence. These intrusive bodies vary in composition and range from gabbro, diorite, to tonalite. The result of these intrusions caused two distinct trends of foliation to develop within the mafic metavolcanic-metasedimentary sequences. The two trends are N-NW and NE-SW and they are controlled by proximity to the plutons. In the area north-northeast of Lingham Lake a significant structure may exist that separates the two trends.

During the formation of the plutonic masses, the meta-volcanic-metasedimentary sequence was intruded by dikes of either mafic or felsic composition.

Metamorphic grade in Grimsthorpe Township ranges from upper greenschist-facies to middle amphibolite-facies (R.M. Easton, 1990). The range of metamorphism appears to be dependent on the proximity to plutons, such that, amphibol-itized metamorphic aureoles exists around some of the plutonic bodies. The presence of biotite is a major accessory mineral in most rocks throughout the township.

A number of faults and shear zones have been recognized within the township (Easton, 1990). As well as these structures, airphoto observations show many topograghic linea-ments, some of which are certain to be fault structures. The most dominate direction of the linear features is N-NW. A second preferred orientation is E-NE. This second direction is consistent with a regional structure that cuts across the northern section of the township (Easton, 1990). From field and airphoto observations it is apparent that the E-NE lineaments may post-date N-NW lineaments. This is based on crosscutting relationships.

II. PROPERTY GEOLOGY AND MINERALIZATION

LOGISTICS

Mapping has been carried out on compassed and hip-chained lines and between lines where outcrops occur. All geological data has been compiled on three maps that cover the entire claim group at a 1:2,500 scale. These maps are appended to this report. Table 2 represents a stratagraphic section for the property. Geological mapping was conducted by R.J. Dillman.

TABLE II.

**TABLE OF FORMATIONS FOR THE
BLACK RIVER PROPERTY
GRIMSTHORPE TWP. ONTARIO**

CENOZOIC

Recent
swamp, lake, and stream deposits

Pleistocene
clay, silt, sand, gravel

Unconformity

PROTEROZOIC

Intrusive Sills and Dikes
gabbro
Intrusive contact
aplite dikes
mafic dikes (diabase?)

Intrusive contact

Metasedimentary and Metavolcanic Rocks
mafic volcanic intrusive/extrusive flows
Unconformity?
carbonate sediments
clastic sediments
mafic volcanic intrusive/extrusive flows

Mafic Metavolcanic Rocks

Mafic metavolcanic rocks occur over approximately 90% of the property. They are believed to be the oldest rock types. This unit is composed of: massive fine-grained flows, coarser grained gabbroic flows, and less abundant agglomerate. Fine-grained massive flows and coarser-grained gabbroic flows are equally distributed over the map area. Defining true contacts for the flows is impossible since they appear to occur as interflows of varying thickness. Fine-grained flows have a basaltic composition that is dark greyish-green on a fresh surface and grey on a weathered face.

There appears to be at least 2 or 3 ages of gabbroic rocks on the property. Interflowed gabbro with basaltic flows tend to occur west of the Black River. These dark green flows are fine to moderate-grained with anhedral textures. East of the river flows tend to be slightly coarser-grained and more massive. Grain composition is more easily recognizable and color differences between feldspar and pyroxenes is obvious. Subhedral crystals of amphiboles are present in these flows and may be a metamorphic feature. A third type of gabbro forms a sill-like body in the vicinity of the river on line 37+00N, lot 20, concession XVI (Map 1C). The gabbro is coarse-grained, and mottled white and grey with easily recognizable plagioclase and pyroxene grains. This gabbro is quite fresh on appearance and does not resemble other gabbroic flows within the map area. It is quite possibly the youngest rock type on the property.

Agglomerates have only been observed in areas west of the river. In these areas their occurrences are limited but become more frequent in the northern sections of the property. They have a massive fine-grained matrix of grey color and various sized, subangular and slightly coarser-grained clasts. Both matrix and fragments appear to be of basaltic composition. Agglomerates are found as interflows with other mafic-metavolcanic rocks.

Mafic schist units are usually found with meta-sedimentary units. They form somewhat continual formations and occur along contacts with mafic metavolcanic flows. They are dark green in color and aphanitic textured. They appear to be of basaltic composition although a chlorite-sericite unit was observed at 24+50N, 0+35E (Map 1B). Mafic schists are generally well-foliated. This fabric may be caused by shearing.

METASEDIMENTARY ROCKS

Metasedimentary rocks comprise approximately 15% of the map area. They form well-foliated, schistose units that are usually thin but continuous over the property. They are found more frequently along the Black River and in areas to the west and occur in the most recessive topography. Members of this unit include: greywacke, argillite, graphitic schist, and quartz-feldspar-biotite schist. Their formation appears to have occurred in a lacustrine and/or fluvial setting.

One characteristic of metasedimentary schists is the presence of rust on weathered surfaces. This is largely due to the abundance of pyrite and lesser amounts of fine, disseminated pyrrhotite. Pyrite can total as much as 10% of the total rock content. It forms as disseminations and stringers on fractures and cleavage plans. Traces of magnetite have been observed in certain localities. Other accessory minerals include biotite occurring as thin interlayers and filling fracture plans, plus quartz veins of various textures.

Of all the members in this unit, quartz-feldspar-biotite schist is the most important member for prospecting purposes. Quartz veins and silicified aureoles around veins occurring in the schists have returned significant gold values. These occurrences will be described in detail later in this report.

The only other metasedimentary rock type observed on the property is marble. Two small outcrops occur in lot 14, concession XIII on the north side of the swamp crossing lines 5+50S and 7+50S (Map 1A). The marble has a sucrosic, banded texture, ranging in color from white, grey, and rusty brown. On a weathered surface it appears light-brown. Strata-graphically, this marble may represent a period of subdued volcanism and that an unconformity may exist along this horizon (C.A. Wagg, 1991).

MAFIC DIKES

Mafic dikes have only been observed within schist units on the property although they probably exist within areas of metavolcanic flows. They are most frequently found in the metasedimentary units closest to the river but they have also been observed in schists outside the property. The dikes are dark greenish-black with varied grain sizes ranging between fine and medium-grained. Coarser-grained dikes are strongly amphibolitized. Width of dikes has not been observed more than 2 m wide and they strike parallel too or at low angles to schistosity. Mafic dikes are strongly jointed with fractures running at right-angles to their margins. Accessory minerals include traces of magnetite, pyrrhotite, and biotite on fracture plans.

FELSIC DIKES

Felsic dikes, or referred to as aplite dikes, have been observed across most of the N-S length of the property. They have been found to be restricted only to the metasedimentary schist-mafic metavolcanic contact along the Black River lineament and the extension of this lineament into lots 13 to

15, concessions XII and XIII. The rock consists of very fine-grained, glassy to sucrosic quartz and feldspar with a low percentage of quartz occurring as small masses or droplets. Flaky biotite and clots of muscovite are common. Biotite may show weak foliations parallel to the trend of the dike. White, sometimes weakly Fe-carbonated quartz veins <0.5 m wide occur in the aplite dikes.

Depending on location there is at least two common orientations to the dikes. In the northern and central regions of the grid this trend is on the average 150 degrees. In the southern regions dikes are orientated on the average 90 degrees. Further mapping is needed to understand the relationship between to two distinct trends. Felsic dikes have also been observed to crosscut the general trend of rock units including that of mafic dikes. They have been observed in both mafic metavolcanic rocks and metasedimentary units but only occurring along the one linear trend.

STRUCTURE AND METAMORPHISM

Based on contacts and foliation measurements of the major rock units in the map area the general trend of geology is on an average of 125 degrees. This direction is conformable to the shape of the plutonic bodies contacting on either side of the mafic-sedimentary belt on which the property is found.

Foliation and schistosity measurements suggest that three structural events may have occurred on the property:

S1.) Development of a strong foliation/schistosity between 120-130 degrees that dips to the SW between 40 degrees and vertical. This direction has been observed in all major rock units. In metasedimentary units this direction is partly due to original bedding and/or regional metamorphism induced during plutonism and folding. The later applying to all major rock types.

S2.) Development of a weak to moderate foliation of 130 to 150 degrees, with low to steep dips towards W to SW. This type has been superimposed on S1 type foliations. The direction is observed in all rock types but is most apparent in schist units. This foliation might be caused by localized shearing.

S3.) Development of moderate foliation between 80 to 110 degrees. This direction is superimposed on all other types of foliations. This foliation coincides with less prominent E-W trending topographical lineaments and is consistent with E-W striking faults observed by Meen (1942) and Easton (1990). This foliation dips moderately south.

Jointing measurements suggest at least two structural phases. One set of joints ranges between 140 to 170 degrees and dips moderately to the S and SW. This set coincides with S2 type foliations and therefore may be a product of localized shearing. This range of jointing is best observed in outcrops along the river lineament and its extension into the southern claims.

A second range of jointing has been measured from 80 to 110 degrees and can dip very steeply N or S. This second set offsets the first set of joints and falls within the range of S3 type foliations. They also appear to coincide with regional E-W faulting. This second range of jointing is commonly seen in mafic metavolcanic outcrops east of the river and within mafic dikes along the river lineament. Joints of this orientation have been observed to break and offset (on a centimetre scale) quartz veins on lines 4+00S to 8+00S, lot 14, concession XII. These veins occur in a meta-sedimentary unit and have significant gold values associated with them.

In the northern section of the claim group a third set of joints was observed in a mafic metavolcanic outcrop along the Lingham Lake Road. This jointing has average orientations of 10 degrees and steep westerly dips. It is not known what is the cause of these features.

Some localized zones of shearing have been located in metasedimentary units within the claim group. The most notable areas of shearing occur along the river lineament and its southern extension in to lot 14, concession XII. These zones, although erratic in width (<3.0 m) and intensity, have been traced up to 400 m trending at low angles to/or parallel foliation. Sheared rock usually consists of quartz-feldspar-biotite schist but shearing, to a lesser degree is present in all other rock types. Shear zones in quartz-feldspar-biotite schist may have quartz veining, silicification, and mylonitization to the host rock, and mineralization consisting of arsenopyrite, pyrite, and gold. Biotite is usually present on cleavages and joints.

Other localized zones of shearing occur along mafic and felsic dike contacts but they are usually thin and discontinuous zones. Some minor shearing has been located in mafic flows but assay results have shown that they economically unimportant.

Metamorphism on the property ranges between high greenschist facies to lower-middle amphibolite facies. Biotite is present in all rock types while chlorite has only been noted in three isolated occurrences. Muscovite is present as clots in aplite dikes. Hornblende is present in most rock types and the frequency of amphibole occurrence increases from east to west across the property suggesting that metamorphism increases in this direction.

PROPERTY MINERALIZATION and ALTERATION

Prospecting has shown that at least four environments exist that return gold values upon assaying:

1. Fine to medium-grained sucrosic quartz veins with arsenopyrite and pyrite.

2. Fracture controlled glassy, grey to blue-smokey, quartz veins with arsenopyrite and pyrite.

3. Disseminated to clotty arsenopyrite and pyrite in silicified shears and vein aureoles.

4. Coarse pyrite in chlorite along contact of quartz veins.

All gold-bearing zones have been found in the quartz-feldspar-biotite schist member of the metasedimentary unit. These zones are all located within the Black River lineament and the extension of this lineament into lots 14 and 15, concessions XII and XIII.

Type 1 gold environments consist of granular, rusty quartz veins with 1-15% clotty to semi-massive arsenopyrite and <5% pyrite. A large percentage of the vein may be biotite-rich fragments of wallrock with fine tourmaline coating and scattered throughout the inclusions. These veins appear to run nearly parallel to host rock yet, no evaluation of strike lengths have been determined for any individual veins. Some veins can be >25 m in length and others up to 0.5m in width. Grab samples of this style of mineralization show up to 2.3-56 g/t gold.

Type 2 mineralization consists of glassy to granular quartz veins, grey to blue to clear in color. These veins are filling fracture systems in quartz-feldspar-biotite schist. The systems conform to the strike of the metasedimentary unit and have been traced <400m in length with possible strike lengths greater than three times that. Width of systems are narrow but variable; 1 to 40cm. In the systems quartz surrounds fragments of wallrock, but unlike type 1 veins, there is very little alteration to the fragments. Sulfides in the systems consist of <5% arsenopyrite occurring as fine smears, disseminations and clots of euhedral crystals. Pyrite totalling <5% forms disseminations to stringers in wallrock and veins and fills crosscutting joints that are <0.5cm wide. Samples of type 2 environments have returned gold values of 1.0-11.5 g/t.

Type 3 style of mineralization consists of silicified quartz-feldspar-biotite schist with some degree of mylonitization. These zones usually occur in combination with type 2 mineralization and occur less with type 1 veins. Quartz stringers <10cm are common in type 3 zones. Distinguishing veins from alteration is sometimes difficult. Dimensions of altered zones are variable and can range up to 1.0m wide. They appear to be poddy zones along trend. Accessory minerals include <5% fine-disseminations of arsenopyrite and clotty to stringered pyrite. Occasional fine-disseminated pyrrhotite is present totalling <3%. Other minerals include fine tourmaline and flaky, fracture-controlled biotite. This type of mineralization has returned values grading from trace-21.6 g/t gold.

Type 4 mineralization is different than types 1 to 3. This mineralization consists of clotty to semi-massive pyrite and chlorite along both contacts of a quartz vein. There has been shearing along the contacts. The quartz is white and crystalline and has traces of pyrite. The mineralization occurs in quartz-feldspar-biotite schist along the river lineament (TR-3). Assays of the vein have shown up to 1.3 g/t gold and only traces in chip samples. Chlorite and pyrite collected together from both contacts have assayed 21.9 g/t gold.

Other quartz veins not previously mentioned occur in various rock types and locations over the property. So far these veins have had negative results when sampled for gold. All these veins are white and crystalline with varying widths of up to 0.5m. Many of the veins occur in metasedimentary horizons and trend parallel to the host rock. These veins can be folded, boudinaged, and carry traces of pyrite. Veins have been noted that are filling fractures in mafic metavolcanic flows. These fracture-veins prefer orientations that are at right-angles to geological trend and could be related to regional or local E-W structures. Quartz veins of widths <0.5m have been seen in aplite dikes but they are generally void of sulfides and may be fracture controlled. Stockwork systems of veining with associated Fe-carbonate have occasionally been observed in Fe-carbonate altered gabbroic flows.

Fe-carbonate altered zones in gabbroic flows are lens shaped and mostly found east of the river. They may contain quartz stockworks, traces of pyrite and magnetite. No gold has been detected with this mineralization.

Pyrite, pyrrhotite, and rarely magnetite are found in most rock types on the property, particularly schist units. Pyrite forms as stringers along cleavages and fractures, and as disseminations with fine pyrrhotite.

Galena occurs in a quartz vein in the south 1/2 of lot 14, concession XIII (TR-4).

III. DESCRIPTIONS, RESULTS, AND LOCATIONS OF ROCK SAMPLES

A total of 110 rock samples were collected from the claim group between September to November, 1992. This brings a total of 178 rock samples taken from the property to date.

Samples taken in 1992 were sent to Accurassy Laboratories in Kirkland Lake, Ontario. At the lab, the samples were processed by pulverizing the rock with a jaw crusher and then cone crushed to -10 mesh. From this, a 300 gram split was crushed to -100 mesh. For analysis 0.5 gm were analyzed for gold by fire assay-atomic absorption methods. All samples were only analyzed for gold.

Descriptions, results, and locations of rock samples are as follows:

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69551	1150986, S/2 L 15,C XIII 204N,008W MAP 1A	float in swamp, grab	339	quartz-feldspar-biotite schist, qtz stringers, < 10% py, < 5% As
69552	1150986, S/2 L 15,C XIII 204N,009W MAP 1A	float in swamp, grab	117	quartz-feldspar-biotite schist, qtz stringers, < 5% py, < 5% As
69553	1150986, S/2 L 15,C XIII 203N,009W MAP 1A	float in swamp, grab	314	quartz-feldspar-biotite schist, qtz stringers, Tr. py, Tr. As
69554	1150986, S/2 L 15,C XIII 280N,011E MAP 1A,	float in road, grab	1332	sheared+silica, qtz-feld-bio sch. qtz stringers, < 5% py, < 1% As
69555	1150986, S/2 L 15,C XIII, 295N, 020E MAP 1A	rep., 0.70 m	9	white quartz vein in aplite dike, Tr. py
69556	1150986, S/2 L 15,C XIII 312N, 008E MAP 1A	rubble crop grab	77	mafic metavol.+ metased. schists, minor qtz veins < 1 cm wide, <3% py Tr. As

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69557	1156636, N/2 L 17,C XIV, 1750N, 008W MAP 1B	float, angular .4*.2*.1 m	<5	quartz, rusty fractures, Tr. py
69558	1156654, S/2 L 18,C XV 2212N, 184E MAP 1B	float, angular	<5	quartz on mafic outcrop, Tr.
69559	1156654, S/2 L 18,C XV 2206N, 189E MAP 1B	grab 0.3 m	6	qtz stringers in mafic+sed schists 1% hematite, Tr. py
69560	1156654, S/2 L 18,C XV 2200N, 192E MAP 1B	rep., 1.0 m	5	quartz-feldspar-biotite schist < 5% py, Tr. As?
69561	1156654, S/2 L 18,C XV 2280N, 175E MAP 1B, TR-3	float in animal hole	3505	quartz, many pieces, chlorite + py along contacts
69562	1156653, S/2 L 20,C XVI 3467N, 011W MAP 1C	float, angular	927	siliceous + sheared qtz-feld-bio schist, 15cm quartz vein, <5% As, <5% py
69563	1156653, S/2 L 20,C XVI 3530N, 004W MAP 1C	rubble crop grab, 0.2 m	67	argillite with 10 cm qtz vein 1% py + po
69564	1156653, S/2 L 20,C XVI 3680N, 077E MAP 1C, TR-1	float on metased o/c, angular, rep.	56,832	granular quartz, disseminated to semi--massive, clotty As <30%, fragments of wallrock in vein.
69565	1156653, S/2 L 20,C XV 3467N, 010W MAP 1C	float on metased o/c angular, many peices	682	siliceous + sheared qtz-feld-bio. schist with grey-blue qtz stringers < 5cm wide, <20% As

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69566	1136653, S/2 L.20,C.XV, 3467N, 011W MAP 1C	float on metased o/c, angular, many peices	680	siliceous + sheared qtz-feld-bio. schist with qtz stringers <5cm wide, 5% As, <5% py
69567	1156654, S/2 L.18,C.XV, 2298N, 049E MAP 1B	grab, 0.5 m	33	qtz--feld-bio. schist, weak silicification + qtz veins <1 cm wide, Tr.-10% py
69568	1156654, S/2 L.18,C.XV 2292N, 047E MAP 1B	grab, 0.3 m	13	silicified qtz-feld-bio schist + weak quartz stringers, 5-10% py
69569	1156653, S/2 L.20,C.XVI 3680N, 077E MAP 1C, TR-1	float, under 69564, rep.	3327	granular quartz, medium grained, fragments of wallrock in qtz, 5-10% As dissem. to semi-massive.
69570	1156653, S/2 L.20, C.XVI 3680N, 077E MAP 1C, TR-1	float, 0.3* 0.3*0.3 m, angular	3535	granular quartz with fragments of metasediments, biotite along fractures, 5-20% As dissem. to semi-massive
69571	1156653, S/2 L.20, C.XVI 3690N, 079E MAP 1C	float, 0.3* 0.2*0.2 m, angular	7	rusty quartz, muscovite clots, Tr.-10% py
69572	1156653, S/2 L.20, C.XVI 3665N, 075E MAP 1C, TR-1	rep., 0.5 m	19	qtz-feld-bio. + graphitic schist + greywacke, <10% py, <3% po
69573	1156653, S/2 L.20, C.XVI 3689N, 095E MAP 1C	grab, 0.5 m	9	qtz-feld-bio. schist, <5% py + po

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69574	1156653, S/2 L.20, C.XVI 3685N, 076E MAP 1C, TR-1	float, 0.4* 0.2*0.1 m, angular	8	qtz--feld-bio. schist, <5% py + po
69575	1156653, S/2 L.20, C.XVI 3673N, 076E MAP 1C, TR-1	float, 0.4* 0.3*0.2 m, angular	10	qtz-feld--bio. schist, <5% py + po
69601	1156635, N/2 L.16, C.XIII 653N, 035W MAP 1A	rubble crop, 0.45 m, grab	<5	quatrz vein in Fe-carb altered gabbro, rusty fractures, Tr. py
69602	1150984, S/2 L.14, C.XIII 380S, 131W MAP 1A, TR-4	trench debris, rep.	534	qtz-feld-bio. schist, mod. silicification + qtz stringers, <3% py, <5% As, <2% po
69603	1150984, S/2 L.14, C.XIII 380S, 131W MAP 1A, TR-4	trench debris, rep.	20,218	granular quartz, medium grained, clotty to semi-massive As <10%, <3% py
69604	1150984 S/2 L.14, C.XIII 401S, 115W MAP 1A, TR-4	trench debris, rep.	2208	granular quartz, medium grained, disseminated to clotty As <3%, <3% py, Tr. po
69605	1150984, S/2 L.14, C.XIII 398S, 115W MAP 1A, TR-4	trench debris, rep.	2267	quartz, similar to 69604, <15% As <5% py
69606	1156653, S/2 L.20, C.XVI 3640N, 075E MAP 1C	float, 1.0* 0.4*0.3 m, angular	5	quartz-feld-bio. + greywacke, weak shearing, <3% py, <2% po
69607	1156636, N/2 L.17, C.XIV 1460N, 025W MAP 1B	float, 2 pieces on gabbro, grab	<5	mafic metavol. schist, weakly chloritized, <1% py, <1% po

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69608	1156636, N/2 L.17, C.XIV BL., 1548N MAP 1B	grab, 2.0 m	<5	gabbro, moderate Fe-carb altered, 3% biotite, <1% py, 1% magnetite
69609	1156650, N/2 L.19, C.XV 3000N, 075E MAP 1C	rep., 0.4 m	94	qtz-feld-bio.+ mafic metavol. schists + metased schists, chert? biotite along fractures, <5% py
69610	1156650, N/2 L.19, C.XV 3001N, 076E MAP 1C	rep., 0.4 m	117	siliceous metased sheared, <5% bio. along fractures, <5% py, <2% po
69611	1156650, N/2 L.19, C.XV 3003N, 080E MAP 1C	grab/rep., 1.4 m	582	qtz-feld-bio. schist, sheared, siliceous, some greyish quartz stringers <2 cm wide with Tr. As, <15% py in schists
69612	1156650, N/2 L.19, C.XV 3003N, 080E MAP 1C	float, large, angular, grab	9	white to rusty quartz on schist o/c. Tr. py
69613	1156650, N/2 L.19, C.XVI 3175N, 090E MAP 1C	grab, 0.3 m	18	quartz-feldspar-biotite schist, weak shearing, <3% py, Tr. As
69614	1156650, N/2 L.20, C.XV 3102N, 135W MAP 1C	chip, 0.35m	28	mafic metavol. clasts in a quartz-muscovite matrix, unit 0.35 metres wide, Tr. py + po, Tr. As
69615	1156650, N/2 L.20, C.XV 3102N, 136W MAP 1C	chip, 0.4 m	39	silicified unit above conglom., qtz nodules <1cm dia., <10% py, <1% po, Tr. As?

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69616	1156650, N/2 L.20, C.XV 3225N, 100W MAP 1C	float, 0.5* 0.4*0.3 m, angular, rep.	8	white quartz, crystalline, rusty fractures, Tr. py
69617	1156650, N/2 L.20, C.XV 3220N, 100W MAP 1C	grab, 10 m	<5	mafic metavol. + metased. schists, Tr-10% py dissem. to stringered, < 2% fine po
69618	1156650, N/2 L.20, C.XV 3190N, 100W MAP 1C	float, 0.4* 0.4*0.2 m, angular	<5	quartz vein in schist, white + rust, crystalline 5-10% py along contact.
69619	1150985, N/2 L.13, C.XII 1125S, 260W MAP 1A	float, 0.4* 0.2*0.2 m, angular	<5	basalt, <3% py in fractures, <1% po near conductor
69620	1150984, N/2 L.14, C.XII 400S, 118W MAP 1A, TR-4	chip, 0.6 m	480	qtz-feld-bio. schist, mod. silicification, 5-10% dissem. to stringered py, Tr. As, Tr. po
69621	1150984, N/2 L.14, C.XII 400S, 117W MAP 1A, TR-4	chip, 0.3 m	986	qtz-feld-bio. schist, quartz stringers <1cm wide, <5% qtz, 5-10% py, Tr.-5% As associated with quartz
69622	1150984, N/2 L.14, C.XII 400S, 117W MAP 1A, TR-4	chip, 0.25m	3386	sucrosic quartz vein, 5-10% As clots, Tr.-5% py, <2% galena, Tr. po
69623	1150984, N/2 L.14, C.XII 400S, 116W MAP 1A, TR-4	chip, 0.5 m	1579	sugary qtz veins <5cm wide in qtz-feld-bio. schist, <30% qtz, Tr.-10% As, <5% py, <2% po, Tr. galena.

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69624	1150984, N/2 L.14, C.XII 400S, 116W MAP 1A, TR-4	chip, 0.5 m	123	qtz-feld-bio. schist, weak silicification + shearing, minor qtz stringers <1cm wide, <5% py <1% As, <3% po
69625	1150984, N/2 L.14, C.XII 400S, 115W MAP 1A, TR-4	chip, 1.0 m	35	qtz-feld-bio. schist, <3% py, <3% po, Tr. As
69626	1194973, S/2 L.16, C.XIV 810N, 150W MAP 1A	float, rubble crop grab	241	qtz-feld-bio. schist, well-zoned biotite <5% <3% py, 1% po Tr. As
69627	1194973, S/2 L.16, C.XIV 810N, 151W MAP 1A	rubble crop grab	<5	qtz--feld-bio. schist + wacke, white qtz veins <2cm wide, 2% py, 1% po in wallrock
69628	1194973, S/2 L.16, C.XIV 920N, 040E MAP 1A	grab, 2 m	94	qtz-feld-bio. schist + wacke, Tr.-3% py, Tr.-1% po
69629	1150986, N/2 L.15, C.XIII 220N, 010E MAP 1A	float,on road	573	qtz-feld-bio. schist, weak silicification, <5% py, <3% As
69630	1156654, S/2 L.18, C.XV 2392N, 120E MAP 1B	rep., 0.3 m	<5	qtz-feld-bio. schist contacting Fe-carb altered gabbro, 5% py, 3% po
69631	1156654, S/2 L.18, C.XV 2389N, 122E MAP 1B	float, angular fragments, rep.	15	quartz + Fe-carb, on Fe-carb zone in mafic metavol. rusty.

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69632	1156654, S/2 L.18, C.XV 2387N, 217E MAP 1B	grab, 1.0 m	<5	gabbro, chlorite + Fe-carb altered, Fe-carb veinlets <1cm wide random orientation, Tr. py
69633	1156654, S/2 L.18, C.XV 2200N, 175E MAP 1B	grab, 3.0 m	<5	qtz-feld-bio. schist + gabbro, Tr.-5% dissemin. py + po
69634	1156654, S/2 L.18, C.XV 2230N, 175E MAP 1B, TR-3	float in animal hole, rep., large block	1301	crystalline qtz, muscovite along fractures, rusty, Tr. py
69635	1156654, S/2 L.18, C.XV 2290N, 200E MAP 1B	grab, 0.3 m float	<5	quartz vein of undetermined size in Fe-carb altered gabbro Tr. tourmaline Tr. py
69636	1156653, S/2 L.20, C.XV1 3468N, 008W MAP 1C, TR-2	float, 0.4* 0.3*0.3 m, rep.	795	strong silicification, qtz stringers in qtz-feld-bio. schist?, <10% euhedral As, <3% py
69637	1156653, S/2 L.20, C.XVI 3680N, 080E MAP 1C, TR-1	rep., 0.35 m	9	quartz vein in qtz-feld-bio. schist, vein is boudinaged, Tr. py
69638	1156653, S/2 L.20, C.XVI 3680N, 080E MAP 1C, TR-1	rep., 1.0 m	5	qtz-feld-bio. schist + qtz stringers < 1 cm wide, <5% qtz, weak silicified aureole around stringers, <10% py, <2% po

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69639	1156653, S/2 L.20, C.XVI, 3683N, 080E MAP 1C, TR-1	float, 0.4* 0.3*0.3 m, subangular rep.	2832	granular quartz, similar to qtz in trench 3 m south, 10-15% As clotty to semi-massive.
69640	1156653, S/2 L.20, C.XVI 3700N, 075E MAP 1C	rep., 1.0 m	16	boudinaged and contorted white, crystalline qtz veins, 4 veins <10cm wide/1.0 m of qtz-feld-bio schist, <5% py
69641	1156653, S/2 L.20, C.XVI 3670N, 067E MAP 1C, TR-1	float, rep., angular, 0.2*0.2*0.1m 5 pieces	710	blue-smokey qtz with fragments of qtz-feld-biotite schist, 2% As, 1% py, could not be located in trench
69642	1156653, S/2 L.20, C.XVI 3670N, 064E MAP 1C, TR-1	float, rep., angular, 0.4*0.3*0.3m	13	white, sugary to crystalline qtz, sourced from vein in trench, Tr. py
69643	1156653, S/2 L.20, C.XVI 3670N, 070E MAP 1C, TR-1	grab, 4.0 m	102	qtz-feld-bio. schist+greywacke, minor sugary qtz stringers < 2 cm wide, minor thin silicified zones, Tr.-5% py, <2% po
69644	1156653, S/2 L.20, C.XVI 3620N, 070E MAP 1C	float, 0.8* 0.4*0.3, angular, grab, 3 pieces	<5	white qtz with blue granular qtz clots, rusty fractures, clotty muscovite, Tr. py
69645	1156650, N/2 L.20, C.XV 3405N, 055W MAP 1C	float, many various sized pieces	136	granular-rusty qtz stringers in metased. schist, stringers < 10cm wide, Tr.-3% py + po

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69646	1150984, S/2 L.14, C.XIII 380S, 127W MAP 1A, TR-4	chip, 0.6 m	41	qtz-feld--bio. schist, weak silicification, 1-5% py, 2% po, Tr. As
69647	1150984, S/2 L.14, C.XIII 380S, 127W MAP 1A, TR-4	chip, 0.4 m	3119	qtz-feld-biotite schist, moderate silicification + shearing, minor qtz stringers <1cm wide that parallel folia., 1-5% py, Tr.-3% As
69648	1150984, S/2 L.14, C.XIII 380S, 127W MAP 1A, TR-4	chip, 0.3 m	5525	granular quartz vein 15 cm wide + silicified aureole, <5% As in clots and disseminations
69649	1150984, S/2 L.14, C.XIII 384S, 123W MAP 1A, TR-4	float, rep., 0.4*0.3*0.3m, 3 pieces	4426	granular quartz similar to qtz found in trenchs, <5% As, 2% py
69650	1150984, S/2 L.14, C.XIII 384S, 122W MAP 1C, TR-4	chip, 1.2 m	37	moderately silicified qtz-feld-bio. schist, minor qtz veins < 1cm wide, 2-5% py, Tr.-2% As, Tr. po, Tr. tourmaline
69651	1150984, S/2 L.14, C.XIII 550S, 174W MAP 1A, TR-5	chip, 1.4 m	164	qtz-feld-bio. + minor greywacke beds, weak shear plains that parallel foli., qtz stringers <1cm wide in shears, <5% py

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69652	1150984, S/2 L.14, C.XIII 551S, 175S MAP 1A, TR-5	float in swamp, angular	1881	qtz-feld-bio. schist with qtz stringer 10 cm wide, moderate silicifation to wallrock, 5-10% As, Tr.-3% py
69653	1150984, S/2 L.14, C.XIII 570S, 173W MAP 1A, TR-5	chips, 0.2 m	527	10 cm qtz vein + siliceous qtz-feld-bio. schist, <5% As, 1-3% py, 50% qtz
69654	1150984, S/2 L.14, C.XIII 570S, 172W MAP 1A, TR-5	chip, 1.2 m	72	qtz-feld-bio. schist, minor qtz stringers with Tr As, Tr.-5% py in wallrock
69655	1156653, S/2 L.20, C.XVI 3740N, 175E MAP 1C	rubble crop	7	mafic metavol. + metased. schist with 25cm quartz vein, white crystalline, Tr. py in contacts.
69656	1156653, S/2 L.20, C.XVI 3792N, 102E MAP 1C	float, +8 pieces, large <1 m, subangular	3059	blue-smokey qtz stringers <10 cm in qtz-feld-bio. schist, sheared, <5% disseminated to stringered py, 1-10% As.
69657	1156653, S/2 L.20, C.XVI 3787N, 105E MAP 1C	large float, angular	672	qtz vein <15cm + siliceous qtz-feld-bio. schist, semi-massive As in vein + dissem. in wallrock, 70% qtz, 15-20% As.
69658	1156653, S/2 L.20, C.XVI 3795N, 103E MAP 1C	float, 0.5*0.5*0.2 m, angular	2168	blue-smokey qtz in qtz-feld-bio schist, frag. of wallrock in vein, 5% As, 2% py

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69659	1156654, S/2 L.18, C.XV 2280N, 175E MAP 1B, TR-3	rep., 0.15 m rubble crop	21,911	sheared contacts on both sides of quartz vein, shear filled with chlorite + semi-massive py, 60/40 chl/py.
69660	1156654, S/2 L.18, C.XV 2280N, 175E MAP 1B, TR-3	chip, 0.25 m rubble crop	16	gossaned, vuggy quartz, chlorite blebs 5%, Tr. py vein is loose in bedrock.
69661	1156650, N/2 L.19, C.XV 3205N, 090E MAP 1C	rep., 0.4 m	553	<10 cm qtz vein + silicified qtz-feld-bio. schist, fragments of wall rock in vein, Tr-5% As, Tr.-5% py, vein contacts mafic dike
69662	1156650, N/2 L.19, C.XV 3210N, 088E MAP 1C	rep., 0.2 m	6	white quartz with rusty fractures, boudinaged in metasediments, Tr. py
69663	1156650, N/2 L.19, C.XV 3070N, 081E MAP 1C	chip, 0.25 cm	1090	sheared and siliceous qtz-feld-bio. schist contacting with aplite dike, 3% As, 5% py.
69664	1194942, N/2 L.21, C.XVI 3950N, 175E MAP 1C	float, 0.5* 0.4*0.3 m, subangular	1644	siliceous + sheared qtz-feld-bio. schist, weak chlorite, <3% As, 5% py
69665	1156653, S/2 L.20, C.XVI 3660N, 065E MAP 1C, TR-1	chip, 0.4	41	sheared and brecciated qtz-feld-bio. schist contacting aplite dike, weak-mod. mylonitization, <10% fine py.

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REFER.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69666	1156653, S/2 L.20, C.XVI 3660N, 064E MAP 1C, TR-1	chip, 0.2 m	65	qtz stringers along dike contact <2cm wide, Tr.-5% py
69667	1156653, S/2 L.20, C.XVI 3660N, 066E MAP 1C, TR-1	chip, 0.9 m	18	qtz-feld-bio. schist, weak shearing, minor qtz stringers <2cm wide, Tr.-10% py
69668	1156653, S/2 L.20, C.XVI 3660N, 066E MAP 1C, TR-1	chip, 0.5 m	10	white qtz vein, crystalline, boudinaged, Tr. py in vein, Tr.-3% py in contact.
69669	1156653, S/2 L.20, C.XVI 3660N, 064E MAP 1C, TR-1	numerous fist-sized pieces found during trenching	724	qtz+qtz-feld-bio. schist, similar to 69641, not located in o/c.
69670	1156653, S/2 L.20, C.XVI 3793N, 097E MAP 1C	float, 0.4*0.2*0.2 m, subangular	1095	metased+qtz-feld biotite schist with qtz veins <5cm wide, chl. clots, <10% As.
69671	1156653, S/2 L.20, C.XVI 3793N, 097E MAP 1C	float, 0.2*0.15*0.15 m, subangular	2347	mostly sucrosic quartz, 5-10% clotty As, 1-5% py
69672	1156654, S/2 L.18, C.XV 2450N, 037E MAP 1B	rep., 2.0	5	chlorite-sericite schist with qtz veins < 5cm cutting schist, weak Fe-carb, Tr. py
69673	1156650, N/2 L.19, C.XVI 2930N, 100W MAP 1C	float, many various sized pieces	7	quartz on metased o/c, white to grey, Tr. py

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REF.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69674	1156653, S/2 L.20, C.XVI 3365N, 100E MAP 1C	rep., 0.3 m	340	qtz-feld-bio. with qtz filling fractures, dissem to stringered py 1-5%, 1-5% As in qtz.
69675	1156653, S/2 L.20, C.XVI 3350N, 105E MAP 1C	rep., 0.35 m	1097	qtz-feld-bio. schist fragments in qtz vein <0.15m wide + silicified wall-rock, 5-10% py, Tr.-3% As in qtz.
69676	1156653, S/2 L.20, C.XVI 3473N, 005W MAP 1C, TR-2	chip, 1.3 m	188	qtz-feld-bio. schist + chlorite filled shears <15cm wide, qtz stringers <5cm in sheared areas, Tr. As in shears, 1-3% py + po.
69677	1156653, S/2 L.20, C.XVI 3473N, 006W MAP 1C, TR-2	chip, 0.6 m	1225	sheared and chloritized meta-sed., minor qtz stringers <5cm wide, 2% As, 5% py + po
69678	1156653, S/2 L.20, C.XVI 3473N, 007W MAP 1C, TR-2	chip, 1.6 m	361	qtz-feld-bio. schist, minor chloritized shear plains <3cm wide, Tr. As, 3% py+po.
69679	1156653, S/2 L.20, C.XVI 3473N, 009W MAP 1C, TR-2	chip, 0.8 m	1263	sheared+siliceous +brecciated meta-sed, blue-smokey qtz stringers <10% wide, 5% clotty to dissem. As, 5% py+po.

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REF.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
69680	1156653, S/2 L.20, C.XVI 3473N, 011W MAP 1C,	chips, 1.4 m	58	mafic + sediment schists, minor thin shear plains with chlorite, Tr. As, 2% py+po.
69681	1156653, S/2 L.20, C.XVI 3680N, 078E MAP 1C, TR-1	chip, 1.1 m	85	qtz-feld-bio.+ minor greywacke, stringered+clotty py <3%, 1% po, Tr. As.
69682	1156653, S/2 L.20, C.XVI 3680N, 077E MAP 1C, TR-1	chip, 0.3 m	4634	granular quartz vein with frag- ments of metased, vein occurs along aplite dike/sed. contact, <20% clotty-dissem. As <5% py.
69683	1156653, S/2 L.20, C.XVI 3680N, 177E MAP 1C, TR-1	chip, 0.25m	4446	same as above, samples of each half of vein.
69684	1156653, S/2 L.20, C.XVI 3679N, 176E MAP 1C, TR-1	chip, 0.25 m	20	aplite dike, biotite filled fractures, Tr. py
69685	1156653, S/2 L.20,C.XVI 3681N, 177E MAP 1C, TR-1	chip, 0.3 m	2782	qtz vein, <20% As clotty-dissem.

* note: the following samples were collected by B.J. Christie (1992) on a property examination for Homestake Minerals.

5512	1156653, S/2 L.20, C.XVI 3730N, 080E MAP 1C	float, possibly local	5	sugary aplite, minor qtz veins, tr. py
5513	1156653, S/2 L.20, C.XVI 3730N, 080E MAP 1C	float, possibly local	<5	grey, sugary aplite, 10% glassy quartz veins, tr. py in wallrock+veins

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REF.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
5514	1156653, S/2 L.20, C.XVI 3730N, 080E MAP 1C	float, possibly local	8	Fe-carb altered mafic metavol., <1% clotty to stringered py.
5515	1156653, S/2 L.20, C.XVI 3740N, 065E MAP 1C	float, possibly local	<5	mafic metavol., moderate Fe-carb alteration, tr.-1% disseminated py.
5516	1156653, S/2 L.20, C.XVI 3660N, 075E MAP 1C, TR-1	rubble crop, grab	11	qtz-feld-biotite schist, graphitic beds, <1% py
5517	1156653, S/2 L.20, C.XVI 3675N, 075E MAP 1C, TR-1	rubble crop, grab	16	aplite, gossaned fractures, tr.-1% py.
5518	1156653, S/2 L.20, C.XVI 3680N, 077E MAP 1C, TR-1	float, possibly local	14,921	sucrosic quartz vein, 2-3% As, <1% py
5519	1156653, S/2 L.20, C.XVI 3535N, 080E MAP 1C	rubble crop, grab	54	graphitic schist, <3% stringered py that parallel and cut foliation.
5520	1156653, S/2 L.20, C.XVI 3530N, 080E MAP 1C	grab of o/c under water	114	qtz vein of unknown extent, 5% calcite, 5% py 1-2% marcasite?
5521	1156653, S/2 L.20, C.XVI 3450N, BASELINE MAP 1C	grab	14	qtz-feld-biotite schist, dissem. py on foliation.
5522	1156653, S/2 L.20, C.XVI 3480N, 010W MAP 1C, TR-2	rubble crop, grab	1921	qtz-feld-biotite schist, 5% sugary qtz veins, 1-2% As, <1% py, arsenopyrite may be fracture or vein related.

SAMPLE No.	CLAIM No. LOT/CONC. GRID COOR. MAP REF.	SAMPLE TYPE/ WIDTH	GOLD ppm	DESCRIPTION
5523	1156653, S/2 L.20, C.XVI 3500N, 050E MAP 1C	float, possibly local	15	fine-grained felsic intrusive, <1% clotty py
5524	1156653, S/2 L.20, C.XVI 3475N, 012E MAP 1C, TR-2	grab, trench?	506	qtz-feld-biotite schist, <1% As+py arsenopyrite may be fracture controlled.
5525	1156653, S/2 L.20, C.XVI 3512N, BASELINE MAP 1C	rubble crop, grab	9	graphitic schist, minor qtz veins, 10% biotite, 1% py+po, tr. As?
5526	1156650, N/2 L.20, C.XV 3190N, 100E MAP 1C	rubble crop, grab	70	cherty/siliceous metasediment, 1-2% clotty py+ fine disseminated po. 5% biotite.
5527	1156660, N/2 L.20, C.XV 3210N, 100E MAP 1C	grab	1201	qtz-feld-biotite schist, moderate Ca-carb alter., fracture control? 2-3% As

IV. SUMMARY OF GOLD SHOWINGS and TRENCHING

HERON POND SOUTH
L. 14, CONC. XII, N/2
L. 14, CONC. XIII, S/2
SO1150984
3+80S, 1+27W to 8+70S, 2+75W
MAPS: 1A, TR-4, TR-5

Fracture system with 1-15cm wide grey to blue-smokey quartz veins, minor silicified and sheared sections in quartz-feldspar-biotite schist and minor greywacke, argillite and graphitic schists. Some sucrosic, type 1 quartz veins present <25cm wide. Mafic dikes trend parallel to schists. Schist unit trends N-NW, dips W-SW at 60-70 degrees. Unit may be offset by near E-W trending structures. Gold-bearing zone may dip more steeply. Maximum width of mineralization observed is 1.55m. Traced >500m by outcrop and float although exposures interrupted by swamp. Best chip sample is 3.4 g/t Au/0.25m. Best grab sample is 21.6 g/t Au taken from float. Gold is associated with arsenopyrite in veins, shearing, and silicified sections of schists.

HERON POND NORTH
LOT 15, CONC. XIII, S/2
SO1150896
2+00N, 0+18W to 2+80N, 0+20E
MAP 1A

Quartz filled fractures in metasedimentary schists. Mineralization tends to occur in the quartz-feldspar-biotite schist member. Traced 60m by float. Much of the float is located below waterline of swamp. Best assay is 1.3 g/t Au in grab of float with 1% arsenopyrite, <5% pyrite. No dimensions determined for zone. Could be extension of the Heron Pond South.

GOPHER SHOWING
LOT 18, CONC. XV, S/2
SO1156654
22+80N, 1+75E
MAPS 1B, TR-3

Sheared contacts of quartz vein in quartz-feldspar-biotite schist? Chlorite + <30% semi-massive pyrite in contacts. Looks very different than any other gold showings on property. Note: all rock is loose in trench (rubble crop?). Best chip sample showed 16 ppb Au/0.25m. Sample only consisted of quartz with <1% pyrite. Best grab of quartz with <2% pyrite showed 3.5 g/t Au. A grab sample which included both contacts showed 21.9 g/t Au. Width of combined contacts is 15cm.

BLACK RIVER SOUTH
LOT 19, CONC. XV, N/2
LOT 20, CONC. XVI, S/2
SO1156653
30+00N, 0+75E to 33+50N, 0+80E
MAP 1C

Grey to blue-smokey, fracture-filling quartz veins and sheared+silicified quartz-feldspar-biotite schist. Traced >350m by outcrop. Best exposures lie under river. Widths variable. Maximum mineralized width noted is <2.0m with average range <0.5m. Maximum width of vein noted is <1.0m with best vein(s) noted along contacts of mafic dike(s). Most veining is <20cm. Shearing+silicification noted in one location along contact with aplite dike. Schist unit strikes NW and dips between 42-70 degrees SW. Fracturing and veining appears to cut schistosity at low angles and dip SW at slightly steeper ngles. Dikes may post-date mineralization. Best chip sample of quartz showed 847 ppb Au/1.0m (Dillman, 1991). Best grab sample of quartz+ quartz-feldspar-biotite schist showed 1201 ppb Au (Christie, 1992) and a similar sample along strike showed 1097 ppb Au representing 0.35m. Gold is associated with arsenopyrite in veining and alteration.

CHRISTIE SHOWING
LOT 20, CONC.XVI, S/2
SO1156653
34+67N, 0+10W to 34+87N, 0+11W
MAPS 1C, TR-2

Metasedimentary schists and minor mafic metavolcanics with parallel sheared and silicified fractures and beds. Zones may include grey to blue-smokey quartz stringers <12cm wide maximum with <5% arsenopyrite, <3% pyrite, and traces of pyrrhotite in wallrock. Schists range in strike between N to NW and dip between 30-76 degrees W to SW. Shearing has occurred along thin fractures, bed contacts, and within beds. There is weak chlorite alteration to shear zones. Shears trend at small angles to or parallel the direction of schistosity and dip SW between 32 degrees and vertical. Mineralization has been traced 20m by outcrop and float. Best chip samples have shown 1263 ppb Au/0.8m and 1225 ppb Au/0.6m, the second sample taken of a parallel shear.

BLACK RIVER NORTH
LOT 20, CONC. XVI, S/2
SO1156653
36+80N, 0+77E
MAPS 1C, TR-1

Sugary quartz vein occurs along the contact of quartz-feldspar-biotite schist and an aplite dike. Clotty to semi-massive arsenopyrite occur in the vein. Quartz contains angular fragments of schist. Biotite + muscovite in fragments and fine tourmaline may coat some of the fragments. Quartz/fragment ratio 70/30. The vein strikes N-NW. The vein-sediment contact dips at 60 degrees SW. The vein-dike contact dips at 48 degrees SW. The vein may pinch and swell; maximum width exposed is 0.55m, minimum width is 0.25m. The vein has been traced 5m by trenching and float. Dike may be cutting vein. The schist unit is mineralized with <3% fine-disseminated pyrite and pyrrhotite but shows no gold. Two chip samples over 0.55m of the vein returned 4.6 g/t Au/0.3m and 4.4 g/t Au/0.25m. The best grab sample showed 56.8 g/t Au.

A second trench has been dug 25 metres to SE of the vein. The trench covers the dike-metasedimentary contact. Although shearing and silicification and quartz veining has occurred along the contact no vein or mineralization was observed that is similar to that in the trench at 36+80N, 0+77E. Before and during trenching 10-15 fist-sized pieces of quartz and meta-sedimentary material were found that contained <3% arsenopyrite. Two samples of this material returned values of 710 ppb Au and 724 ppb Au. This float may have been relocated by glacial activities suggesting that the source would be located towards the north.

BLACK RIVER NORTH BOULDER OCCURRENCE
LOT 20, CONC. XVI, S/2
S01156653
37+87N, 105E to 37+95N, 103E
MAP 1C

Prospecting activities have located an area where approximately 10 various sized boulders of quartz-feldspar-biotite schist occur on the surface of glacial moraine tills. The boulders are angular and up to 1.0*0.5*0.3 m in dimension. They contain sugary and grey to blue-smokey quartz veins (type 1 and 2 veins) well mineralized with arsenopyrite. There is some degree of silicification and shearing to the wallrock and it is well mineralized with arsenopyrite and pyrite. 5 samples taken of some of the float ranged between 672 ppb to 3059 ppb gold. A trench was attempted over the float but it was abandoned because of water seepage. This float has probably been relocated by glacial movements and may have been sourced from an area close-by and to the north. Another piece of float also occurring in glacial till was found at 39+50N, 1+75E. This float ran 1644 ppb Au and is similar to above mention float in mineralization and alteration. These float occurrences suggest that a gold-bearing structure may occur in the area of or under the river.

V. CONCLUSIONS AND RECOMENDATIONS

Within the boundaries of the Black River Property geological mapping and prospecting have lead to the discovery of seven areas where gold mineralization occurs. All the occurrences are coincidental with the Black River lineament and the extension of this lineament into the southern portion of the property. Gold in these zones is associated with arsenopyrite/pyrite mineralization in moderate to narrow quartz veins, quartz-filled fracture zones and sheared + silicified rock of metasedimentary origin.

It appears that there are several different styles of gold-bearing mineralization. Similarities between each of the showings suggest that the area has been subjected to multi-phased fracturing and veining.

To further evaluate the potential of this area it is recommended that geological mapping and prospecting be continued on the property. Many lineaments exist especially west of the current grid that parallel the river lineament. These lineaments may represent similar environments suitable for gold mineralization. Further evaluation of the property could be made with soil geochemistry. Surficial deposits are suitable for this type of survey. Geophysical methods, already being undertaken in certain locations should be extended to cover all areas of the property.

respectivily submitted

Robert J. Dillman, B.Sc
Dated: January 3, 1993

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Christie, B.J., 1992. Report on Prospecting, Geological Mapping, and Soil Sampling, Dillman Black River Property, Grimsthorpe Township, Southern Ontario Mining Division, Ontario. Unpublished internal report for Homestake Canada Ltd.

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C E R T I F I C A T E

I, ROBERT JAMES DILLMAN, do hereby certify as follows:

[1] THAT I am a Mining Exploration Geologist, and that I reside and carry on business at 42 Springbank Drive, in the City of London, Province of Ontario.

[2] THAT I am a Graduate of the University of Western Ontario, with a Bachelor of Science Degree in Geology, 1992.

[3] THAT I have been practising my profession since 1992.

[4] THAT I have been actively prospecting in Canada since 1978.

[5] THAT my Report, dated January 5, 1993, on the Black River Property of Grimsthorpe Township is based on information collected by myself between 1991 and the date of this report, and on other sources of information cited in this Report.

[6] THAT I have a 100% interest in the Black River Property and any information given in this Report is as accurate as to the best of my knowledge, and THAT I am not making any false statements to better the position of the property for personal gain.

R.J. Dillman, B.Sc.

Dated at London, Ontario
This 8th day of January, 1993

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16-Jun-92

HOMESTAKE MINERAL DEVELOPMENT COMPANY
Suite 2116
120 Adelaide St. West
Toronto, ON
M5H 1T1

Page: 8
Copy: 1 of 2

Attn: B. Christie
Project:

Received: 29-May-92 15:38

PO #:

Job: 921043 Status: Preliminary

Sample Id	Au FA/AA ppb	As Hyd-AA ppm	
			Rocks
DG - 5512	5	2.3	
5513	<5	2.3	
5514	8	0.8	
5515	<5	1.4	
5516	11	2.1	
5517	16	1.0	
5518	14921	21000	
5519	54	150.	
			Rocks
5520	114	46.0	
			Rocks
5521	14	15.0	

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16-Jun-92

HOMESTAKE MINERAL DEVELOPMENT COMPANY
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M5H 1T1

Page: 9
Copy: 1 of 2

Attn: B. Christie
Project:

Received: 29-May-92 15:38

PO #:

Job: 921043

Status: Preliminary

Rocks

Sample Id	Au FA/AA ppb	As Hyd-AA ppm
5522	1921	16000
5523	15	80.0
5524	506	7000.
5525	9	30.0
5526	70	21000
5527	1201	34000

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46044 **Certificate of Analysis**

Dillman Mr. R.
42 Springbank Dr.
LONDON, Ontario
N6J 1E3

October 14 92

Work Order # : 920371
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
260724	69551	339	0.010	
260725	69552	117	0.003	
260726	69553	314	0.009	
260727	69554	1332	0.039	
260728	69555	9	<0.001	
2[illegible]729	69556	77	0.002	
260730	69557	<5	<0.001	
260731	69558	<5	<0.001	
260732	69559	6	<0.001	
260733	69560	5	<0.001	
260733	69560	5	<0.001	Check
260734	69561	3505	0.102	
260735	69562	927	0.027	
260736	69563	37	0.001	
260737	69564	56832	1.654	
260738	69565	682	0.020	
260739	69566	680	0.020	
260740	69567	33	0.001	
260741	69568	13	<0.001	
260742	69569	3327	0.097	
260742	69569	2891	0.084	Check
260743	69570	3535	0.103	
260744	69571	7	<0.001	
260745	69572	19	0.001	
260746	69573	9	<0.001	
260747	69574	8	<0.001	
260748	69575	10	<0.001	
260749	69601	<5	<0.001	
260750	69602	534	0.016	
260751	69603	20218	0.588	
2[illegible]751	69603	17089	0.497	Check

LF-30

Per: G. Duncan

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Dillman Mr. R.
42 Springbank Dr.
LONDON, Ontario
N6J 1E3

October 14 92

Work Order # : 920371
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
260752	69604	2208	0.064	
260753	69605	2267	0.066	
260753	69605	2069	0.060	Check

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Page: 1

Dillman Mr. R.
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LONDON, Ontario
N6J 1E3

October 21 92

Work Order # : 920389
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
260992	69606	5	<0.001	
260993	69607	<5	<0.001	
260994	69608	<5	<0.001	
260995	69609	94	0.003	
260996	69610	117	0.003	
260997	69611	582	0.017	
2[illegible]98	69612	9	<0.001	
260999	69613	18	0.001	
261000	69614	28	0.001	
261001	69615	39	0.001	
261001	69615	38	0.001	Check
261002	69616	8	<0.001	
261003	69617	<5	<0.001	
261004	69618	<5	<0.001	
261005	69619	<5	<0.001	
261006	69620	480	0.014	
261007	69621	968	0.028	
261008	69622	3386	0.099	
261009	69623	1569	0.046	
261010	69624	123	0.004	
261010	69624	145	0.004	Check
261011	69625	35	0.001	
261012	69626	241	0.007	
261013	69627	<5	<0.001	
261014	69628	94	0.003	
261015	69629	573	0.017	
261016	69630	<5	<0.001	
261017	69631	15	<0.001	
261018	69632	<5	<0.001	
261019	69633	5	<0.001	
261019	69633	11	<0.001	Check

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October 21 92

Work Order # : 920389
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
261020	69634	1301	0.038	
261021	69635	<5	<0.001	
261021	69635	<5	<0.001	Check

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Dillman Mr. R.
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N6J 1E3

November 6 92

Work Order # : 920412
Project :

SAMPLE NUMBERS		Gold	Gold	
Accurassay	Customer	ppb	Oz/T	
261199	69636	795	0.023	
261200	69637	9	<0.001	
261201	69638	5	<0.001	
261202	69639	2832	0.082	
261203	69640	16	<0.001	
261204	69641	710	0.021	
261205	69642	13	<0.001	
261206	69643	102	0.003	
261207	69644	<5	<0.001	
261208	69645	136	0.004	
261208	69645	74	0.002	Check
261209	69646	41	0.001	
261210	69647	3119	0.091	
261211	69648	5525	0.161	
261212	69649	4426	0.129	
261213	69650	37	0.001	
261214	69651	164	0.005	
261215	69652	1881	0.055	
261216	69653	527	0.015	
261217	69654	72	0.002	
261217	69654	185	0.005	Check
261218	69655	7	<0.001	
261219	69656	3059	0.089	
261220	69657	672	0.020	
261221	69658	2168	0.063	
261222	69659	21911	0.638	
261223	69660	16	<0.001	
261223	69660	15	<0.001	Check

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46362 **Certificate of Analysis**

Dillman, Mr. R.
42 Springbank Dr.
LONDON, Ontario
N6J 1E3

November 19 92

Work Order # : 920426
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
261489	69661	553	0.016	
261490	69662	6	<0.001	
261491	69663	1090	0.032	
261492	69664	1644	0.048	
[illegible]1493	69665	41	0.001	
261494	69666	65	0.002	
261495	69667	18	0.001	
261496	69668	10	<0.001	
261497	69669	724	0.021	
261498	69670	1095	0.032	
261498	69670	1077	0.031	Check
261499	69671	2347	0.068	
261500	69672	5	<0.001	
261501	69673	7	<0.001	
261502	69674	340	0.010	
261503	69675	1097	0.032	
261504	69676	188	0.005	
261505	69677	1225	0.036	
261506	69678	361	0.011	
261507	69679	1263	0.037	
261507	69679	1064	0.031	Check
261508	69680	58	0.002	
261509	69681	85	0.002	
261510	69682	4634	0.135	
261511	69683	4446	0.129	
261512	69684	20	0.001	
261513	69685	2782	0.081	
261513	69685	2822	0.082	Check

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LF-30

Per: G. Duncan

ORIGINAL

NTS: 31C/11

REPORT ON ELECTROMAGNETIC (VLF) AND MAGNETIC SURVEYS

BLACK RIVER PROPERTY, GRIMSTHORPE TOWNSHIP,

SOUTHERN ONTARIO MINING DIVISION, ONTARIO

PREPARED FOR:

Ontario Prospectors Assistance Program
Incentives Office
5th Floor,
Willet Green Miller Centre,
933 Ramsey Lake Road
Sudbury, Ontario
P3E 6B5

PREPARED BY:

R.J. DILLMAN
42 Springbank Dr.,
London, Ontario
N6J 1E3

OPAP Resistration No:
OP92-235

SUMMARY

The Black River property is located in Grimsthorpe Township, 32 km northeast of the town of Madoc, Ontario. Although the Madoc-Bancroft region has shown quite an extensive history of mineral exploration, there is no record of prospecting activities within the area of the Black River property.

The property is underlain by Middle to Late Proterozoic mafic metavolcanic and metasedimentary rocks of the Grenville Structural Province. General trend of these rocks across the property is NW-SE.

During the fall of 1991 a number of gold discoveries were made along the Black River and along a swamp filled extensional lineament to the river. Quartz veins up to 0.5 m wide occur in locally sheared and/or silicified areas of a metasedimentary unit consisting of beds of a quartz-feldspar-biotite rich rock, greywacke, argillites, and graphitic schists. This metasedimentary unit has been traced at various intervals for a distance of over 5 kilometres. Some of the gold showings have been traced for distances greater than 700 metres along this trend.

An electromagnetic survey and a magnetic survey have coincidental conductors and anomalies with some of the known gold occurrences. The surveys have located other targets along the 5 km trend which may be potential host environments for gold mineralization.

T A B L E O F C O N T E N T S

I. INTRODUCTION

SCOPE

This report summarizes the results of magnetics and electromagnetic surveys performed on Black River property, Grimsthorpe Township, Ontario. Results of these surveys are appended to this report.

LOCATION AND ACCESS

The Black River property is located in Grimsthorpe Township. The property is approximately 30 km northeast of Madoc, Ontario. Access can be made by following Highway 62 north from Madoc to the village of Gilmour. 4 km east of Gilmour is the turn for the Skootamatta Lake Access Road. The property begins at the intersection of the Skootamatta Lake Access Road and the Lingham Lake Access Road (Figure 1).

The property is covered by N.T.S. sheet 31C/11.

PROPERTY AND STATUS

The property consists of twelve contiguous unpatented mining claims consisting of twenty six units of 20 hectacre size (figure 2). The claim numbers are SO1150984 to SO1150986 inclusive, SO1156635, SO1156636, SO1156650, SO1156653, SO1156654, SO1194942, SO1194943, SO1194973, SO1194974.

All claims are held by Mr. R.J. Dillman of London, Ontario.

LOGISTICS

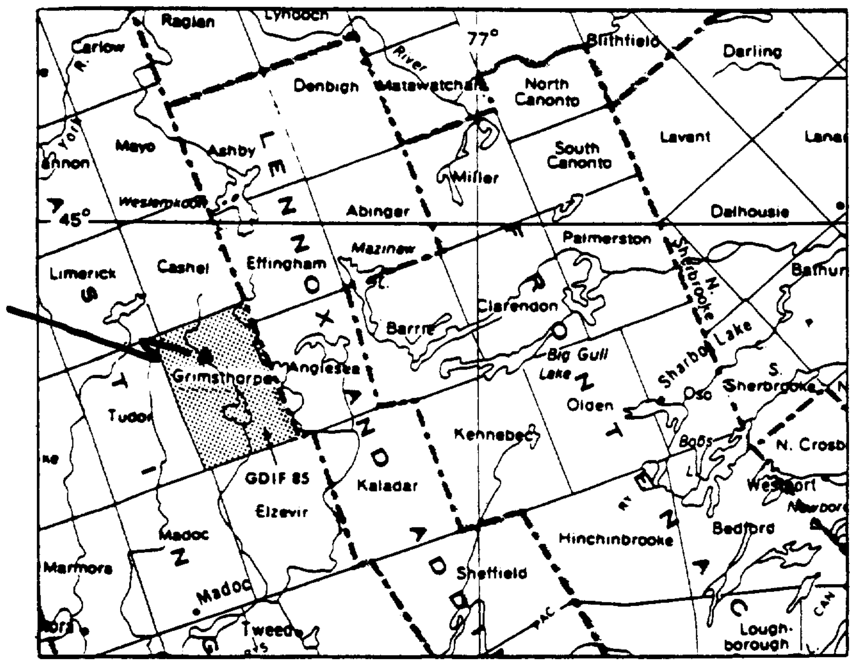
Between the dates of: October 11 to October 24, 1991, February 22 to February 26, 1992, and periodically between, October 6 to November 6, 1992, magnetic and electromagnetic surveys have been done over the area covered by the grid. The total distance traversed and time taken for the magnetic survey is 21km in 11 days and for the electromagnetic survey is 17.9km in 22 days. All readings were taken on compassed and flagged lines that have been chained every 25m for accuracy. Line spacing is 100m but in southern areas of the grid 50m spacing was used over the gold showings. Results of the surveys have been plotted on 1:2,500 scale maps that are appended to this report.

Both surveys have been preformed by Mr. R.J. Dillman of London, Ontario.

TOPOGRAPHY AND LAND-USE

Airphotos of the property reveal many small ponds and streams, the largest of which is the Black River. These

Property Location



1 inch=16 miles

PROJECT LOCATION

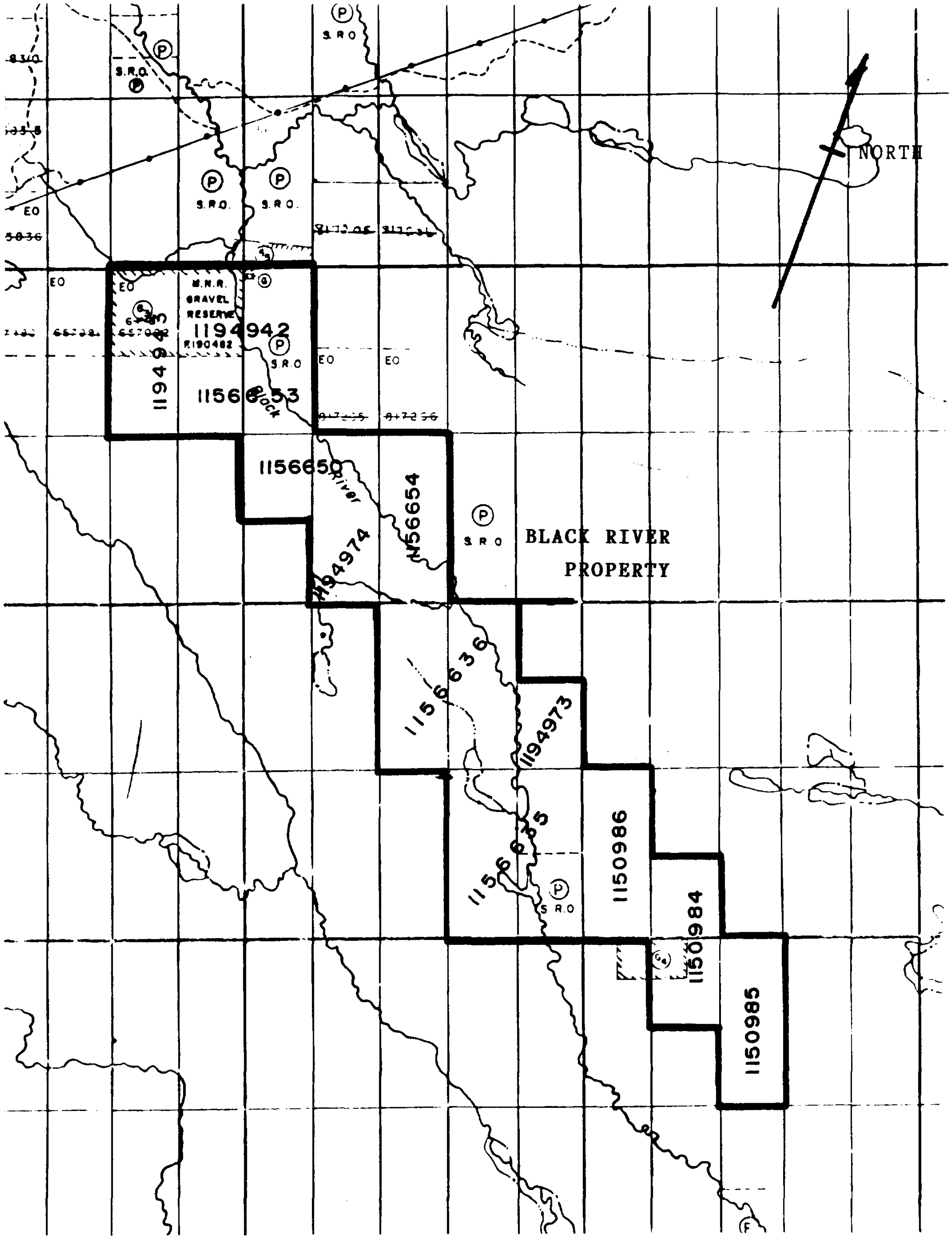


FIGURE 2

BLACK RIVER CLAIM GROUP
GRIMSTHORPE TOWNSHIP, ONTARIO
PLAN: M97

features are confined to topographical lineaments. The largest and most continual set of lineaments prefer a N-NW orientation. These lineaments are offset in places by a weaker set on a NE orientation.

The highest elevations on the property are found east of the Black River. This area is dominated by large outcrops of mafic metavolcanics and shallow overburden consisting of localized till. Outcrop exposure is approximately 75% in this area.

West of the Black River the land is much flatter and outcrop exposure decreases to approximately 10%. Outcrops are confined to the highest elevations and along the sides of depressions. Large areas of land are till covered and most depressions contain swamp or bog.

Most of the overburden on the property is glacial derived. Tills dominate west of the river. They consist of different sized, angular material made up of locally sourced mafic metavolcanic rock and regional sourced, rounded granite boulders. In some isolated areas the tills consist of well-sorted sand and gravel. Striations measured on outcrop surfaces suggest glacial advancement was from N.4 degrees E.

Vegetation on the property is variable. Hardwoods such as birch, maple, and oak grow in the higher elevations. White pine, spruce, and balsam occur in flatter areas. Lower areas have jack-pine, balsam, and alders.

Recently, there has been very limited logging activities conducted west of the Lingham Lake Access Road. Other industrial land-use includes sand and gravel extraction in the north section of the property. Recreational land-use only appears to be hunting and for this purpose a number of small cabins are located within the property boundary.

PREVIOUS EXPLORATION ACTIVITIES

Grimsthorpe Township has a sketchy history of mineral exploration. Except for the 1991 survey no evidence has been found to suggest that the claim group has every been prospected. There is also no report of work filed with the Ministry of Natural Resources for the area of the property.

Mineral exploration, mainly for gold, has been concentrated in the western and northwestern regions of the township. During 1909 to 1914, gold was produced from the Gilmour Mine in lot 30, concession 19. This mine has the only record of production in Grimsthorpe Township.

Talc was discovered in 1910 in lots 8, 9, and 10, concession 5.

Regional geology was first mapped by Meen and Harding (1942). They reported talc occurrences in lot 13, conc. 4. They also reported numerous sulphide occurrences in metasedimentary schists in the Lingham Lake area.

In 1954, Stratmat Limited carried out a ground electromagnetic survey over the talc occurrences in lot 13, conc. 4.

In 1955, drilling was preformed on the claim group referred to as the McMurray Group. A total of 793 feet were drilled to test an arsenic occurrence in lot 33, concession 11.

After 1955, the Gilmour Mine and the area in proximity to the mine appear to be the only area of interest for mineral exploration. Currently this area is held by Homestake Minerals.

In 1990, much of Grimsthorpe Township and neighboring Anglesea Township were mapped by R.M. Easton of the Ontario Geological Survey.

Gold was discovered in the Black River area in 1991 by R.J. Dillman. This resulted in the staking of several claims. He subsequently carried out geological and geophysical surveys over limited portions of the property.

C.A. Wagg of Denbigh, Ontario staked 5 additional claims along the trend of the Black River. These claims were recorded in Dillman's name.

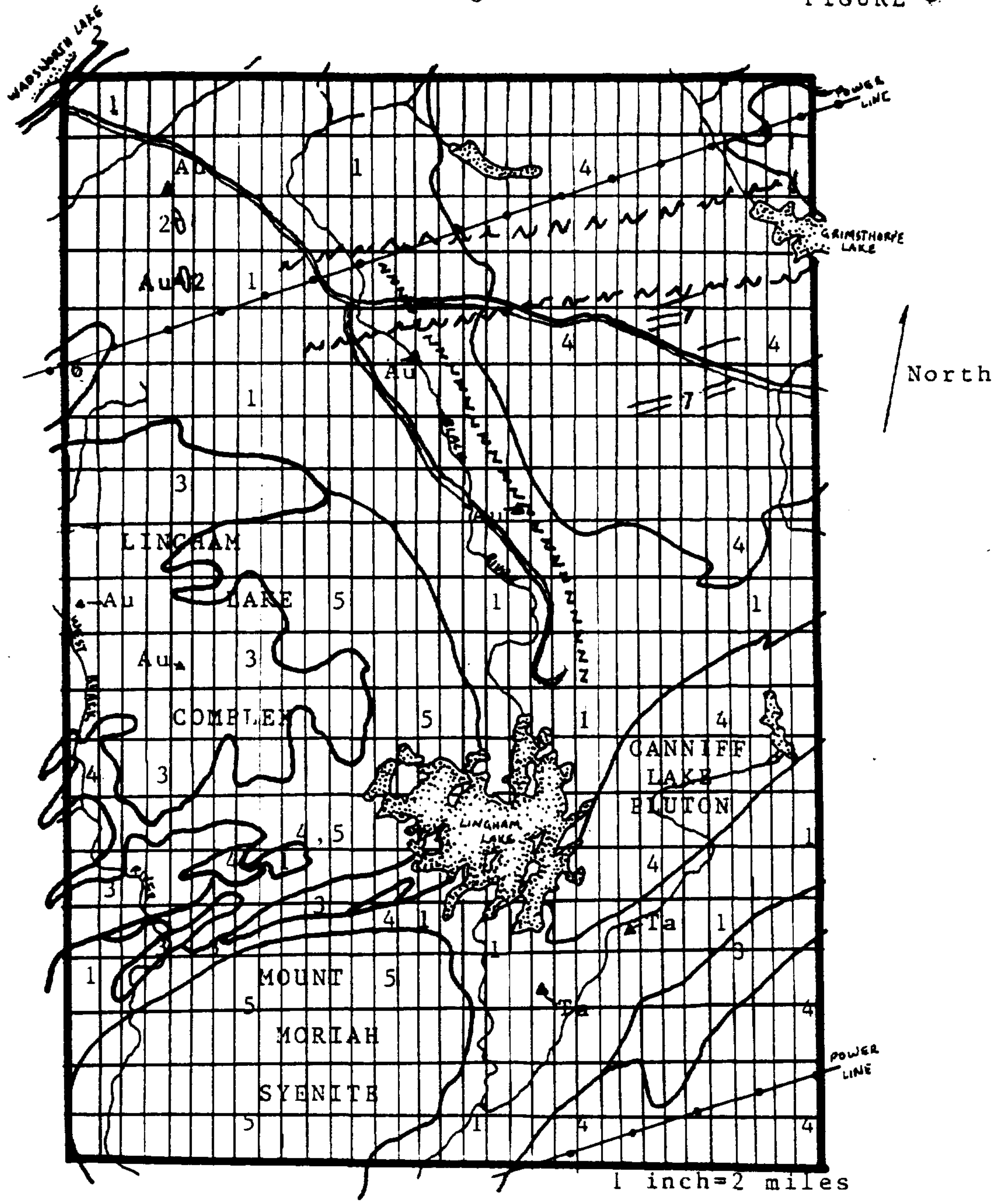
In the summer of 1992, the property was visited by Brian Christie, a geologist representing Homestake Minerals. Mr. Christie undertook limited prospecting, soil sampling, and geological mapping in isolated regions of the claim group. His work led to the discovery of gold in lot 20, concession 16 and what is now known as the Christie Showing. Christie also staked several claims to the north and recorded them in Dillman's name.

Further staking was conducted in the fall of 1992 by Dillman. A grid was constructed over portions of the new claims for control over geological, magnetic, and electromagnetic surveys. This work has led to the discovery of several more gold showings in the Black River area.

REGIONAL GEOLOGY

Grimsthorpe Township is in the Madoc-Bancroft region of the Grenville Structural Province. The geology of the township is summarized in Figure 3. A sequence of formations is presented in Table 1.

FIGURE 3



GEOLOGY OF GRIMSTHORPE TOWNSHIP

7	diabase	▲	mineral occurrence
6	trondhjemite	Au	gold
5	syenite	Ta	talc
4	granite	NNN	fault
3	diorite		
2	metasediment		
1	mafic metavolcanic		

(modified after Easton and Ford, 1991)

TABLE I.

SUGGESTED
TABLE OF FORMATIONS FOR THE
BLACK RIVER PROPERTY
GRIMSTHORPE TWP. ONTARIO

CENOZOIC

Recent
swamp, lake, and stream deposits

Pleistocene
clay, silt, sand, gravel

Unconformity

PROTEROZOIC

Intrusive Sills and Dikes
gabbro
Intrusive contact
aplite dikes
mafic dikes (diabase?)

Intrusive contact

Metasedimentary and Metavolcanic Rocks
mafic volcanic intrusive/extrusive flows
Unconformity?
carbonate sediments
clastic sediments
mafic volcanic intrusive/extrusive flows

Grimsthorpe Township is equally divided between mafic metavolcanic rocks and igneous intrusive complexes. All rocks are of the Middle to Late Proterozoic.

Mafic metavolcanics consist of intrusive and extrusive, fine-grained basaltic and coarser-grained gabbroic flows. Between flows schists may occur which can be sedimentary derived and/or be related to volcanism.

At least five large, separate plutonic bodies intruded into the mafic metavolcanic-metasedimentary sequence. These intrusive bodies vary in composition and range from gabbro, diorite, to tonalite. During the formation of the plutonic masses, the meta-volcanic-metasedimentary sequence was intruded by dikes of either mafic or felsic composition.

Metamorphic grade in Grimsthorpe Township ranges from upper greenschist-facies to middle amphibolite-facies (R.M. Easton, 1990). The range of metamorphism appears to be dependent on the proximity to plutons.

Airphoto observations show many topograghic linea-ments, some of which are certain to be fault structures. The most dominate direction of the linear features is N-NW. A second preferred orientation is E-NE. This second direction is consistent with a regional structure that cuts across the northern section of the township (Easton, 1990). From field and airphoto observations it is apparent that the E-NE lineaments may post-date N-NW lineaments. This is based on crosscutting relationships.

PROPERTY GEOLOGY AND MINERALIZATION

The property is underlain by Proterozoic mafic meta-volcanic flows, metasedimentary schists, and dikes. These rocks belong to the Grenville Structural Province formed during the late Precambrian.

Mafic metavolcanic flows consist of fine-grained basaltic flows, coarse-grained gabbroic flows, and agglomerates. Thin units of mafic schists may occur between flows.

Metasedimentary rocks are mostly found as schist units that consist of greywacke, argillite, graphite and a member composed of quartz-feldspar-biotite. These schists are characteristically rusty on a weathered surface and contain fine-disemminated pyrite, pyrrhotite, and magnetite. In the southern areas of the property there are rare occurrences of marble.

Fine-grained mafic dikes and fine-grained aplite dikes occur more frequently in schists. They are most frequently found along the river and to the south.

The general trend of rock units determined from foliations of schists is NW. Units appear to dip moderately SW to near-vertical. There are at least three recognizable foliations in the schists. The most common, NW, is probably relic bedding. The second is W-NW and may be caused by localized shearing. The third is E-W and may relate to younger structural phase.

No obvious fault zones have been observed although structural measurements suggest their presence. Localized areas of shearing have occur in all major rock types.

Metamorphism is believed to range from high greenschists to middle amphibolite facies.

Accessory sulphide mineralization in the schists consists of fine-disseminated pyrite, pyrrhotite, and magnetite. Quartz veins with arsenopyrite and pyrite occur in metasedimentary schists along the Black River and along an extensional lineament to the river. Gold has been found in these veins.

II. DISCUSSION AND RESULTS OF GEOPHYSICS

LOGISTICS

Between the dates of: October 11 to October 24, 1991, February 22 to February 26, 1992, and periodically between, October 6 to November 6, 1992, magnetic and electromagnetic surveys have been done over the area covered by the grid. The total distance traversed and time taken for the magnetic survey is 21km in 11 days and for the electromagnetic survey is 17.9km in 22 days. All readings were taken on compassed and flagged lines that have been chained every 25m for accuracy. Line spacing is 100m but in southern areas of the grid 50m spacing was used over the gold showings. Results of the surveys have been plotted on 1:2,500 scale maps that are appended to this report.

Both surveys have been preformed by Mr. R.J. Dillman of London, Ontario.

The instrument used for the electromagnetic survey was a Geonics EM-16. The station received was Cutler, Maine, USA, which operates at 24kHz. During the survey the instrument was orientated N 20 degrees E for all readings. This instrument has a 50 m depth penetration.

For the magnetics survey, the instrument used was a Gem Systems Proton Precession Magnetometer, model GSM-8. This instrument has a penetration depth of 50 m.

CONDUCTOR INTERPRETATION

CONDUCTOR A
LOT 14, CONC. XII, N/2
LOT 15, CONC. XIII, S/2
SO1150984, SO1150986
9+00S, 2+75W to 1+00N, 1+37W
MAP 3A

Conductor A occurs along creek and swamp with outcrops of metasedimentary schists and mafic metavolcanic schists. Conductor is consistent with geological trend and dips SW at steep to almost vertical angles. Schists are weakly mineralized with disseminated pyrite and pyrrhotite. Sulfide content does not suggest conductivity. There are coincident magnetic highs with the conductor axis. Arsenopyrite/gold-bearing quartz veins and quartz-filled fracture zones have been traced 500m along the schist unit. Some weak to moderate shearing is associated with the zones. Conductor A appears to be offset be E-W trending structures. The conductor may result from a combination of the wet topography plus the change in rock type; mafic metavolcanic flows to mafic and sedimentary schists.

CONDUCTOR B
LOT 14, CONC. XII, N/2
SO1150984
8+00S, 1+90W to 8+50S, 1+85W
MAP 3A

Conductor axis occurs at the base of a steep, NW-trending slope. Conductor B is not consistent with the local geological trend. No outcrop is exposed along the conductor although closest outcrops consist of mafic metavolcanic flows. The NW trend of this conductor appears to intersect and offset conductor A. Conductor B may represent a fault that dips vertically or be caused by the topographical changes.

CONDUCTOR C
LOT 15, CONC. XIII, middle
SO1150986
0+00N, 0+50W to 1+00N, 0+20W
MAP 3A

Conductor C occurs entirely under swamp. Both conductor and local geological trends are similar. This conductor strikes towards a gold occurrence at 1+75N, 0+12E. This occurrence is very similar to gold showings found along conductor A. The dip of the response is steeply W-SW or near-vertical. This conductor may have resulted from the conductive nature of the swamp or it could be swamp + geologically induced, such that, it may be an extension of conductor A which has been offset by an E-W trending structure.

CONDUCTOR D
LOT 15, CONC. XIII, N/2
S01150986 2+00N, 0+35W to 3+00N, 0+40W
MAP 3A

Conductor D has been located over swamp. Appears to trend at an angle to the local geological trend. It is possible that the south end of this conductor is associated with conductor C. South end of conductor is very close to auriferous metasedimentary float located at 1+75N, 0+12E. This conductor has probably resulted from the conductive nature of the swamp although its proximity to a known gold occurrence suggests that it should not be so easily attributed to topography.

CONDUCTOR E
LOT 15, CONC. XIII, N/2
S01150986
2+00N, 1+85W to 3+00N, 1+65W
MAP 3A

Short conductor located over swamp. Closest outcrops consist of mafic metavolcanic flows. South end of conductor has associated magnetic high. May trend parallel to local geology. This conductor may be a weakly conductive shear zone.

CONDUCTOR F
LOT 15, CONC. XIII, N/2
S01150986
4+00N, 0+10E to 5+00N, 0+20W
MAP 3A

Conductor F occurs at the base of a slope, in dry overburden with outcrops of mafic metavolcanics. Trend of the conductor does not parallel local geology. The VLF response suggest that this conductor could be an effect of topography changes.

CONDUCTOR G
LOT 16, CONC. XIV, S/2
S01194973
7+00N, 0+10E to 9+00N, 0+30E
MAP 3A

Conductor occurs along a thin unit of metasediment schists in volcanic flows. Unit is weakly mineralized with pyrite and pyrrhotite. Conductor appears to dip steeply SW which is consistent with the schist unit. The cause of the conductor may have resulted from the change in rock types.

CONDUCTOR H
LOT 16, CONC. XIV, S/2
S01194973
8+00N, 0+87W to 10+00N, 0+95W
MAP 3A

Conductor H occurs in low, wet ground. Although this might be the cause of the VLF response it should be pointed out that the conductor is coincidental with an arsenic soil anomaly with values ranging up to 195 ppm As(Christie,1992).

CONDUCTOR I
LOT 16, CONC. XIV, S/2
SO1194973
8+00N, 1+35W
MAP 3A

Conductor I occurs in wet to dry overburden that is probably conductive. Conductor I, if it is a geologically induced conductor may be of some importance because it occurs over a 2nd arsenic soil anomaly with values grading up to 135 ppm As and 19 ppb gold (Christie, 1992). Metasedimentary float found "down ice" and close to the conductor axis assayed 241 ppb gold (Dillman, 1992)

CONDUCTOR J
LOT 17, CONC. XIV, N/2
SO1156636
15+00N, 1+30E to 16+00N, 1+35E
MAP 3B

This conductor occurs over dry to swampy ground at the base of a slope. Closest outcrop to conductor axis consists of mafic metavolcanic flows. Trend of the conductor is parallel geology and it follows a magnetic low. This conductor may be caused by elevation changes, swamp, or conductive overburden.

CONDUCTOR K
LOT 18, CONC. XV, S/2
SO1156654
24+00N, 1+12E
MAP 3B

Conductor occurs over outcrop of Fe-carbonate altered gabbro with quartz-Fe-carbonate stringer stockwork. The VLF suggests that the conductor is near surface and dips SW at a steep angle. There is an associated magnetic high. The outcrop contains disseminated pyrite and magnetite but they do not appear abundant enough to be conductive. It is possible that the conductor is caused by non-surfacing sulfide mineralization associated with the alteration and stockwork system.

CONDUCTOR L
LOT 18, CONC. XV, S/2
SO1156654
23+00N, 0+60E
MAP 3B

This conductor occurs in a wet to dry swampy area of the river valley. No outcrop is found close to the conductor although metasedimentary schists outcrop within 25m of the conductor axis. There is a magnetic high coincidental with the conductor. This conductor might be caused by the river sediments but it may also be caused by a sulfide target.

CONDUCTOR M
LOT 18, CONC. XV, S/2
LOT 19, CONC. XV, S/2
LOT 19, CONC. XV, N/2
SO1156654, SO1194974, SO1156650
24+00N, 0+30E to 29+00N, 0+65E
MAP 3B

Conductor M is a long, continuous response that dips at a moderate angle SW. The conductor follows a unit of mafic schists that begins to include metasedimentary schists as one progresses northwest along the unit. No sulfides that suggest conductivity have been seen in the schists. There is a magnetic anomaly coincident with the conductor along the north half. The conductor occurs approximately in the dry midpoint of a moderate northeast facing slope of the river valley. Conductor M is related to the schist unit. There may have been faulting or shearing along this unit and possible sulfide zones could be present.

CONDUCTOR N
LOT 18, CONC. XV, N/2
SO1156650
28+00N, 1+15E to 29+00N, 1+40E
MAP 3B

This conductor occurs over the river. There are outcrops of mafic metavolcanic flows on either side of the river. An outcrop on the east side of the river is part mafic schist with disseminated pyrite and pyrrhotite and weak silicification. The conductor, because it is not continue with the river, may be induced by shearing within this mafic schist unit or by the VLF reacting to a different rock type.

CONDUCTOR O
LOT 19, CONC. XV, N/2
LOT 20, CONC. XV, N/2
LOT 20, CONC. XVI, S/2
SO1156650, SO1156653
30+25N, 0+85E to 34+00N, 0+65E
MAP 3C

Conductor O occurs along the river and over outcrops of metasedimentary schists. The schists are weakly mineralized with disseminated pyrite and pyrrhotite. There are thin zones of shearing, veining and fracturing. The fractures are sealed with quartz + weak arsenopyrite mineralization. Anomalous gold values up to 1201 ppb have been taken from this zone. There is a good, strong magnetic anomaly coincidental with this conductor. The trend of conductor O is consistent with the strike of the schists and the conductor appears to be dipping SW at a moderate to steep angle. This is also consistent with geology. Conductor O is in part influenced by the conductive properties of the river as well as having a signature characteristic of a weakly conductive shear zone. It is not certain whether this conduction is partly caused by localized sulfide zones or by the presence of graphite schists.

CONDUCTOR P
LOT 20, CONC. XV, N/2
LOT 20, CONC. XVI, S/2
S01156650, S01156653
32+00N, 1+12W to 37+00N, 0+35E
MAP 3C

This conductor follows a unit of metasedimentary schists and minor mafic metavolcanic schists. The dip of the conductor is moderate to shallow in a SW direction and may steepen along the south extent of the axis. Topography over the conductor axis consists of mostly dry overburden, some outcrops, and locally wet swamps. The conductor is coincidental with a magnetic high. The VLF response, in part, suggests faulting or shearing might be the cause of the conductor. Prospecting has revealed localized shearing within the schist unit as well as disseminated pyrrhotite, pyrite, and stringered pyrite. No where has sulfide content been observed that was thought to be massive enough to promote conductivity although, graphite schist has been noted in at least one location along the conductor axis. A trench on the schists has revealed some parallel arsenopyrite-bearing shear zones that carry gold values up to 1263 ppb across 0.8m (Dillman, 1992). Another gold showing proximal to the north end of the conductor has returned values of 56.8 g/t Au in grab samples of a quartz vein within the schist unit. Conductor P represents a locally sheared metasedimentary unit with conductive members (graphite), weak sulfide mineralization, and locally associated gold values.

CONDUCTOR Q
LOT 20, CONC. XVI, S/2
S01156653
36+00N, 0+95E to 37+00N, 1+05E
MAP 3C

The axis of this conductor occurs over an overburden-filled linear depression. Metasedimentary schists outcrop on the west side of the depression and gabbro occurs on the east side. The trend of the lineament and the conductor is consistent with geology. The dip of the conductor appears to be near-vertical although readings have been influenced by other conductors on either side. Conductor Q might only be caused by conductive overburden in the lineament or, in part, it may be induced by some conductive property along the gabbro/sediment contact.

CONDUCTOR R
LOT 20, CONC. XVI, S/2
S01156653
35+00N, 1+20E to 37+00N, 1+85E
MAP 3C

Conductor R somewhat follows the river, occurring along the base of the east slope of the river valley. This conductor trends in a more northernly direction than surrounding conductors. The only other conductor that shares this trend is conductor N. Outcrops do not occur on the axis of the conductor although volcanic outcrops occur along the slope and sedimentary+volcanic rocks are found along the river. The conductor appears to dip towards the NE at a steep angle and this is unusual for the property. The conductor is coincidental with a magnetic high. The cause of this conductor might be attributed to the topographic effects induced by the river and the slope although the cause may lie with the occurrence of a faulted metasedimentary unit. A unexplained direction of jointing (Dillman, 1992) observed in an outcrop in the general area may provide evidence to the existence of a fault zone. Also, there is a distinct change to schistosity in outcrops occurring in the river bed on the north side of the Skootamatta Access Road. The existence of a structure could explain the differences in schistosity.

MAGNETIC INTERPRETATION

ANOMALY A
LOT 14, CONC. XII, N/2
LOT 14, CONC. XIII, S/2
LOT 16, CONC. XIII, S/2
SO1150984, SO1150986
8+50S, 2+50W to 0+00, 1+00W
MAP 2A

This magnetic high occurs in metasedimentary schists. It is coincident with conductor A. The anomaly dips steeply SW along much of the trend except in the north where it appears to dip steeply to the NE. The two apparent dip interpretations may be separated by an E-W trending structure. Gold has been detected in quartz veins and sheared+silicified zones along the schists. The schists are weakly mineralized with disseminated pyrite and pyrrhotite. Anomaly A is caused by the weak pyrrhotite mineralization in the schists. Some of the spot highs might be caused by magnetite bearing mafic dikes which occur locally in the schists.

ANOMALY B
LOT 15, CONC. XIII, N/2
SO1150986
2+00N, 0+00 to 3+00N, 0+37W
MAP 2C

Anomaly B occurs in metasedimentary schists that are similar to those found along anomaly A. Similar mineral-ization and gold values have been found in float occurring on anomaly B. The magnetics suggests that A and B are two separate anomalies but it is quite possible that the separation is due to E-W trending structures. Although these structures have not actual been observed there is some geological and geophysical evident that points to their existence. If these structures exist it appears that some of the spot highs occur where the structures cross the schists. There also appears to be a relationship of the mag spot highs and the locations of the gold occurrences even though mineralization at the showings is not magnetic. Anomaly B may be disseminated pyrrhotite or magnetite in the metasedimentary schists.

ANOMALY C
LOT 13, CONC. XII, N/2
SO1150985
9+00S, 1+25W to 10+00S, 1+12W
MAP 2C

This magnetic high has been attributed to a quartz vein with <5% fine disseminated magnetite. The length of the vein is not known but where it outcrops in the east corner of the pond it is at least 0.5m wide. This vein may be structure related since it occurs in a E-W trending lineament and the strike of the vein is parallel to the lineament.

ANOMALY D
LOT 14, CONC. XII, N/2
SO1150986
6+00S, 1+12W to 7+00S, 0+50W
MAP 2A

Anomaly D has been found to be a quartz vein, similar in texture and mineralization as to that causing anomaly C. This vein of smaller width trends E-W although evidence suggesting a structural relationship was not observed.

ANOMALY E
LOT 16, CONC. XIII, N/2
SO1156635
5+00N, 3+65W to 6+00N, 2+95W
MAP 2A

On line 5N, it was found that overburden occurs over the highest magnetic response. An outcrop of mafic metavolcanic flows found just south of the anomaly was observed to have small, randomly orientated granitized dikes and stringers <2cm wide. They were found to contain blackish clots of magnetite. What this intrusive zone is related to has not been established. Mineralization and the suggested northern trend of this anomaly is unique to the area. An orientation of this would cut the general trend of geology and point to a structural relationship possibly with a fault occurring along the river.

ANOMALY F
LOT 16, CONC. XIV, S/2
SO1194973
11+50N, 0+00
MAP 2A

Bull's eye type magnetic high that occurs in overburden. Closest outcrops consist of mafic metavolcanic flows. No evidence to explain the anomaly has been found in the field.

ANOMALY G
LOT 18 , CONC. XV, S/2
SO1156654
23+00N, 1+12E to 24+00N, 1+25E
MAP 2B

The southern extent of the strike length for this anomaly is undefined at present time of report. The magnetic high was found to occur over a gabbroic flow which has moderate Fe-carbonate alteration and minor quartz-carbonated stringer systems. There are traces of pyrite, tourmaline, and fine magnetite throughout the alteration zone. Conductor K is associated with this zone. Other occurrences of this type are generally found on the east side of the river. Why they prefer this region has yet to be determined. Gold assay results of rock samples taken of the alteration have so far shown that they economically unimportant.

ANOMALY H
LOT 18, CONC. XV, S/2
SO1156654
23+00N, 1+62E
MAP 2B

This anomaly is a weak magnetic high within an area of rather low intensity. The anomaly occurs in overburden and until readings are taken towards the south no attempt will be made as to it's dimensions and probable cause. With the present state of coverage in this area, the anomaly should be overlooked as a possible target to be considered important. But since at occurs close to a recently discovered gold showing it is worth mentioning.

ANOMALY I
LOT 18, CONC. XV, S/2
SO1156654
23+00N, 0+50E
MAP 2B

This anomaly occurs very close to metasedimentary outcrops exposed along the river valley. The schists were noted to have traces of fine-disseminated pyrrhotite and pyrite. At present, the strike of this anomaly is open in the south direction.

ANOMALY J
LOT 18, CONC. XV, S/2
SO1156654
24+00N, 0+50W
MAP 2B

Anomaly J occurs in overburden. The closest outcrops consist of mafic metavolcanic flows. The survey is incomplete towards the south so that strike length can not be determined. It is not believed that anomalies I and J are the same. This is based on structural measurements made on outcrops exposed at anomaly I. No explanation can be made as to the nature of anomaly J.

ANOMALY K
LOT 18, CONC. XV, middle
SO1156654
23+00N, 2+75E to 27+00N, 2+00E
MAP 2B

This anomaly occurs in mafic metavolcanic flows. The anomaly has been prospected but no significant mineralization was observed. It is suggested that the magnetic response is caused by varied magnetic properties within or between mafic metavolcanic flow(s).

ANOMALY L
LOT 19, CONC. XV, N/2
SO1156650
27+00N, 0+75E to 29+00N, 0+50E
MAP 2C

Anomaly L occurs over a thin unit of metasedimentary schists. It is consistent with the strike of the unit and dips towards the southwest. The anomaly is caused by fine-disseminated pyrrhotite within the schists.

ANOMALY M
LOT 19, CONC. XV, N/2
LOT 20, CONC. XV, N/2
SO1156650
30+00N, 0+65E to 34+00N, 0+37E
MAP 2B, MAP 2C

This anomaly may be related to anomaly L. It is a strong, continual anomaly that dips SW along the south sections and appears almost vertical towards the north. This contrast is possibly structure related. Prospecting and mapping in the area have shown that the anomaly occurs over mafic and metasedimentary schists that have been intruded by mafic and felsic dikes. There is shearing, fracturing and veining within the schists. Arsenopyrite and gold values up to 1.2 g/t occur in the alteration. Disseminated pyrite and pyrrhotite occur in the schists. The anomaly is a result of the pyrrhotite.

ANOMALY N
LOT 19, CONC. XV, S/2
SO1194974
28+00N, 2+12W to 29+50N, 2+00W
MAP 2B, MAP 2C

Anomaly N is a very strong anomaly which trends NW and its strike length is open in both directions. It is possibly related to anomaly O but this is only speculated at the present time. The anomaly occurs in a shallow cut through mafic metavolcanic outcrops. This cut widens into a large swamp towards the SE. Prospecting could not locate an explanation for the anomaly but a large, angular block of chlorite schist was found on the anomaly. This rock was not magnetic although it is strongly sheared.

ANOMALY O
LOT 20, CONC. XV, N/2
LOT 20, CONC. XVI, S/2
33+00N, 1+00W to 38+00N, 0+25E
MAP 2C

Anomaly O is a well-defined anomaly that trends NW and dips shallow to moderately SW. It is intersected by anomaly M in the vicinity of line 35N. The anomaly is coincidental with a unit of metasedimentary schists and is believed to result from fine-disseminated pyrrhotite that occurs in the schists. Although much of the area is covered by overburden gold has been detected in one outcrop on the anomaly and in another near the north end. As stated before this anomaly could be related to anomaly N. How it is related to anomaly M can only be speculated although based on the magnetic results the two could be related by faulting or folding. Since no fold structures have been recognized in the area the intersection of the two anomalies must be a result of shearing.

ANOMALY P
LOT 21, CONC. XVI, S/2
S01156653
36+00N, 2+00W to 37+00N, 1+70W
MAP 2C

This anomaly returned some of the strongest readings on the entire property. The anomaly occurs in mafic metavolcanic flows and chloritized mafic metavolcanic schists. Prospecting has revealed a discrete structure that trends parallel to most geological rock units in the area. Some quartz veining was noted in the zone but lacked sulphide mineralization. Fine-disseminated pyrite and magnetite were observed in the schist and probably caused the magnetic high. The anomaly is open along its strike and appears to dip moderately SW. More work is needed to understand this zone since it is the only occurrence of magnetite-pyrite-chlorite seen on the property.

ANOMALY Q
LOT 20, CONC. XVI, S/2
S01156653
36+00N, 1+75E to 37+00N, 2+12E
MAP 2C

This anomaly is coincidental with conductor R. The magnetic signature suggests that the dip is NE which is similar to that of the conductor. Prospecting of the anomaly has revealed Fe-carbonate alteration in mafic metavolcanics outcropping close to the anomaly and, metasedimentary float on the anomaly axis. The orientation of the trend is somewhat different than what geological measurements have shown except for an isolated set of joints measured proximal to the anomaly. This has encouraged the idea of a possible fault occurring within the area. Establishing survey lines to the north will help an interpretation. At present the magnetics suggests pyrrhotite mineralization in a metasedimentary unit.

ANOMALY R
LOT 20, CONC. XVI, S/2
SO1156653
38+00N, 1+50E
MAP 2C

Anomaly R is located in overburden of the edge of a locally flooded section of the river. The anomaly was detected on the last reading taken before the line was discontinued. Until more readings are available no attempt at this time, will be made as to the nature of this anomaly but it should be pointed out that the anomaly occurs in the "up ice" direction of some boulders that contain significant gold values grading up to 3.1 g/t. Rock type and mineralization is identical to that of other showings along the Black River.

III. CONCLUSIONS AND RECOMMENDATIONS

Each of the geophysical methods used on the property has proven to be very successful. Both instruments have reacted with certain properties of the rock units so that zones can easily be defined, even in areas of overburden.

Over the known gold showings both instruments reacted well. The magnetometer appears to be the best trusted of the two because it does not react with surfacial features as would a VLF:EM-16 when surveying over swamps and hills. Not only did the magnetometer define the trends of metasedi-mentary schist units as magnetic highs it also showed that "spot highs" occur where gold was found in the schists. The correlation of the two phenomena has not been established although an answer may be found with the possibility of relativily young structures that crosscut areas of the property.

At the present state of the geophysical surveys more work will be needed to define the full extent of rock units that host the gold occurrences in the Black River area. Sections of the grid were inaccessible last fall due to swamps and unusually high water levels in the river. The same geophysical methods will be employed this winter over these regions. Other areas to survey include an expansion of the grid to the north and to the west. This will follow-up strike extensions and explore for parallel environments that may be present in lineaments west of the Black River. To eliminate confusion between surface conductors, geological structure, and sulfide mineralization, the surveys: Max-Min or I.P. should be considered before drilling any conductive bodies.

respectivily submitted

Robert J. Dillman, B.Sc, Geologist
January 5, 1993

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Easton, R.M., and Ford, F., 1990. Geology of the Grimsthorpe Area. In Summary of Field Work and Other Activities 1990, Ontario Geological Survey, Miscellaneous Paper 151, p. 99-110.

Meen, V.B., 1942. Geology of the Grimsthorpe-Barrie Area; Ontario Department of Mines, Vol. 51, pt. 4, p. 1-50 (with Map 51d: published 1944).

C E R T I F I C A T E

I, ROBERT JAMES DILLMAN, do hereby certify as follows:

[1] THAT I am a Mining Exploration Geologist, and that I reside and carry on business at 42 Springbank Drive, in the City of London, Province of Ontario.

[2] THAT I am a Graduate of the University of Western Ontario, with a Bachelor of Science Degree in Geology, 1992.

[3] THAT I have been practising my profession since 1992.

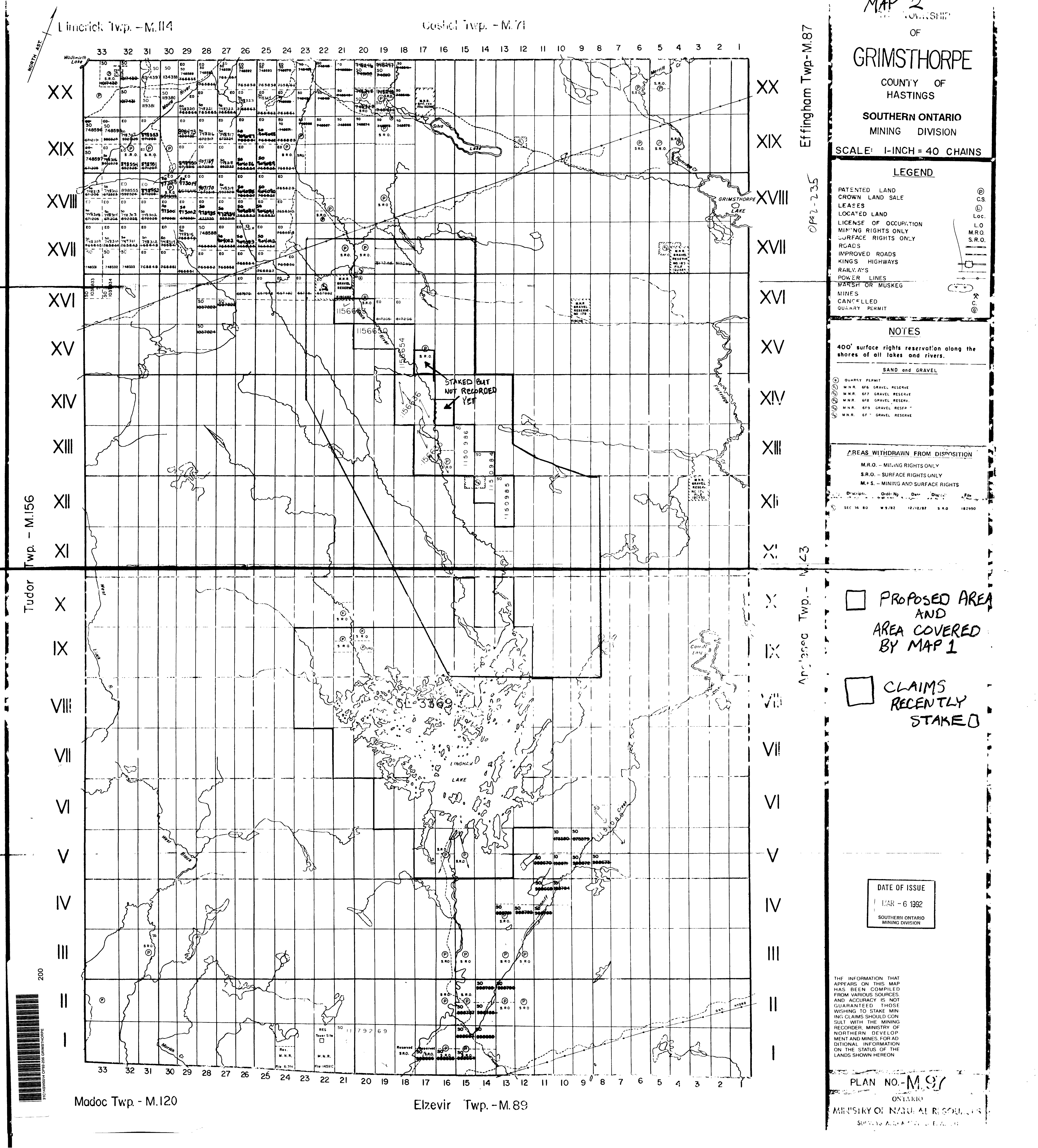
[4] THAT I have been actively prospecting in Canada since 1978.

[5] THAT my Report, dated January 5, 1993, on the Black River Property of Grimsthorpe Township is based on information collected by myself between 1991 and the date of this report, and on other sources of information cited in this Report.

[6] THAT I have a 100% interest in the Black River Property and any information given in this Report is as accurate as to the best of my knowledge, and THAT I am not making any false statements to better the position of the property for personal gain.

R.J. Dillman, B.Sc.

Dated at London, Ontario
This 8th day of January, 1993



MAP 2
TOWNSHIP OF GRIMSTHORPE
COUNTY OF HASTINGS
SOUTHERN ONTARIO MINING DIVISION
SCALE: 1-INCH = 40 CHAINS
LEGEND
PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KINGS HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED
QUARRY PERMIT
NOTES
400' surface rights reservation along the shores of all lakes and rivers.
SAND and GRAVEL
AREAS WITHDRAWN FROM DISPOSITION
M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+ S. - MINING AND SURFACE RIGHTS
OP92-235
Limerick Twp. - M.114
Cashel Twp. - M.71
Effingham Twp-M.87
Tudor Twp. - M.156
Anglesea Twp. - M.43
Madoc Twp. - M.120
Elzevir Twp. - M.89
GRIMSTHORPE LAKE
LINGHAM LAKE
STAKED BUT NOT RECORDED YET
PROPOSED AREA AND AREA COVERED BY MAP 1
CLAIMS RECENTLY STAKED
DATE OF ISSUE
MAR - 6 1992
SOUTHERN ONTARIO MINING DIVISION
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES. AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON
PLAN NO.-M.97
ONTARIO
MINISTRY OF NATURAL RESOURCES

BLACK RIVER NORTH SHOWING

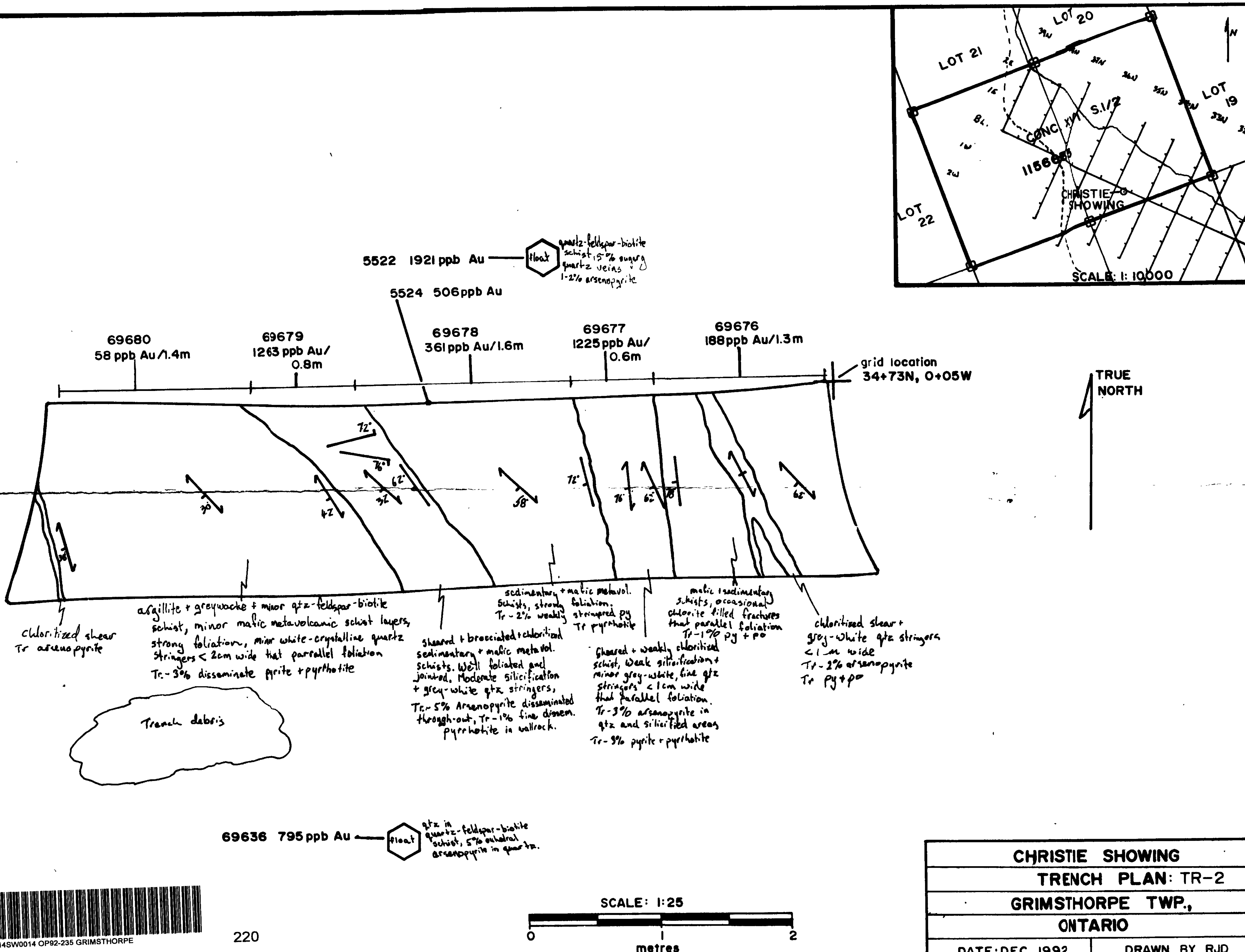
TRENCH PLAN

GRIMSTHORPE TWP., ONTARIO

SCALE: 1:50	PLAN Nº. TR-1
DATE: DEC. 1992	DRAWN BY RJD

31C14SW0014 OP92-235 GRIMSTHORPE

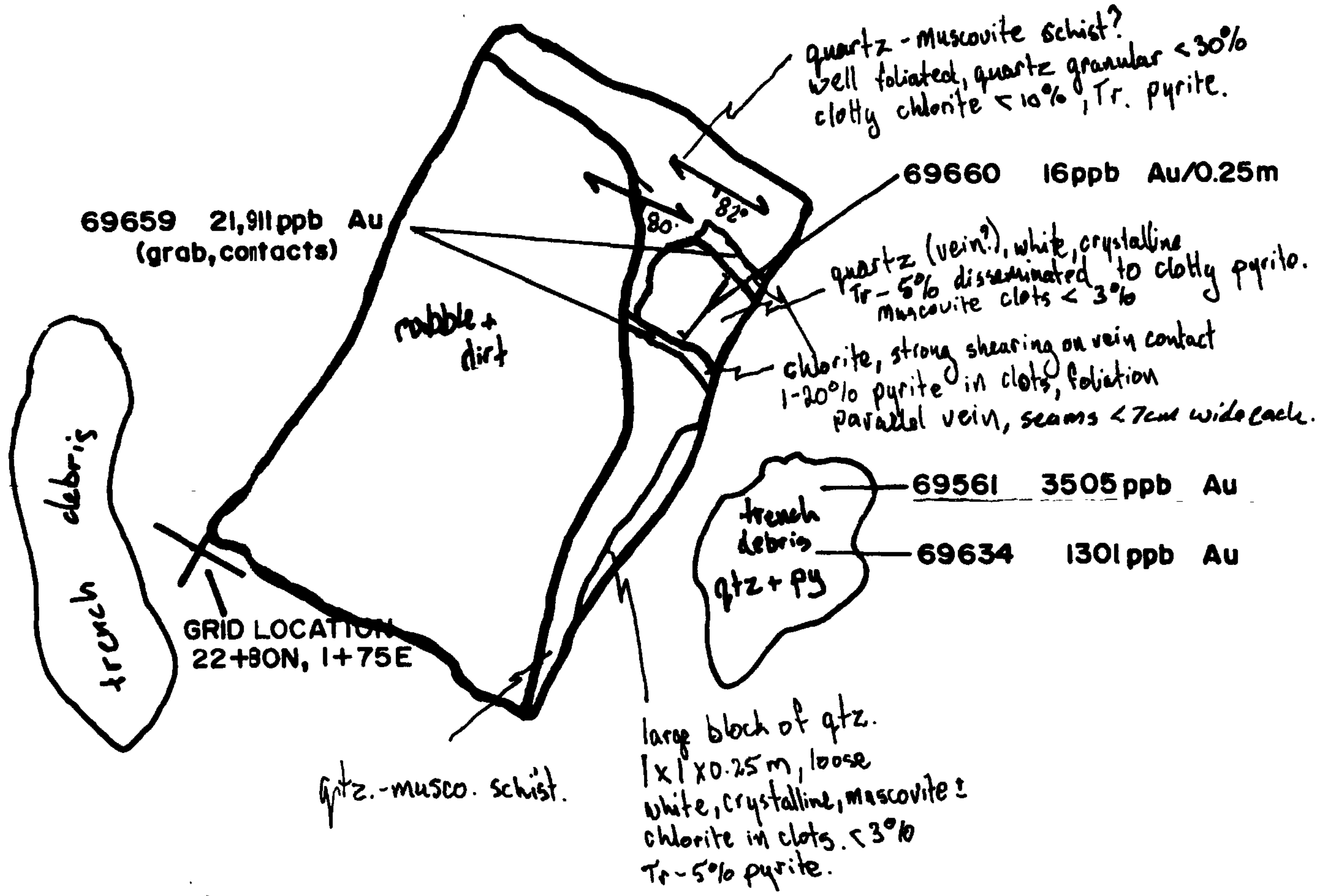
210

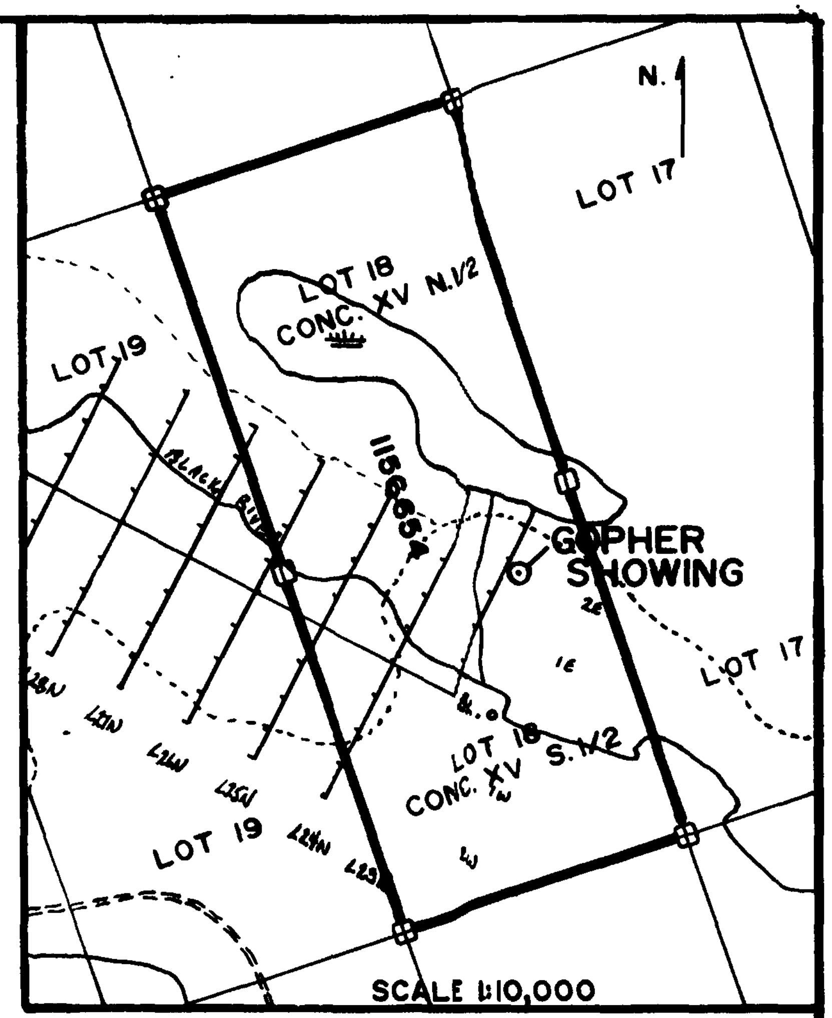


CHRISTIE SHOWING
TRENCH PLAN: TR-2
GRIMSTHORPE TWP., ONTARIO
DATE: DEC. 1992 — DRAWN BY RJD

31C14SW0014 OP92-235 GRIMSTHORPE

220





TRUE NORTH

31C14SW0014 OP92-235 GRIMSTHORPE

230

* note: all rock in trench is loose.

GOPHER SHOWING	
TRENCH PLAN	
GRIMSTHORPE TWP., ONTARIO	
SCALE: 1:25	PLAN Nº. TR-3
DATE: DEC. 1992	DRAWN BY RJD

HERRON POND SOUTH SHOWING	
TRENCH PLAN	
GRIMSTHORPE TWP., ONTARIO	
SCALE: 1:50	PLAN Nº. TR-4
DATE: DEC. 1992	DRAWN BY RJD

HERRON POND SOUTH SHOWING	
TRENCH PLAN	
GRIMSTHORPE TWP., ONTARIO	
SCALE: 1:50	PLAN Nº. TR-5
DATE: DEC. 1992	DRAWN BY RJD


GRIMSTHORPE TWP. PLAN Nº. M97
TRUE NORTH
MAGNETIC NORTH
CONC. XII
CONC. XIII
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
BLACK
RIVER
LINGHAM LAKE ROAD
1169665
1150986
1150984
1169673
LEGEND
4 Aplite dikes
3 Marble
2 Schists
a mafic schist
b argillite, greywacke, phyllite schists
c quartz-feldspar-biotite
1 Mafics
a basalt
b gabbroic flows
c agglomerate
SYMBOLS
outcrop
rubble crop
float
foliation + dip
schistosity + dip
striae + dip of vein
arsenopyrite
pyrrhotite
contact
sample number
clearing
pond
beaver dam
swamp
road
pyrite
magnetite
hill top, slope
GEOLOGY
GRIMSTHORPE TOWNSHIP
ONTARIO
DATE: NOV. 1992
MAP Nº 1A
SCALE: 1:2,500
DRAWN BY RJD


GEOLOGY
GRIMSTHORPE TOWNSHIP
ONTARIO
DATE: NOV. 1992
MAP Nº 1B
SCALE 1:2,500.
DRAWN BY RJD
LEGEND
4 Aplite dikes
3 Marble
2 Schists
a mafic metavolcanic schists
b argillite, greywacke, graphitic schists
c quartz-feldspar-biotite schist
1 Mafic metavolcanics
a basalt
b gabbroic flows
c agglomerate
SYMBOLS
outcrop
rubble crop
float
foliation + dip
schistosity + dip
strike + dip of vein
jointing + dip
7807B sample number
clearing
pond
BD beaver dam
swamp
road
hill top + slope direction
Au gold
As arsenopyrite
mag magnetite
py pyrite
po pyrrhotite
contact
TRUE NORTH
MAGNETIC NORTH
GRIMSTHORPE TWP. PLAN Nº. M97
metres
0
100
200
CONC. XIV
CONC. XV
LOT 17
LOT 18
LOT 19
LOT 20
BLACK RIVER
LINGHAM LAKE ROAD
1159973
1156635
1156636
1159974
1156650
1156654
15N
16N
17N
23N
24N
25N
26N
27N
28N
29N
270


GEOLOGY
GRIMSTHORPE TOWNSHIP
ONTARIO
MAP N° 1C
DATE : NOV. 1992
DRAWN BY RJB
SCALE 1:2,500
LEGEND
4 Aplite dikes
3 Marble
2 Schists
a mafic metavolcanic schists
b argillite, greywacke, graphitic schists
c quartz-feldspar-biotite schist
1 Mafic metavolcanics
a basalt
b gabbroic flows
c agglomerate
SYMBOLS
outcrop
rubble crop
float
foliation + dip
schistosity + dip
strike + dip of vein
jointing + dip
contact
TBO78 sample number
clearing
pond
BD beaver dam
swamp
road
hill top + slope direction
py pyrite
po pyrrhotite
Au gold
As arsenopyrite
mag magnetite
metres
LOT 19
LOT 20
LOT 21
LOT 22
CONC. XV
CONC. XVI
BLACK RIVER
MAHONEY LAKE ROAD
SCOOTAMATTA ROAD

MAGNETIC SURVEY

GRIMSTHORPE TOWNSHIP ONTARIO

DATE: NOV. 1992	MAP Nº 2A
SCALE: 1:2,500	DRAWN BY RJD

MAGNETIC SURVEY
GRIMSTHORPE TOWNSHIP
ONTARIO
MAP No. B2
DRAWN BY
GOLD OCCURRENCE
MAGNETIC LOW
250 GAMMA CONTOUR INTERVAL
VALUES BASED AT 56,000 GAMMAS
GEM SYSTEMS GSM-8
TRUE NORTH
MAGNETIC NORTH
metres
LOT 17
LOT 18
LOT 19
LOT 20
CONC. XIV
CONC. XV
BLACK RIVER

MAGNETIC SURVEY
GRIMSTHORPE TOWNSHIP
ONTARIO
MAP No 2C
DATE: NOV. 1982
SCALE 1:2,500
GEM SYSTEMS GSM-8
VALUES BASED AT 56,000 GAMMAS
250 GAMMA CONTOUR INTERVAL
MAGNETIC LOW
GOLD OCCURRENCE
TRUE NORTH
MAGNETIC NORTH
metres
LOT 22
LOT 21
LOT 20
LOT 19
LOT 18
CONC. XV
CONC. XVI
BLACK RIVER
SKOOTAMATTA LAKE ROAD
LINGHAM LAKE ROAD


ELECTROMAGNETIC SURVEY
GRIMSTHORPE TOWNSHIP
ONTARIO
MAP Nº 3A
DATE: NOV. 1992
SCALE: 1:2,500
DRAWN BY RJD
GRIMSTHORPE TWP. PLAN Nº. M.97
CONDUCTOR
GOLD OCCURRENCE
Instrument: GEONICS EM-16
Station: CUTLER, MAINE (24 KHz)
metres
0
100
200
TRUE NORTH
INSTRUMENT ORIENTATION
MAGNETIC NORTH
STATION DIRECTION
CONC. XII
CONC. XIII
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
LINGHAM LAKE ROAD
BLACK RIVER

ELECTROMAGNETIC SURVEY
GRIMSTHORPE TOWNSHIP
ONTARIO
GOLD OCCURRENCE
CONDUCTOR
LOT 17
LOT 18
LOT 19
LOT 20
CONC. XIV
CONC. XV
BLACK RIVER
LINGHAM LAKE ROAD


ELECTROMAGNETIC SURVEY
GRIMSTHORPE TOWNSHIP
ONTARIO
DATE: NOV. 1992
MAP Nº 3C
SCALE 1:2,500
DRAWN BY RJD
GRIMSTHORPE TWP. PLAN Nº. M97
TRUE NORTH
INSTRUMENT ORIENTATION
MAGNETIC NORTH
STATION DIRECTION
CONDUCTOR
GOLD OCCURRENCE
Station: CUTLER, MAINE (24 kHz)
Instrument: GEONICS EM-16
profile scale 1cm=10%
quadrature
inphase
reading station
grid line
metres
0
100
200
LOT 18
LOT 19
LOT 20
LOT 21
LOT 22
CONC. XV
CONC. XVI
BLACK RIVER
SKOOTAMATTA LAKE ROAD
LINGHAM LAKE ROAD
26N
27N
28N
29N
30N
31N
32N
33N
34N
35N
36N
37N
38N
39N
M
N
O
P
Q
R
340