SUMMARY

This report covers the 1982 exploration activities on the 39 contiguous claims south of our main Fripp Township property, Project 785. These claims were staked in September 1981.

During June of 1982, Northgate Exploration Limited completed a line cutting and magnetometer program over these claims. Two high priority targets were identified. The first priority target is the lower contact of the ultra mafic volcanics with the granodiorite. This has potential for Cu mineralization similar to that on the adjacent Hollinger-Argus ground. The second priority target is a small gabbro plug with possible Au-Cu mineralization similar to that on Muskasenda Lake.

2.0 LOCATION (NTS Ref 42 A/3)

The 39 claim extension is located in the southeast quadrant of Fripp Township approximately 20 miles south of Timmins and adjoins the main claim block on claims 618993, 618996 and 618999. (Figure 1)

3.0 ACCESS

Fripp Township is accessible via a network of well maintained gravel roads. The system links Matchewan, Shining Tree and Timmins (Pine Street). The main claim block is covered by numerous non maintained logging roads which could only be used by snowmobile during the winter. Access to the southwest extension is via an old logging road to the north end of Bartlett Lake or to the east side of claim 624096. Bartlett Lake itself, can be used to reach the eastern 4 claims by boat or skidoo. (Figure 2)

4.0 PHYSICAL FEATURES

4.1 Topography

Price, Fripp and McArthur Townships are characterized by isolated, low, rocky hills, unconsolidated glacial deposits and poorly drained swamps. Rarely does the local relief exceed one hundred feet in elevation which is typical of the Precambrian Peneplain.

Lakes in the general area are shallow and are usually the result of beaver dams. Many are intermittent and tend to evaporate during the summer months.

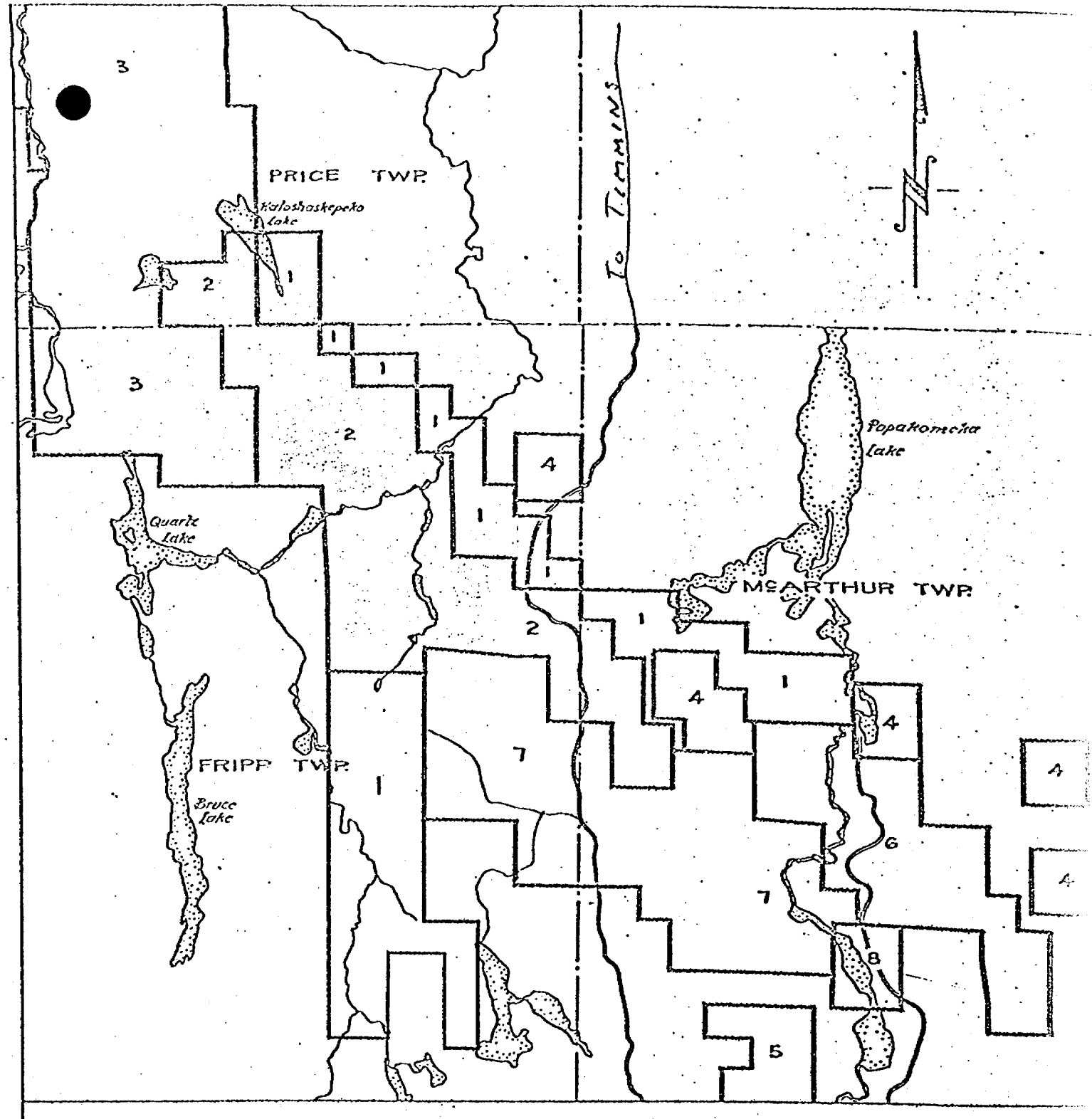
4.2 Timber

Forest cover in this area is relatively mature with stands of poplar, birch, spruce and pine, being common on the higher ground. The lower swampy areas are covered with alder, saplings, moose maple and in some areas, mature cedar.

Although large scale harvesting does occur elsewhere in the area, only small cleared areas exist on the property due to selective cutting.

4.3 Water Resources

The Split Rock River system which transects the property at its mid-point is of sufficient size and flow to provide an adequate water source for both pre-production and production needs.



LEGEND

1 Northgate Exploration Limited
2 Bordin-Northgate Option
3 Argentex
4 Amax
5 Texas Gulf
6 Westfield Minerals
7 Mattagami Lake Mines Ltd
8 Lacana

Figure 1

FRIPP TOWNSHIP AREA

COMPANY HOLDINGS

Scale: 1" = 1mile

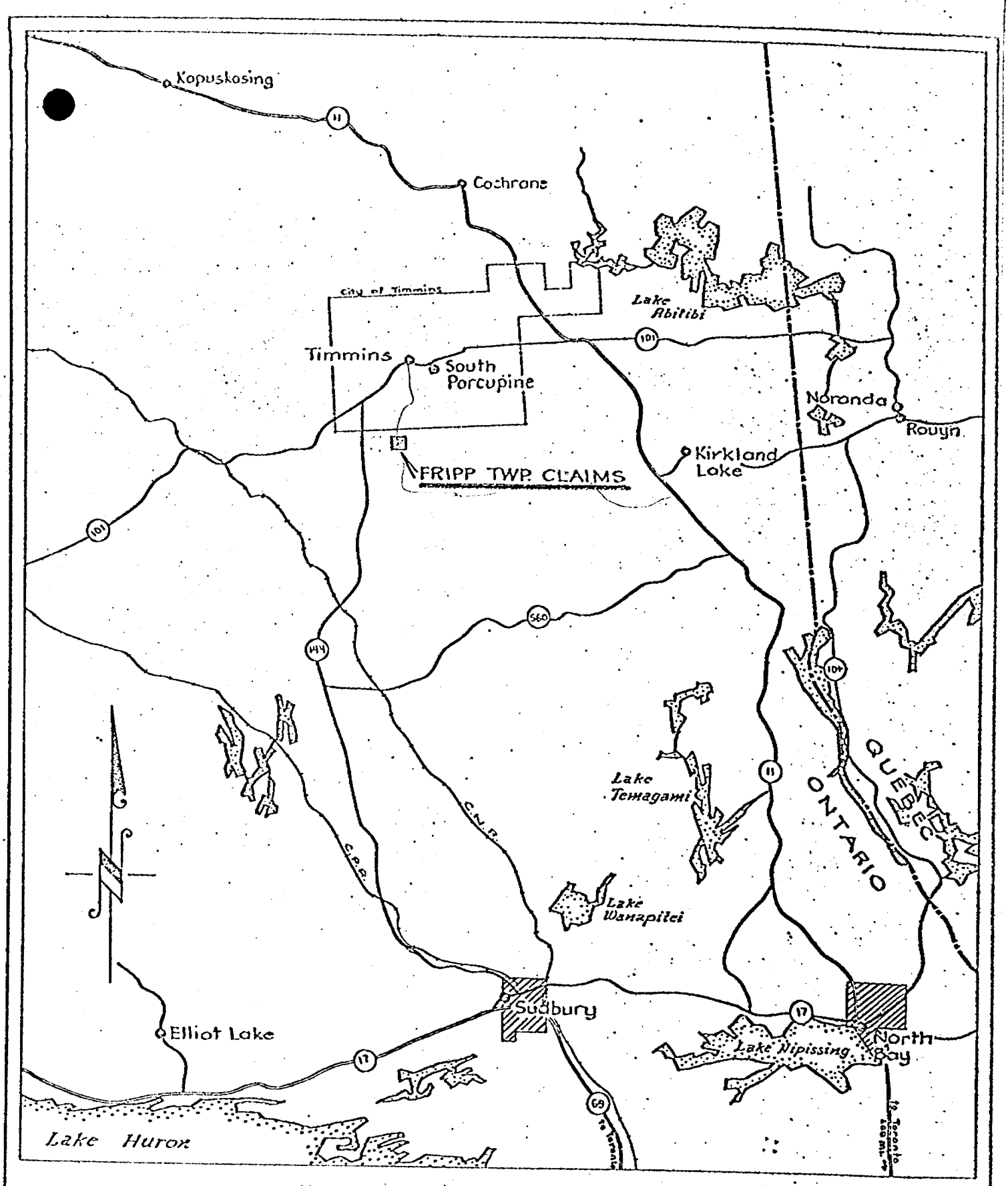


Figure 1

LOCATION MAP
showing
FRIPP TWP. CLAIMS

10 0 10 20 30 40 50
MILES

Katoshaskepeko Lake, as well as, numerous other small lakes could service the northern claims, while ponds and swamps could service the southern claims for diamond drilling or other pre-production activities.

4.4 Climate

The Timmins area has a continental climatic pattern which is characterized by dry, cold winters and hot, humid summers.

Winter, which can begin as early as mid-October and continue until mid-May, experiences temperatures as low as -40°C over extended periods and snow cover to 5 feet in forested areas.

The summer months on the other hand, have warm to hot temperatures which are sometimes accompanied by uncomfortable humidity.

Both spring and fall months have pleasant sunny days, but cool nights. These seasons, however, can be marred by freezing temperatures, frost and snow.

5.0 AUXILLIARY SERVICES

5.1 Power Facilities

With no major industries in the area, an immediate source of electrical power is not available. However, with the installation of a substation, an adequate supply can be obtained from the power line located four miles to the east.

This line runs south from Abitibi Canyon to Sudbury and supplies Timmins with most of its electrical needs. The capacity of the line is now 500,000 volts.

5.2 Mining Equipment and Supplies, Labour

Timmins is a well established mining centre with many suppliers maintaining warehouses in the district.

Likewise, mining contractors and experienced miners are available in the district.

6.0 PROPERTY AND OWNERSHIP (Table 1)

The Fripp Option property as originally presented, consisted of a block of 74 unpatented mining claims, distributed in Price, Fripp, and McArthur Townships. All claims were staked by Dennis Bordin of Timmins in the spring of 1981 and were in good standing.

Northgate Exploration Limited expanded this group in two phases, by staking an additional 75 claims. The first phase protected the blocks' eastern boundary and to form one contiguous group with Westfield's claims in McArthur Township. The second phase extended part of the boundary southwards in Fripp Township to adjoin and partially surround five leased claims currently held by Hollinger-Argus, and containing a mineral deposit of approximately 165,000 tons averaging 3% copper.

The Fripp Option property now consists of 149 mining claims or about 6,000 acres.

TABLE 1

Claims Bordin Property: Price, Fripp and McArthur Townships

Price Township

Claim Number	Recorder	Transferred To NGX	Anniversary Date
P-591040	Dennis Bordin	X	June 6, 1982
P-591041	" "	X	" " "
P-591155	" "	X	" " "
P-591156	" "	X	" " "
P-591594	" "	X	June 7, 1982
P-591595	" "	X	" " "
P-591596	" "	X	June 6, 1982

Sub-total 7 claims

Fripp Township

Claim Number	Recorder	Transferred To NGX	Anniversary Date
P-618161	Dennis Bordin	X	May 2, 1982
P-618162	" "	X	" " "
P-618163	" "	X	" " "
P-618164	" "	X	" " "
P-618165	" "	X	" " "
P-618166	" "	X	" " "
P-618167	" "	X	May 3, 1982
P-618168	" "	X	" " "
P-618169	" "	X	" " "
P-619315	" "	X	May 19, 1982
P-619316	" "	X	" " "
P-618985	" "	X	May 9, 1982
P-618986	" "	X	" " "
P-618987	" "	X	" " "
P-618988	" "	X	" " "
P-618989	" "	X	" " "
P-618990	" "	X	" " "
P-618991	" "	X	May 6, 1982
P-618992	" "	X	" " "
P-618993	" "	X	" " "
P-618994	" "	X	May 7, 1982
P-618995	" "	X	" " "
P-618996	" "	X	" " "
P-618997	" "	X	May 8, 1982
P-618998	" "	X	" " "
P-618999	" "	X	" " "
P-591027	" "	X	May 26, 1982
P-591028	" "	X	" " "
P-591029	" "	X	" " "
P-591030	" "	X	" " "
P-591031	" "	X	May 27, 1982
P-591032	" "	X	" " "
P-591033	" "	X	" " "
P-591034	" "	X	May 28, 1982
P-591035	" "	X	May 29, 1982
P-591036	" "	X	" " "

Claim Number	Recorder	Transferred To NGX	Anniversary Date
P-591037	Dennis Bordin	X	May 28, 1982
P-591038	" "	X	May 29, 1982
P-591039	" "	X	" " "
P-591147	" "	X	May 31, 1982
P-591148	" "	X	" " "
P-591149	" "	X	" " "
P-591150	" "	X	" " "
P-591151	" "	X	" " "
P-591152	" "	X	" " "
P-591153	" "	X	" " "
P-591926	" "	X	June 11, 1982
P-591927	" "	X	" " "
P-591928	" "	X	" " "
P-591929	" "	X	" " "
P-591930	" "	X	June 13, 1982
P-591931	" "	X	" " "
P-591932	" "	X	" " "
P-591936	" "	X	" " "
P-393149	" "	X	June 27, 1982
P-393150	" "	X	" " "
P-393151	" "	X	" " "
P-393152	" "	X	" " "

Sub-total 58 claims

McArthur Township

Claim Number	Recorder	Transferred To NGX	Anniversary Date
P-619317	Dennis Bordin	X	May 19, 1982
P-619318	" "	X	" " "
P-591933	" "	X	June 13, 1982
P-591934	" "	X	" " "
P-591935	" "	X	" " "
P-591937	" "	X	June 14, 1982
P-591938	" "	X	" " "
P-591939	" "	X	" " "
P-591940	" "	X	" " "

Sub-total 9 claims

Total 74 claims

TABLE 2

NORTHGATE CLAIMS: PRICE, FRIPP AND MCARTHUR TOWNSHIPS

PRICE TOWNSHIP

Claim Number	Recorder	Transferred to NGX	Anniversary Date
P-624406	Gabriel Sutherland	X	August 23, 1982
P-624407	"	X	"
P-624408	"	X	"
P-624409	"	X	August 24, 1982
P-624410	"	X	"
P-624411	"	X	"

SUB TOTAL : 6 CLAIMS

FRIPP TOWNSHIP

Claim Number	Recorder	Transferred to NGX	Anniversary Date
P-624154	Nolan Boa	X	August 16, 1982
P-624155	"	X	"
P-624281	Richard McAllister	X	"
P-624282	"	X	"
P-624823	"	X	"
P-624284	"	X	"
P-624285	"	X	"
P-624286	"	X	August 17, 1982
P-624287	"	X	"
P-624288	"	X	"
P-624289	"	X	"
P-624290	"	X	August 18, 1982
P-624291	"	X	"
P-624292	"	X	"
P-624293	"	X	September 9, 1982
P-624294	"	X	"
P-624295	"	X	September 10, 1982
P-624296	"	X	"
P-624297	"	X	"
P-624298	"	X	September 12, 1982
P-624299	"	X	"
P-624303	"	X	September 13, 1982
P-624304	"	X	"
P-628041	"	X	"
P-628042	"	X	"
P-628043	"	X	"
P-628044	"	X	September 11, 1982
P-628045	"	X	"
P-622582	Henry Gonzalez	X	September 9, 1982
P-622291	"	X	"
P-622292	"	X	"
P-622293	"	X	"
P-622294	"	X	"

TABLE 2 (CONTINUED)

FRIPP TOWNSHIP(CONTINUED)

Claim Number	Recorder	Transferred to NGX	Anniversary Date
P-624096	Genry Gonzalez	X	September 10, 1982
P-624097	"	X	"
P-624098	"	X	"
P-624099	"	X	"
P-624100	"	X	"
P-624101	"	X	September 11, 1982
P-624102	"	X	"
P-624103	"	X	"
P-624104	"	X	"
P-624105	"	X	"
P-624106	"	X	September 12, 1981
P-624107	"	X	"
P-624108	"	X	"
P-624109	"	X	"
P-624110	"	X	"
P-624111	"	X	September 13, 1982
P-624113	"	X	"
P-624113	"	X	"
P-628036	"	X	"
P-628037	"	X	"

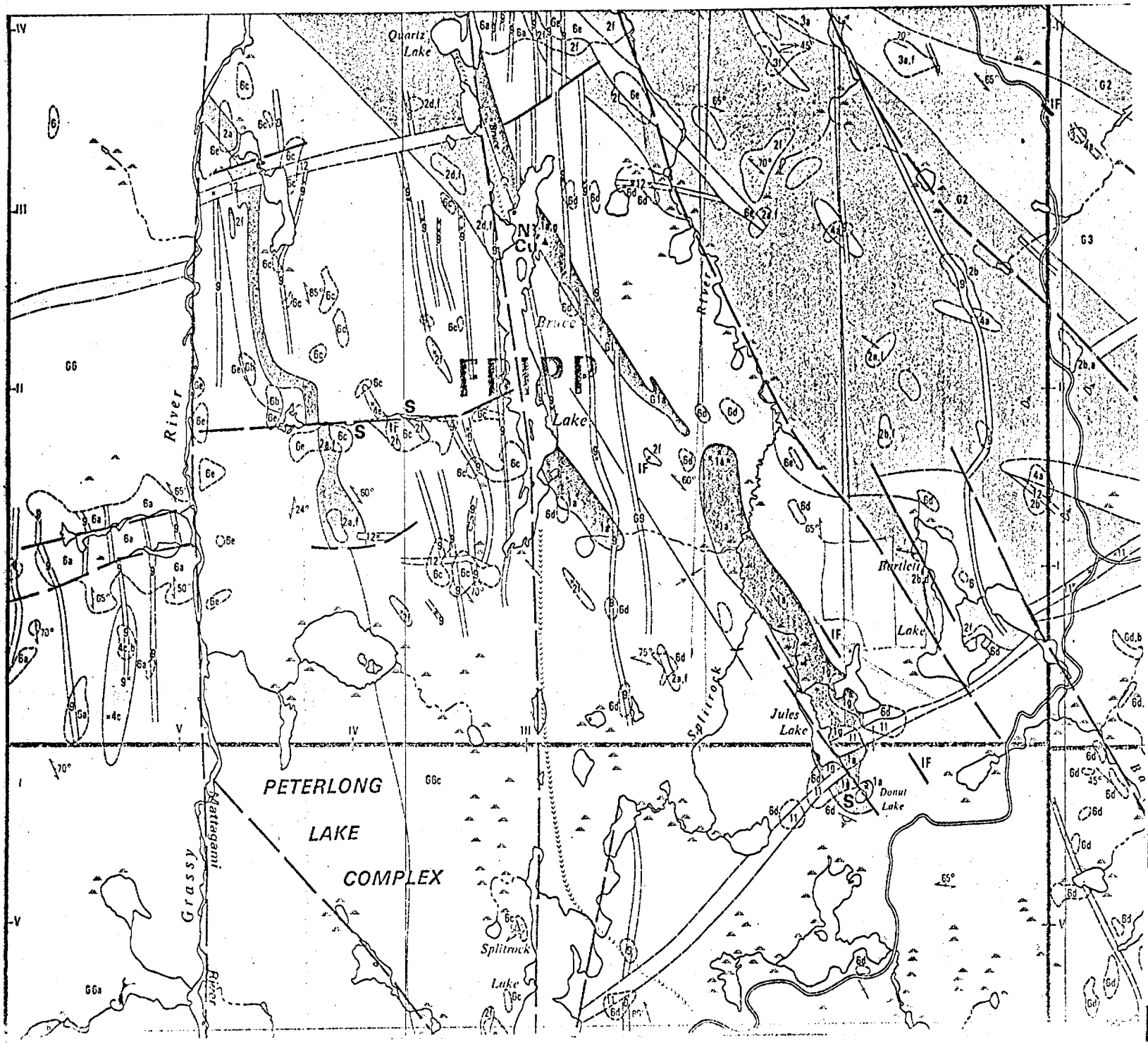
SUB TOTAL: 53 CLAIMS

MCARTHUR TOWNSHIP

Claim Number	Recorder	Transferred to NGX	Anniversary Date
P-624156	Nolan Boa	X	August 16, 1982
P-624157	"	X	"
P-624158	"	X	August 17, 1982
P-624159	"	X	"
P-624160	"	X	"
P-624161	"	X	"
P-624612	"	X	"
P-624163	"	X	August 18, 1982
P-624164	"	X	"
P-624165	"	X	"
P-624166	"	X	"
P-624167	"	X	"
P-624168	"	X	"
P-624169	"	X	August 20, 1982
P-628038	Henry Gonzalez	X	September 21, 1982
P-628039	"	X	"

SUB TOTAL: 16 CLAIMS

TOTAL : 75 CLAIMS



UNCONFORMITY

PRECAMBRIAN

LATE PRECAMBRIAN

MAFIC INTRUSIVE ROCKS[a]

12 — *12 Olivine diabase.*

UNCONFORMITY

EARLY PRECAMBRIAN (ARCHEAN)

MAFIC INTRUSIVE ROCKS

9 — *9 Diabase.*

BATHOLITHIC COMPLEXES

PETERLONG LAKE COMPLEX

6 — *6 Unsubdivided.*
6a Hornblende-biotite trondhjemite.
6b Biotite-hornblende trondhjemite.
6c Diorite.
6d Diorite and quartz diorite containing trace to 20 percent blue opaline quartz.
6e Biotite granodiorite.
6f Porphyritic hornblende granodiorite.
6g Leucocratic granodiorite and alaskite.
6h Fine-grained feldspar and quartz porphyry.

INTRUSIVE CONTACT

METAMORPHOSED MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS

4 — *4 Unsubdivided.*
4a Gabbro.
4b Gabbroic anorthosite.
4c Pyroxenite.
4d Serpentinized peridotite.
4e Peridotite largely altered to talc-carbonate.
4f Quartz gabbro.

INTRUSIVE CONTACT

METAVOLCANICS AND METASEDIMENTS

INTERMEDIATE TO FELSIC METAVOLCANICS

3 — *3 Unsubdivided.*
3a Tuff and lapilli-tuff.
3b Breccia.
3c Massive metavolcanics.
3d Pillowed flows.
3e Interlayered tuff and lesser massive flows.
3f Sericitic schist.
3g Minor interlayered siltstone and/locally conglomerate greywacke.
3h Garnet and staurolite bearing metavolcanics.

MAFIC METAVOLCANICS

2 — *2 Unsubdivided.*
2a Massive flows.
2b Pillowed flows.
2c Variolitic flows.
2d Tuff and lapilli-tuff.
2e Volcanic breccia.
2f Amphibolitized.
2g Gneissic.
2h Pyroxene spinifex.
2j Chlorite schist.
2k Tremolitic (Low Fe)–bearing mafic metavolcanics.

ULTRAMAFIC METAVOLCANICS

1 — *1 Unsubdivided.*
1a Massive, polysutured serpentinized peridotite.
1b Spinifex textured flows.
1c Irregular patches and veins of spinifex-textured peridotite.
1d Ultramafic pyroclastics.
1e Co[illegible]

Figure 3

PROPERTY HISTORY

The entire area, including the Bordin Property, was prospected for gold pre-World War II and numerous showings were discovered.

Post-World War II further attempts were made in the search for base and precious metals within the belt and again with the exception of the Texmont Discovery (Ni) (1951), no economic deposits were found.

The following is a brief outline of recorded work over the Bordin claims as found in the assessment files (M.N.R.):

1952	McCoshen-Sandrelli Geophysical Report. Assays and pits. Assays were discouraging.
1961-1965	Hollinger Gold Mines Limited Geophysical Report. EM and Magnetometer Surveys.
1966	Acme Oil and Gas. Conducted Airborne Geophysical Surveys, EM and Magnetometer, several weak anomalies.
1970	Hollinger Gold Mines Limited. Four diamond drill holes totalling 1,117 feet.
1971	Texas Gulf Sulphur. Ground based magnetometer and EM surveys, outlined two iron formations and a diabase dyke, no further work.
1975	Lionel Beaulieu. Five small pits, no sampling.

8.0 GEOLOGY

8.1 Regional (Figure 3)

All of the rocks which underlie this area are of early Precambrian Age (Archaean) and have been capped by a mantle of Pleistocene and Recent unconsolidated deposits.

The Archaean rocks consist of two cycles of volcanism in which each cycle contains a basal ultramafic sequence of flows. Mafic metavolcanics overlie this unit and generally contain massive, as well as, pillowed flows. These in turn are overlain by an upper unit of intermediate to felsic metavolcanics consisting of massive flows, but more commonly tuffs, lapilli tuffs and breccia. It is within this upper unit that intercalated sedimentary beds occur including siltstones, greywackes and iron formation.

The lower metavolcanic unit has been intruded by both felsic and mafic magmas which have formed small domes of quartz-feldspar porphyry in the felsic volcanics and gabbroic sills in the mafic volcanics, respectively.

A pre-tectonic age has been affixed to the gabbro while the porphyry is syn-tectonic and may be part of a feeder system for the felsic rocks.

Large emplacements of granite magma late in the tectonic cycle, formed the Adams Batholith and the poly-phase Peterlong Lake complex.

Numerous diabase dykes transect the area and are middle to late Precambrian in age.

The Archaean volcano-sedimentary series has been compressed and warped about the granitic domes in Adam and Giekie Townships. The Bordin-Northgate property lies on the western flank of this structure.

Numerous north to northwesterly faults traverse or follow the trend of the disturbed and enfolded volcanic inliers.

9.0 MAGNETOMETER SURVEY

9.1 Field Method and Instrumentation

The survey was undertaken by R. Zinn and three summer students, M. Mayville, D. Vasiga and D. Sypes, during the latter part of June 1982. The base of operations for this survey was the Timmins office, 107 Wilson Avenue.

Readings were taken at 100 ft. stations on all lines with a Scintrex MP-2 proton magnetometer. The crossline stations on the baseline were established as corrected stations to compensate for diurnal drift. The crosslines were read in a figure eight pattern to tie into the baseline stations. Considering the magnitude of the anomalies, the diurnal variation is negligible.

Data correction and plotting occurred at the Timmins office with final drafting, contouring, and interpretation in Toronto in the fall. Results are presented on Figures 3, 4 in the back pocket, which detail lines, claims and corrected magnetic readings. Figures 5, 6 show contoured results.

9.2 Discussion and Interpretation of Results

The most recent report on Fripp Township is in O.G.S. Report 171, Map 2345, at 1:50,000 scale. This map shows the area as being underlain by serpentinized peridotite to the southwest, mafic volcanics to the northeast and a central zone of granodiorite to quartz diorite. In addition to these major rock types, there is a small gabbroic pluton and diabase dyke in the northeast corner, a fault down the Split Rock River, and an iron formation in the south, Figure 3.

Our survey does not totally agree with this map. The mag shows no evidence of an iron formation in the south or of a fault down the Split Rock River.

The mag contour map shows three anomalously high zones with accompanying lows to the north and east all trending northwest. The most southerly of these high zones is the ultramafic volcanic indicated on Map 2345. It stretches from the western boundary on line 92S to the south boundary east of the base line on line 144S. The associated low runs from the west end of line 88S to line 112S at the baseline. This moves the volcanic-granite contact to the east of that shown on Map 2345 and it would appear that the mineral deposit on the Hollinger-Argus ground is associated with this contact.

The central anomaly is rather tenuous in that it consists of a series of isolated spot highs in the +400 to +1,000 gamma range. These probably reflect concentrations of iron minerals (magnetite or pyrrhotite) within the diorite, possibly at the edge of a contact aureole with the ultramafic volcanics. The +3,000 gamma high at the northwest end of this series (line 56S/17W) has a low to the east and may represent the edge of the ultramafic volcanics.

The northern anomaly is a very narrow structure with a bulge at each end. The O.G.S. map shows a small gabbro plug that should correspond to the southeast end of the anomaly. There are also two dykes in the vicinity, one an olivine diabase and the other a diabase. The diabase is shown crosscutting the gabbro in a north-south direction, whereas the olivine diabase is shown as being cut off by granodiorite to the west. Three possible interpretations exist:

a) The olivine diabase is continuous at depth, enters the claim group and reaches the gabbro,

b) The diabase dyke is misplotted and in fact runs northwest not north-south,

c) The gabbro intrusive has sent out a dyke of its own along a minor fault.

The majority of the claim group exhibits a low relief pattern from 0 to +400 with the 0 level being 59,000 gammas total field. There is no indication of a faulted contact between a mafic volcanic and a granodiorite. Considering the paucity of outcrop in the area, one has to assume that the O.G.S. was overly generous in their interpretation of the extent of volcanics. Our data indicates that the volcanics are probably small isolated remnants within the granodiorite intrusive.

9.3 Conclusions and Recommendations

Of the three anomalous zones, only 2 are of any real interest. The northern anomaly associated with the gabbroic intrusive should be mapped and prospected with an accompanying geochem survey. The target in this case would be Au, Cu mineralization similar to that in the Muskasenda Lake area. The gabbro is considered to be part of the larger intrusive centred on Muskasenda Lake and Bartlett Township.

The most promising anomaly is that caused by the ultramafic intrusive in the south. Hollinger-Argus has a deposit of approximately 165,000 tons grading 3% copper associated with this same anomaly, or rather the north east flank of the ultra mafic flow causing the anomaly. The flow is described in O.G.S. Report 171 as "largely altered to talc-carbonate or tremolite and that individual flows up to 6 m thick are observed near the north shore of Donut Lake. The flow tops underlying the spinifex-textured peridotite can be readily discerned, and the variation in size of the blades forming the spinifex texture indicates that tops are to the southwest". This would seem to indicate that the copper deposit is due to gravity separation of sulphides from the flow.

This anomaly should be mapped and prospected in conjunction with soil geochemistry and an EM survey. The target in this case is Cu, Ni with a possibility of chromite and platinum group metals as accessories.

An additional 4 claims should be staked on the west boundary adjacent to claims 624105, 624106, 624111 and 624112. This should be sufficient to pick up the northeast contact that is the focus of our attention.

R Zinn

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#3

W8206.378

The Minin

42A03NW0029 2.5226 FRIPP

900

Type of Survey(s): MAGNETOMETER	Township or Area: FRIPP Twp
Claim Holder(s): NORTHGATE EXPLORATION	Prospector's Licence No.: T 835
Address: Box 143 1 First CANADIAN Place Toronto ONT M5X1C7	
Survey Company: NGX	Date of Survey (from & to): Day 30 Mo. 5 Yr. 82 — Day Mo. Yr.
	Total Miles of line Cut: 29
Name and Address of Author (of Geo-Technical report): R Bunn #202 715 Don Mills ONT	

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
OCT 19 1982
MINING LANDS SECTION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	622291	
	622292	
	622293	
	622294	
	~~622295~~	
	622582	
	624096	
	624097	
	624098	
	624099	
	624100	
	624101	
	624102	
	624103	
	624104	
	624105	
	624106	
	624107	
	624108	
	624109	
	624110	
	624111	
	624112	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	624113	
	624293	
	624294	
	624295	
	624296	
	624297	
	624298	
	624299	
	624303	
	624304	
	628036	
	628037	
	628041	
	628042	
	628043	
	628044	
	628045	

RECORDED
SEP 30 1982
Receipt No. .....

Total number of mining claims covered by this report of work: 39

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

PORCUPINE MINING DIVISION
RECEIVED
SEP 30 1982
PM

Calculation of Expenditure Days Credits
Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only		
Total Days Cr. Recorded: 1560	Date Recorded: Sept 30/82	Mining Recorder:
	Date Approved as Recorded: 83:07:06	Provincial Manager/Director: Provincial Mining Engineer

Date	Recorded Holder or Agent (Signature)
28/09/82	R Bunn

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
Ron Bunn #202 715 Don Mills Rd
Don Mills ONT

Date Certified: 28/09/82

Certified by (Signature): R Bunn

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Magnetometer

Township or Area Fripp Township

Claim Holder(s) Northgate Exploration Limited

Survey Company Northgate Exploration Limited

Author of Report R. Zinn

Address of Author P.O. Box 143, 1 First Canadian Pl, Toron[illegible]o

Covering Dates of Survey June 1 - November 20, 1981
(linecutting to office)

Total Miles of Line Cut 29

SPECIAL PROVISIONS CREDITS REQUESTED		DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical	
	--Electromagnetic	
	--Magnetometer	40
	--Radiometric	
ENTER 20 days for each additional survey using same grid.	--Other	
	Geological	
	Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: 25/11/82 SIGNATURE: R Zinn
Author of Report or Agent

2.4971

Res. Geol. _____ Qualifications ~~None~~

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P 622291	P 624298
622292	624299
622293	624303
622294	624304
622582	628036
624096	628037
624097	628041
624098	628042
624099	628043
624100	628044
624101	628045
624102	
624103	
624104	
624105	
624106	
624107	
624108	
624109	
624110	
624111	
624112	
624113	
624293	
624294	
624295	
624296	
624297	

TOTAL CLAIMS 39

If space insufficient, attach list

RECEIVED
NOV 25 1982
MINING LANDS SECTION

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval 100' detail 50' Line spacing 400'

Profile scale _____

Contour interval 200 gammas

MAGNETIC

Instrument Scintrex MP 2

Accuracy – Scale constant + 1 gamma

Diurnal correction method Baseline tie in

Base Station check-in interval (hours) 1

Base Station location and value Baseline

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION / RESISTIVITY

Instrument _____

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time _____ Frequency _____

– Off time _____ Range _____

– Delay time _____

– Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

2.5226

NORTHGATE EXPLORATION LIMITED
SUITE 3140, P.O. BOX 143, 1 FIRST CANADIAN PLACE, TORONTO, CANADA M5X 1C7 • TELEPHONE (416) 362-6683 • TELEX 06-217766

June 8, 1983

Mr. E. F. Anderson
Director
Land Management Branch
Ministry of Natural Resources
Whitney Block, Room 6450
Toronto, Ontario
M7A 1W3

Re: Geophysical (Magnetometer) Survey submitted on Mining Claims P622291 et al in the Township of Fripp.
Your File No. 2.5226

Dear Sir:

Further to my letter of May 30, 1983 requesting signature and date on the above report maps, the signed material has been returned to us by Mr. Zinn from the field. Therefore I am enclosing the two sets of four maps signed and dated.

I trust everything is now in order for approval of this assessment work.

Yours truly

NORTHGATE EXPLORATION LIMITED

G. Harper, Ph. D.
Chief Geologist

c.c. Timming Recorder
Timmins, Ontario

encl.

GH:sd

May 27, 1983 2.5226

Northgate Exploration
Box 143,
1 First Canadian Place
Toronto, Ontario
M5X 1C7

Dear Sirs:

RE: Geophysical (Magnetometer)
Survey submitted on Mining Claims P622291 et al in
the Township of Fripp

Enclosed are the plans, in duplicate, for the above-mentioned survey. Please have Mr. Zinn date and sign each one and return them to this office.

For further information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

Encls:
D. Kinvig;mc

cc: Mining Recorder
Timmins, Ontario

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.5226

Jan 31/83

Mining Lands Comments

- Maps not signed

☑ To: Geophysics Mr Barclay

Comments

☑ Approved ☐ Wish to see again with corrections | Date Feb 28/83 | Signature

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geochemistry

Comments

LD

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

378

1982 11 30

2.5226

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geophysical (Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 622291 et al in the Township of Fripp.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land ManagementBranch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

DW:sc

cc: Northgate Exploration
Toronto, Ontario.

cc: Ron Zinn
Don Mills, Ontario

File no. 2.5226

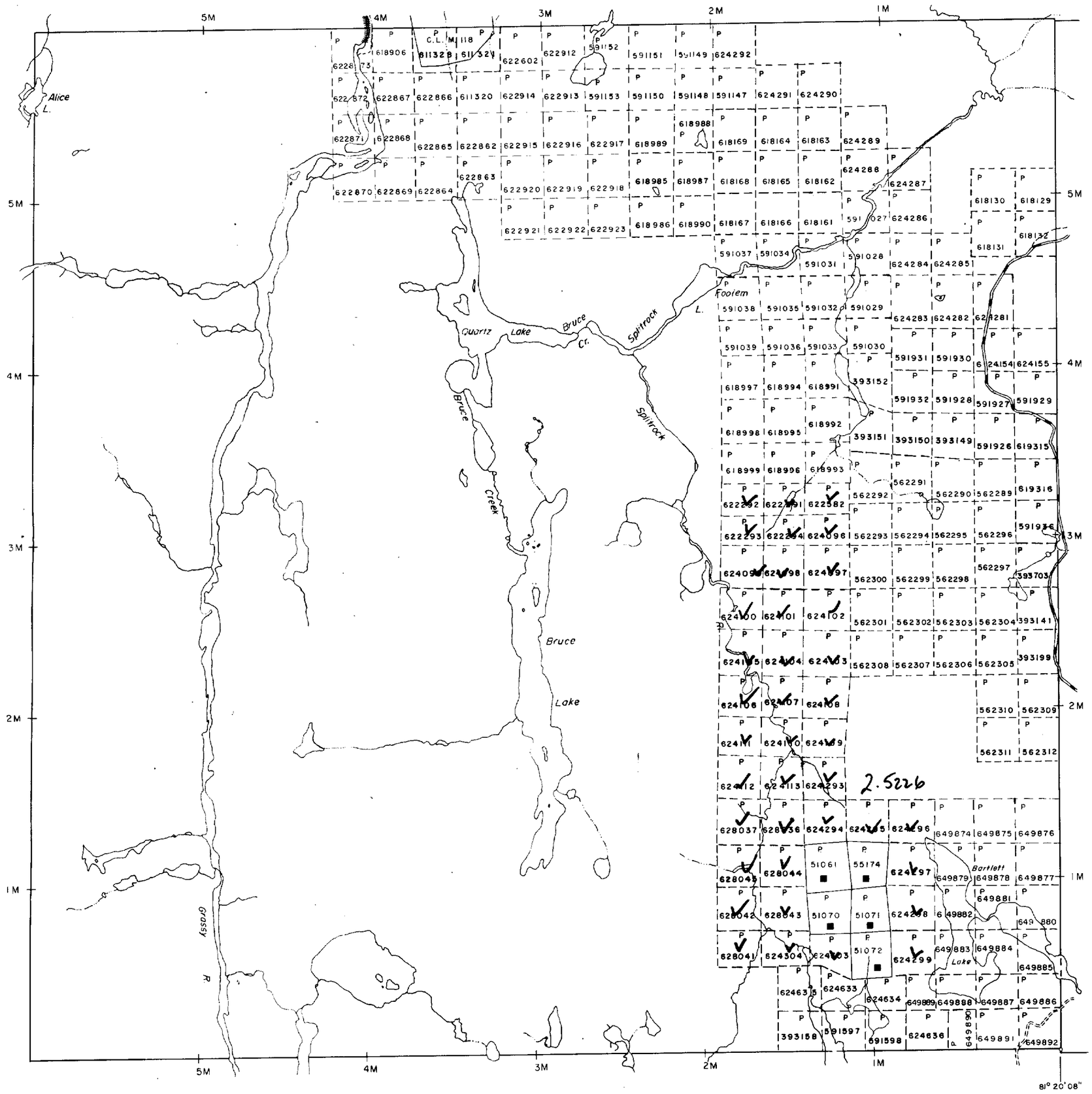
PG22291	✓		624106	✓			
92	✓		107	✓	1/4	624303	
93	✓		108	✓	1/4	304	
94	✓		109	✓	✓	628036	✓
622582	✓		110	✓	✓	037	
624096	✓		111	✓	1/4	041	
97	✓		112	✓	✓	042	
98	✓		113	✓	✓	043	
99	1/4		624293	✓	✓	044	
624100	✓		94	✓	1/4	045	
101	✓		95	✓		3 claims	
102	✓		96	✓			
103	✓		97	✓			
104	✓		98	✓			
105	1/4		99	✓			

PRICE TWP. M.307

McKEOWN TWP. M.299

TWP. M.298 McARTHUR

MUSGROVE TWP. M.304



THE TOWNSHIP OF

FRIPP

DISTRICT OF TIMISKAMING

PORCUPINE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

DISPOSITION OF CROWN LANDS

PATENT, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LEASE, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LICENCE OF OCCUPATION

ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970.)

Order Nº | File | Date | Disposition

DATE OF ISSUE
JUL - 4 1983
Ministry of Natural Resources
TORONTO

PLAN NO. M. 281

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A03NW0029 2.5226 FRIPP

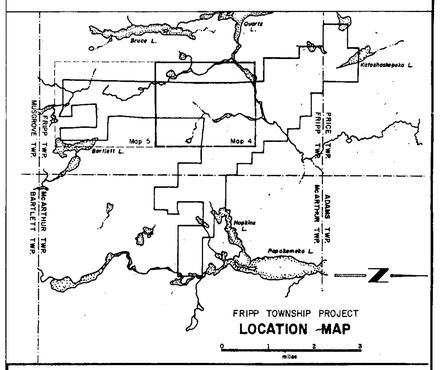
200

NOTE:
— Add 59000 gammas to all readings

Scale 1:4800

FEET 500 0 1000 FEET

METRES 150 0 300 METRES



FRIPP TOWNSHIP PROJECT
LOCATION MAP

0 1 2 3 miles

Northgate Exploration Limited

N.T.S No.

FRIPP TOWNSHIP PROJECT - Nº 785

FRIPP TOWNSHIP, DISTRICT OF TIMISKAMING, ONTARIO

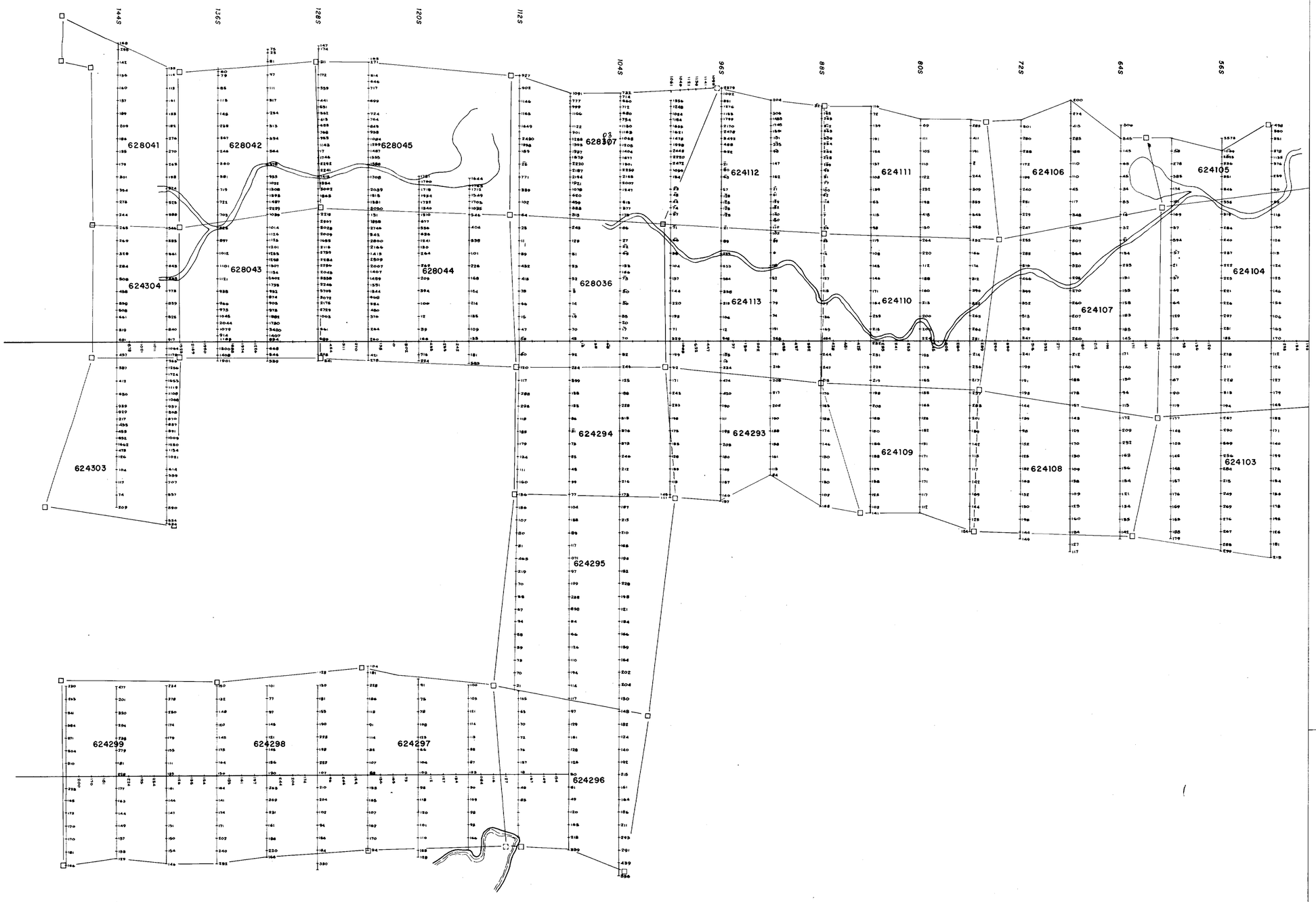
MAGNETOMETER SURVEY

— DATA —

Work by [illegible] Date Oct '82	Proj. no: 785	Scale: 1" = 400' 1:4800
Drawn by: Rodel Ortiz Date: Oct. '82	Rev. by:	Date:

2.5226

Fig. 3

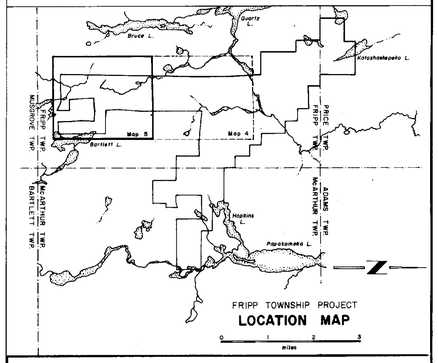


NOTE:
- Add 59 000 gammas to all readings

Scale 1: 4800

FEET 800 0 1000 FEET

METRES 150 0 300 METRES



FRIPP TOWNSHIP PROJECT
LOCATION MAP

0 1 2 3 miles

Northgate Exploration Limited

N.T.S No.

FRIPP TOWNSHIP PROJECT - Nº 785

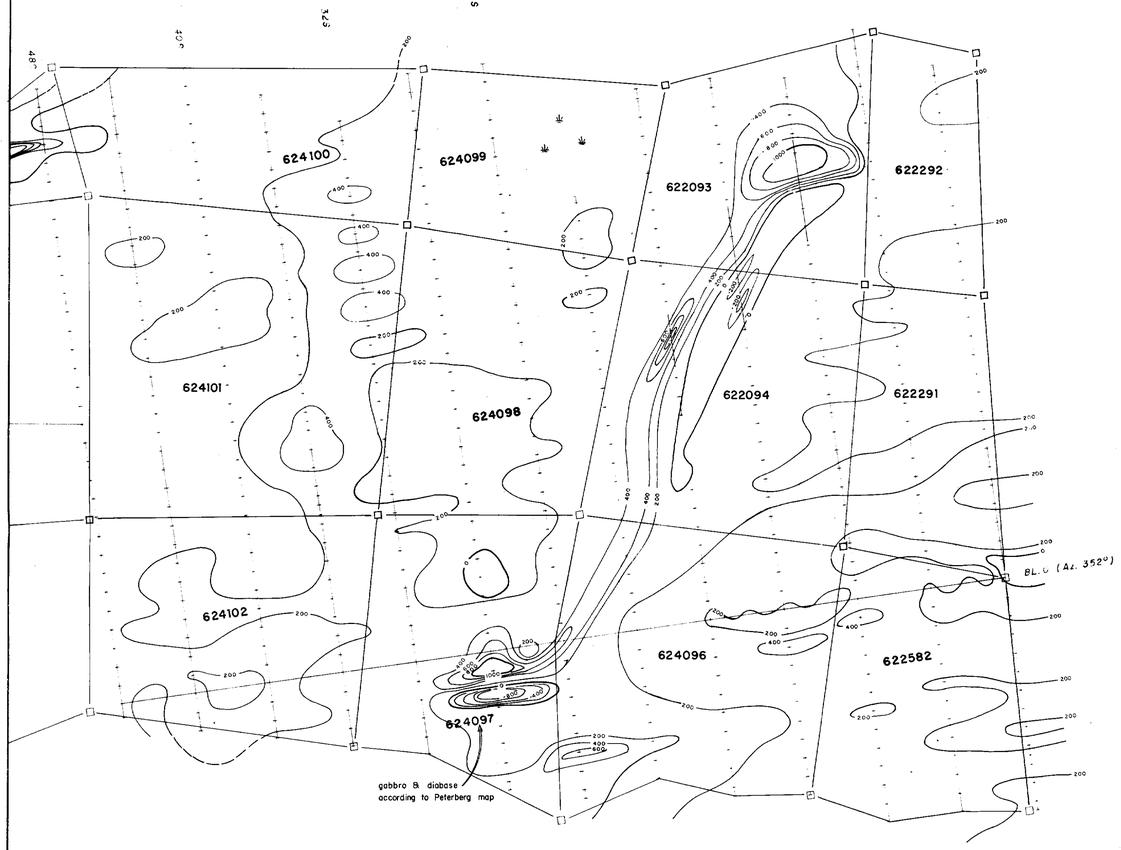
FRIPP TOWNSHIP, DISTRICT OF TIMISKAMING, ONTARIO

MAGNETOMETER SURVEY

— DATA —

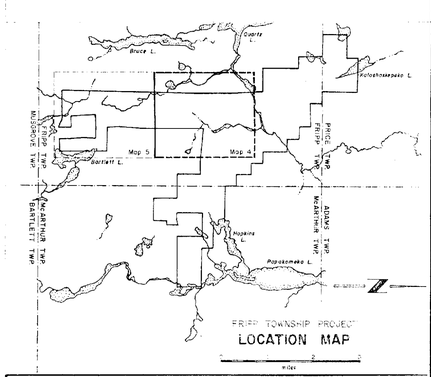
Work by: R. Zimmer Date: Oct 82	Proj. no: 785	Scale:	1"=400' 1:4800
Drawn by: Rodel Ortiz Date: Oct. '82	Rev. by:	Date:	

Fig. 4



NOTE:
- Add 59 000 gammas to all readings
- Contour intervals (plus 59 000 gammas)
- every 200 gammas
- every 1000 gammas

Scale 1:4800



FRIPP TOWNSHIP PROJECT
LOCATION MAP

Northgate Exploration Limited

N.T.S No

FRIPP TOWNSHIP PROJECT - Nº 785

FRIPP TOWNSHIP, DISTRICT OF TIMISKAMING, ONTARIO

MAGNETOMETER SURVEY

— CONTOURS —

Work by RZim Date Oct 82	Proj no 785	Scale	1" = 400' 1:4800
Drawn by Rodel Ortiz Date Oct. '82	Rev by	Date	

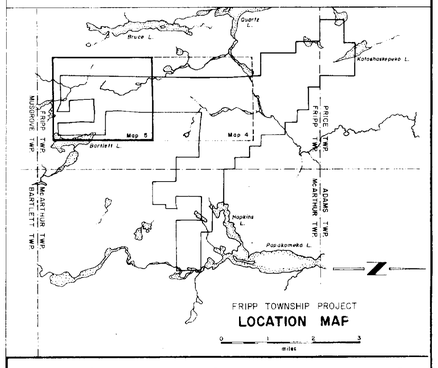
Fig. 5

NOTE:
- Add 59 000gammas to all readings
- Contour intervals (plus 59 000gammas)
  - every 200gammas
  - every 1000gammas

Scale 1: 4800

FEET 500 0 1000 FEET

METRES 150 0 300 METRES



FRIPP TOWNSHIP PROJECT
LOCATION MAP
0 1 2 3 miles

Northgate Exploration Limited

N.T.S No.

FRIPP TOWNSHIP PROJECT - No 785

FRIPP TOWNSHIP, DISTRICT OF TIMISKAMING, ONTARIO

MAGNETOMETER SURVEY
— CONTOURS —

Work by R. Zinn Date Oct 82	Proj no 785	Scale	1"=400' 1:4800
Drawn by Raoul Ortiz Date Oct '82	Rev by	Date	

2.5226

Fig. 6