



31C13SE0010 OP93-120 TUDOR

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**A Report
on
THE CRAIG MINE GOLD PROJECT
in
THE TUDOR TOWNSHIP AREA
of
SOUTHEASTERN ONTARIO
1993**

OPAP GRANT OPG93-049

Toronto, Ontario

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CONTENTS

THEORY	<i>Page 1</i>
THE PROJECT	<i>Page 2</i>
Craig Mine Section	
Felsic Rocks	
Wolf Lake Band	
Gilmour Band	
Other Felsics	
LOCATION and ACCESS	<i>Page 3</i>
GEOLOGY	<i>Page 3</i>
THE MAIN SHOWINGS	<i>Page 4</i>
Craig Mine	
Quinlan Lake Showing	
McMurray Showing	
Con. 13, Lot 5 Occurrence	
PROSPECTING and SAMPLING	<i>Page 5</i>
Assay Values	
Section West of Craig Mine	
Wolf Lake Felsics	
Prospecting	
Panning	
Water Sampling	
Gilmour Felsics	
ELECTROMAGNETIC SURVEYING	<i>Page 8</i>
Craig Mine Section	
Results	
Con 2, Lot 11 Occurrence	
Results	
McMurray Occurrence	
PROJECT RESULTS	<i>Page 10</i>
REFERENCES	<i>Page 11</i>
INCLUSIONS	<i>Page 11</i>
TABLE No. 1 Rock samples	<i>Page 12</i>

THEORY

Of the numerous gold prospects occurring in Tudor township only a few have gold values above trace. Of these, the Craig Gold Mine and the Quinlan Lake showing lie within amphibolite rich volcanic rocks near the edge of the Lingham Lake intrusive. The Lot 5, Con 13 (Tudor Twp.), Hollandia Mine (Madoc Twp.), and other lesser showings occur at various locations along a felsic horizon near the upper contact of the volcanics with overlying marbles. The felsic volcanic band which strikes through Wolf Lake is traceable for about 10 miles in the Tudor township area, along a generally north-southerly strike direction, and lies about 7500 feet stratigraphically above the Craig Mine and Quinlan Lake occurrences. These latter showings may be feeder veins representing the roots of a gold plumbing system which may have reached the paleo surface on which the later marbles of the Tudor basin were deposited. The gold occurrences along the felsic flow horizon may be the result of the migration of gold bearing solutions due to pressure on deeper parts of the volcanic pile from static pressure or intrusion of events such as the Lingham Lake complex. Two geological loci that suggest themselves as possible hosts to gold concentrations are (1); the 7500 foot section of volcanics lying stratigraphically directly above the Craig Mine to as far west as the felsic flows and (2); the felsic flows themselves and any interflow sediments associated with the top part of the volcanic pile. The exploration of these two possible hosts for gold and other related felsic rock occurrences was the purpose of this 1993 OPAP grant project.

THE PROJECT

The purpose of the 1993 exploration project was to prospect, examine and sample (1); as much of the area immediately west of the Craig mine and (2); as much of the felsic rock lying at the top of the volcanic section as possible including both the Wolf Lake felsics and other felsic horizons in Tudor township as shown on map 2168 by Lumbers¹

Craig Mine Section

There is reasonably good exposure west of the mine for about the first 4800 ft. After that the ground becomes low and swampy approaching Wolf Lake and no rock exposure is available until the west side of the lake is reached. Because the contact between the volcanics and the overlying marbles of the Tudor basin passes through Wolf Lake, what is possibly the most important part of the section is overburden covered. However, the exposed area closer to the mine was prospected and sampled and an electromagnetic survey was run to cross section the volcanics in an attempt to detect any sulphide bearing horizons not otherwise exposed.

Felsic Rocks

Wolf Lake Band

The Wolf Lake felsic rocks lying near the top of the volcanic sequence extend in a northerly direction for nearly 10 miles within the area of this study. This distance covers their exposure and extensions from the south end of Tudor township, just north of the old Hollandia mine, north and northwesterly to Lot 5 in Con. 14 in the northeast quarter of the township. This felsic band is host to a number of the gold showings in the study area including the Lot 5, Con 13 occurrence (No. 9 on map 2168) and has also been the subject of more recent studies by Homestake Mining and other companies and individuals. Because these rocks offer a potential host to gold bearing solutions migrating up section from the Craig mine area it was decided to prospect and sample them for as much of their known strike length as was practical but concentrating the work on the section west of the mine.

Gilmour Band

Another strong band of felsics, referred to here as the Gilmour felsic band strikes southwesterly across Tudor Twp. through the village of Gilmour. It is exposed intermittently for over 6 miles and hosts the McMurray showing in Lot 1, Con 1, Limerick township. This Gilmour horizon may occupy approximately the same stratigraphic location as the Wolf Lake horizon on which our work was concentrated. It also lies just below the marble contact, near the top of the volcanic section. This horizon was prospected and sampled also.

¹ Lumbers, S.B., see References section

Other Felsics

Other felsic occurrences in Tudor and Limerick townships were also visited and, in some cases, sampled. These locations included the Jordan Lake exposure and exposures in central Tudor township and in Limerick township. Some of these felsic occurrences were not sampled because of reports of negative assay results by other prospectors.

The base maps and references used in the project are Maps 2167 and 2168 Tudor and Limerick Townships, part of O.D.M. report GR67, Geology of Limerick and Tudor Townships by S.B. Lumbers, 1969.

LOCATION and ACCESS

Access to the general area in which the program was carried out is via that part of Highway 62 which runs from Bancroft in the north to Madoc in the south and secondary roads off it. Some fishing trails exist in the area of the Moira River and were used where possible. In addition, a canoe was used to access the Moira River north of Wolf Lake and Wolf Lake itself.

GEOLOGY

The Tudor-Madoc-Lake carbonate sedimentary basin occupies most of southern Tudor township, southeastern Lake township and much of northern Madoc township in southeastern Ontario. The basin is generally characterized by Proterozoic fine to coarse grained marble and dark calcareous schists consisting of phlogopitic and tremolitic marble in the upper part and clastic components such as felsic metagreywacke and meta-arkose and metaconglomerate in the lower part. Underlying the basin are volcanics of various compositions and cutting all the above are mafic intrusives of gabbroic, peridotitic and pyroxenitic composition and granitic to syenitic intrusions.

The rocks of interest in this project belong to the volcanic sequence that directly underlies the Tudor basin. They range in composition from mafic to intermediate for the most part with high amphibole content near basic intrusives such as the Lingham Lake complex in eastern Tudor township. Near the top of this sequence, just underlying the marble contact, felsic volcanics occur. These bands are often persistent for considerable distances and consist of flows, tuffs, lapilli tuffs and agglomerates. Because of their composition they may be expected to weather relatively high. Sulphides are a minor part of their composition for the most part but pyrite, pyrrhotite, arsenopyrite and occasional chalcopyrite are seen in disseminations and small veinlets associated with shearing. Gold values, where present, are often associated with arsenopyrite.

THE MAIN SHOWINGS

Following are summaries of the best gold showings in the Tudor Twp. area.

Craig Mine

- Tudor Twp.
- discovered in the late 1800's
- 1905-06 bullion worth \$5,760 produced from 1,850 tons of ore
- 1934-36 5200 tons development muck hoisted
- mill on property
- two shafts (to max 245 ft.), lateral work
- quartz vein, strikes NW, 1/2 to 6 ft. wide. Can be traced for 990 ft.
- in mafic volcanics. Contact aureole of Lingham Lake complex
- Fissure filling. Sheared quartz is blue-grey
- pyrite, pyrrhotite, chalcopyrite present in veins

Quinlan Lake Showing

- Tudor Twp.
- northeast trending quartz vein, 10 ft. wide
- in mafic metavolcanics
- vein contains disseminated arsenopyrite, pyrite, locally tourmaline
- grab sample by Lumbers gave 0.08 opt gold, tr silver

McMurray Showing

- LimerickTwp.
- gold (+ minor silver) and arsenopyrite associated with quartz veins
- pits and trenches in a northeast striking rusty shear zone
- drilled by Stratmat, Macassa
- tuff, felsic and mafic metavolcanics present
- quartz up to 1 ft. wide, vein networks
- 5-10% disseminated sulphides including py, po, cp, arsenopyrite.
- arsenopyrite up to 55% dissem.
- Lumbers reports up to 0.27 opt gold/1 1/2 ft. from split core

Con. 13, Lot 5 Occurrence

- Tudor Twp.
- trench exposes a quartz vein, 2 ft. wide in rhyolite.
- arsenopyrite disseminated in vein, massive stringers of sulphide in wall
- grab off vein by Lumbers gave 0.01 opt gold, tr silver
- grab of massive arsenopyrite gave 0.03 opt gold, tr silver

PROSPECTING and SAMPLING

The accompanying maps show most of the sample locations. The kind of sample taken at any location varied with availability of exposure and sample material. Rock samples, soils, mulls and, at Wolf Lake, water samples were taken at various locations. Assays were done for arsenic (As) or gold (Au). Because of the common association in the area of gold values with arsenopyrite mineralization and because of the easier detectability of arsenic at some distance from a source, arsenic was relied on as a pathfinder to gold rather than using direct gold assays. In addition, early results in this program showed a close relationship between the better gold bearing showings and anomalous arsenic. High arsenic samples were then tested for gold in most cases. It was found late in the program, however, that occasional above-background gold assays occurred without elevated arsenic but budget restrictions limited further experimentation in assay procedures. In any case it is considered doubtful that any strong gold anomaly was missed due to assay technique.

Assay Values

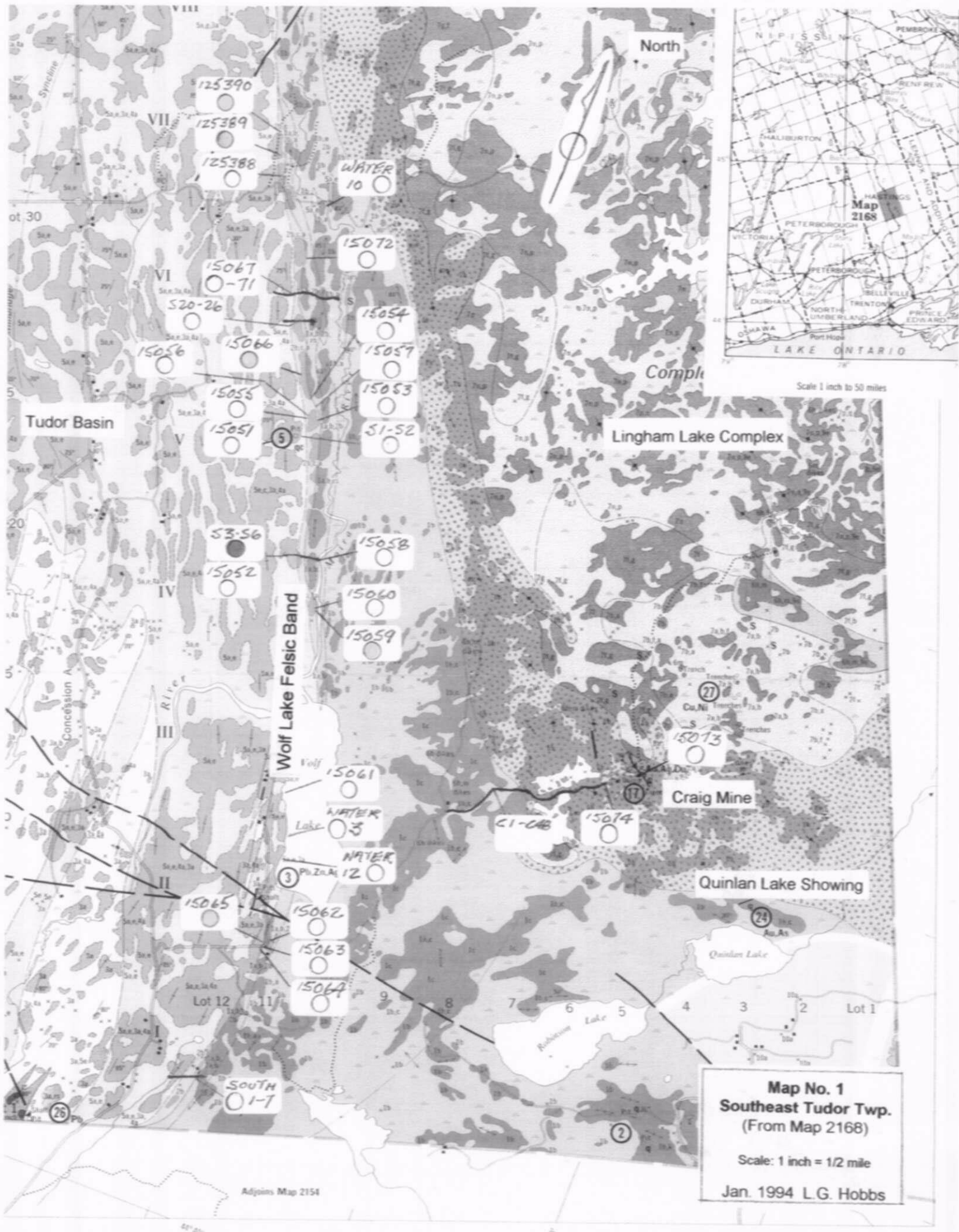
Rock assays for arsenic ranged from a high of 13.92% at the McMurray occurrence to as low as <5 ppm. For purposes of plotting rock assay values on Map No. 1 and Map No. 2 background arsenic was considered to be up to 35 ppm, with values to 350 ppm considered weakly anomalous and higher values considered strongly anomalous. Colour coding on the maps distinguishes the samples on this basis (see Legend).

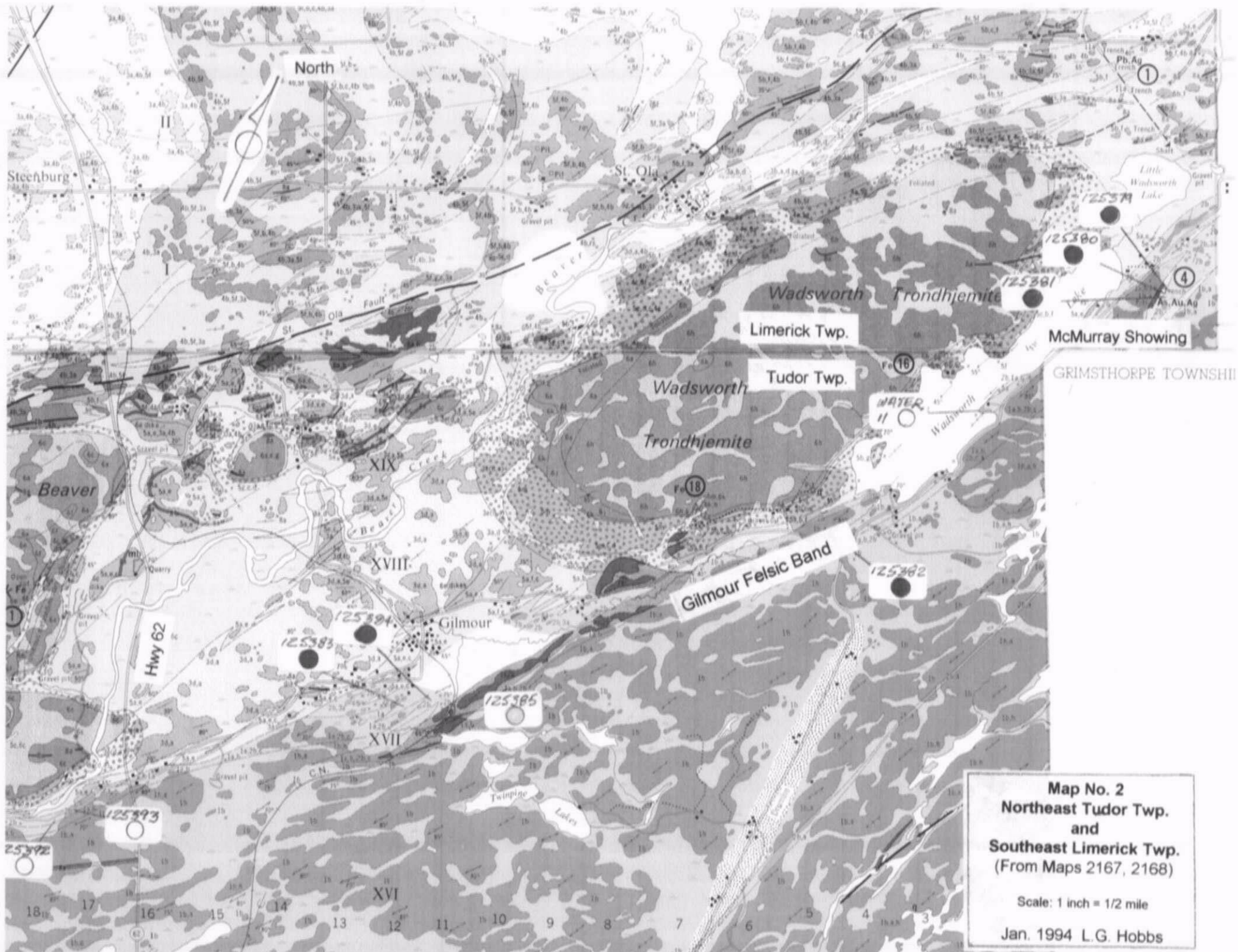
Arsenic values in the 68 soils and mull samples taken varied from a high of 102 ppm to <5 ppm. Background was considered to be lower than 25 ppm and anomalous 25 ppm. and above. These terms are, of course, merely relative within the population of values obtained in this work. As with the rocks, colour coding on the maps distinguishes the samples on this basis (see Legend).

Section West of Craig Mine

Several days were spent prospecting the volcanics west from the mine to Wolf Lake looking for evidence of a quartz rich feeder system leading to the upper part of the volcanic column. Only minor quartz and carbonate veins up to 3/4 in. were seen. Except for occasional small crystals of pyrite or pyrrhotite sulphides are also rare. Exposures appear to be mainly massive amphibolite and amphibolite rich basalts. Some sheared zones trending north-southerly were seen but no strong sulphide or quartz enrichment was seen.

A series of mull samples were taken at 100 ft. intervals on a southwest line close to the mine access road. These are numbered C1 to C48 and represent a cross section of nearly a mile of mafic volcanics above the mine. They were assayed for arsenic and silver, most of them running <5 ppm arsenic but a few showed slightly higher values. Results higher than <5 ppm As are plotted on a graph showing EM16 VLF survey results from the Craig mine road so that the arsenic values can be compared with the VLF survey. One cluster of arsenic values (station 28 W area) correlates to a weak crossover at about 25+50 W. The other cluster near the west end of the traverse is beyond the end of the VLF readings which probably should have been extended. Murphy's law is alive and well.





Map No. 2
Northeast Tudor Twp.
and
Southeast Limerick Twp.
(From Maps 2167, 2168)

Scale: 1 inch = 1/2 mile

Jan. 1994 L.G. Hobbs

Legend

PRECAMBRIAN^b

PROTEROZOIC

INTRUSIVE ROCKS^c

POTASSIC GRANITIC AND SYENITIC ROCKS



- 9a Potassic granite.^f
- 9b Quartz monzonite.
- 9c Potassic syenite.
- 9d Monzonite.
- 9e Granite pegmatite or syenite pegmatite (dikes).
- 9f Granite pegmatite or syenite pegmatite (nests).

MAFIC SILLS AND DIKES



- 8a Altered gabbro.
- 8b Altered diorite.

MAFIC INTRUSIVE ROCKS



- 7a Peridotite, melaperidotite.
- 7b Pyroxenite, metapyroxenite.
- 7c Olivine gabbro.
- 7d Unaltered gabbro.
- 7e Unaltered diorite.
- 7f Uralitized gabbro.
- 7g Uralitized diorite.
- 7h Metagabbro and metadiorite.
- 7j Anorthositic gabbro and anorthositic diorite.^f
- 7k Anorthosite.
- 7m Hornblende diorite.
- 7n Quartz-bearing diorite.
- 7p Tonalite.
- 7q Fine-grained mafic dike.
- 7r Hybrid diorite.

SODIC GRANITIC AND SYENITIC ROCKS



- 6a Albite granite.
- 6b Hybrid albite granite.
- 6c Fine-grained albite granite.
- 6d Sodic granite.
- 6e Albite syenite.
- 6f Amphibole-rich albite syenite.
- 6g Fine-grained albite syenite.
- 6h Trondhjemite.
- 6j Amphibole trondhjemite.^f
- 6k Contaminated trondhjemite.
- 6m Granodiorite.
- 6n Contaminated intrusive breccia (formed by reaction of sodic granitic magma with carbonate metasediments).

INTRUSIVE CONTACT

METASEDIMENTS AND METAVOLCANICS^c

CARBONATE METASEDIMENTS



- 5a Fine-grained marble.
- 5b Fine-to medium-grained marble.
- 5c Medium-grained marble.
- 5d Coarse-grained marble.
- 5e Fine-grained phlogopitic and tremolitic marble.
- 5f Fine-to medium-grained phlogopitic and tremolitic marble.
- 5g Calc-silicate granofels and gneiss.
- 5h Amphibole granofels.
- 5j Diopside granofels.
- 5k Felsic tuffite.
- 5m Mafic tuffite.
- 5n Layered diopside hornfels.



- Contact metamorphosed metasediments.

CALCAREOUS METASANDSTONE AND METASILTSTONE



- 4a Calcareous feldspathic metagreywacke.
- 4b Porphyroblastic actinolite metasediments.
- 4c Porphyroblastic hornblende metasediments.
- 4d Para-amphibolite.^d
- 4e Layered amphibole hornfels.



- Contact metamorphosed metasediments.

CLASTIC SILICEOUS METASEDIMENTS



- 3a Feldspathic metagreywacke.
- 3b Meta-arkose.
- 3c Metasubarkose.
- 3d Polymictic metaconglomerate.



- 3e Contact metamorphosed clastic siliceous metasediments (regionally metamorphosed rock type in brackets, if known).

FELSIC METAVOLCANICS



- 2a Felsic flow rocks.
- 2b Felsic tuff and felsic lapillituff.
- 2c Felsic agglomerate.



- 2d Contact metamorphosed felsic metavolcanics (regionally metamorphosed rock type in brackets, if known).



- Siliceous iron formation.

MAFIC METAVOLCANICS



- 1a Amphibole-poor mafic metavolcanics.
- 1b Amphibole-rich metavolcanics.
- 1c Massive amphibole-rich metavolcanics.
- 1d Foliated amphibolite.^f
- 1e Layered amphibolite.^f
- 1g Layered biotite amphibolite and hornblende-quartz-plagioclase gneiss.
- 1j Mafic pyroclastic rocks.
- 1k Mafic dike.



- 1h Contact metamorphosed amphibolite.



- Siliceous iron formation.



- Rusty-weathering, pyrite- and pyrrhotite-bearing schist.^e



- Breccia.

Ag	Silver.
As	Arsenic.
Au	Gold.
Cu	Copper.
Fe	Iron.
mb	Marble.
Ni	Nickel.
Pb	Lead.
q	Quartz.
qc	Quartz carbonate.
S	Sulphide mineralization.
Ti	Titanium.
Zn	Zinc.

Sample location



Rock samples

Strongly anomalous ●

Weakly anomalous ○

Background ○

Soil samples

Anomalous ●

Background ○

Wolf Lake Felsics

Prospecting

This felsic band was well prospected and sampled for nearly 5 miles of its length. Both rock samples and soil samples were taken as dictated by the availability of outcrop. Outcrop is fairly common although felsics are not as well exposed as suggested by Lumbers' maps. In fact much of the felsic is difficult to identify showing the hard siliceous nature, which was expected, only occasionally. In many places the upper part of the volcanic series is carbonatized and the transition upward into the marbles of the Tudor basin is subtle. The presence of a ridge, presumably the result of differential erosion of the harder felsic, is often the best indication of its presence.

Assay values from rock samples were mainly low with arsenic values ranging from <5 ppm to a high of 150 ppm. Of the few gold assays taken 14 ppb was the highest. Silver, which was assayed for because of laboratory error, gave a high of 1.8 ppm. Soils and mulls assayed as high as 102 ppm arsenic in Sample S-4 but were mostly much lower. Map No. 1 shows the distribution of these anomalous values in both rock and soil samples. Slightly anomalous locations are scattered along the length of the felsic rocks with no particular place standing out.

Panning

In addition to the above prospecting and sampling several locations on the Moira River, which parallels the felsic horizon, were panned. A work report in the assessment files library at Toronto claims gold was panned from the river. We were unable to verify this. Except for a few places the river is slow flowing and an unlikely place to be able to pan gold. Even siphoning fine gravel from between boulders at the few existing riffles produced nothing on panning.

Water Sampling

Because Wolf Lake lies stratigraphically directly above the Craig mine and the felsics appear to pass through the lake the possibility exists that any gold deposit fed by veining from the mine area and localized by the felsic band would most likely be located under Wolf Lake. Unfortunately at least 1 1/2 miles of the felsic horizon is unavailable for examination because of the lake and adjoining swampy ground. For this reason four samples of water were taken from the lake and the Moira River and assayed for arsenic on the theory that any gold/arsenic concentrations below the lake would show elevated arsenic in the water. Samples 3 (Wolf Lake), 10 (Moira River above Wolf Lake), 11 (Wadsworth Lake), and 12 (Wolf Lake) were taken and assayed. All returned <0.005 mg/litre in arsenic. We were later informed by the laboratory that an anti-precipitant should have been used in these samples for good accuracy but the uniformly low values suggest Wolf Lake is not markedly anomalous compared to background.

The sample locations and results are shown on Map No. 1, Table 1 and Assay sheets.

Gilmour Felsics

The Gilmour felsic band was prospected less intensely than the Wolf Lake felsics in this program because the latter were originally thought to be a more likely gold host. However the Gilmour felsics, where seen, were somewhat more siliceous and, based on assay results, higher in arsenic and gold. From a study of Lumbers' mapping it is unclear how the various felsic bands in Tudor and Limerick townships are interrelated and whether some are folded equivalents of others. The Wolf Lake and Gilmour bands may be equivalent in age. Both lie at the upper contact of the volcanic sequence with the overlying marbles of the Tudor basin and its syngenetic equivalents. But major Trondhjemite intrusives (Wadsworth Trondhjemite) abut the felsics of the Gilmour band while a large basic intrusive (Lingham Lake Complex) lies close to the Wolf Lake band. Thus the Gilmour band may be more favourably located as a gold host rock.

Sampling concentrated on the McMurray showing and area, a felsic exposure near the village of Gilmour and a prominent felsic just west of Highway 62. In general, this felsic band is harder and better mineralized with quartz veining and pyrite and arsenopyrite. The exposure near Gilmour village is almost rhyolitic in places. Arsenic and gold values were generally higher in the Gilmour felsics with grab samples from the McMurray occurrence showing gold values up to 6583 ppb (0.192 ounces/ton) and arsenic up to 13.92%. A number of other locations gave arsenic values in the weakly to strongly anomalous categories (see section on *Assay Values*).

The sample locations and results are shown on Map No. 2, Table 1 and Assay sheets.

Other Felsics

Other felsic occurrences examined and sampled include those at Jordan Lake, the occurrence in Lot 11, Con. 13 Tudor Twp., and the occurrence on the Domtar private road in Limerick Twp. These appear to lie at different stratigraphic horizons than the Wolf lake and Gilmour bands but complex folding in the volcanics may be deceiving. In general they all are harder and more siliceous than the Wolf Lake band and resemble the Gilmour band. Their arsenic content is also higher, in general, than Wolf Lake and more like the Gilmour band.

Their sample values are shown in Table 1 and the Assay sheets.

ELECTROMAGNETIC SURVEYING

A limited amount of electromagnetic surveying was done in the section west of the Craig mine in an attempt to identify any conductors present. Interflow units lying stratigraphically between the mine and the upper felsic flow unit would provide potential hosts for upward migrating gold solutions. In addition, there is an established relationship between gold mineralization in the area and arsenopyrite. These interflow sediments are commonly mineralized with sulphide and may be conductive if enough sulphide is present. Electromagnetic conductors striking north-south and lying west of Wolf Lake as seen in OMNDM assessment work files (e.g., 2-8081) may be such interflow horizons lying west of (and stratigraphically above) the section surveyed.

Craig Mine Section

The section from the mine westerly for 4100 ft. was surveyed along a single traverse line using a Geonics EM16 VLF (Very Low Frequency) instrument. The station read was Cutler Maine. The VLF signals are broadcast from various transmitters around the world and are used for navigation purposes by submarines. The EM16 instrument measures the dip angle of the signal in both In-phase and Quadrature components at any particular survey station. Distortions in the signal caused by conductivity in the area of the receiver indicate possible conductive geological features. A rough qualitative measure of the distortion is provided by the amplitude of the dip angle and by the relationship between the In-phase and Quadrature components.

Results

The coupling angle between the supposed north-south strike of any conductors present and the Cutler transmitter was poor. Features with an east-west strike to southeast strike couple best with the Cutler transmitter and conductors striking in other directions tend to be masked. Several crossovers were obtained, as shown on the accompanying profile, but they are all located in close proximity to ponds and creeks and none shows quadrature confirmation to suggest a sulphide source.

Con 2, Lot 11 Occurrence

Two short VLF profiles were run in an east-westerly direction in the area of the old shaft and pits of this occurrence reading the Cutler station. Exposures are slaty metasediments and strikes are north-south in this area. These pits are in the lower part of the Tudor basin and lie stratigraphically just above the felsic flows that mark the top of the underlying volcanics. They also lie directly up section from the Craig mine. Conductors have been detected in this general area by other prospectors and, although no veins of importance are exposed, it was decided to test the showings for conductivity.

Results

A strong crossover was obtained just east of the pits and shaft. A wire fence is believed to be the cause.

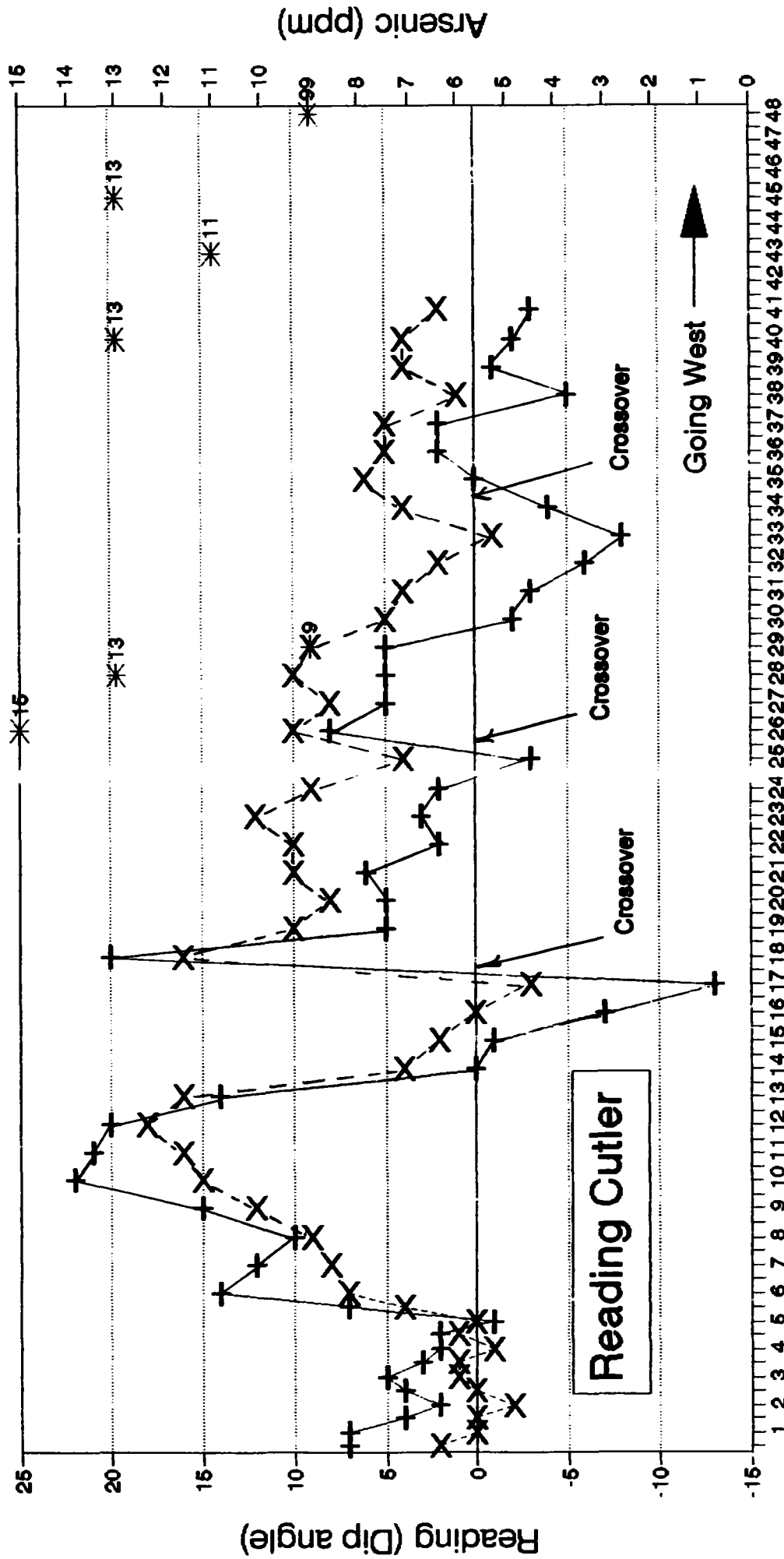
McMurray Occurrence

A short profile was run across the showing area in an east-west direction and reading the Cutler station. This showing has minor sulphides exposed in quartz veins and in the wall rocks and appears as if it could be weakly conductive.

Results

In-phase dip angles increased strongly going east toward a small pond. No crossover was obtained. Quadrature readings were variable.

EM16 SURVEY CRAIG MINE ROAD



Distance from Mine (ft. *100)

PROJECT RESULTS

1. The best gold values obtained were from the Craig Mine and McMurray occurrences, both of which were previously known.
2. In general, arsenic and gold are closely associated in the project area and arsenic can be used as a pathfinder element in most cases. But there are locations, such as the Craig Mine dump where high gold values are associated with background arsenic values (Sample 15073). On the other hand, at the McMurray occurrence high gold values are associated with very high arsenic.
3. Assays of the Gilmour felsic band show a higher arsenic background than the Wolf Lake band. The Gilmour felsic exposures are also more siliceous, fractured and carry more disseminated sulphide than the Wolf Lake. Any further gold prospecting work in the area by the author will probably concentrate on the Gilmour felsics.
4. The Other felsics sampled (Jordan Lake etc.) were found to be geologically more similar to the Gilmour band than the Wolf Lake band. They have similar arsenic assay levels as well. Their more limited exposures makes them somewhat less attractive for prospecting.
5. The negative results obtained from water sampling do not entirely eliminate the felsics passing under Wolf Lake as a possible gold host. Better sampling technique is possibly required including the use of an anti-precipitant for water samples.
6. Some follow-up may be justified in the area 4500 ft. west of the Craig Mine where some slightly elevated arsenic values were obtained and VLF surveying did not reach.
7. Any further VLF surveying for potential north-south striking conductors should employ a portable transmitter set at a more favourable coupling angle to the targets. The coupling angle with the station used in 1993 (Cutler) was poor.
8. Further work on the Gilmour felsic band is recommended.


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REFERENCES

Assessment Work files, O.M.N.D.M., Toronto.

**Lumbers, S.B. ;GR 67, Geology of Limerick and Tudor Townships, 1969; Ontario
Department of Mines**

INCLUSIONS

Map Legend

Map No. 1: Southeast Tudor Twp.

Map No. 2: Northeast Tudor Twp.

Table 1: Rock Samples

EM16 Survey Craig Mine Road

Assay sheets

Table No. 1 Rock Samples

Sample Number	Location	Gold (ppb)	Silver (ppm)	Arsenic (ppm)	Felsic
125379	McMurray shwg. qtz grabs dump	24		460	Gilmour
125380	McMurray. High Sulphide felsic	1632		3.9%	Gilmour
125381	McMurray. Qtz rich from pit	6583		13.92%	Gilmour
125382	Sh'd rusty mafic. Corner drumlin Rd.	72		928	Gilmour
125383	Hard sil. felsics. fine S. Behind Gilmour	24		430	Gilmour
125384	As 383. Less hard. Less S.	209		592	Gilmour
125385	Rusty schist. Gilmour at track.	19		120	Gilmour
125386	Limerick Tp. Domtar Private Rd. Felsic.	14		70	Other
125387	Felsic N. of lake in Con 13. Near 10	24		82	Other
125388	Cleveland rd. Felsic just W. of Moira R.	14		25	Wolf Lk.
125389	400 ft. N. of 388	10		150	Wolf Lk.
125390	200 ft. N. of 389. Much calcite, Str. N-S	14		50	Wolf Lk.
125391	Felsic. Jordan L.	7		141	Other
125392	Felsic. Gunter Rd. 1500 ft. W. of Hwy	3		22	Gilmour
125393	Felsic. Gunter Rd. 1000 ft. W. of Hwy 7-10% Py xl relicts	7		10	Gilmour
15051	Felsics S. of Cleveland rd. Close to south pit		0.1	<5	Wolf Lk.
15052	As 051. 1 mi. S. of Cleveland Rd.	nil	0.1	15	Wolf Lk.
15053	As 052. Qtz section		0.1	<5	Wolf Lk.
15054	As 051. 3/4-1 mi. S. of Cleveland Rd. Qtz 1 ft. wide.	3	0.1	9	Wolf Lk.
15055	300 ft. S. of 054. Pits? Carbonate?		0.1	<5	Wolf Lk.
15056	As 055. Loose qtz grabs		0.1	<5	Wolf Lk.
15057	160 ft. E. of EO29301-2		0.1	<5	Wolf Lk.
15058	W. bank Moira R. Soft carb'd tuff.		0.1	<5	Wolf Lk.
15059	Next otc S. from 058. 3 ft. sil. felsic. V. little S.	7	0.2	72	Wolf Lk.
15060	Felsic. Near 059		0.2	<5	Wolf Lk.
15061	Qtz fragments. Wolf Lk. bottom.		0.1	<5	Wolf Lk.
15062	Cor. S. of Wolf Lk. Rusty mafic.		0.4	<5	Wolf Lk.
15063	As 062. Rusty felsic.	nil	0.1	25	Wolf Lk.
15064	As 062. Rusty, sil. carb bands.	3	0.3	14	Wolf Lk.

15065	As 062. Fresh S. bearing felsic. Cp?	nil	1.8	143	Wolf Lk.
15066	Felsic ridge 3/4 mi. S. on Moira trail.	nil	0.1	127	Wolf Lk.
15067	Rd. off Moira trail. ~1/2 mi. south. East end of Rd.		0.1	<5	Wolf Lk.
15068	Rd. as 067. 240 ft. E. of 067. Near felsic contact		0.1	<5	Wolf Lk.
15069	Rd. as 067. 540 ft. E. of 067. Marble w. sil. bands.		0.2	<5	Wolf Lk.
15070	Rd. as 067. 675 ft. E. of 067. Harder		0.1	<5	Wolf Lk.
15071	Rd. as 067. 1245 ft. E. of 067. Hard mafic? 500 ft. to Moira trail.	7	0.1	20	Wolf Lk.
15072	Moira trail. 1450 ft. S. on trail. Q.V. 2 ft. thick. Xcutting host by 20 deg.	3	0.1	18	Wolf Lk.
15073	Craig mine dump. Qtz w. py/po siderite. Bluish grey qtz.	1269	8	<5	Other
15074	Hard volc 300 ft. W. of Craig mine.		0.1	<5	Other



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Geochemical Analysis Certificate

3W-2987-RG1

Company: **L. G. HOBBS**

Date: DEC-29-93

Project:

Attn:

We hereby certify the following Geochemical Analysis of 26 ROCK samples submitted DEC-15-93 by .

Sample Number	Au PPB	Au Check PPB	Ag PPM	As PPM	Cu PPM	Pb PPM	Zn PPM
15051			0.1	<5			
15052	Ni l		0.1	15			
15053			0.1	<5			
15054	3		0.1	9			
15055			0.1	<5			
15056			0.1	<5			
15057			0.1	<5			
15058			0.1	<5			
15059	7		0.2	72			
15060			0.2	<5			
15061			0.1	<5			
15062			0.4	<5			
15063	Ni l		0.1	25			
15064	3		0.3	14			
15065	Ni l		1.8	143			
15066	Ni l	Ni l	0.1	127			
15067			0.1	<5			
15068			0.1	<5			
15069			0.2	<5			
15070			0.1	<5			
15071	7	7	0.1	20			
15072	3		0.1	18			
15073	1234	1303	8.0	<5			
15074			0.1	<5			
UA-04	600		9.5	19	134	1200	42
BELLETERRE TR-3	960	823	9.5				

Certified by

P.O. Box 10, Swastika, Ontario P0K 1T0

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FAX (705) 642-3300



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Geochemical Analysis Certificate

3W-2347-RG1

Company: **L G HOBBS**

Date: **SEP-29-93**

Project:

Attn:

We hereby certify the following Geochemical Analysis of 15 ROCK samples submitted AUG-26-93 by .

Sample Number	Au PPB	Au PPB	As PPM
125379	24		460
125380	1728	1536	3.90%
125381	6446	6720	13.92%
125382	72		928
125383	24		430
125384	209		592
125385	21	17	120
125386	14		70
125387	24		82
125388	14		25
125389	10		150
125390	14		50
125391	7		141
125392	3		22
125393	7		10

Certified by *Dennis Chantre*

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300



1301 Fewster Drive,
Mississauga, Ontario L4W 1A2
Tel: 416-625-1544 Fax: 416-625-8368

REPORT No.
33392

17-DEC-1993

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM Ansil Resources Ltd.
 Attn: Larry Hobbs
 605-80 Richmond Street W.
 Toronto ON
 M5H 2S9

PAGE: 1 of 1
Received: 16-DEC-1993
Invoice # 65944
P. O. # Verbal

SAMPLE(S) OF Water

Arsenic
mg/L

Sample 3	< 0.005
Sample 10	< 0.005
Sample 11	< 0.005
Sample 12	< 0.005

SIGNED

A handwritten signature in dark ink, appearing to be "M. J. Smith", is written over a horizontal line.

For inquiries on this report, please contact our Customer Service Department.
Samples returned or discarded two months from the date of this report.

Geochemical Analysis Certificate**3W-2995-SG1****Company: L HOBBS****Date: JAN-13-94****Project:****Attn:**

We hereby certify the following Geochemical Analysis of 66 SOILS samples submitted DEC-15-93 by .

Sample Number	Au PPB	Au Check PPB	Ag PPM	As PPM
C-1			0.1	G
C-2			0.2	G
C-3			0.1	G
C-4			0.1	G
C-5			0.1	G
C-6			0.1	G
C-7			0.1	G
C-8			0.1	G
C-9			0.1	G
C-10			0.1	G
C-11			0.1	G
C-12			0.1	G
C-13			0.1	G
C-14			0.1	G
C-15			0.1	G
C-16			0.1	G
C-17 Missing				
C-18			0.1	G
C-19			0.1	G
C-20			0.1	G
C-21			0.1	G
C-22			0.1	G
C-23			0.3	G
C-24			0.1	G
C-25			0.1	G
C-26	9		0.4	15
C-27			0.1	G
C-28	5		0.1	13
C-29	3		0.1	9
C-30 Missing				

Certified by Dennis Chantre

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3W-2995-SG1

Date: DEC-29-93

Geochemical Analysis Certificate

Company: **L HOBBS**

Project:

Attn:

We hereby certify the following Geochemical Analysis of 66 SOILS samples submitted DEC-15-93 by .

Sample Number	Au PPB	Au Check PPB	Ag PPM	As PPM
C-31			0.1	0.0
C-32			0.1	0.0
C-33			0.1	0.0
C-34			0.1	0.0
C-35			0.1	0.0
C-36			0.1	0.0
C-37			0.1	0.0
C-38			0.1	0.0
C-39			0.2	0.0
C-40	27	19	0.2	13
C-41			0.1	0.0
C-42			0.2	0.0
C-43	7		0.2	0.0
C-44			0.1	0.0
C-45	9		0.2	13
C-46			0.3	0.0
C-47			0.4	0.0
C-48	5		0.2	9
South 1 (00)	5		0.3	11
South 2 (1+00W)			0.1	0.0
South 3 (2+00W)	7		0.2	14
South 4 (3+00W)			0.1	0.0
South 5 (4+00W)			0.2	0.0
South 6 (5+00W)	7		0.1	20
South 7 (1+00E)	9	5	0.4	19
S-1			0.1	0.0
S-2			0.1	0.0
S-3	3		0.2	35
S-4	26	39	0.1	102
S-5	7		0.1	51

Certified by

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Geochemical Analysis Certificate

3W-2995-SG1

Company: **L HOBBS**

Date: DEC-29-93

Project:

Attn:

We hereby certify the following Geochemical Analysis of 66 SOILS samples submitted DEC-15-93 by .

Sample Number	Au PPB	Au Check PPB	Ag PPM	As PPM
S-6			0.1	<5
S-20	7		0.4	<5
S-21			0.3	<5
S-22			0.2	<5
S-23			0.2	<5
S-24	3		0.4	<5
S-25			0.2	<5
S-26			0.1	<5

Certified by

