

Mohawk Garnet Inc

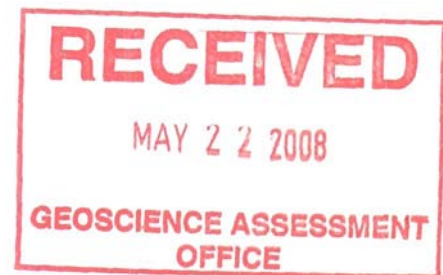
Interim Report Geological Mapping Project 2007-2008

Mohawk Garnet property  
Street Township  
Sudbury District, Ontario  
Canada

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Geologist

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## Executive Summary

Over a 4 month period, commencing in August to December 2007, a field geological mapping program was performed on the Mohawk Garnet property in Street Township, Sudbury District. The purpose of the program was to gain an understanding of the garnet deposits and horizons, their location, and extent and whether additional garnet horizons could be found. In addition, the spatial relationship of the horizons, their rock hosts, estimated resource (quality and quantity) was also investigated and studies toward the desirability for mining were initiated.

Initial geological mapping was confined to the garnet deposits previously mined, or undergoing development, situated along the mine road. Further geological mapping, beyond the known zones, both across the strike to the east and along specific garnet horizons, lead to a discovery that there were multiple garnet zones, not only one as initially thought. The rock units are interlayered along a prominent north to northeast direction (commonly 020 to 040 degree strike) rock package and dip steeply to the east and south east (commonly 60 to 80 south east degrees dip), forming a broad sinuous pattern along strike, and broad fold in the north end of the property, for several kilometres. Evidence for faulting was not observed in the field, however airphoto interpretation and maps published by government, may indicate minor displacements of garnet beds along strike. Outcrop exposure, generally good at >25%, airphoto interpretation, geological mapping of geological structures (primarily rock foliations (strike and dip) and bedding) confirmed that there are several distinct garnet horizons, many of which contain in excess of 20% garnet (commonly 30% to 50%). At least 5 garnet zones are now known, each more than 2km in length, open at depth and having widths of greater than 10 meters. These have been termed, from west (in the vicinity of the mine road) to east (to a series of N-S elongate swamps near the eastern boundary of the claim block), zones M (for Mine road), A, B, C and Other.

The host rocks are typically a dark grey black banded hornblende-biotite gneiss (mafic gneiss or mgn) with small lenses of quartz-feldspar (white boudins and lenses, generally <5cm width and up to several meters length). Barren beds found interbedded between the garnet horizons are commonly feldspar-quartz Gneisses (felsic gneiss or fgn), often iron stained (contain minor magnetite and trace amounts of small garnet and black hornblende rich bands). Barren mgn lacking boudins and structure (massive (gabbroic) with no foliation and barren of garnet) are also found between the garnet rich horizons. Where the garnet horizons have been intruded or cut by narrow (< 2 meters) pegmatite (peg) dykes, the host rock is mica rich (muscovite (yellowish), chlorite (green) and biotite (dark brown-black)) and can contain significant garnet concentrations with often large 2cm to 5cm garnets. However, the pegmatite dykes are generally barren of garnet. In the south end of the property, along the mine road, the gneisses are interbedded mgn and fgn (mgnfgn) with higher feldspar and quartz, whereas north and to the east the hosts are typically hornblende-biotite rich (mgn) Small scale folding (crenulations, chevron and others) was observed in many outcrops with a typical fold steep plunge to the southeast.

Geological mapping, supported by air-photograph interpretation, of garnet rich horizons (Zones M, A (and Garnet Mountain), B and others, can lead to calculate a preliminary resource estimate

of some 2.7 million tons of greater than 20% garnet within the mapped area. Zone A was mapped for its exposed length and was shown to be continuous for more than 2 kilometres and may be an extension of Garnet Mountain. All of the zones are open along strike and at depth. The resource estimate is based on a mining depth of 25 feet (less than 10m), mining width of 50 feet (less than 20m) and an insitu density value of 11 cu feet per ton. Ongoing geological mapping along strike of the other zones, M, B, C, and any others, in 2008 may confirm or increase this estimate. Geological mapping can also occur as infrastructure planning proceeds.

The petrology (associated minerals), garnet composition (pyrope, almandine and others), desirability (friability, purity, etc) and garnet recoveries remain unknown for each of the garnet zones discovered. While the current operation has recovered garnet from portions of known zones, the business case model needs to be determined based on the beneficiation studies now being performed by Geolab, Vancouver Petrographics and possibly Lakefield. Nineteen garnet host rock samples have been collected have been submitted for petrographic description, description of the garnets and other features which may aid in carrying out additional beneficiation and economic studies.

While the 2007 geological program confirmed known garnet horizons, discovered new horizons and generated a series of field maps, additional field work is required to confirm the continuity along strike of garnet horizons, and if warranted at depth, determine the north and south extent of the discovered zones (within the current claim holdings), and to determine practical, least environmental impact, road access to discovered zones. The lab work will confirm how viable the various deposits are to near 100% garnet recovery and the desired milling circuit. More work will move the estimated (based on one dimension and visual) resource above to a reserve (based on detail mapping, trenching and shallow drilling, bulk sample and subsequent beneficiation studies) and help deduce a long-term business plan.

## **Interim Report Geological Mapping Project 2007-2008**

### **Background**

Preliminary work on the Mohawk Garnet property, Street Township, Sudbury District, Ontario, Canada, began in August 2007. The site was visited, at the commencement of field work, to gain a sense of the general features and to discuss the project with Mohawk field staff. Initial meetings focussed on an approach to begin both regional and detailed geological work for much of the property and the 'Garnet Mountain' area, including the development of a practical rock legend, determine the extent for priority detailed investigations, plan a localized mapping layout and location of tie in points (i.e., claim posts), begin securing air photos for the base map construction, secure mapping materials for regional assessment and to initiate the compilation work. A Garmin 76cs and Magellan eXplorist XL GPS units were also obtained to assist in recording outcrop locations. Both metric and imperial measurement units are used in this report.

Subsequent work, from September to December 2007, focussed on determining the stratigraphy or layering, whether there were multiple layers of garnet rich beds and the extent of these horizons.

### **Early Work in 2007**

Based on the initial meetings, a very preliminary sketch of some of the geological features was produced from the visit in August, 2007, based outcrops along the mine road. The key challenge was to confirm the rock package, specifically the stratigraphy or layering of the rock types. Based on the earlier visit, the Hanging Wall (overlying on top of the garnet beds) is hornblende rich (dark green to grey black Hornblende Gneiss). This bed also contains 'boudins' (small pinch and swell lenses of quartz/feldspar). The Footwall (rock beneath/under the garnet beds) appears to be Feldspar Quartz Gneiss (with minor hornblende), whereas the garnet bed itself is Biotite/Hornblende/Muscovite gneiss/Schist. Garnets are found in narrow to wide beds (5" to 10' (2 to 3 meters) over 50+' (15 m+) outcrop) and found interbedded with varying concentrations and sizes of garnets (1/4" to 2" (1cm to 5cm) garnets). The extent of these beds along strike was unknown primarily because of topographic features (overburden, low areas and swamp).

The rocks dip generally E to SE and other than the major fold in the NE seem to dip 70-80 degrees SE with minor faulting of beds, as seen by minor drags in beds and air photos. In the NE there is a broad syncline (concave fold) which appears to plunge to the Southeast 60-70 degrees. Here the beds are highly folded and contain minor (< 2' wide) pink pegmatite intrusives (coarse pink feldspar crystals in dykes) cross cutting the garnet beds. The garnet beds are interbedded with feldspathic gneiss and quartz layers

(< 2") which show a high degree of small scale folding. In addition some of the beds are 'brecciated' or broken up with quartz-feldspar veining filling cracks in the rock. At the fold crest the garnet unit appears +100' (more than 30 m) in width (at Garnet/Mohawk Mountain).

Not having a spatial appreciation, it is difficult at the time to say whether there were one or multiple garnet rich beds with a Hornblende Gneiss Hanging Wall (HW), and whether the beds are continuous along strike or at depth. Surprisingly, given the general reported complex geology for the area, the strike and dip are relatively constant in those outcrops visited (strike NE and approx dip 70 degrees to the SE) except where it is folded at the northeast (Syncline on sketch).

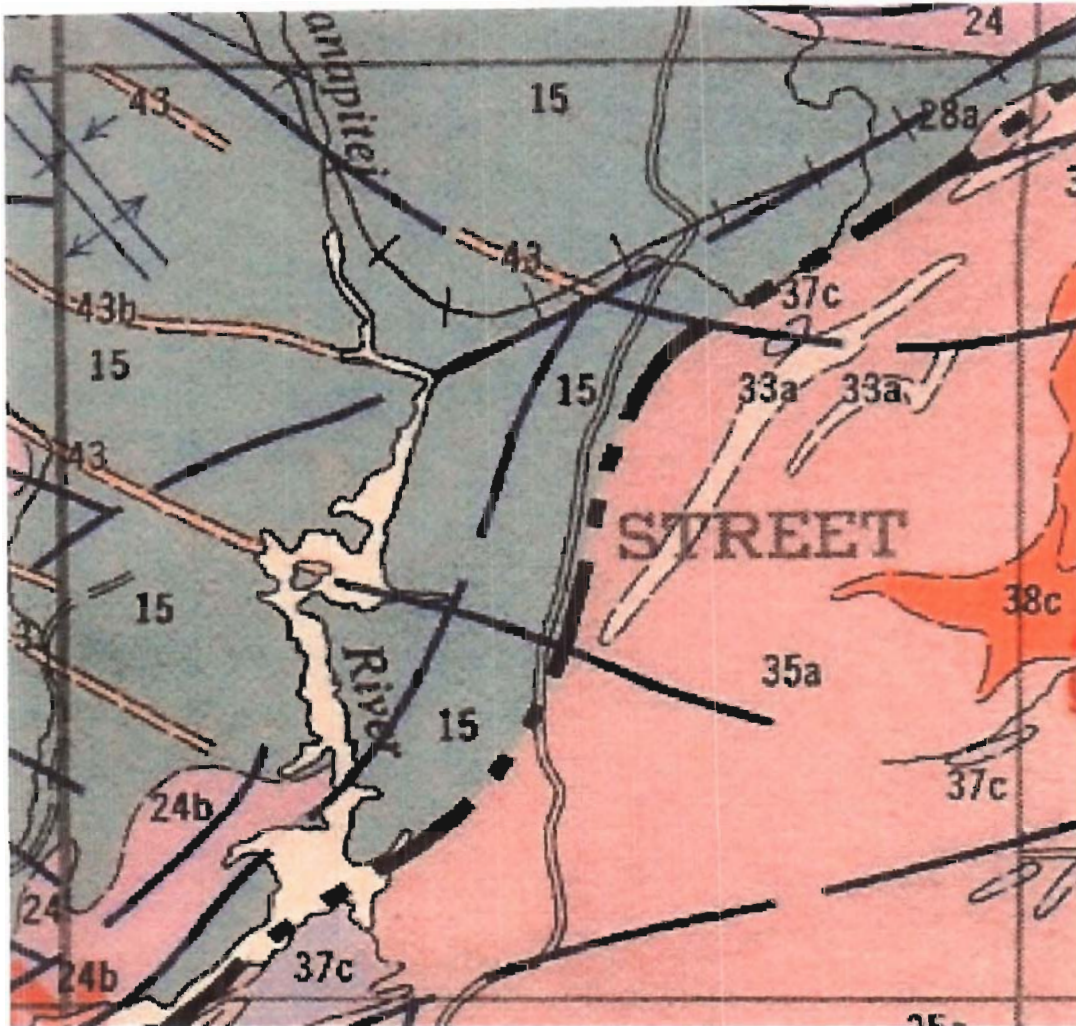
The subsequent review of air photos, review of files in MNDM and commencement of a more detailed mapping program will provide more information to confirm or refute the above and delineate areas for detailed work. Based on the preliminary work there does not appear to be too many structural complications (major folds, drastic changes in strike, major faults, or significant intrusive, etc), however subsequent work will provide more information on the location, extent and size of the garnet horizons (and whether there are multiple horizons).

#### **Regional Geology Reports in Literature**

Earlier work was performed in the vicinity of the property by government geologists and a regional geological map was produced by the Ontario government in 1975 (Map 2361).

Street Township contains the geological boundary between the older Superior Precambrian province (to the NW) and the younger geological Grenville province to the Southeast. The boundary (Grenville Front) roughly follows the Kukagami Lake Road and the Railway east of the Kukagami Lake Road. The Mohawk Garnet property is situated in the Grenville Province just east of Kukagami Lake Road.

The Mohawk Garnet property is comprised of northeast trending layers or rock units denoted as Units 33a, 35a and minor 37c. The garnet bearing horizon is contained in Unit 33a. 33a is described as "Muscovite and quartzose gneiss derived from orthoquartzite, subarkose and aluminous claystone" or ancient sandstones and shales. The surrounding rock layers, 35a are described as "biotite gneiss containing numerous thin beds of feldspathic gneiss, muscovitic and quartzose gneiss and sills and dykes of gneissic gabbro", most likely an ancient sedimentary bed.



The Unit 33a high aluminous and claystone origin may explain the high proportion of garnets (aluminum silicates) observed in this unit. The rock unit approximately is 5.3 km in length and approximately 30m wide and displays a minor bend to the northeast. Of interest is a parallel unit similar to this bed lying approximately 100m to the southeast of the northern part of the garnet bearing horizon. It may contain garnet and be the SE fold limb of the main garnet horizon or a separate horizon. It is 2.2km in length and approximately 13m wide. A mapping traverse of 100 to 200m in a south-easterly direction (at 110 degrees direction) from "Garnet Mountain" should intercept this new horizon. If more garnet horizons are present, further work is warranted.

### **Geological mapping East of Known Garnet Horizons (mine road occurrences)**

As a follow-up to the government regional geological map (Map 2361) and ongoing regional geological mapping program, a traverse of mapping continued east and southeast from known garnet deposits GT07 and GT06 (located on the mine road) in September 2007. The intent was to confirm what government geologists mapped in 1975 as a 'Muscovite Gneiss/Claystone (rock unit 33a)'. The traverse, termed 'H' for hanging-wall, commenced along Permit Line 16998 (at GT07) eastward to Claim Post #1 1043382 and then southeast until no outcrop was observed (to a flat swamp/muskeg) for 1800 feet and then north along the muskeg margin for approximately 1200 feet and then west for about 1000 feet back to the road ending at GT06. The field data was recorded by GPS and field notes were taken at each outcrop (see Appendices A to E).

Two significant garnet bearing horizons were discovered during geological mapping. These have been termed 'A' and 'B', each containing up to 50%, 1 to 2 cm garnets, in narrow to wide beds. The beds trend NE and locally change to more east and are nearly vertical in dip. The host rock is biotite-hornblende gneiss (mgn), similar to elsewhere on the property where garnets have been mined. Deposit 'A' is about 200 feet wide and more than 600 feet in length, whereas Deposit 'B', located to the east of 'A' is about 150 feet wide and more than 300 feet in length. Between the deposits and to the east of Deposit B, garnet content diminishes to less than 5 % and also gives way to a very pink banded gneiss (fgnpeg) further east at the muskeg edge.

More work is required to confirm the extent and size of these deposits and whether Deposits A and B are related to what has been mined at GT07 (open cut) on the road. Because of the reported intense large scale folding in the area, these horizons may be related and possibly join or pinch out along strike of the horizon/bed.

By October 2007, geological mapping on the property has identified at least three distinct rock hosts for rich garnet deposits. The garnet layers/beds or rock types have a general strike of NNE (020 to 040 degrees direction) and dip steeply to the east (85 to 60E)m over a minimum length of 2.5 km. The rock hosts can be termed are felsic gneiss(fgn on the accompanying maps) (a pink to whitish banded feldspar-quartz rich, minor hornblende banded gneiss) typical of the zone being mined in the south, south of the mill, mafic-felsic gneiss(mgnfgn) (a well banded gneiss with rich bands of hornblende (nearly black), alternating with bands/boudins (lenses) of feldspar-quartz) typical of 'Garnet Mountain', and schist (sch)(variable biotite-muscovite rich with minor bands of hornblende and feldspar-quartz boudins/seams/dykes) typical of those deposits near the mill and along the road just north of the mill. In most cases, the garnets are concentrated in wide bands/beds up to several 10's of meters. The entire garnet 'package' appears to be confined by barren felsic gneiss (fgn) containing iron

staining (magnetite) to the east and possibly barren mafic gneiss (MGN) to the west. The accompanying geological maps describe the location of these rock types, garnet concentrations and horizons and geological structures.

Several distinct garnet horizons have been investigated; however mapping indicates that there may be additional horizons warranting detailed work. Most of the garnet horizons follow prominent outcrop ridges and can be traced both in the field and on air-photographs. One zone, currently mined near the mill, follows the mine road for much of its extent, while another lies parallel to the east several 100s of meters. It has arbitrarily been termed Garnet Zone A (GTA) and has been traced along strike for at least 2.5km and may extend and join with 'Garnet Mountain' to the north. The garnet zone is typically exposed along its entire strike length and over a width of 10 to 40 meters, composed of banded MGNFGN (hornblende-feldspar banded with parallel boudins of feldspar-quartz), typically containing a minimum of 10% to up to 50%, less than 1cm size garnet crystals, in bands of several meters. Interestingly, the host is fairly consistent, however where there are more intrusive rocks (commonly coarse grained pinkish Pegmatite (PEG)) cutting the gneiss bands, schists (mica and chlorite (green flaky) rich) can be found containing up to 40%+ 4cm size garnets.

Regarding continuity of the garnet zones, investigations to date indicate that the zones are quite consistent with little or no significant breaks along strike. Some sections of the garnet horizons show extensive localized folding (highly folded bands), minor pegmatite dykes (up to 2m width) where breaks may have occurred, and cross cut breaks (boulder fields and swamp low areas) in outcrop (indicating the location of possible minor faults), the horizons do not display significant offsets. Air-photographs and recent regional geology maps of the area (see R.M. Easton, 1996 MNDM) suggest that there may be minor approximate NW-SE and approximate E-W trending faults, however field mapping to date, has not found strong evidence of major faulting. It may be interpreted that some garnet horizons may have been displaced by up to 50 meters by SE and E trending faults (strong lineaments (light blue lines) south of Garnet Mountain on final geological map 001B).





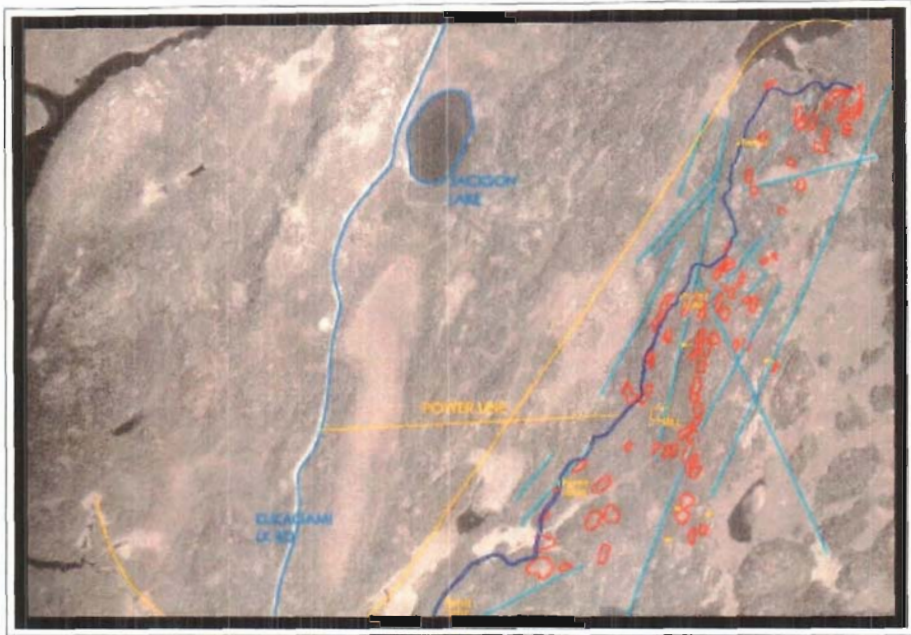
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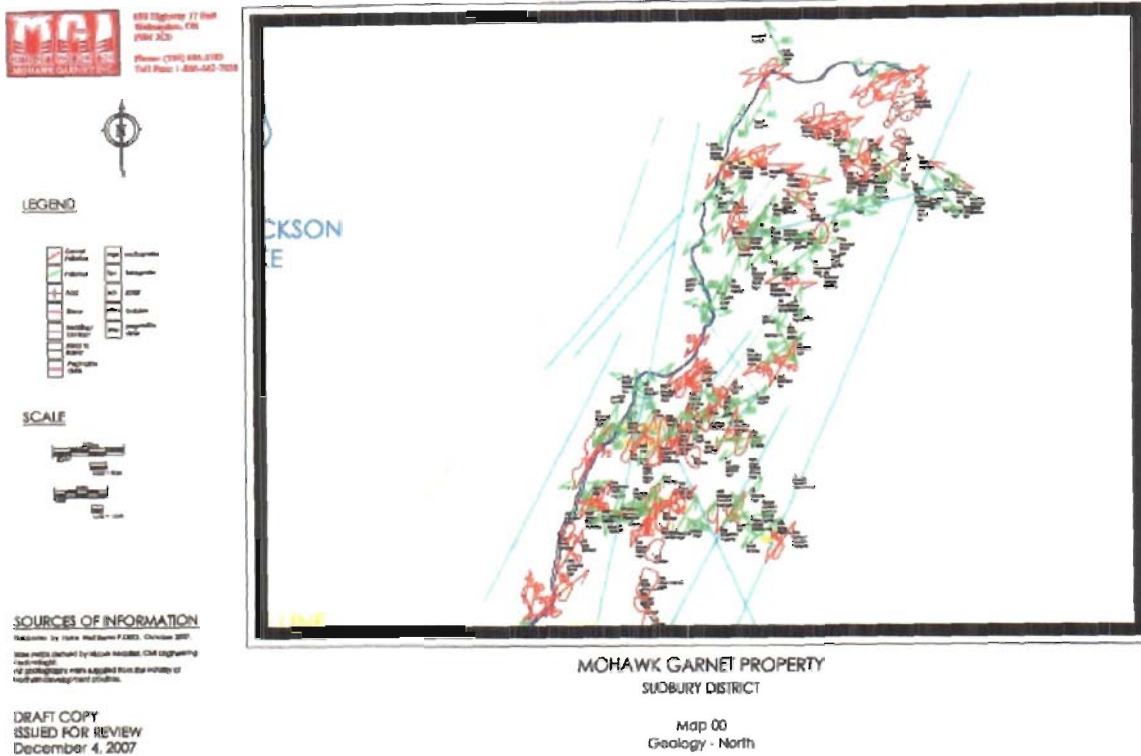
**SOURCES OF INFORMATION**  
 Published by: Mining Information 7 (2007, October 2007)  
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 All photographs were supplied from the archives of  
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**MOHAWK GARNET PROPERTY**  
 SUDBURY DISTRICT  
 Map 0018  
 Site Map - TrendLine

Further mapping both across and along strike of identified garnet horizons will confirm the extent and size of prospective 'economic' garnet horizons. Metallurgical work should be conducted on the three garnet hosts identified above, at a minimum, to determine petrology, garnet concentration and recovery. Pending these results, infrastructure (roads and satellite crushing, etc) can be planned to optimize access and development of these deposits.



### Mohawk Garnet Geological Mapping November-December 2007

Geological mapping continued in November to determine the location, quantity and quality of garnet. More than 260 rock outcrops were recorded and mapped using a GARMIN gps unit (76CS) over an approximate area mapped 3kmX0.5km (10,000'X1,900') (Appendix A). Five (5) Garnet Horizons were discovered (containing >20% Garnet concentrations). These are from west to east, Zone M (for mine), Zone A (denoted earlier as GTA), Zones B, C and other. At the time of writing, all are open along strike and at depth, however based on the exposure and continuity of the garnet a preliminary resource, for all zones combined, can be estimated in-situ at 2.7 million tons (50'width, 25'depth) @>20% garnet. Nineteen (19) samples were submitted to Geolab (and Vancouver Petrographics) for follow-up petrographic description to determine the host rock variations, garnet compositions and general characteristics of the garnet associations.



## Garnet Resource Estimate (>20% GT)

HORIZON	Estimated Insitu Tonnage *
A	735,000
B	670,000
M	400,000
Garnet Mountain	268,000
Other	670,000
<b>TOTAL</b>	<b>2,743,000 tons</b>

*\* Based on a max 50' width, 11 cu ft/ton, and max 25' mining depth, # of outcrops 258*

The resource calculation is based on the good exposure of outcrop and the garnet horizons, generally more than 25% rock exposure, the positive topographical features associated with distinct garnet horizons, lineation features seen on air photos and common structural features such as common rock foliations and dips (common attitudes of beds, see map Geology 00 and Appendix A)



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**LEGEND**



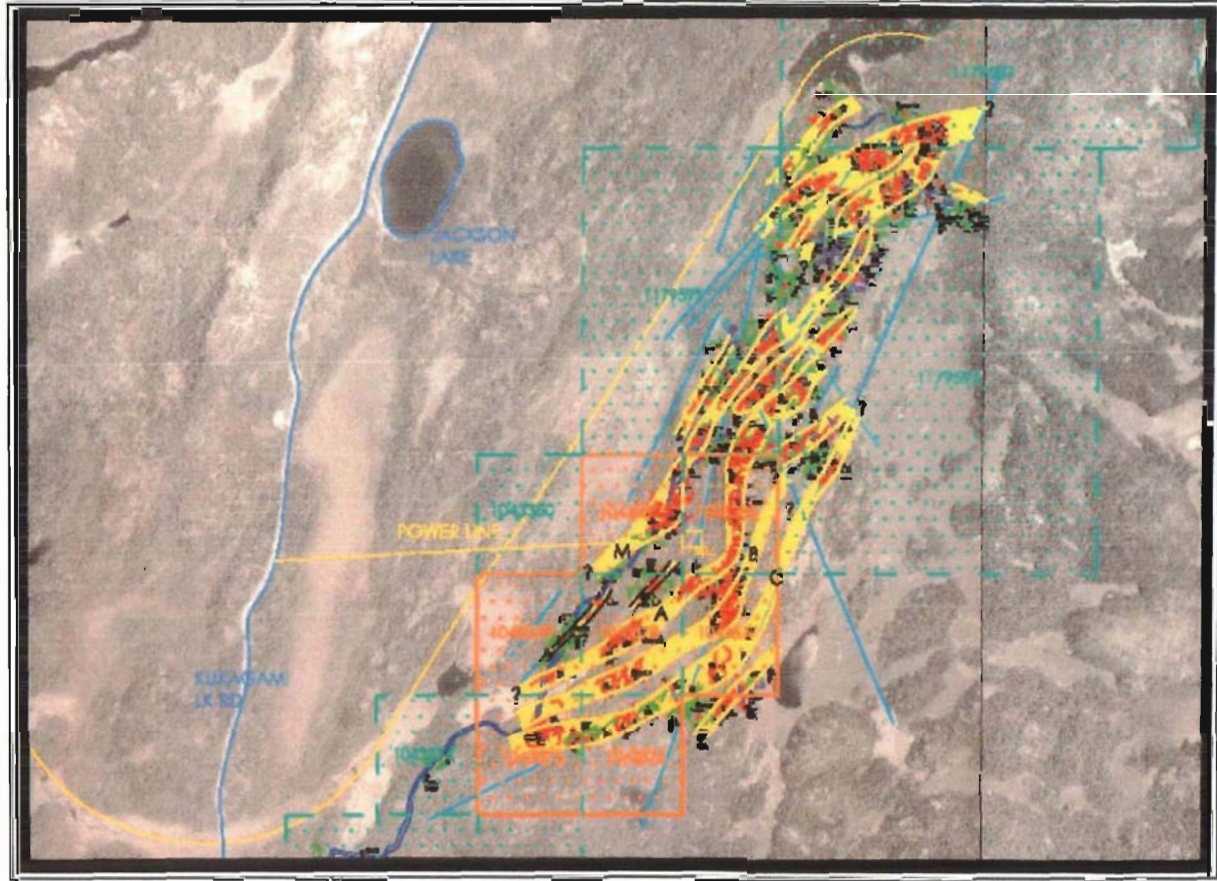
**SCALE**



**SOURCES OF INFORMATION**

Revised by Hans Jochims P.Eng. October 2007.  
 Base Maps derived by Mirco Baccini, CM Engineering  
 Technology.  
 All photographs were acquired from the library of  
 Southern Development of Mines.

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**MOHAWK GARNET PROPERTY  
 SUDBURY DISTRICT**

Map 001  
 Geological Map

## Mohawk Garnet Beneficiation Model

To scope out whether the garnet horizons may be considered economic, it is useful to derive a garnet recovery model for the known garnet deposits (Zones M, A, B and C). This would aid in scoping out garnet recovery objectives and help to determine the scope of what Mohawk Garnet would like the testing labs (Geolab and Lakefield) to accomplish.

The following is a possible (hypothetical) scenario which will aid in determining predictable ideal recoveries of garnet from outcrop, coarse crush (mill or pit feed) and end product to achieve 100% recovery of garnet.

For modeling, the sample assumes that the in situ (in place, as mapped, in rock outcrop) grades 50% garnet, contains about 1cm+ size garnets, by visual or field estimate. The outcrop will be blasted, mucked and trucked to the primary crusher and eventually to the existing mill circuit. Because garnet has a significantly higher density, nearly double of the waste or gangue, a variation in garnet content will have a significant result in estimating what one ton (short) of low grade garnet (lets use 20% as the lower cut off) or high grade garnet (anything higher than 50% garnet in this model) will be.

Let's first take a look at the garnet in the field and its host rock. Based on the preliminary geological mapping, a 50% garnet rock sample can be termed as "Garnetiferous Biotite Amphibole (Hornblende) Gneiss (mgn) with the possible approximate composition:

Mineral	Approx/ estimated percentage	density	Formula
Garnet (Almandine and/or Pyrope?)	50%  (comprises 60% of weight and 50% volume of sample)	4.25  (about 7-10 ft <sup>3</sup> /ton consolidated/in situ)	Fe <sub>3</sub> (Mg <sub>3</sub> )Al <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub>
Biotite (and Muscovite)	20%  (comprises 17% weight and 20% volume of sample)	3.10	H <sub>2</sub> K (Mg, Fe) <sub>3</sub> Al (SiO <sub>4</sub> ) <sub>3</sub>  H <sub>2</sub> KAl <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub>

Feldspars (Albite and Potassium types)	10%	2.7	Na (K) AlSi <sub>3</sub> O <sub>8</sub> , etc
Amphibole (hornblende?)	10%	3.0	CaMg <sub>2</sub> (Al,Fe) SiO <sub>2</sub> O <sub>12</sub> , etc
Quartz	10%	2.6	SiO <sub>4</sub>
Misc trace ilmentite, magnetite, zircon, etc.	trace	insignificant	(Fe,Mg) O.TiO <sub>2</sub> (wk magnetic)  FeO.Fe <sub>2</sub> O <sub>2</sub> (strongly magnetic)

Note that any chemical analysis would prove futile to study garnet content because the gangue also contains similar elements or chemistry.

The model sample above (50% garnet) will have the following approximate rock volume/weight (short ton) characteristics from in situ (in outcrop) to primary and secondary/tertiary crushing. Note, while the tonnage may be estimated (visually) in situ in outcrop, the volume of rock yielded would nearly double upon being broken by blasts and further crushing, but the grade should remain the same throughout the crushing (pre-gravity and pre-magnet phase of milling):

<b>In Outcrop (in situ)</b>	<b>Primary Crush (mill feed) or muck</b>	<b>Secondary Crush (with continuous feed from same deposit to maintain same tonnage)</b>	<b>Tertiary Crush</b>
11 ft <sup>3</sup> /ton (very dense)	25 ft <sup>3</sup> /ton (broken and less dense muck)	20 ft <sup>3</sup> /ton	About 20 ft <sup>3</sup> /ton or less
About 1,200 lbs garnet (based on 60% of total consolidated rock)	Volume more than doubles that of the unblasted rock but grade remains the	Volume about double the in situ and grade remains the same (60% of	Pre process (gravity) feed should contain about 1200 lbs of garnet in

weight (not visual volume!) before blasting)	same (60% of the weight).	the weight).	crushed rock if all is recovered from the original 1 ton outcrop sample.
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Based on the above the mill feed will contain about approximately 1200lbs of Almandine garnet. Ideally the mill feed of this garnet content should yield 1200 lbs of processed garnet at the END of the MILL CIRCUIT, if none ends up in the waste, tailings or lost as dust. This would be 100% recovery!

Mechanical processing is currently being used at Mohawk Garnet to separate the garnet from waste. Gravity separation would probably remove most of the garnet as noted above because it is significantly heavier (nearly twice as heavy) than the gangue or waste (feldspars, biotite, muscovite, quartz, (hornblende) amphibole). The garnet powder or fine crush (concentrate) will contain both GARNET and other minor heavy minerals (such as ilmenite (weakly magnetic in unknown quantities), magnetite (strongly magnetic in unknown quantities)) of which a magnet may remove these leaving a more pure garnet concentrate. It is unknown whether the heavy minerals are contained within the garnets or in the gangue. It is also unknown as to the quantity of ilmenite/magnetite in the garnet concentrate pre-magnet and post magnet processing.

**Several questions to ask the Labs:**

1. For every lb of ore that is feed into the mill, (grades estimated visually at the pit and in outcrop pre-blast), however a bulk sample should be submitted to a lab for quantification prior to mining) is Mohawk Garnet getting 100% of the garnet recovered at the end of the Mill circuit (as in the above model)?
2. Is the gravity circuit effective in separating 90+% of the garnet, if not should there be a longer gravity cycle or a secondary gravity separation put in place? What are the head grade/ton, primary crusher grade/ton, secondary crush grade and final crush and grade after use of magnets, compared to the initial head or pit grade?
3. We currently do not know the amount of ilmenite-magnetite in the garnet concentrate (?). We also do not know the mesh or crush size for removal of heavy minerals (?).
4. Finally, is a lower grade deposit (20% garnet) of small garnets (less than 0.5cm size garnets), going to yield 90+% recovery versus a higher grade (say 50+% garnet) of 1-2cm garnets. This may have implication if we choose to blend deposits or overcut into pit walls to maximize mining.

The above scenario should provide guidance to both measure in field characteristics of desirable garnet deposits and to further relate the deposits to the actual milling process to maximize garnet recovery. Other than to define the garnet species (Almandine), no chemical analysis is required, however a range of mechanical tests and petrographic analysis is recommended to confirm the minerals associated with the garnet (as in the above table), percentage garnet and mineral association and possible beneficiation tests to determine the best way to recover the garnet to achieve as near as possible a 100% recovery.

### **Summary of Geolab (and Vancouver Petrographics) Work Requested**

Nineteen rock samples were collected from outcrop for several of the identified garnet zones, specifically zone M, A and B. These were submitted to Geolab for preparation and then to Vancouver Petrographics. Results are not yet available. Vancouver Petrographics are to provide the following:

- Prepare 19 large thin sections
- Conduct petrographic descriptions
- Provide labeled digital photographs of micro sections
- prepare a report summarizing their findings

Once Vancouver Petrographics has finished with the thin sections samples, Geolab will undertake the following:

- 1) Scan each thin section with the flat bed scanner.
- 2) Analyze the thin section on the SEM for:
  - ID minerals present.
  - Give approximate modal % of the minerals present in this area using a grid analysis with Feature software.
  - If the area chosen is also representative of the opaques present in the sample, describe only those opaques. If the opaques show a different mineralogical composition (make up) in a different area of the thin section, also describe these opaques. Specify which of these is done in the report.
  - Determine what species of garnet (s) are present in the thin section. Look for zoning and evidence of retrograde metamorphism in the garnets.
  - ID and report the minerals that are directly associated with the garnets.
- 3) Provide a report for the work done by Geolab.



The following Table is a summary of rock samples (garnet rich) submitted

<b>Garnet Zone</b>	<b>Sample Number</b>	<b>General Description</b>
<b>GT01- (South Zone on Road- new blast, Zones A, B)</b>	GT01B1	(FGN)Felsic gneiss quartz-feldspar- biotite gneiss 10-20% <1cm garnet
	GT01B2	(FGN) Felsic gneiss quartz-feldspar- biotite gneiss 10-20% <1cm garnet
	GT01B3	(FGN) Felsic gneiss quartz-feldspar- biotite gneiss 10-20% <1cm garnet
	GT01B4	(FGN) Felsic gneiss quartz-feldspar- biotite gneiss 10-20% <1cm garnet
<b>GT04 (Garnet Mountain-northern zone, Zone M,A)</b>	GT041	(MGNFGN) Mafic-Felsic gneiss 15% <1cm garnet
	GT042	(MGNFGN) Mafic-Felsic biotite gneiss 10% <1cm garnet
	GT043	(MGNFGN) Mafic-Felsic gneiss 20% <1cm garnet
	GT044	(MGNFGN) Mafic-Felsic gneiss <5% <1cm garnet
	GT045	(MGNFGN) Mafic-Felsic gneiss w biotite-muscovite 30% <1cm garnet
<b>GT07 (open cut mid way along mine road, Zone M)</b>	GT071	Massive biotite-quartz-feldspar 40% <1cm garnet
	GT072	Massive biotite-chlorite-quartz-feldspar, 30% <1cm garnet
	GT073	Massive biotite-quartz-feldspar, 20% garnet <1cm
	GT074	Muscovite-quartz-feldspar schist/gneiss, trace <1cm garnet
	GT075	Massive coarse muscovite-quartz-feldspar, 10% <1cm garnet

<b>GT03 (zone on east side of road north side of mill complex, Zone M)</b>	G31	(SCH) Biotite-chlorite schist, 40% 3cm garnet
	G32	(FGN) Biotite-quartz-feldspar gneiss, 30% 2cm garnet
	G33	(FGN) Biotite-quartz-feldspar gneiss, 20% <3cm garnet
	G34	(FGN) Biotite-chlorite-quartz-feldspar gneiss, 15% <3cm garnet
	G35	(FGN) Quartz-feldspar-biotite gneiss with <10% <1cm garnet

## Conclusions

The field season limited the amount of field work; however it was successful in providing a better understanding of the garnet deposits, their location and new discoveries. Several geological maps were generated from the large amount of geological data collected. Considering the extent, based on mapping, the that many of the garnet horizons remain open along strike, Mohawk Garnet may wish to conduct detailed follow-up mapping in the Spring of 2008 and also determine the current mining claim status to determine whether more land should be acquired.

A preliminary resource estimate of 2.7 million tons grading >20% garnet has been identified to a mineable depth of some 10m (approx 25 feet) and only in areas with reasonable rock exposure (minimal to no overburden).

Planning should occur to determine the least destructive road access to these deposits. In addition, road design should not impede or block future access to garnet horizons. Beneficiation work will confirm the economic viability of the deposits and a business plan can be developed as a mining plan is developed.



## Next Steps

- Finalize Maps
- Confirm priority areas for trench and blasting (and drilling for depths >25')
- Recalculate tonnage and grade
- Environmental studies and permitting
- Confirm garnet grade, recoveries (lab), width and depth of mining



## Next Steps

- Infrastructure planning (roads, culverts, silt fencing, access, location)
- Detail follow-up along strike of garnet horizons (confirm continuity, extent (spring 2008))
- Regional mapping to extend known zones (spring 2008)

**Mohawk Garnet Property Geology 2008**

**APPENDIX A**

**Geological Data and Waypoints**

## Mohawk Garnet Property

## GT-04 Garnet Mountain and other OC and GT

Waypoint	az	dip	plunge	% Garnet	size cm	feature	description	pegmatite rock %
F1		70		90	25	0.9 fold	qtzvpeg	10
GT301		130			30	foliation	on ridge	9
B1		75	60S		30	contact	bedding	
F2		75		80E	30	0.9 fold	foldsyncline	25 mfgn
GT501					50	2 garnet	nearF3	0 mfgnmgn
F3		120		70SE	0	syncline		mfgn
W1		30			0	ridge	fold	mfgn
W2					0	barren	withF4	20 fgn
F4		80		50S		fold	anticline	fgnPeg
B2		55	50E		30	contact	crenulated	15 fgnPeg
GT503					51	2 anticline	inF4	mgn
F4B		120		60E	0	fold	Pegdyke	100 peg
P1					0	dyke	3mwide	fgnPeg
W3					0	bed	in角度	0 mgnsch
GT302		110	50S		25	2 bed	NofPeg	30 mgnfgn
GT504		90		80E	50	2 fold	wkfoliation	9 mgn
GT504B		170		90	51	dyke	PegQtzmgn	mgnPeg
GT504C		50	70S		50	2 foliation	folded	7 fgnmgn
B3		140	80E		51	foliation	garnetbed	mgn
GT506					51	bed	nearB3	4 mgnfgn
GT303		95		50E	30	fold	nearfold506	7 fgnmgn
B5		115	80S		51	contact	bedmgnstrong	4 fgnmgn
GT507		60		90	51	fold	nearB5	10 fgnmgn
GT601		140		90	61	2 foliation	C4toN	fgnmgn
C4		145	80E		51	contact	also304	15 fgnPeg
GT304					30	bed		15 fgn
GT305		40	50E			foliation	crenulated	20 pegv
GT201		80	70S		25	foliation	boudins	10 fgnmgn
SHEAR		65		90		shear	boudins	15 mgnfgn
SHEAR		65	45S		20	foliation		fgn
OCSE		95	80S		25	0.9 foliation		mgn
OCSE		105	60S		0	contact	partF3	mgn
GT04B		80	70S		35	bed	majorridge	15 fgnmgn

GT04B	60	70S		10	bed	boudins		15	fgnmfn
OC10	90	75S		5	foliation	feldporphroblasts			mgn
GT05	90	60S			foliation				
GT05	60		70SE	60	3	syncline	xenocrysts	7	mgnsch
OC11	30	80S			foliation	kspar			fgn
OC13	40	70S			foliation	boudins		10	mgn
OC07	50	80S		10	foliation	augensboudins			mgn
OC16	100	70S		4	foliation	contorted			mgn
GT06	50	85N		20	1	foliation	feldporphroblasts	10	mgnfgn
OC04	180	50S		4	foliation				mgnfgn
OC18	120		90	0	foliation	minorqtz			fgn
OC03	60	80S		7	0.9	foliation	boudins	10	mgn
GT07	30	75S		51	foliation	cut			mgnsch
OC02	80	85S		10		wkfoliation		4	mgn
GT03	185	70E		51	3	contact			schmgn
GT03	50	80W		51	foliation				mgnsch
GT03	70	60S		10	contact	pinchSW			mgn
GT08	70		90	50	foliation				fgn
GT08	10		50	50	foliation				fgnmgn
GT08	10		50	10	foliation				mgn
OC01	100	85N		0	foliation	wkfoliation			mgn
OC19	50	50S		0	foliation	xenocrysts K-spar			fgn
OC20	40	70S		0	foliation	kspar			fgn
OC20	40	70S		0	foliation	boudins			mgn
OC21	50	70S		0	foliation	wkfoliation		4	mgn
GT02	60	70S		10	foliation	minorboudins			mgn
GT01	60	70S		20	foliation	rehabed			mgnsch
OC23	60	50S		0	foliation	kspar		20	fgn
OC24	150	70W		0	foliation	wkfoliation		4	gabbromgn
H01	50	75E		7	foliation	20/25		5	pegmgn
H02	25	60E		3	foliation	well foliated			mgn
H02	30	75E		25	foliation	well foliated			mgn
HF1	60		75NE	0	axis	fold			mgnsch
H04	40	claimline							claimline
H04	40			0		ridge	50/10	10	mgn
H05	30	70E			contact	crsegranite		100	granitemgn
HGT502	20	70E		50	2		75/15		mgnfgn

HGT60	20 70E	claimline	60	2 beds	banded	50/25		mgn
H06	50 85W		20	1	foliated			fgn
H07	90 vertical			contact		100/100		
H07	30 vertical		15	2 foliation				fgn
H07	30	80N	0	fold				mgn
HGT503			50	2 folded	boudins	1043382-1 1179586-3		mgn
GT401	40 85W		40	1 foliation		100/50		fgn
H08			10	wkfoliation		75/50		
HGT402	25 vertical		0-40	2 foliation	banded	150/100		fgn
H09	80		10	ridge	ridge	50/25		pegfgn
H10	60 80W		5	2 foliation	boudins	150/100		mgn
H11	40			dyke	ridge	100/50	50	peg
H11	40		1	1 foliation	banded			mgn
H12	40 85E	trace		contact	ironstain	100/75		mgnfgnpeg
H13	50	trace	fine	folded	fgnpink			swampedge
H14	60 85E	trace	fine	foliation		100/50		
H15			7	1		50/25		fgn
H17	20 80E		2	1 foliation				fgn
HGT202	50 85E		15	foliation		150/50		
H403	55 80E		30	1 foliation	boudins	100/50		mgn
H19	55 vertical		7			small		mgnfgn
H20	20	70N	tr-5	0.9 fold		50/25	barren	fgn
HC2	150 85S				contact			fgnmgn
H24	30 85E		8	foliation		200/100	10	mgn
HN01	170 80E	85S	0	wkfoliation		50/10	5	mgn
HN02	30		3	foliation	boudins	50/50		mgn
HN03	20		3	wkfoliation	ridge			mgnfgn
HN04	40 50E		3	0.9 foliation	finemgn	100/25	ironst	mgn
HN05	140 60W		0		folded		qtzv	mgn
HN05	160	50W		fold				mgn
HN06	105		9	1 fold	folded	60/25	10	mgn
HN07	60		0	wkfoliation	outcrop	onswamp		gabbromgr
HN08			0	msv		msv		gabbro
HN09	110		2	0.9 folded	fold		ironst	mgn
HN10	90 85S		12	foliation	banded		ironst	fgn
HN11	80 60S		9	fold	folded	75/50	ironst	mgnfgn
HN12	40	40S	4	2	banded	200/30		mgnfgn

HN13			7	0.9	porphrobl			mgn
HN14	55	90	4		foliation	porphrobl		mgn
HNGT01	90	vertical	25	1	foliation	banded		mgngranite
HN15			4			msv	100/50	ironst
HN16	70	70N	4		fold	folded		fngmgn
HN16	30	45E	3		foliation	banded		fnggabbro
HN17			0			msv	30/30	gabbro
HN18	150	85W	0		foliation			fngmgn
HN19	50	80E	5	1	foliation	banded		fgn
HNGT02	30	70E	15	1	foliation	banded		fgn
HNGT03	65	70E	20	2	wkfoliation	boudins	150/100	mgn
HS01	30	80E	4		foliation	boudins		mgn
HSGT401	40	80E	40	1	foliation	porphrobl	40/50	mgnfgn
HSGT501	70	50E	60	4	fold		4mbed	biotite
HSGT501	10				dyke			peg
HSGT501	105	vertical	20		foliation		glacial015	mgnfgn
HS02	20	40E			foliation		Oct-50	fngmgn
HS02	60				picketLN		swamp	Ntippond
HS03	50	80E	4		foliation	boudins		mgn
HS04	30	70E	15	1	foliation			mgnfgn
HSGT302	40		30		ridge	boudins	ridge	mgnfgn
HS06	30	70E	0			boudins		mgn
HS07	40	85E	0		foliation		75/20	mgn
HSGT502	90	40S	50	2	bedding	boudins	2m	mgnpeg
HSGT303	35	75E	30	1		porphrobl		mgnpeg
HS08	170	vertical	0		foliation			ironst
HS09	40		0			ridge	100/50	granitepeg
HS10	50	70E	0					ironst
Hsswamp			0					granite
HSGT151	40	80W	20	1	contact	boudins		mgnpeg
HSGT151	35	80E	25	1	foliation			ironst
HSGT152	30	80E	15	0.9	foliation	boudins	25/10	mgn
HS11	35	70E	0		foliation			mgnfgn
HSGT503	30	70E	50	2	foliation		picketln	ironst
HSGT503	40	80SE	5	1	fold	fold		fngmgn
HS12			10	1	wkfoliation	dyke		10 mgnpeg
SGT501	80		50	3	wkfoliation	boudins	100/25	10 mgn



SGT501	90 70S		5	1 contact	contact		fgnmgn
S01			3	0.5	boudins	small	mgn
S02	60 75E	trace			foliation	30/30	5 mgn
S201	75 80		20	1	wkfoliation		mgn
S03	40						peg
S04	50		0		wkfoliation ironst	75/30	fgn
SGT401	30 60E		40	1	bedding	ridge	mgn
S05	40 75E		3	0.5	foliation	ridge	fgn
S06	50 80E				foliation ironst	50/100	magnetite fgnmgn
S07	165		0	0	wkfoliation porphrobl	150/30	gabbro
S07	155		0	0	dyke		peg
S08	60 80E				foliation ironst	250/25	elongate fgn
S09	30 70E	trace			wkfoliation	50/25	0 mgn
S09	15				permitLn		
S10	20 50E		3		banding boudins	100/100	onLine mgnpeg
S11	30 80E		0		wkfoliation	100/30	mgn
S12	20 vertical		0			70/10	mgn
SGT151	30 60E		15	1	banding porphrobl		mgn
S13			0		wkfoliation	20/20	mgn
SGT01	165		9	2	wkfoliation boudins	200/25	mgnfgn
SGT01	70 45NE		9	2	folded pegbands		mgn
S14	45 75E		5	1	foliation ironst	100/20	lake fgn
S14							permitLn
S15			0		wkfoliation ironst	100/50	mgn
S16	55 vertical	trace				300/100	10 mgn
SGT202	30		15	1	boudins		mgn
SGT102	45		10	1	wkfoliation		mgn
SGT103	40 80E		15	1		trench	30 fgnmgn
SGT203			20	0.5		100/70	fgnmgn
SGT502	30 60E		50	3	foliation boudins		15 fgnmgn
SGT204	70		20		foliation		claimLn fgnmgn
S17	40						claimLn fgn
S18			9	1	wkfoliation		fgnmgn
S19			9	1			mgn
SGT402	40 60E		40	2	foliation	100/50	trench fgnmgn
S21			0		wkfoliation	ironst	swamp fgn
S22	45 60E		0		foliation	150/30	mgn

323	25 70E	0	wkfoliation ironst	fgnmgn
3GT301	30 60E	30	1 wkfoliation boudins ironst	mgnfgn
324	30 70E	0	wkfoliation boudins 150/75	5 mgnfgn
325	30	0	wkfoliation qtzvpeg 200/50	mgn
326	40	10	1 foliation	mgnfgn
327	60	0	foliation boudins	2 mgn

Mohawk Garnet property Geology November 2007

Waypoint	az	dip	plunge	% Garnet	size cm	feature	description	pegmatite %	rock
GTA		30		40		1 Zone A	cp1043382		mgnfgn
GTA01				15			15/10		fgnmgn
GTA02				30		1			fgnmgn
GTA03	55 60E			25		1 foliation			fgnmgn
GTA04				25		1	boudins		mgnfgn
GTA05				45		1			mgnfgn
GTA06				40		1 folded	ridge 100/100		mgn
GTA07				40		1	ridge gtincreaseW		
GTA08				30		1	100/150		mgnfgn
GTA09				35		1			mgnfgn
GTA10				25		1			mgnfgn
GTA11				20		1			mgnfgn
GTA12				20		1			mgnfgn
GTA13				15		1			mgnfgn
GTA14				51		strippedOC	trenchstrip		mgnfgn
GTA15				35		1	claimLn		mgnfgn
PerLnGt10	30 70E			10		foliation	75/25		mgnfgn
GT01B	60 50S			30		interbedded	stripped		fgnmgn
HNB01	30 45E			0		foliation	25/30		fgnpeg
HNB301	80			30		1 foliation	boudins	10	mgnfgn
HNB101	80			15		1 foliation	potassic		fgnmgn
HNB102	70 70E			15		wkfoliation	cliff	boudins	mgn
HNB02	110 40N			5		1 fault?	kspar oldroad		fgn
HNB103				15		1	msvwkfol 50/30	kspar	fgn
HNB151	50 60S			25		2 foliation	ridge 300/50	ironst	fgn
HNB03				5		0.5 wkfoliation		ironst	fgnmgn
HNB104	60 70S			9		1	boudins	20	mgnfgn
HNB04	135 80W			4		0.5 foliation	ironst		mgn
HNB05	110 70W			5		bands	wkfoliation folded		mgn
HNB152				15		1	folded 20/20		mgnfgn
HNB105				9			50/20		mgnfgn
HNB106	120			9		1 wkfoliation	20/10		mgnfgn

HNB06	130		0.1	wkfoliation	fine	finegrain	ironst	fgn
HNB07			0	massive	finemed	smOC		gabbro
HNB08			0.1	folded	medgrain	50/50		fgn
HNB09	90		0.1	1 foliation		100/10		mgn
HNB10			0	wkfoliation				mgn
HNB11	145	90		foliation	finegrain	50/10		fgn
HNB12	60		0.1	bands	crse	20/10		fgn
HNB107			15	1				20 mgnfgn
HNB108			9	0.5	folded	ironst		fgn
HNB13	90	85E	5	1 foliation	folded	50/30		
HNB153			16	1	folded			15 mgnfgn
FN01	160	90	0.1	1 foliation	folded	100/25	ironst	fgn
FN01	155	80E		foliation	banded			mgnfgn
HNA01			4	wkfoliation		20/10		mgnfgn
HNA02	60	75E	4	1 foliation	boudins	50/50		mgnfgn
HNA03	45		4	foliation	boudins			mgnsch
HNA201	25	85E	20	1 foliation		100/20		mgnfgn
HNA04	40		4	1 foliation	boudins	100/30		mgnfgn
HNA151			15	1		50/50		mgnfgn
HNA05	30	50E	4	1 foliation				mgn
HNA06	30	60E	4	1 foliation	banded			mgn
HNA301	130		35	2 foliation	boudins	75/20		fgnmgn
HNA07	110		9	1 foliation	folded		ironst	fgnmgn
HNA08	30	50E	4	1 foliation				fgn
HNA09	100	70E	0	foliation				mgn
HNA10	60	70E	0.1	wkfoliation				mgnfgn
HNA11	40		0.1		fault?			mgn
HNA102	100	80S	10	1	banded			mgnfgn
HNA12			0	wkfoliation	fngrain			mgn
HNA152			15	1 wkfoliation				mgn
HNA153	60	70E	15	1 foliation	boudins	150/100		mgnfgn
HNA202	20		25	1 dyke		sandpit	dykes	mgnfgn
HNA103	40	80E	9	1 foliation		20/10		fgn
SA01	55	50E	0	foliation	fngrain	200/50		mgn
SA201	45		20	1 foliation	boudins	75/20		mgn
SA151	45		20	1 foliation	banded			mgnfgn
SA501	55	70E	51	1.5 foliation	banded	100/30	qtz	mgnfgn

SWP  
2402

55  
65 60E

4

1 foliation

swamp  
houdins

elongate  
100/50

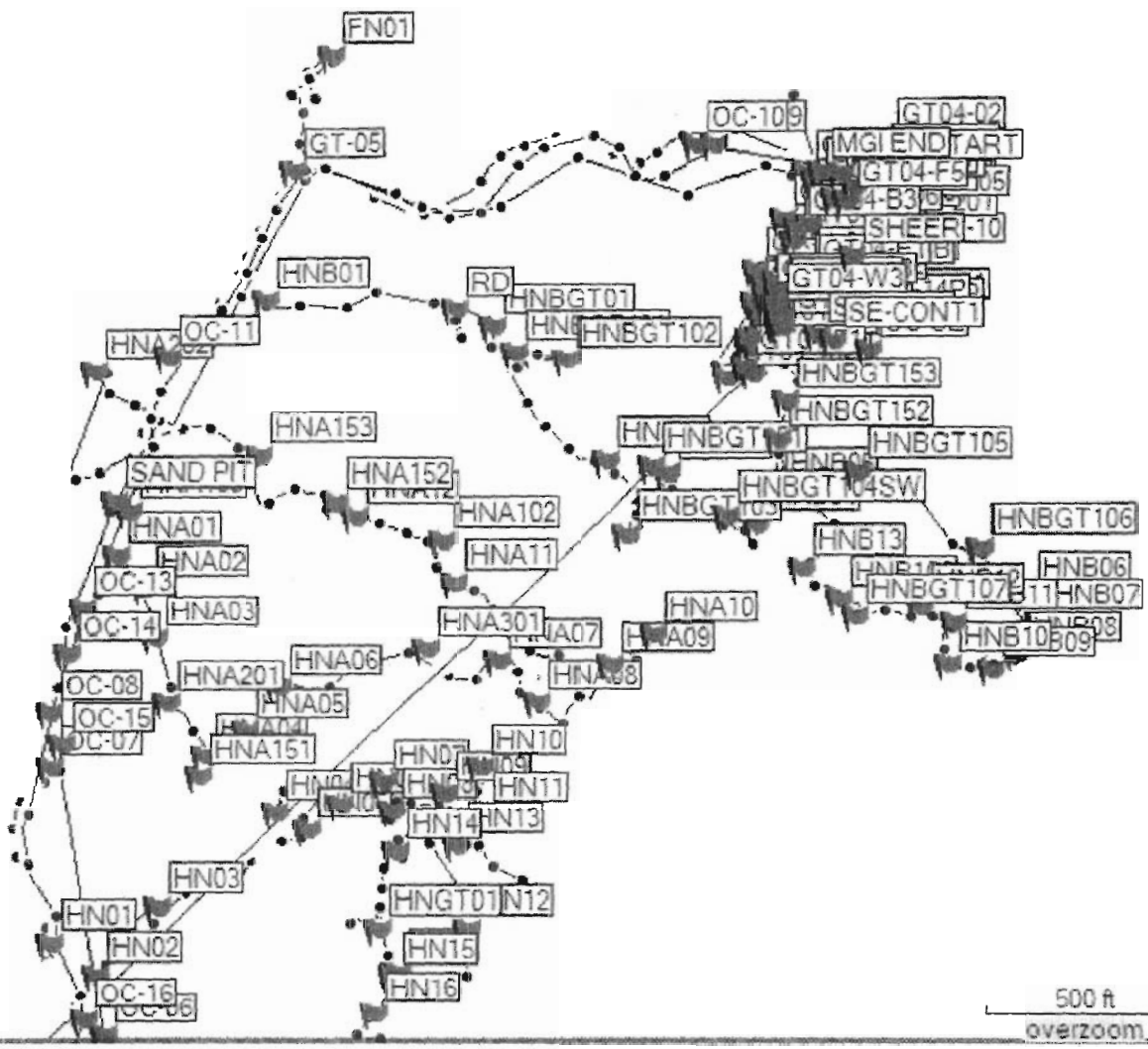
man

**Mohawk Garnet Property Geology 2008**

**APPENDIX B**

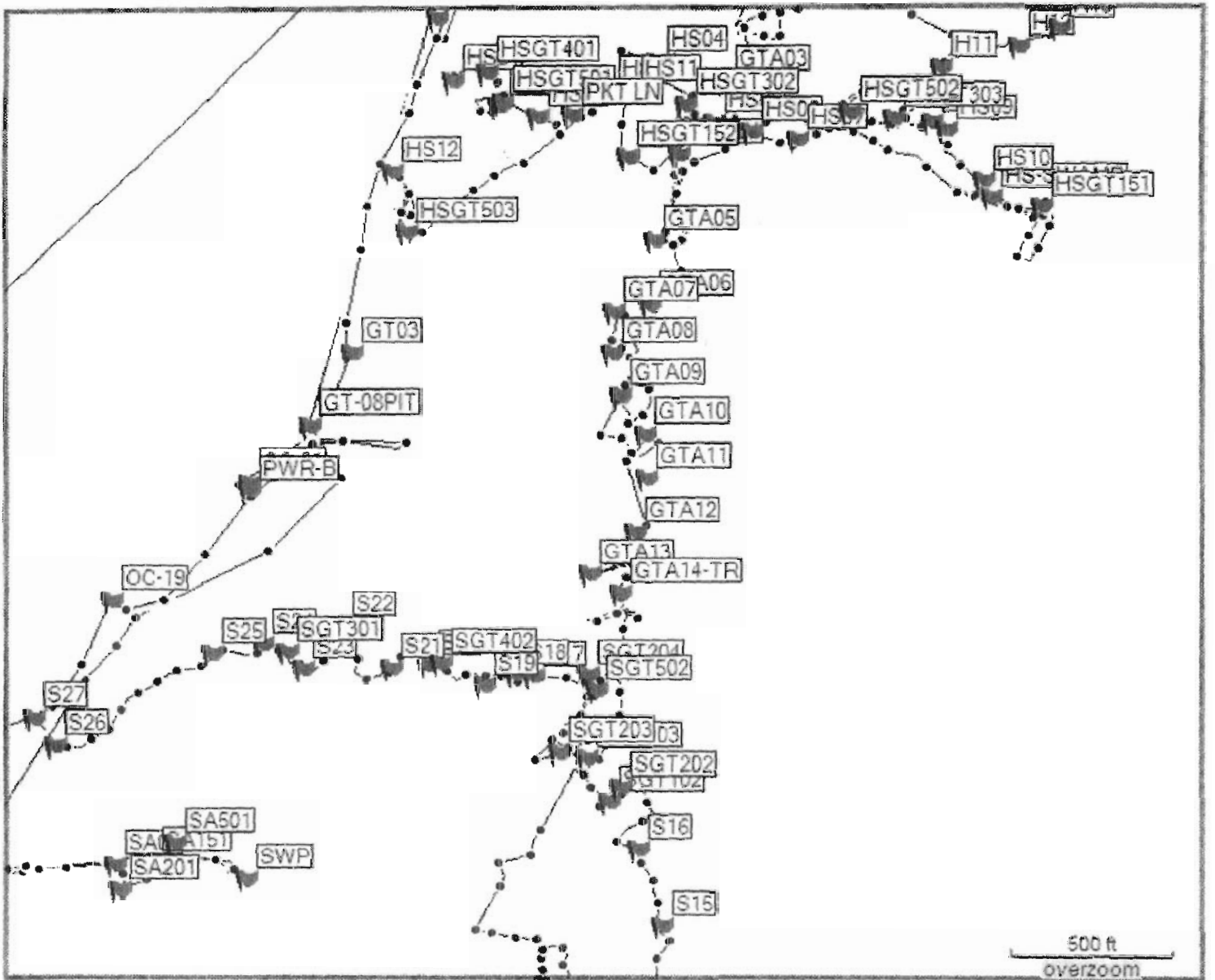
**Map Showing Garmin GPS Waypoints**

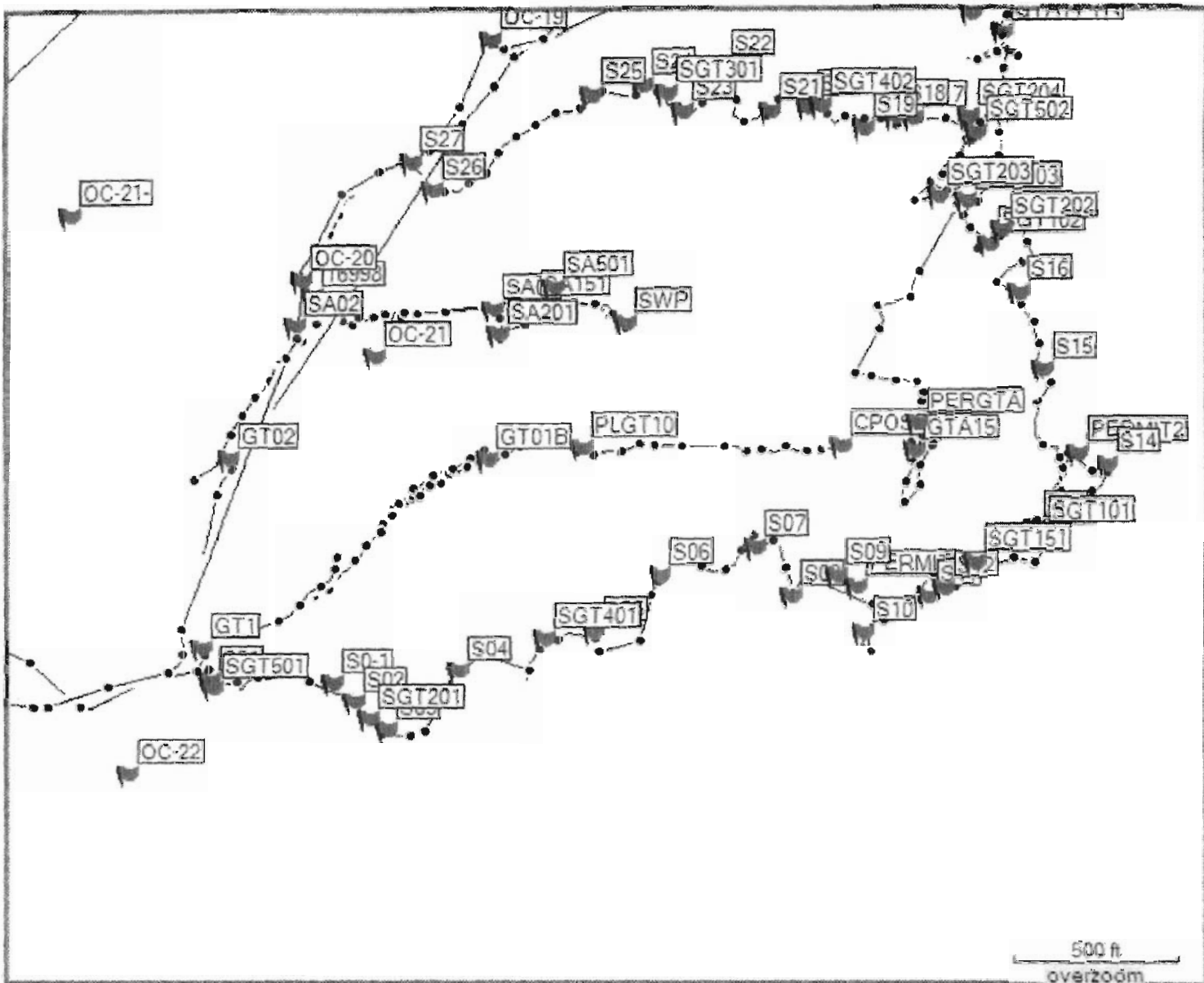
**Scale 1 inch to 500 feet**









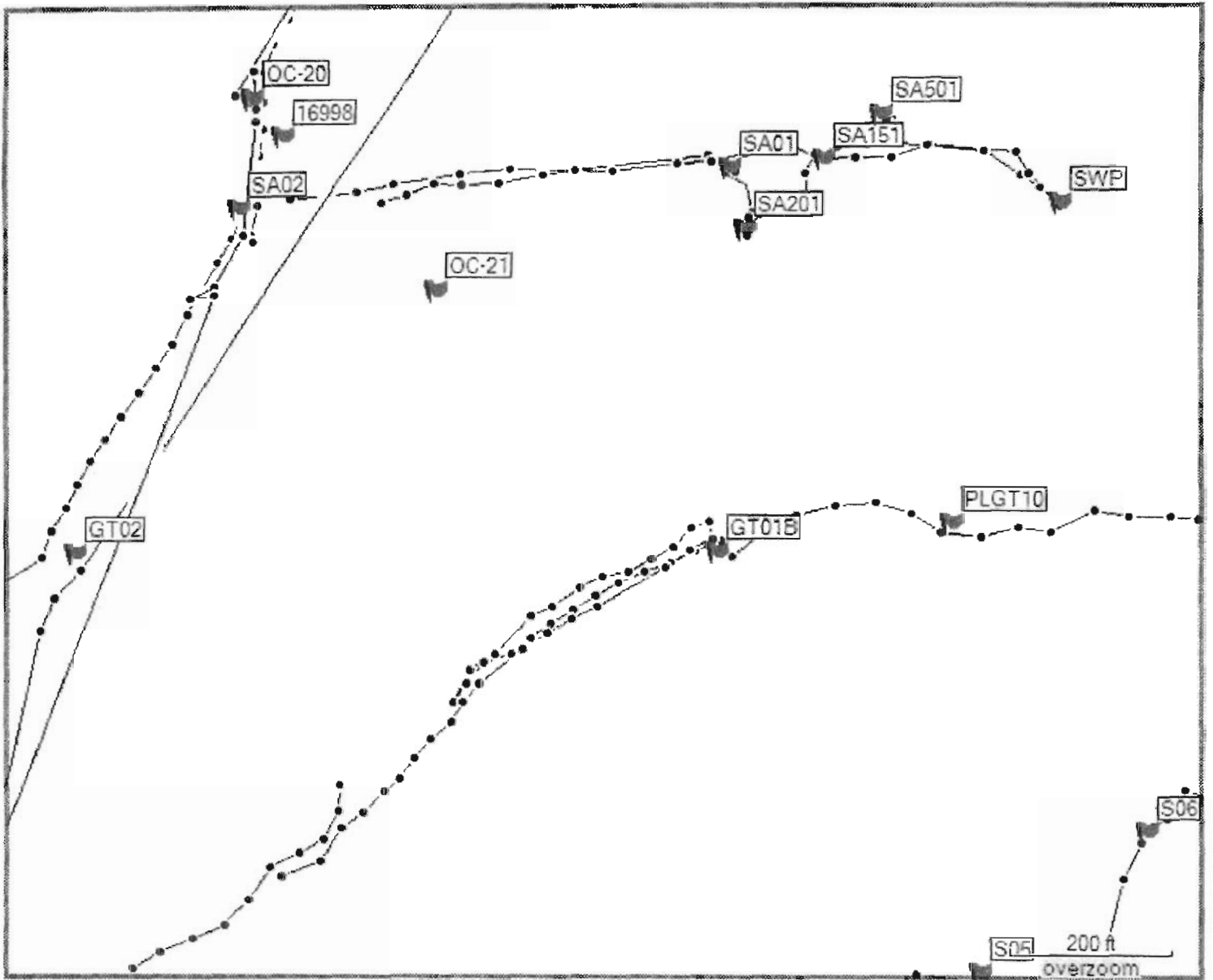


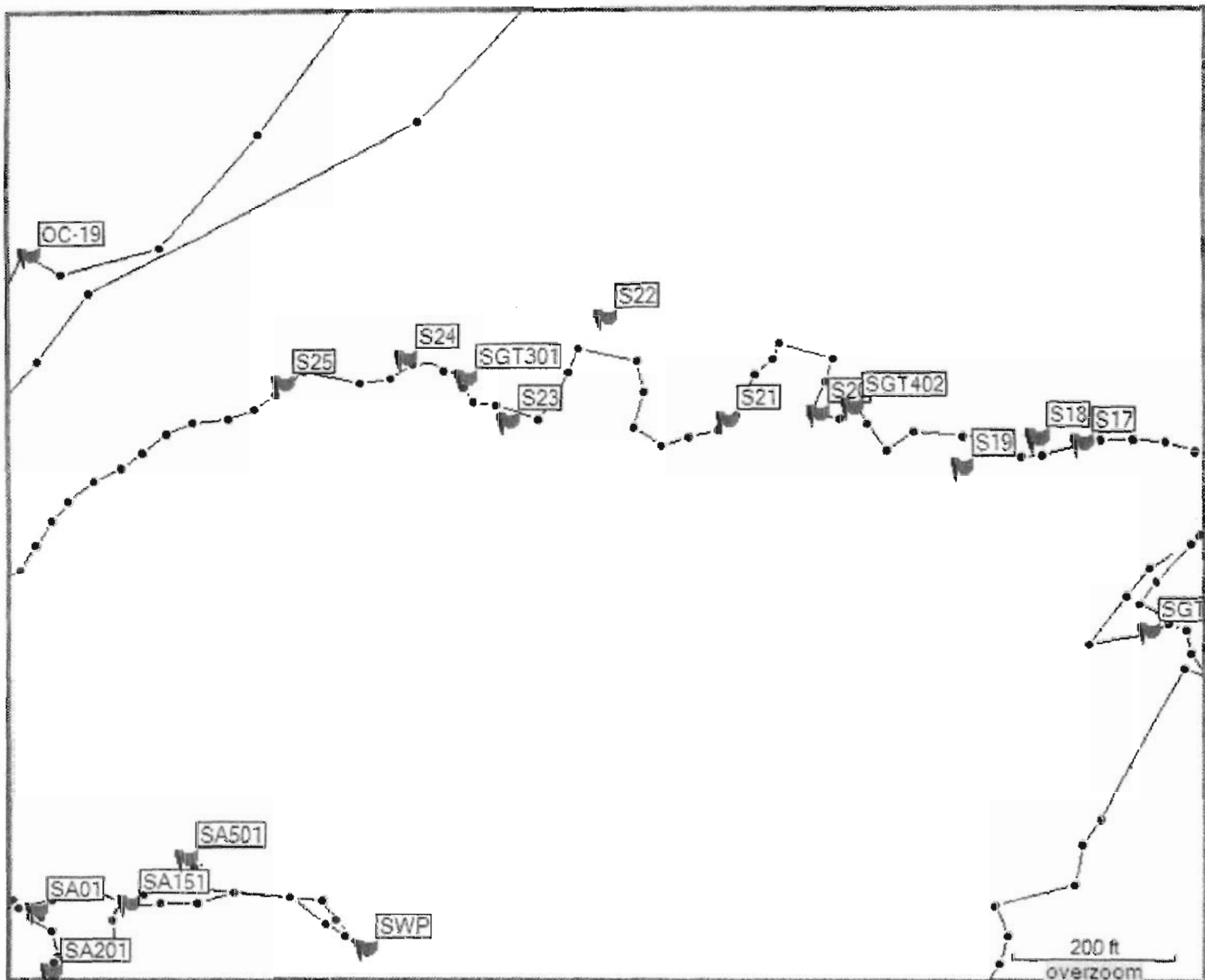
**Mohawk Garnet Property Geology 2008**

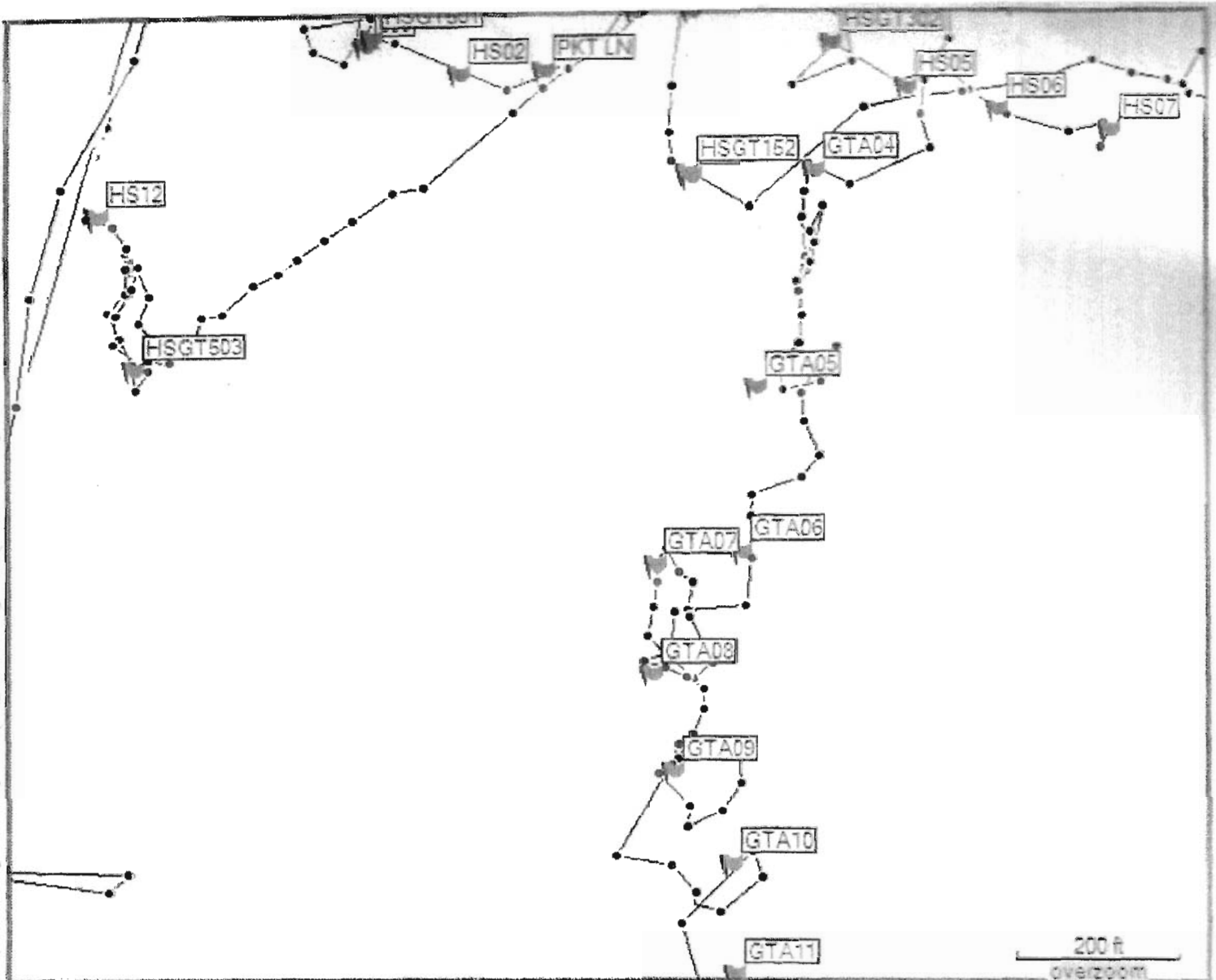
**APPENDIX C**

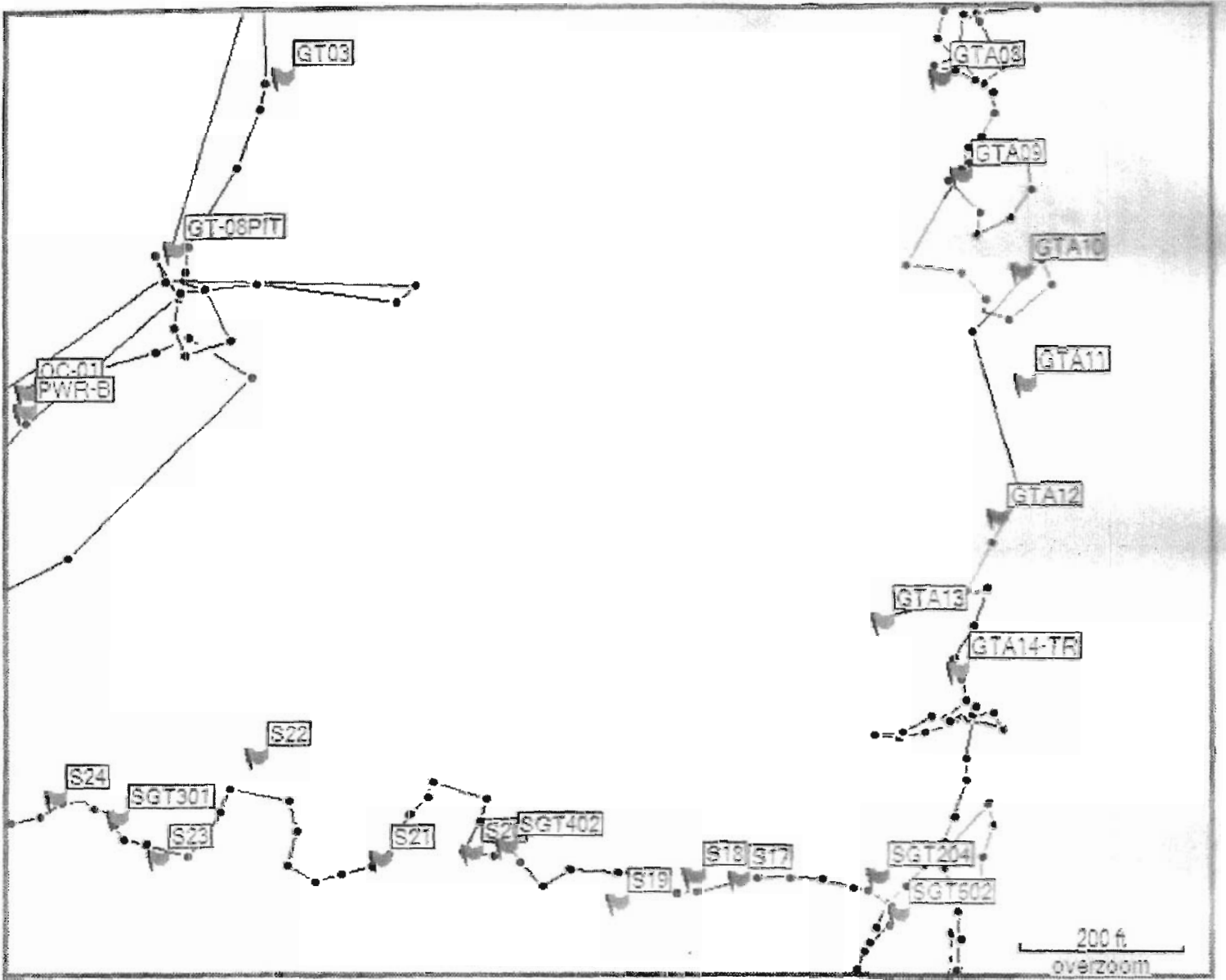
**Map Showing Garmin GPS Waypoints**

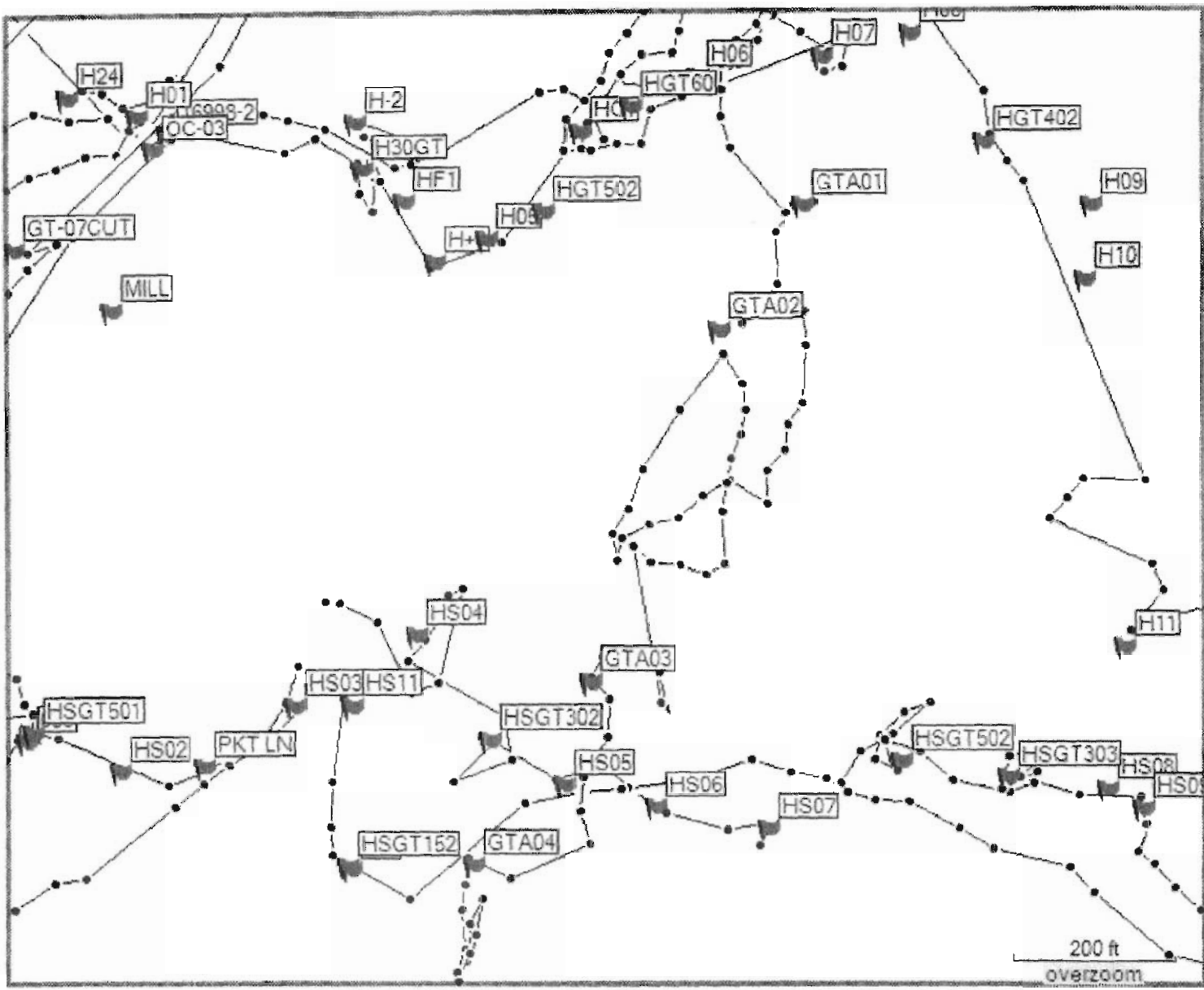
**Scale 1 inch to 200 feet**



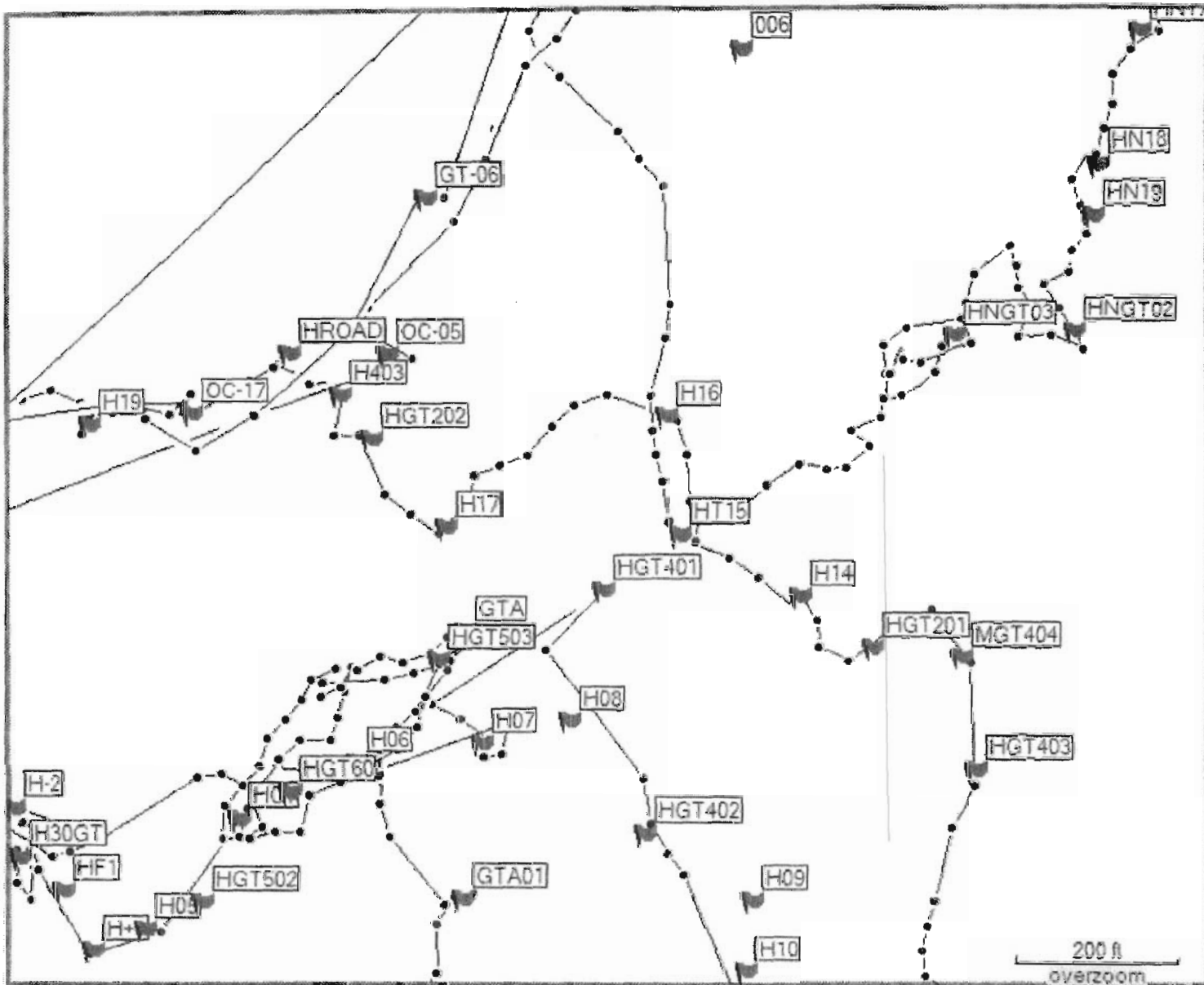


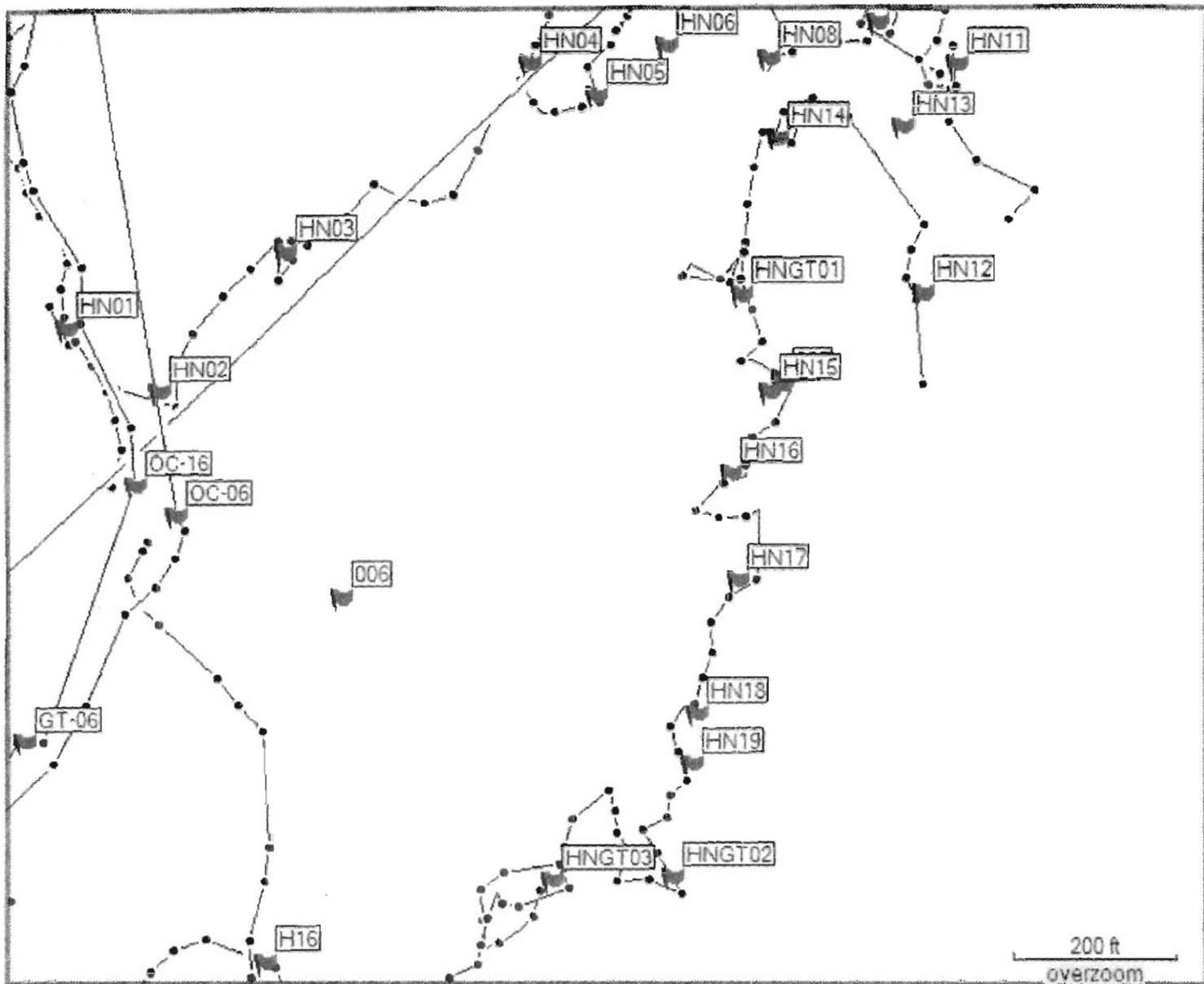


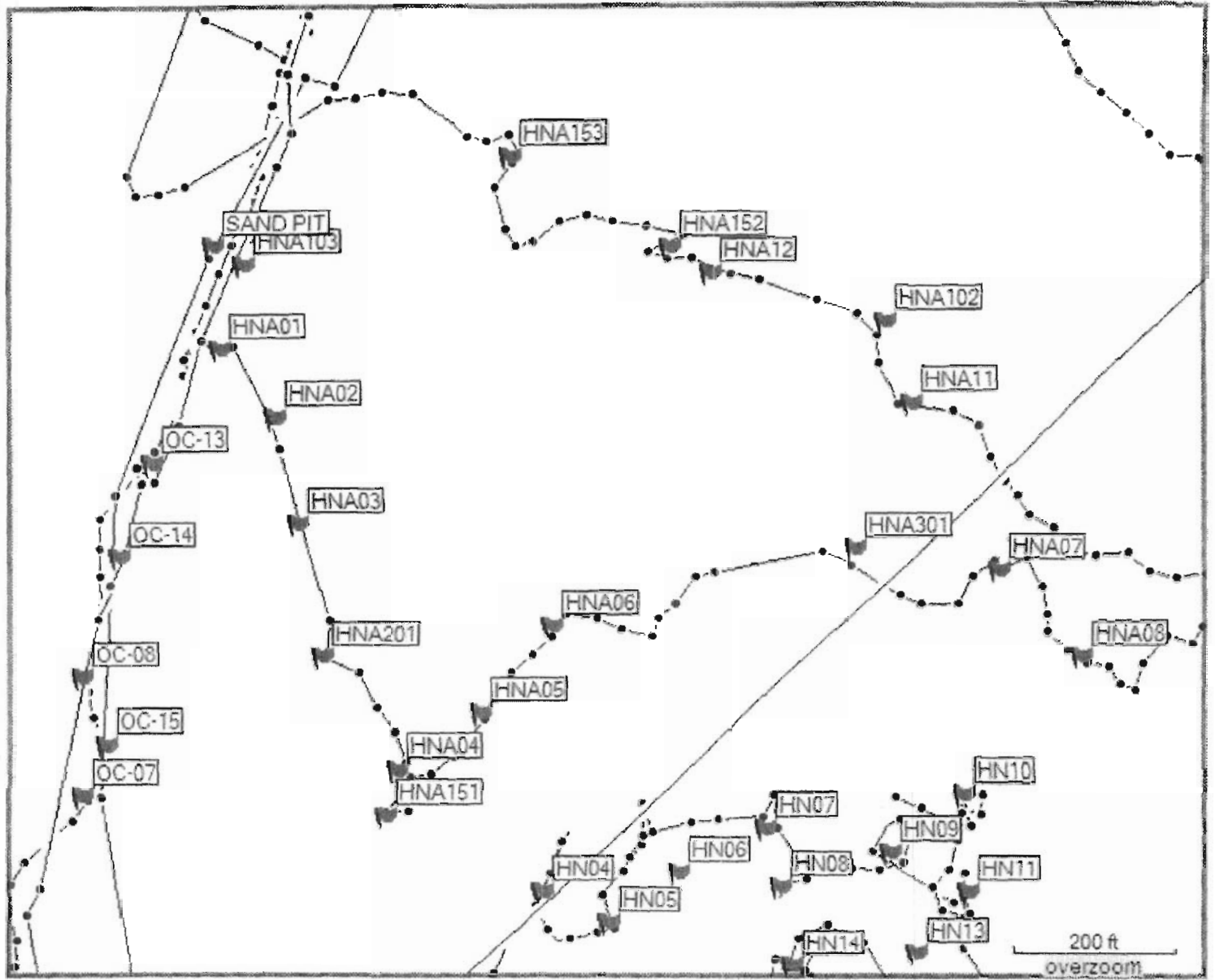


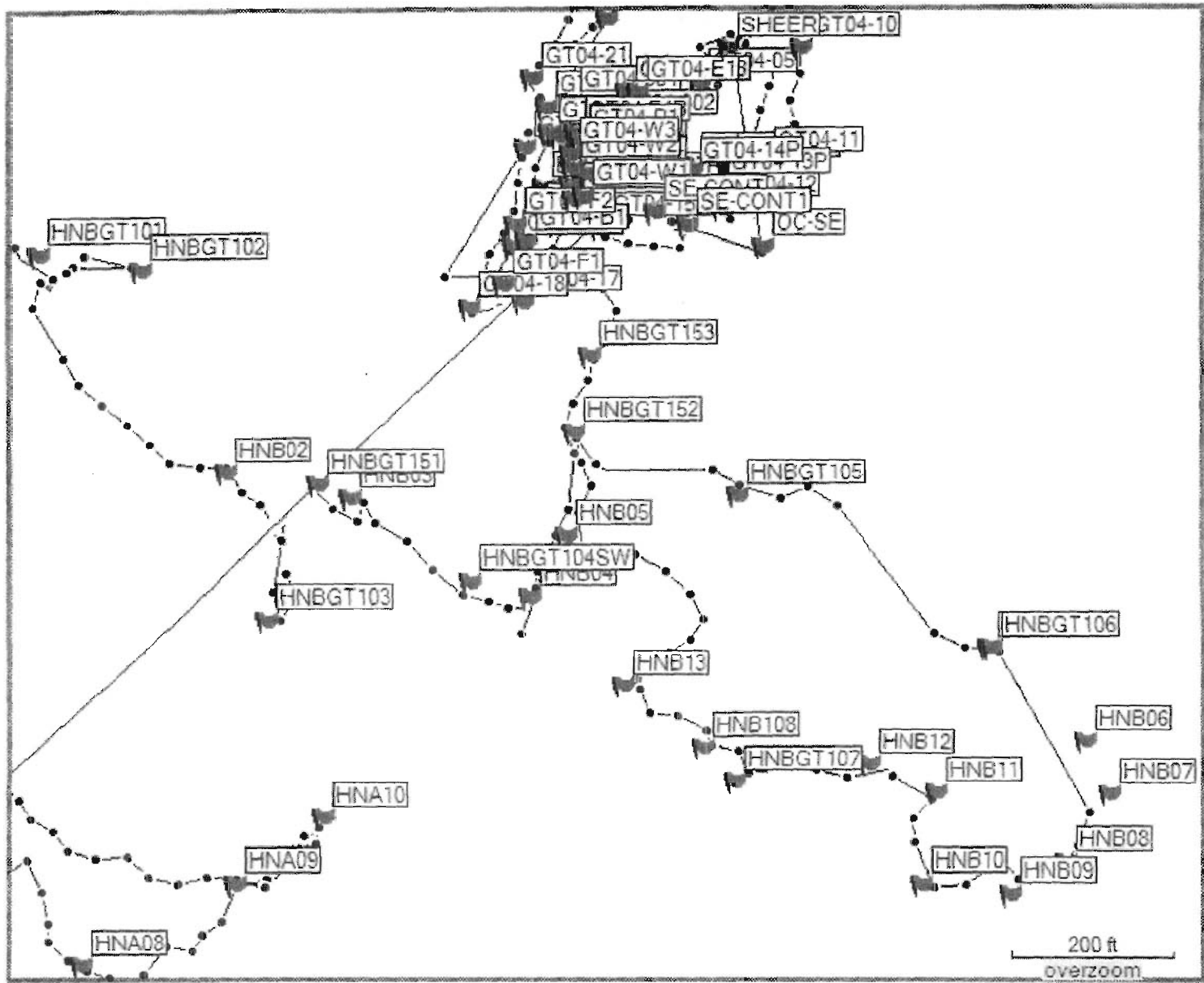


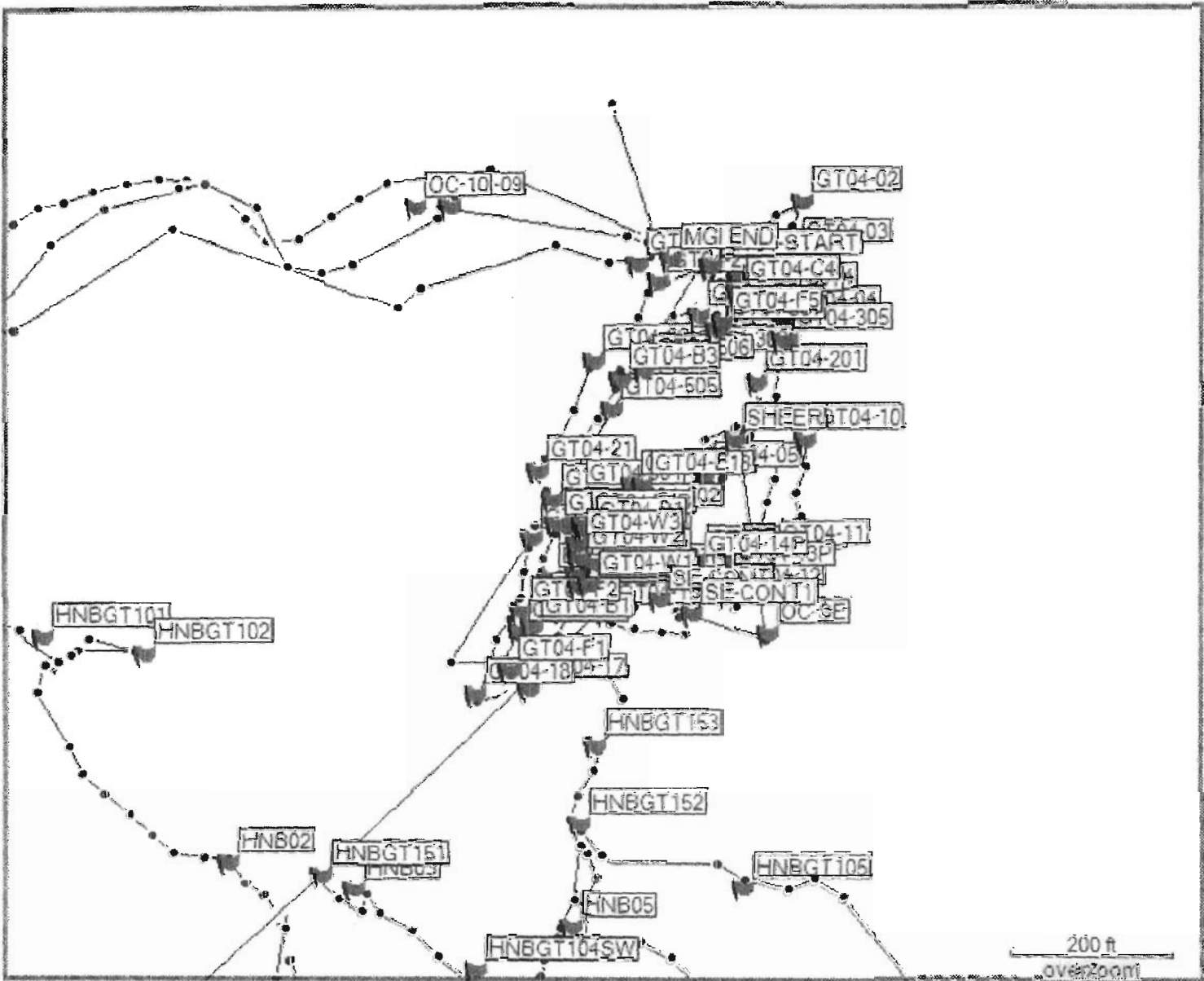












**Mohawk Garnet Property Geology 2008**

**APPENDIX D**

**Map Showing Magellan GPS Track Mapping Route**

**Scale 1:3,000**

80°36.5'

80°36'

0015  
GT07-1 GT07

0005

0003

GT07-02  
0002

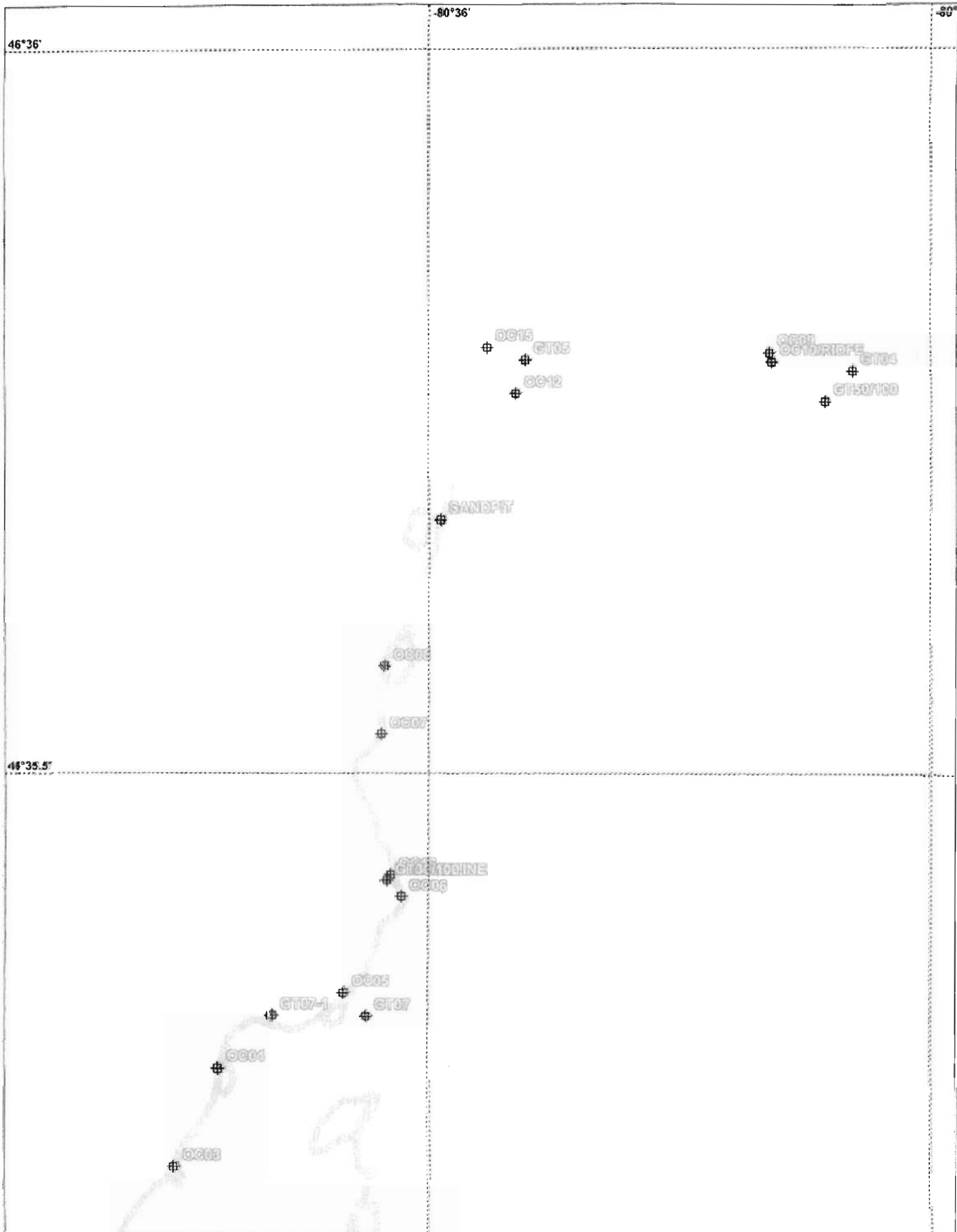
46°35'

GT06

GT06MILLPT

0001

0010



46°36' -90°36'

46°36'

46°35.5'

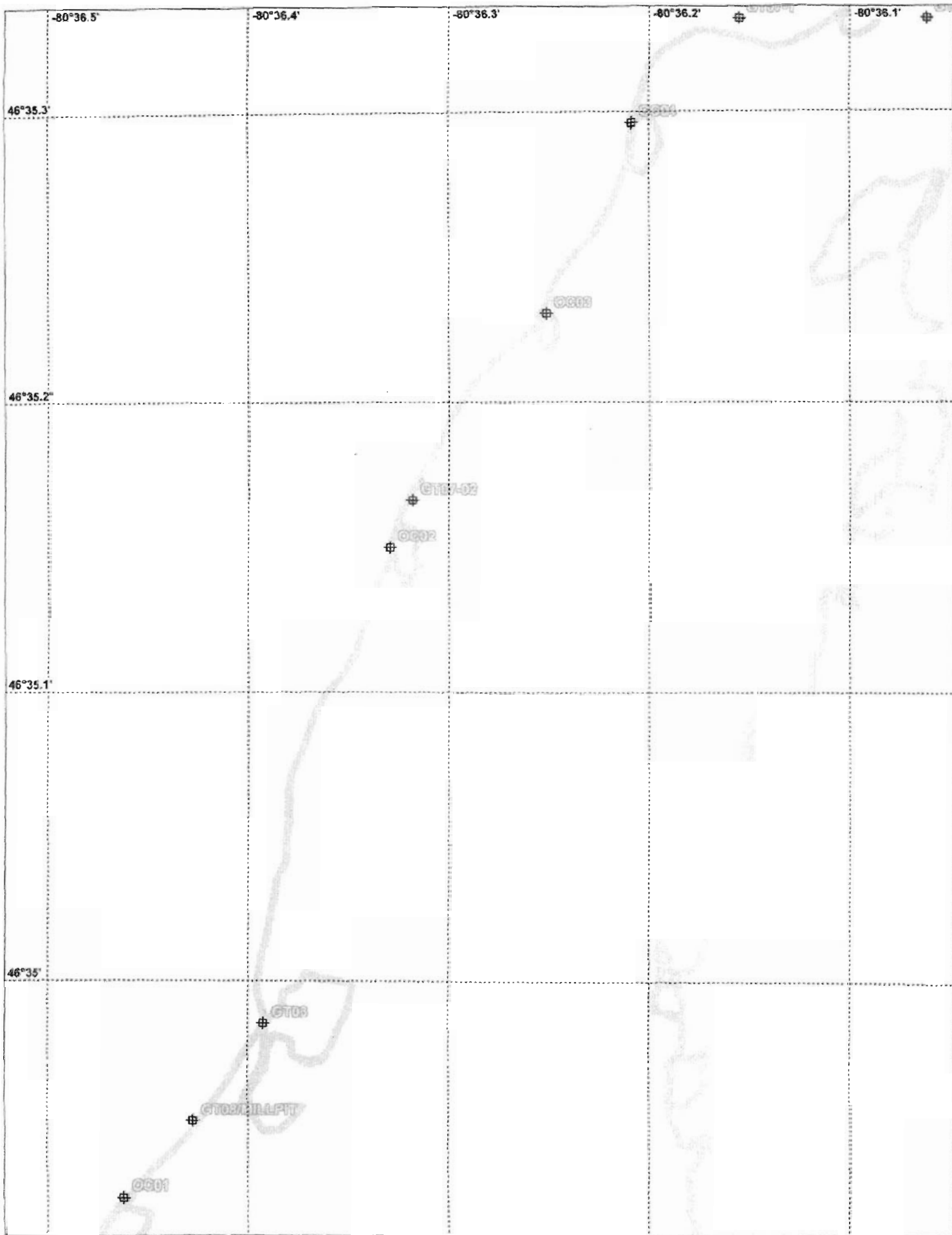


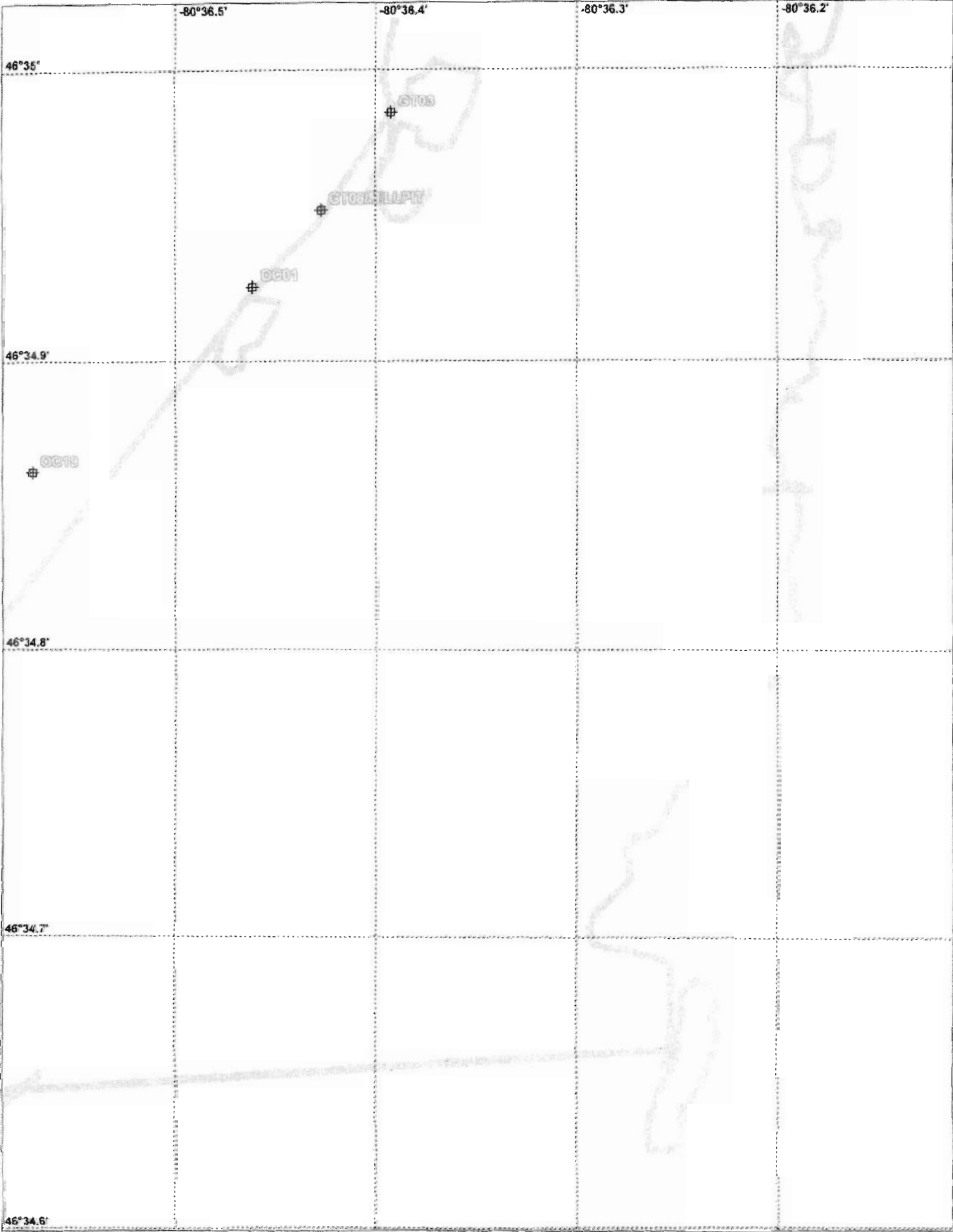
**Mohawk Garnet Property Geology 2008**

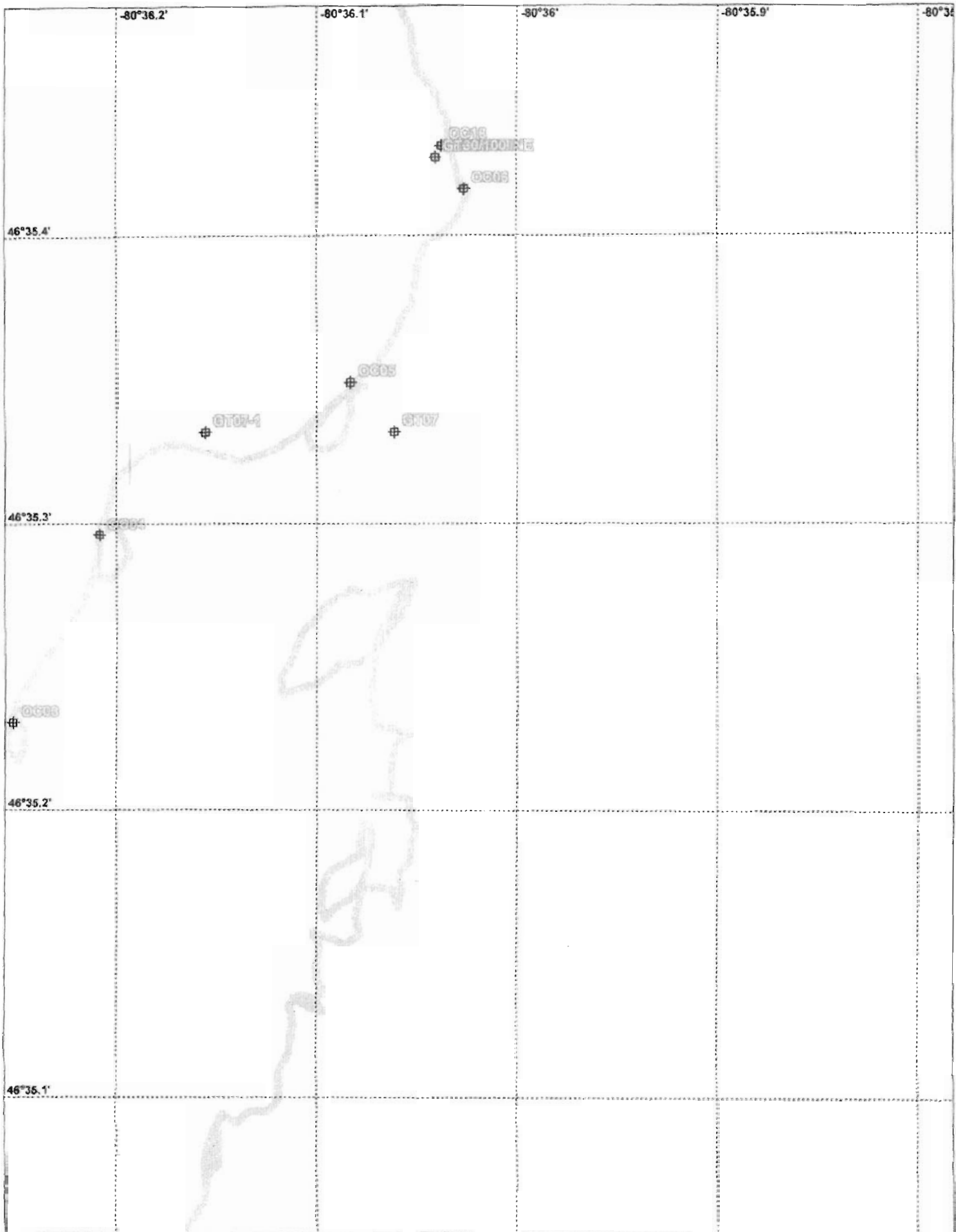
**APPENDIX E**

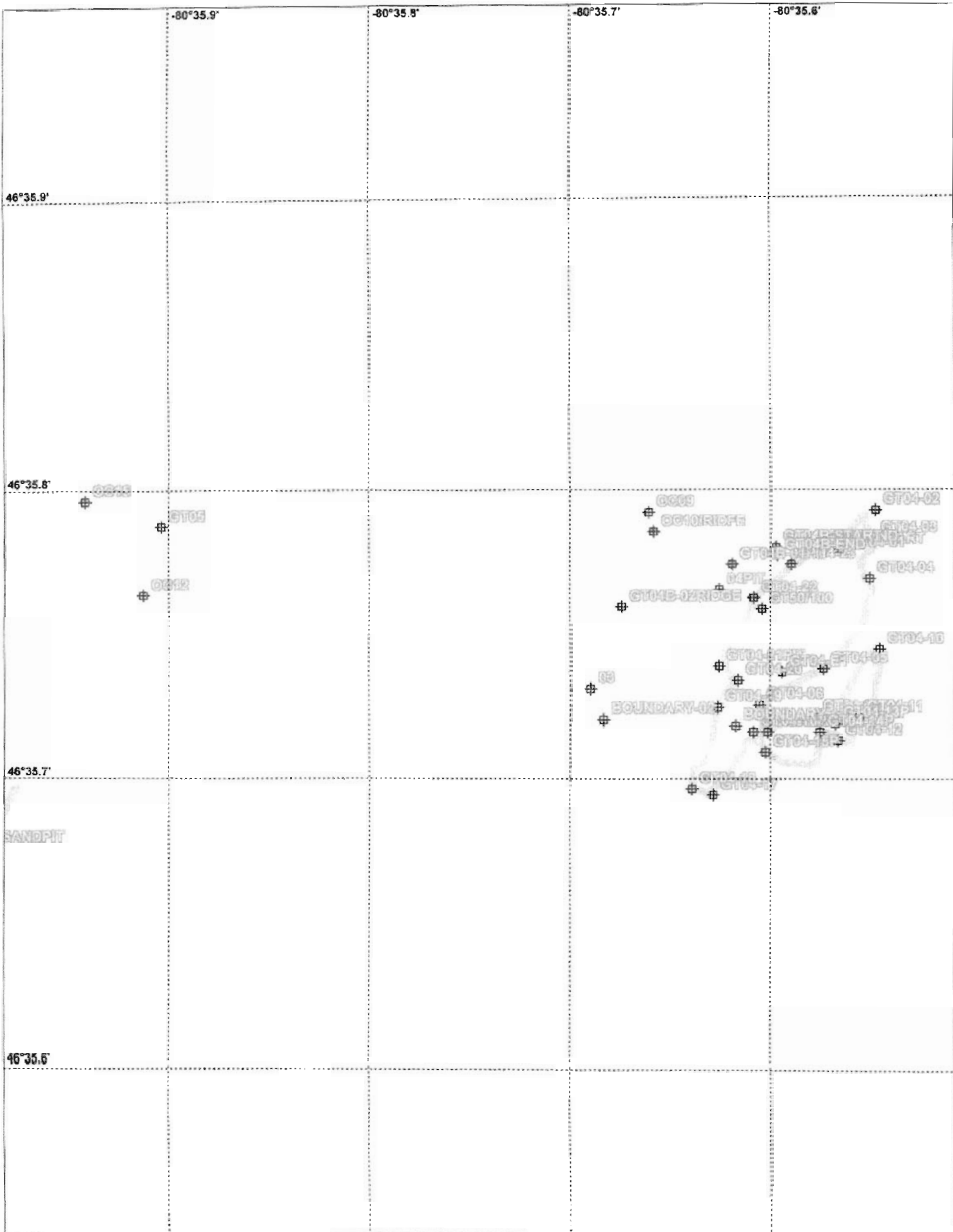
**Map Showing Magellan GPS Track Mapping Route**

**Scale 1:1,500**







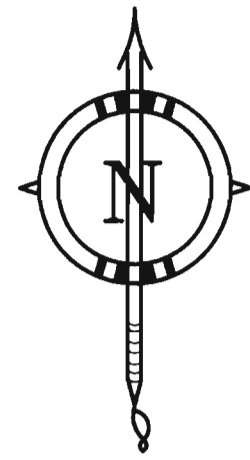






808 Highway 17 East  
Wahnapitae, ON  
POM 3C0

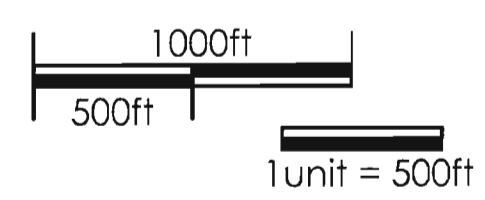
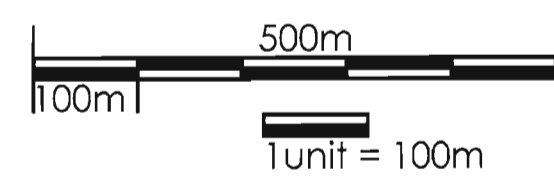
Phone: (705) 694-5783  
Toll Free: 1-866-642-7638



### LEGEND

	Trends (lineation)		Kakagami Lk Rd
	Minor Trends (lineation)		Mill Site
	Trends		Gate
	Garnet Occurrence (foliation)		PermitLine/CutLine
	Outcrop (foliation)		Township/Power
	Fold		Garnet Horizon
	Shear		Known Horizon
	Bedding/Contact		Estimated Horizon
	Minor to Barren		mgn maficgneiss
	Pegmatite dyke		fan felsicgneiss
	Garnet Outcrop		sch schist
	Outcrop		gab gabbro
	Site Rd		peg pegmatite dyke

### SCALE



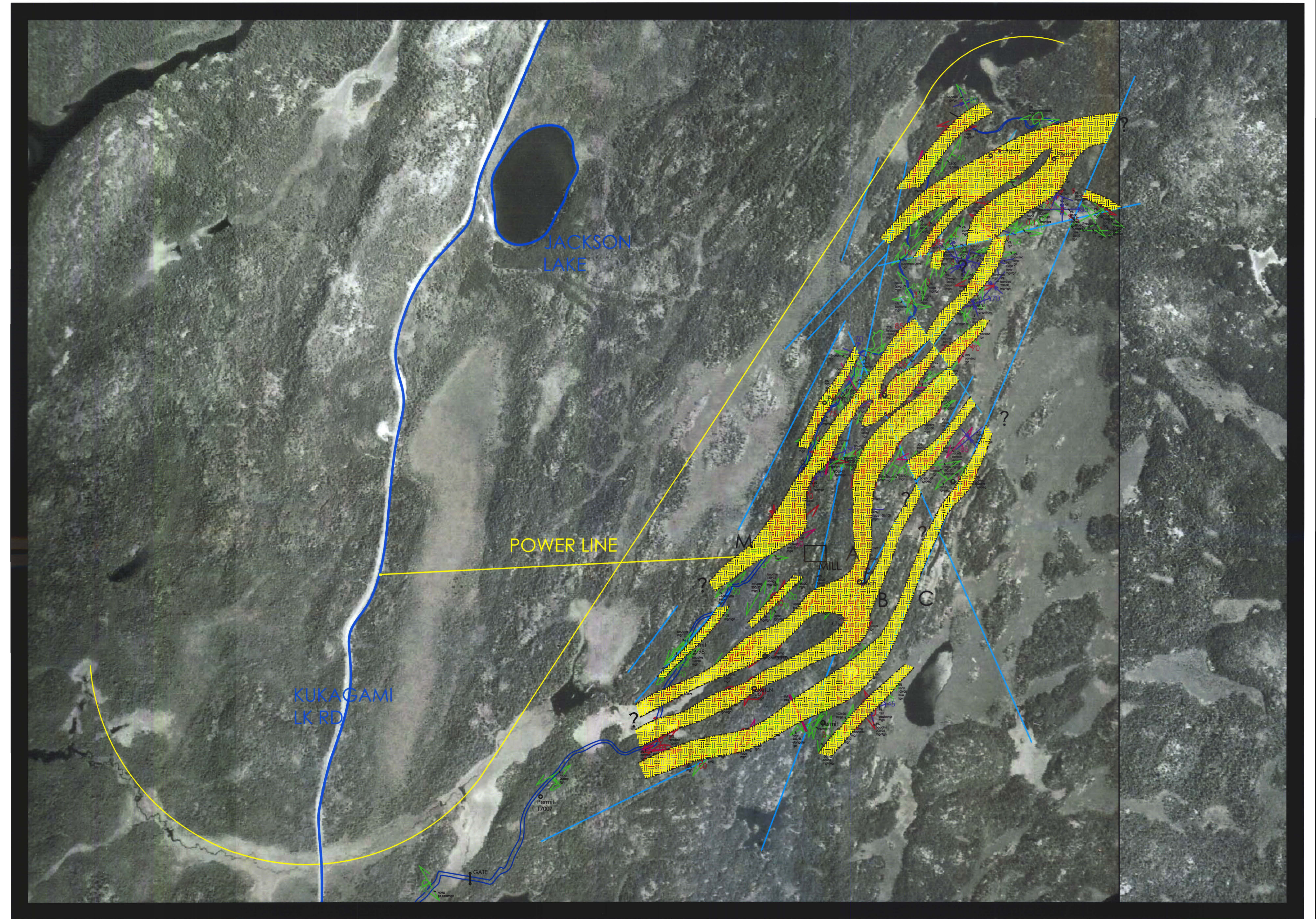
### SOURCES OF INFORMATION

Fieldnotes by Hans Matthews P.GEO. October 2007.

Base Maps derived by Nicole Recollet, Civil Engineering Technologist.

Air photographs were supplied from the Ministry of Northern Development of Mines.

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ISSUED FOR REVIEW  
December 13, 2007



## MOHAWK GARNET PROPERTY SUDBURY DISTRICT

Map 001  
Geological Map