TECHNICAL REPORT

on the

DON MCKINNON PROPERTY

for

BALTIC RESOURCES INC.

HAWKINS TOWNSHIP
SAULT STE. MARIE MINING DIVISION
ONTARIO

prepared by

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Summary

The McKinnon, Hawkins Township property lies across a narrow, east-west trending portion of the Kabinakagami (Kabi) Lake Greenstone belt. It consists mainly of metavolcanics and metasediments of Archean age, which have been strongly folded.

The metavolcanics are mostly mafic to intermediate in composition and include medium-grained massive flows, pillowed flows, fine-grained flows and amygdaloidal units. Sparsely distributed felsic metavolcanics occur mainly as tuffaceous interlayers within the mafic sequence and as narrow formations. Integrated metagreywacke and metasiltstone are the most common sediments in the greenstone belt.

Vertical to steeply dipping diabase dykes of Proterozoic age crosscut all Archean rocks along two prominent trends, northwesterly and northeasterly.

The metavolcanic and metasedimentary rocks have been subjected to amphibolite grade metamorphism and are highly deformed. As a result their mineralogy has been altered and most of their textural features have been obscured.

A major east-west trending, steeply dipping shear zone (Puskuta Lake Shear Zone) passes through the central portion of Hawkins Township. This zone of intense ductile deformation, which is about two kilometers wide, has strongly deformed the metavolcanic sections.

On the Eastern and central portions of the property the east-west trending greenstone belt is subdivided into two formations. The northernmost formation is mainly amphibolized mafic metavolcanics typical of the Kabi Lake belt and is about 400 meters wide.

The southernmost formation is about 800 meters wide, however, and consists of interbanded mafic and felsic units intruded by a large number of felsic sills, some of which are porphyritic. The felsic units are highly deformed, sericitized and sheared.

To the north, the mafic formation lies in contact with granodiorite intrusives. The section of the felsic tuffs at the southern edge of the metavolcanic formation exhibits a transformation of texture from tuffaceous to gneissic as it approaches the contact with a tonalite intrusive. This zone is strongly sheared and silicified.

The western half of the property is underlain entirely by the metavolcanic section which broadens to the west with little change in composition and turns southward, the strike changing from 270 degrees to 250 degrees. Here there are more felsic sills and to the south, highly serecitized felsic tuffs and siliceous pyritiferous metavolcanics predominate.

In the eastern and central portions of the property, at the southern edge of the metavolcanic section is a felsic member intruded by a number of sills. It is from 100 meters to 120 meters wide and is bounded to the north by a mafic interlayer and to the south by the tonalite contact.

This member hosts the main auriferous horizon which is 20 to 60 meters wide and persists for several kilometers. It was evaluated by the Falconbridge trenching and drilling program in the 1980's and grades from 100 ppb to 4610 ppb.

Within the gold bearing zone are a number of discontinuous areas of higher grade, which include the Langdon Lake, Shenango and Taylor occurrences. They have strike lengths of 70 to 250 meters and widths from 1 to 10 meters and grade from 2 g/t to 8 g/t. The Shenango No. 1 zone is the most prominent of these. In the 1930's, approximately 2,400 tons of ore were extracted from this area and records show that 41,600 tons of 0.14 oz./t drill indicated material existed in the northern section of the zone.

The auriferous horizon has silicified areas and has undergone sulfide enrichment and wide-spread carbonatization. This alteration increases markedly over the areas of higher grade and at their edges.

The mineralization is most intense near the contacts with a mafic interlayer to the north and appears to be stratigraphically controlled or at least stratigraphically influenced.

In addition to this gold bearing horizon, recent trenching has exposed several other mineralized zones in sericitized felsic sections that merit further investigation.

In the western part of the property, past exploration programs suggest that the gold occurrences are more erratically distributed. But, this part of the property has not been as extensively drilled and trenched as the eastern and central parts. Also, some four to five kilometers of strike length in the felsic formation have only been superficially explored.

The writer's examination of the property and his study of the exploration activities carried out in the past suggest that the property's potential as a gold producer has not been fully tested. This is because these programs have been concentrated on a relatively narrow portion of the stratigraphy. Therefore, further exploration is recommended.

In the future, the scope of exploration programs should be expanded to include the entire stratigraphic section of the felsic tuffs formation and the entire length of the tonalite contact zone. Because of the thin overburden, trenching is the most cost effective method of exposing these areas so that they can be sampled for analysis.

The goal of these programs should be the discovery of gold bearing, low-medium grade material of sufficient volume that it can be extracted economically.

1.0 Introduction

On July 19, 2004, Mr. Don McKinnon authorized the writer to prepare a technical report, for qualifying purposes, on a contiguous group of mining claims located in Hawkins, Derry and Walls Townships, in the Sault Ste. Marie mining division of the Province of Ontario.

The scope of this technical review includes a summary of the exploration activities which have taken place in the areas now covered by the claim group and in the vicinity since 1923, as well as the results of these activities. It also includes a description of the geological setting, both regional and local and of the mineral occurrences on the property.

Recommendations for further exploration work along with a budget estimate are contained in the report.

The writer, John R. Boissoneault, B.Sc., P. Eng, is a qualified person with respect to this technical report and is independent, having no interest direct or indirect in the subject property.

In the course of preparing and writing this report, the writer has made every effort to comply with National Instrument 43-101 and C.I.M. standards.

The report is based upon data derived from geological maps, compilation maps, drilling and trenching results and reprints prepared by mining and exploration companies and their representatives. This material is on file in the Resident Geologist's Office, Timmins Region, Ministry of Northern Development and Mines, in Timmins Ontario. It is also based upon discussion held with Mr. Randall W. Salo, as well as A. C. Wilson and upon a personal examination of the property which was made on July 27, 2004 in compliance to policy 43-101C.

The writer is unaware of any technical data other than that researched at the Resident Geologist's Office in Timmins, Ontario.

2.1 Disclaimer

In the preparation of this project, the writer has relied solely on data available at the Resident Geologist's office at the Ministry of Northern Development and Mines in Timmins, Ontario. This material includes geological maps, published and unpublished reports as well as drilling and trenching results.

This data has not been verified by the writer except for two chip samples taken during his property examination on July 27, 2004. There are several reasons for this. The drill core is not available and the trenches are now filled with detritus and water. Also, the sheer volume of relevant data makes this task impractical.

The writer has verified title to the mining claims by checking the abstracts on the website at the Mining Recorder's office in Timmins, Ontario. They are recorded in the name of Don McKinnon. A copy of these abstracts is included in the appendix.

In referring to the "drill-indicated" ore in the Shenango area, the writer is quoting a report. He has not made tonnage and grade calculations and cannot verify this material as a resource.

The sampling, assay and security procedures employed during the Falconbridge and Aurlot programs were not observed first hand by the writer. However, after reading the reports of these activities, he is confident that these were done in a professional manner.

The writer is unaware of any technical data other than that which can be researched at the Resident Geologist's office in Timmins, Ontario.

2.2 Conversion of Units

The following table sets forth certain standard conversions from the Standard Imperial units to the international System of Units (or metric units).

To convert from	to	Multiply by
Feet	Meters	0.305
Meters	Feet	3.281
Miles	Kilometers	1.609
Kilometers	Miles	0.621
Acres	Hectares	0.405
Hectares	Acres	2.471
Grams	Ounces (troy)	0.032
Ounces (troy)	Grams	31.103
Tonnes	Short Tons	1.102
Short tons	Tonnes	0.907
Grams per tonne	Ounces (troy) per ton	0.029
Ounces (troy) per ton	Grams per tonne	34.285

3.0 Property Description and Location

The McKinnon property consists of twelve mining claims, a total of 175 units, covering a total area of 2,800 hectares. These form a long contiguous block, from one to one and half kilometers wide from north to south and in excess of ten kilometers long from east to west (Table 1, Figure 4).

Table 1 – Claim Numbers and Descriptions

Claim #	Units	Hectares	Recording Date	Due Date	Required Work
1229071	8	128	June 6, 1997	June 6, 2005	$ 3200.00
1229072	16	256	June 6, 1997	June 6, 2005	$ 6400.00
1229073	16	256	June 6, 1997	June 6, 2005	$ 6400.00
3016341	16	256	July 14, 2003	July 14, 2005	$ 6400.00
3016342	16	256	July 14, 2003	July 14, 2005	$ 6400.00
3016377	15	240	July 9, 2003	July 9, 2005	$ 6000.00
3016376	15	240	July 9, 2003	July 9, 2005	$ 6000.00
3002377	16	256	June 12, 2003	June 12, 2005	$ 6400.00
3002396	15	240	June 12, 2003	June 12, 2005	$ 6000.00
3002378	10	160	June 12, 2003	June 12, 2005	$ 4000.00
3017789	16	256	June 24, 2004	June 24, 2006	$ 6400.00
3017790	16	256	June 24, 2004	June 24, 2006	$ 6400.00

The claim block lies along what is approximately the north south medial line of Hawkins Township and extends into Walls Township in the east and Derry Township in the west, in the Sault Ste. Marie Mining Division. The coordinates of the mid point of the property are 711 000 E and 5 430 000 N (UTM Zone 16U, NAD83). This is about 120 kilometers south of the town of Hearst and about 100 km north-northeast of the town of Wawa and the eastern shore of Lake Superior.

Several small lakes lie within or partially within the property boundaries. These include Dubroy Lake in the east, Langdon Lake in the centre and Gull Lake in the south. The Oba River flows northwards through the property about two kilometers west of its mid point.

The Algoma Central Railway line crosses the property from north to south, approximately three kilometers east of its mid point near Langdon Lake. The Canadian National Railway passes within four kilometers of the eastern part of the claim block to the north.

A map of the claims is presented in Figure 4 (Property Claim Map).

4.0 Accessibility, Climate, Local Resources, Physiography

Access to the McKinnon property may be achieved by travelling south on paved Highway 583 from the town of Hearst to the village of Mead, a distance of 37 kilometers. A Newago lumber gravel surface road leads further south to the town of Oba, an additional distance of 72 kilometers. From Oba, several secondary lumber roads provide access to various parts of the claim group (Figure 4).

The town of Oba lies at the junction of the Canadian National and the Algoma Central Railways. The town of Hearst lies at Highway 11 and may be reached via this highway from North Bay to the southeast and Thunder Bay to the west.

The climate is temperate and typical of the southern Canadian Shield area. It is somewhat moderated by the proximity of Lake Superior. Winter temperatures range from 0 degrees Celcius (C) to -25 degrees C with extreme lows of -45 degrees C. The average summer temperature ranges from 5 degrees C to 24 degrees C with extreme highs of 30 degrees C. Average precipitation is approximately 650 mm in the summer and 350 mm in the winter.

With the exception of a few small lakes and the Oba River, exploration activities can be carried out year round. Water for diamond drilling can be obtained from the river and from numerous small lakes and streams on the property.

The town of Hearst is traditionally a lumbering centre with a saw mill, but the town now has a plywood plant and manufactures wood products. With a population of 6000, it has a well developed infrastructure with good supply outlets and several heavy equipments contractors.

The property lies within the Boreal Forest Region of Northern Ontario. The area covered by the claim group is primarily high ground with numerous outcrops and shallow overburden. The eastern and central parts of the property have a prominent east-west trending ridge along their central sections. It slopes gently to the south with swampy areas where the overburden thickens. Prominent depressions transect the ridge at several points and are usually occupied by small streams or swamps.

The area has been forested in the past and the western part has been replanted. The central and eastern parts have a second growth forest with poplar and some pines in the higher areas and black spruce in the lower areas.

5.0 History

The earliest geological work in the Kabi belt was done in 1917 when T. L. Tanton carried out a reconnaissance survey along the C.N.R. line. In 1927, R. L. Gledhill examined gold occurrences in Hawkins and Walls townships. J. E. Maynard did a twelve township study along the Kabi belt in 1929 and P. E. Giblin reported on mineral occurrences in the area in 1968. The southwestern portion of the greenstone belt was mapped by G. M. Syragusa during the period of 1973 to 1978.

In 1993, A. C. Wilson published a compilation of previous field investigations that were made from 1988 to 1990 as "Ontario Geological Survey, Open File Report 5787," and entitled, "Geology of the Kabinakagami Lake Greenstone Belt."

The first reported discovery of gold in the area was made by a prospector named G. Taylor in 1923. This showing is in Hawkins township, and is referred to as the Taylor Occurrence (mineral occurrence No. 9).

Gold was discovered in Lizar township in 1926, and between 1936 and 1939, Hiawatha Gold Mines Ltd. did a considerable amount of work on this property including 13,034 feet of surface drilling. A shaft was sunk to 299 feet and two levels were established (mineral occurrence No. 3).

Other mineral occurrences of note which were discovered along the Kabi belt are as follows:

1. Kalibak Gold Mines – SW Lizar Twp., 1936 (mineral occurrence No. 5, 6)
2. Vasey-Stenabough – SW Lizar Twp., 1936 (mineral occurrence No. 10)
3. Langdon Lake - North-Central Hawkins Twp., 1925-39 (mineral occurrence No. 7)
4. Shenango Gold Mine – Central Hawkins Twp., 1925-39 (mineral occurrence No. 8)
5. Charpentier Gold-Silver – SW Lizar Twp., 1946 (mineral occurrence No. 1)
6. Cuthbert-Peterson-Dubroy – West Walls Twp., 1929 (mineral occurrence No. 16)
7. Johnstone-Barnes - West Hawkins Twp., 1939 (mineral occurrence 17)
8. Goldfields - West Hawkins Twp., 1989 (mineral occurrence 18)

All of the known gold occurrences within the Kabi belt are located in southwestern Lizar Township, in eastern Hawkins Township, and in western Walls Township.

There have been two producing gold mines in the area. Between 1936 and 1939, Hiawatha Gold Mines Ltd. produced 179 ounces of gold from 1931 tons of muck. Between 1936 and 1945 Shenango Gold Mines milled some 2430 tons of muck from an open cut and a shallow shaft yielding a recorded 66.2 ounces of gold.

The history of exploration activity on the McKinnon property dates back to the original discoverers of gold in Hawkins township by G. Taylor in 1923. This was followed by a discovery by Shenango Gold Mines in 1935 and then by Johnstone and Barnes in 1939.

Most of the previous work has been concentrated on the eastern half of the property particularly in the region of the Taylor and Shenango occurrences. Exploration on the western half has been sporadic and generally recent.

Because of the long east-west direction of the property, it is convenient to separate the work history into three areas and outline these in the following tables:

Eastern Half

Table 2: Taylor Prospect (presently claim 1229073)

Date	**Work Performed By**	**Work Performed**	**Results**
1925-1929	G. Taylor	Stripping, trenching, sampling	Uncovered 3 quartz veins, gold panned
1929-1935	Hawkins Mining Syndicate	Stripping, trenching, bulk sampling (2000 lb)	Uncovered 7 quartz veins 30.5 g/t Au over 0.30 m 5.1 g/t Au from test pit
1935	Hollinger Gold Mines	Prospecting, diamond drilling	31.31 g/t Au over 6.1 m No other documentation
1935-1945	Mintor Gold Mines	Prospecting, channel sampling	No documentation
1960	International Nickel Co.	Diamond drilling	No documentation
1972-1974	Magi Gold Mines Ltd. (fiche: Hawkins; 0015-0018)	Induced polarization and magnetic surveys, 3 diamond drill holes (907 feet)	Minor finely disseminated sulfides
1979-1980	St. Josephs Exploration Ltd. (fiche: Hawkins; 0012, 0013)	Magnetometer, VLF, HLEM surveys	5 VLF anomalies, very weak HLEM anomalies

1980-1981	Sulpetro Minerals Ltd.: (fiche: Hawkins; 0011)	Geological survey, surface sampling	Encouraging assay values, highest value 20.91 g/t Au (no width reported)
1983-1986	Falconbridge Exploration Ltd. (fiche: Hawkins; 0035)	Geochemical and geophysical surveys, trenching, diamond drilling (16 holes = 2334 feet)	Results illustrated in Table 5
1999-2004	Don McKinnon (WP Hawkins-2)	Trenching, stripping, ground geophysics, diamond drilling (1 hole 217 m)	Presently claim 1229072, exposed wide alteration zone

Table 3: Shenango Prospect (presently claim 1229071)

Date	Work Performed By	Work Performed	Results
1935-1937	Shenango Mining Co.	Trenching (1000 ft.), channel sampling, exploration shaft (52 ft. deep), adit (90 ft.), open cut mining, diamond drilling (2500 ft.)	Assays average 0.140 oz./ton over 5 ft. wide and 400 ft. of strike length
1937-1941	Shenango Mining Co.	Diamond drilling (400 ft.), trenching, production shaft (135 ft.)	Reported assay results underground; 0.14 oz./ton over 30 ft., 0.18 oz./ton over 20 ft. 0.22 oz./ton over 15 ft. 0.17 oz./ton over 8 ft.
1945	Shenango Mining Co. (fiche: Hawkins; 0019)	Clean up operation at mill	Recovery of 35.87 ounces of gold and 5 ounces of silver
1979-1981	St. Josephs Exploration Ltd. (fiche: Hawkins; 0012, 0013)	Ground geophysics including I.P., geological mapping and sampling	Samples taken from muck pile returned assays of: 7.54 g/t, 6.69 g/t, 52.4 g/t
1983-1986	Falconbridge Exploration Ltd. (fiche: Hawkins; 0021- 0035)	Geochemical and geophysical survey (I.P.), trenching, diamond drilling (13 holes; 1816 ft.)	Results illustrated in accompanying table
2000-2004	Don McKinnon (WT Hawkins-30)	ground geophysics, stripping, trenching, Diamond drilling (2 holes; 214 meters)	Presently claim 3002377 and 1229072, exposed wide alteration zone

Note: Falconbridge holdings of 1983-1986 included the present claims; 3002377, 3002378, 3002396, 1229071, 1229072, and 1229073

Western Half

Table 4: Goldfields and Johnstone-Barnes Showings

Date	Work Performed By	Work Performed	Results
1939	Johnstone and Barnes	Trenching, sampling, presently claim 3016341	Gold occurrence discovered, reported assay of 0.24 oz./ton over35 ft.
1975	Rio Tinto Canadian (fiche: Hawkins; 0010)	Ground geophysics, diamond drilling (2 holes; 902 ft.)	No reported results, presently claim 3016341
1984-1988	Golden Range Resources (fiche:Hawkins; 0036-0039, WT4 TO WT6)	Geology, geochemistry, ground and airborne geophysics, diamond drilling (8 holes; 813 ft.)	No available results, presently part of claims 3016341, 3016342
1986-1989	Goldfields Canadian Mining Ltd. (fiche: Hawkins; WT 11, WT20, WT21)	Geology, sampling, diamond drilling (13 holes; 1780 ft.)	Results incorporated in Aurlot Exploration Ltd., 1989 report below
1986	Hawk Resources (fiche: Hawkins; 0042, WT2, WT16, WT19)	Ground geophysics, geochemistry, diamond drilling (20 holes; 6151 ft.)	Adjacent south of claims 3002377 and 1229071, results discouraging
1989	Aurlot Exploration Ltd. (fiche: Hawkins; WT13, WT17, WT18)	Geology, sampling, Geochemistry, airborne geophysics, stripping, trenching,	Channel sample assays reflected results; 1.31 oz./ton over 3 ft., 0.74 oz./ton over5 ft., 0.42 oz./ton over 2 ft., 0.40 oz./ton over2 ft., 0.21 oz./ton over5 ft., 0.11 oz./ton over2 ft., presently claims 3016342, 3016376, 3016377

On June 6, 1997, Don McKinnon acquired claims 1229071, 1229072, and 1229073 (total 40 claim units, 640 hectares). The remainder of the claim block was acquired in 2003 and 2004.

6.0 Regional Geology

The McKinnon Hawkins Township property lies within the Kabinakagami (Kabi) Lake greenstone belt which is part of the Wawa subprovince of the Canadian Shield of northern Ontario. This belt is composed mostly of metavolcanics and metasediments of Archean age. It is one to six kilometers wide from north to south and extends for a distance of 100 kilometers in a large crescent shape to the north from Nameigos Township at the western end to Champlain Township at the eastern end.

In Hawkins Township at the most northerly part of the crescent the belt divides into a northern segment and a southern segment. The McKinnon property lies across the narrow east-west trending northern segment and extends westward beyond the point of division.

Mafic to intermediate metavolcanics are the dominant rock types of the Kabinakagami belt. These include fine to medium-grained massive flows, pillowed flows, flow top breccias as well as monolithic and polymictic breccias.

Felsic metavolcanics are sparsely distributed throughout the belt. They occur mainly as tuffaceous interlayers within the mafic metavolcanic sequences but also as narrow tuffaceous formations and as fragmental units.

Quartz porphyry and minor quartz-feldspar porphyry sills and dikes are common in the central portion of the belt in Hawkins Township.

Interbedded metagreywacke and metasiltstone are the most common sediments in the greenstone belt. These rocks are often injected with multiple pegmatite fractions. In Hawkins Township, these metasediments occur as alternating quartz-rich and garnet-biotite layers within a metavolcanic sequence.

The only known mafic intrusive in the greenstone belt is a roughly circular body of metagabbro or metapyroxenite occurring in Lizar Township in the western part of the belt.

Granitic rocks in the area generally consist of coarse-grained biotite or biotite-hornblende trondhjemite to granodiorite. An intrusive in the central part of Hawkins Township is a sheared tonalite. These intrusives generally show a strong gneissic texture.

Vertical to steeply dipping diabase dikes of Proterozoic age crosscut all rock types. These generally conform to two prominent trends; one northwesterly and another northeasterly. The diabase is coarse-grained, equigranular, and homogeneous, and the dikes range in width from one meter to 30 meters. Narrow lamprophyre dikes, usually less than 25 centimeters wide also occur in the greenstone belt.

The metavolcanic and metasedimentary rocks of the Kabinakagami Lake belt have been subjected to low to medium amphibolite grade metamorphism. The mineralogy of the mafic metavolcanics is albite + epidote + biotite + hornblende with garnet also present in central Hawkins Township.

Three types of alteration have been observed in the greenstone belt and are as follows:

1. Silicification along the northern contact between the mafic metavolcanics and the tonalite in central Hawkins Township and along the Bear Creek fault in Lizar Township.

2. Carbonate alteration within shear zones in central Hawkins Township and vein carbonate alteration within pillowed mafic metavolcanic flows and felsic tuffs in the southwestern part of the same township.

3. Epidote alteration occurs within felsic and mafic metavolcanics in the central part of the belt.

Two prominent structural features have had a significant effect on the rocks of the Kabinakagami Lake greenstone belt. The first of these is a major east-west trending, steeply dipping shear zone which passes through the central portion of Hawkins Township and has been traced for a distance of 60 kilometers to the east and southeast. This feature, a zone of intense ductile deformation about two kilometers wide, has been named the “Puskuta Lake Shear Zone.” It lies along the metavolcanic sections to the south which makes up the northern arm of the greenstone belt and the plutonic intrusive. All of the rocks within the shear zone have been strongly deformed with the mafic and felsic metavolcanics extremely well foliated in an east-west direction, and possibly tectonically layered.

In central Hawkins Township several northwest trending narrow localized shear zones crosscut the main trend of the Puskuta Lake Shear Zone. These are strongly foliated chloritic zones of short strike length.

The second prominent structural feature lies in the southwestern part of Lizar Township and is called the “Bear Creek Fault.” This structure has a northeast trend and is indicated by deformation and silicification of the rocks on either side. It is accompanied by a zone of high strain approximately 50 to 100 meters wide and a narrow shear zone to the northwest.

A number of northwest trending faults are interpreted to occur in the western part of the greenstone belt. These are of short strike length with horizontal displacements of less than one kilometer.

7.0 Local Geology

In the western part of Hawkins Township, the Kabi Lake greenstone belt separates into a northern arm and a southern arm. These arms diverge around a tonalite intrusive and extend eastward crossing the eastern boundary of Hawkins Township into Walls Township (Figure 5).

The eastern and central portions of the McKinnon property lie along the northern arm of the greenstone belt, completely covering it. The western portion of the property extends beyond the point of separation of the two arms into the main part of the Kabi Lake belt.

Two east-west trending metavolcanic formations, of Archean age, cross the eastern half of the property. These lie in conformable contact and dip steeply to the north, (the width of the entire section being approximately 1200 meters). They are bounded to the north and south by granite plutons, the contacts being near parallel and having a strike of between 260 and 278 degrees.

The northernmost of these formations is about 400 meters wide in the eastern part of the property but widens rapidly to the west. It consists mainly of fine grained, dark green to black, amphibolictic mafic volcanics. These include pillowed flows with the pillows strongly flattened, amygdaloidal flows and massive medium-grained units. There is generally strong foliation with the subsequent alignment of hornblende and calcic plagioclase. Alternating bands of hornblende and plagioclase two to four centimeters wide occur in some places and suggests narrow, metamorphosed, mafic tuff horizons within this formation.

Finely laminated tuffaceous interlayers of pale grey felsic metavolcanics are common within the mafic sequence. Isolated thin layers of buff brown weathering metagreywacke occur in some places.

The southern most formation is about 800 meters wide and consists of a complex of interbanded, amphibolitic, mafic metavolcanics and pyritiferous felsic metavolcanics intruded by a large number of felsic sills. The felsic metavolcanics display thin quartz-rich and feldspar-rich layering and are generally sericitized.

Some of the sills which are light grey to almost white in colour have a porphyritic texture. They contain opalescent quartz eyes which tend to have ellipsoidal shapes, and lesser euhedral to anhedral feldspar phenochrysts. The ground mass is highly siliceous and strongly foliated.

A number of the mafic units within this formation are garnetiferous and most of them have epidotized areas. The contacts between the individual mafic and felsic units are generally quite sharply defined.

The entire metavolcanic section containing both of these formations has been highly metamorphosed to the amphibolite grade and has undergone a high degree of deformation. As a result, primary textures are often obscured and the original mineralogy is largely destroyed.

Extensive shearing is common throughout the section since it lies within the Puskuta Lake Shear Zone (Figure 5). This shear zone spans the entire width of the northern arm of the greenstone belt in eastern and central Hawkins Township.

The mafic metavolcanics of the northern most formation lie in contact with plutonic granodiorite intrusives along the northern margin of the McKinnon property in the eastern half of the township. The strike of the contact is 275 degrees. The granodiorite is medium-grained and equigranular. Foliation is generally moderate and parallel with the contact, but is strongly developed near the contact with the mafic metavolcanics.

At the southern edge of the southern most formation the felsic tuff units become coarser-grained. The texture transforms gradually from tuffaceous to gneissic with segregation of the minerals into quartz-feldspar and biotite-rich bands. This zone is strongly sheared and lies along the contact with an intrusive tonalite body which crosses the southern part of the eastern half of the McKinnon property in an east-west direction. The tonalite is medium to course-grained and equigranular to the south, but near the contact with the metavolcanics, the sheared tonalite shows a cataclastic texture with crushed quartz and feldspar grains, and interstitial aligned biotite, chlorite, epidote, and muscovite crystals.

At least two steeply dipping Proterozoic diabase dikes cross the eastern half of the property in an approximately northerly direction. One of them is just west of Langdon Lake and the other is between the Langdon and Shenango occurrences. These dikes are about 20 meters wide with narrow chill margins and course equigranular interiors.

In the western half of the property the contact between the southern formation and the tonalite intrusive curves southward and crosses the southern boundary of the property on claim # 3016377. This part of the claim group is underlain entirely by the mafic metavolcanic formation and the felsic complex to the south. Both formations broaden to the west and the contact between them turns slightly southward to a strike of 250 degrees crossing the property near its medial line.

On this part of the McKinnon property the most northerly formation is geologically similar to its eastern counterpart with fine-grained felsic tuffaceous interlayers within a mafic metavolcanic sequence, but in this case the formation contains a large number of felsic sills which increase in number in the southern part of the formation as you move westward. Some of the sills are porphyritic with opalescent quart eyes in a highly siliceous foliated matrix. The regional strike of the foliation in this formation is 255 degrees.

The most southerly formation contains the same complex of interbanded felsic and mafic metavolcanics that we find in the eastern part of the property. In this case, however, highly sericitized felsic tuffs and siliceous pyritiferous metavolcanics predominate. Again, there is a large number of quartz-felspar porphyry sills, but these units are generally narrow, discontinuous, and highly deformed. The whole formation is folded in a complex fashion, especially near the tonalite contact.

Because the claims are stepped southward as you move to the west much of the western half of the property lies south of the Puskuta lake shear zone, however, shear zones of limited strike length splay off the southern edge of the main shear zone. This is

indicated by several cases of retrograde greenschist metamorphism in the affected units of the metavolcanic sections.

Two sets of diabase dikes of Proterozoic age cross the western half of the property: one set having a northwestern strike and the other having a northeasterly strike. These are up to 30 meters wide with fine-grained chill zones at their steeply dipping margins and course to medium-grained interiors.

In the eastern half of the property a number of small north trending strike slip faults of limited strike length and slight displacement cut and offset the metavolcanic sequence in several places. These are quite prominent near the Shenango showing. In the western half of the property similar faults occur but they tend to have NE-SW and NW-SE trends. There are, however, no major fault zones within the boundaries of the McKinnon property.

There is some indication that the portion of the Kabi belt that underlies Hawkins Township is a sharply folded anticlinal structure with a western plunge. The north and south arms of the greenstone belt would be the limbs of that structure.

If this is the case, the tonalite body is probably a high level syntectonic intrusive implanted along the axis of the anticline during the folding process. This is evidenced by:

a) The shape of the tonalite body and the joining of the north and south arms around its nose. This implies a truncated anticline with a western plunge

b) The composition of the tonalite being different from that of the plutonic intrusives to the north and south of the Kabi belt.

c) The impression of gneissic texture on the metavolcanic rocks near the tonalite contact.

8.0 Alteration

Varying degrees of sericitization can be observed in the felsic metavolcanics and tuffs as well as in the felsic sills throughout the McKinnon property. This condition is especially prominent in zones of deformation and shearing where the rocks can sometimes be classified as sericite schists.

Within both the mafic metavolcanics and the felsic tuffs are zones of silicification generally accompanied by sulfide enrichment. In the central and eastern parts of the property silicification is common near the contact between the tonalite intrusive and the

metavolcanic section. In all parts of the property it can be observed in the vicinity of gold occurrences.

Carbonate alteration has taken place within the Puskuta Lake shear zone in the vicinity of gold occurrences. In the eastern and central parts of the property the carbonate content increases gradually from north towards the northern edge of the main felsic horizon, and from the south towards the contact of this section with the tonalite intrusive. This type of alteration has also been observed in the metavolcanics within the western portion of the property, particularly in the salvage zones of the pillowed flows. In this case it usually occurs as a prominent brown carbonate staining. There is also banded carbonate enrichment in some of the zones of silicification.

Localized mica alteration has taken place in silicified areas generally near the gold occurrences. The mica is brown to pinkish-brown in colour.

In the main felsic section in the central part of the property, a pinkish staining can be observed in several places, particularly in silicified areas, and at various distances from the tonalite contact. This condition could be caused by the infusion of potassium feldspar.

Epidote alteration has occurred in several localities on the property within the felsic metavolcanic sections. Epidote-rich lenses can be seen in some of the mafic metavolcanic units and near contacts with diabase dikes. The latter are often accompanied by silicification and generally associated with sulfide enrichment, particularly pyrite and chalcopyrite.

9.0 Mineralization

The eastern half of the McKinnon property contains a number of gold occurrences including the previously known Langdon, Shenango, and Taylor occurrences as well as the more recent discoveries, which were made in the Falconbridge program of 1984 to 1986. These occurrences, though discontinuous, have a number of similarities and are hosted by the same formation, the metavolcanic sequence discussed under “Local Geology” and “Alteration.” The auriferous horizon has about four kilometers of strike length, is west trending and dips steeply north (-86 deg.). It is located on what are now claims 1229071, 1229072, and 1229073.

Gold bearing mineralization is found in a highly sheared sequence of felsic and mafic metavolcanics previously referred to as the “southernmost formation.” Most of the mineralization is confined to a felsic member near its contact with a sheared and deformed tonalite intrusive to the south and also adjacent to a mafic member to the north. The stratigraphic width of the hosting felsic metavolcanic is about 100 to 120 meters.

The mineralization is concentrated near the contacts and although there are some values in the mafic member to the north, the higher gold values are found in the felsic member where it has been highly silicified.

The auriferous zones of higher grade have strike lengths of from 70 to 250 meters and widths of from 1 meter to 10 meters. They are sometimes offset by small north trending faults and localized shear zones. The zones contain a number of small quartz veins from 10 to 50 centimeters wide, along with disseminations of pyrite and chalcopyrite, and in some cases pyrite stringers and blebs. At the Taylor occurrence pyrrhotite, sphalerite, and galena are also present in minor quantities. The lower grade areas are peripheral and attain widths of from 20 to 60 meters.

Since the entire auriferous horizon lies within the Puskuta Lake shear zone, the whole section is sericitized to varying degrees. Pervasive carbonate alteration can be observed in all of the mineralized areas. It increases towards the gold bearing zones from both the north and the south and is most intensive in the areas of higher grade. Hematite alteration is also common where the felsic unit has undergone intensive fracturing. On surface the gold bearing occurrences have well developed gossan zones (goethite) due to oxidation.

Reported assay values from trenching and diamond drilling programs suggest that the higher grade zones grade from 2 grams/ton (g/t) to 8 g/t with isolated highs in the 20 g/t range over widths of from 1.0 to 6.0 meters (Lai, 1981; Shenango Records, 1938).

The entire auriferous horizon has continuous gold values ranging from 0.10 g/t to 4.61 g/t over a stratigraphic width of 20 to 60 meters and a strike length of 4.0 kilometers (Morrison, 1985). Two of the chip samples taken by the writer during his examination of the property confirm these reported values (0.23 g/t and 1.59 g/t) (Table 6 and Figure 5).

On the western half of the property, there are several gold occurrences in the vicinity of the Goldfields occurrence. This area is about 5.5 kilometers to the west of the Langdon Lake showing occurrence on what is now claim 3016341.

The gold values are found in silicified sections of sericitized felsic tuffs which have undergone intensive deformation, shearing and small-scale faulting. The mineralization consists of pyrrhotite, pyrite, and minor chalcopyrite in up to 20% sulfides. There is some carbonate alteration in a broad silicified zone containing bands of brown-pink mica.

This zone lies at the northern margin of a belt of metavolcanics, which appears to be continuous with the section previously referred to as the “most southerly formation.” Since the gold bearing felsic tuffs lie in contact with mafic metavolcanics to the north, they appear to be the western extension of the horizon which is auriferous on the eastern

part of the property. If this is so, there is a 4.0 kilometer strike length between them which has only been superficially exposed.

Diamond drilling and trenching results in the vicinity of the Goldfields occurrence (presently on claim 3016341) indicate that the gold is erratically distributed and that the mineralization is limited in strike length and plunges steeply to the west. The best returned assay values from this area are: 0.42 oz./t (grab sample from Goldfield showing), 0.155 oz./t over 1.7 meters (drill hole). The trenching program returned assays from 0.032 oz./t over 4 ft. to 1.31 oz./t over 3 ft. (selected highs)(0.74 oz./t over 5 ft., 0.42 oz./t over 2 ft., 0.21 oz./t over 5 ft., 0.11 oz./t over 2 ft.)

To the east of the Goldfield showing, there are several gold occurrences associated with pyrite and minor chalcopyrite in a mafic metavolcanic section close to the southern contact with the tonalite intrusive. The mineralization occurs within intensely silicified shear zones in massive fine-grained amphibolitized mafic rock with epidotized sections. Grab samples from this zone returned values of from 45 ppb to 320 ppb gold.

At the western end of the McKinnon property at the eastern edge of what is now claim 3017790, is the Johnstone-Barnes occurrence. The surface value reported is 0.24 oz./t over 35 feet. This occurrence is in the northernmost formation, which is mainly amphibolitized mafic metavolcanics. Diamond drilling of induced polarization targets failed to intersect more than weak anomalous values in this vicinity. Therefore, the occurrence does not appear to respond to I.P. geophysics or does not occur in the area surveyed and drilled.

10.0 Interpretation and Conclusion

It is the writer's opinion that the exploration activities carried out by Falconbridge Exploration Limited and Aurlot Exploration Limited were carried out in a professional manner and that the data derived from these programs are reliable. The results of this trenching and drilling show that there is an auriferous horizon of substantial width (20 to 60 meters) in a section of altered felsic tuffs and felsic sills which is part of a larger metavolcanic sequence. This mineralized zone carries anomalous gold values of from 0.10 g/t to 4.6 g/t and extends for several kilometers across the eastern half of the property.

There is some evidence in the drilling results from the western half of the McKinnon property that a similar horizon could occur near the northern edge of the felsic metavolcanic section which appears to be part of the same one that hosts the gold values in the eastern half of the property.

Previous work including a small number of chip samples taken by the writer shows that parts of the hosting felsic formation contain anomalous gold values outside of the zone of trenching and drilling carried out by Falconbridge Limited in the past. Also, there is a considerable strike length of this zone (four to five kilometers) that has had only superficial exposure.

Early sampling programs which were carried out on the eastern and central parts of the property were designed to test areas of quartz veining, and the Falconbridge drilling was targeted on Induced polarization anomalies. This work has been concentrated on a width of less than 200 meters, in a section of felsic metavolcanics whose width is about 800 meters. Therefore, a large part of the hosting formation remains relatively unexplored in both width and length.

If the tonalite body is in fact a high level syntectonic intrusive as suggested by some of the evidence, then it must be considered as a possible source of the silicification and potassium alteration in the eastern and central parts of the property.

The edge and contact zone of the tonalite should therefore be targeted as a potential area of gold deposition. Furthermore, there are some four kilometers of this contact area on the property, which have not been exposed by past exploration.

For these reasons, it is the writer's opinion that much of the McKinnon property's potential remains untested, and that future exploration programs are warranted.

11.0 Recommendations

The writer recommends that exploration programs be conducted on the Don McKinnon Hawkins township property. The scope of these programs should include the entire width of the gold bearing stratigraphy in the eastern half of the property. Trenching is the most cost-effective method of doing this because of the relatively thin overburden.

Therefore, a trenching program should be designed with the goal of exposing as great a width as possible of the altered sequence of felsic metavolcanics and porphyry sills, which has been referred to as the "southern most formation". This process of trenching across the stratigraphy should be repeated at intervals in order to obtain multiple cross-sections of this formation and the tonalite contact zone.

Channel sampling and assaying for gold should be carried out across the entire formation along each exposed section. Whole rock analyses should be done on each member of the sequence and a radiometric survey should be conducted over the entire area in order to identify geological units and possible alteration signatures associated with

gold occurrences. It will be necessary to maintain proper security and chain of possession in the handling of the samples collected for analysis.

The results obtained from these programs should then be used to extend them into the western part of the property along the strike of the southern most formation.

The northern intrusive contact of the tonalite with the metavolcanic section should be exposed by the trenching program wherever possible and cut by short drill holes in areas of deeper overburden. This process should extend into the central part of the property for the entire length of this zone.

Since the diamond drilling, which was done on the auriferous horizon in the past was limited to relatively shallow depths, a program of deeper drilling should be considered after further study of the available data.

In addition to these recommendations, the writer suggests that the mafic metavolcanic formation to the north not be ignored since it contains gold values at the western end of the property. The testing of this formation should also be done by trenching and sampling at several convenient locations of easy access and thin overburden.

In order to carry out the radiometric survey and properly locate trenches and diamond drill holes, a control grid consisting of cut out picket lines should be established on the property. This would consist of approximately 260 kilometers of north-south lines at 100 meter intervals, and an east-west base line.

Because of climatic considerations, it would be more effective to carry out the recommended programs in two phases. The geophysical and diamond drilling portions can be done in the winter while the trenching program can only be carried out during the summer season.

Therefore, Phase I, the winter program, should consist of establishing the control grid, carrying out the radiometric survey and doing the diamond drilling. Phase II, should consist of the trenching program directed from the results of the diamond drilling or geophysics and surface prospecting.

Respectfully submitted,

John R. Boissoneault, BSc., P Eng.

12.0 Estimate of Costs

Phase I

A : Surface Geophysics

Establishing Grid [260 km @ $425.00/km] ……..	$110,000.00
Radiometric Survey [260 km@ $75/km] …...……...	$ 19,500.00
	---
subtotal	$129,500.00

B : Diamond Drilling Program

Mobilization of drill, tractor and equipment ……	$ 10,000.00
Drilling [20,000 feet @ $16.00/foot] ……	$240,000.00
Casing, casing shoes [100 holes @ $250.00/hole] ……	$ 19,000.00
Core trays [400/1000 feet X 20] …….	$ 6,000.00
Collecting and sampling core [100 days @ $200.00/day] ……..	$ 15,000.00
Supervision [100 days @ $250.00/day] ……...	$ 19,000.00
Assaying and shipping [1,200 samples @ $15.00/sample] ……..	$ 15,000.00
Whole rock analysis [120 samples @ $25.00/sample] ……	$ 2,000.00
Demobilization ……..	$ 10,000.00
	---
subotal	$336,000.00

C : Technical Costs

Radiometric survey ……..	$ 5,000.00
Drawing plans and sections ……	$ 10,000.00
Writing report ……..	$ 5,000.00
	---
subtotal	$ 20,000.00

Total A + B + C	$485,500.00
+ contingency factor (10%)	$ 48,500.00

Total Phase I	**$534,000.00**

Phase II

A : Trenching and Prospecting Program

Mobilization and Demobilization of excavator and muskeg tractor	$ 4,000.00
Mobilization and Demobilization of two operators …….	$ 1,000.00
Excavation [2,000 hours @ 85.00/hour] ……	$170,000.00
Muskeg tractor [2,000 hours @ $120.00/hour] ……..	$240,000.00
All terrain vehicle [200 days @ $50.00/day] ……..	$ 10,000.00
Wajax pump [200 days @ $50/day] ……	$ 10,000.00
Washing [200 days@ $150.00/day] ……	$ 30,000.00
Supervision and mapping [100 days @ $250.00/day] …….	$ 25,000.00
Channel sampling [100 days @ $100.00/day] …….	$ 15,000.00
Food and lodging ……...	$ 15,000.00
Gasoline and oil ……...	$ 5,000.00
Transportation [20,000 km @ $0.40/km] ……	$ 8,000.00
Whole rock analysis [120 samples @ $25.00/sample] ……..	$ 3,000.00
Assaying and shipping [1,200 samples @ $15.00/sample] ……	$ 18,000.00

Subtotal	$554,000.00

+ contingency factor (10%)	$ 54,500.00

Total Phase II	**$608,500.00**

TOTAL Phase I + Phase II $ 1,142,500.00

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14.0 Glossary

A

anticline
A convex fold in rock, the central part of which contains the oldest section of rock. See also syncline.

Archean
Geologic eon that occurred from 2500 to 3800 years ago

B

.

basalt
The dark, dense, *aphanitic*, *extrusive rock* that has a silica content of 40% to 50% and makes up most of the ocean floor. Basalt is the most abundant volcanic rock in the Earth's crust.

batholith
A massive discordant *pluton* with a surface area greater than 100 square kilometers, typically having a depth of about 30 kilometers. Batholiths are generally found in elongated mountain ranges after the country rock above them has eroded.

breccia
A *clastic rock* composed of particles more than 2 millimeters in diameter and marked by the angularity of its component grains and rock fragments.

C

carbonate
One of several minerals containing one central carbon atom with strong *covalent bonds* to three oxygen atoms and typically having *ionic bonds* to one or more positive ions.

contact metamorphism
Metamorphism that is caused by heat from a magmatic intrusion.

convergence
The coming together of two lithospheric plates. Con-vergence causes *subduction* when one or both plates is oceanic, and mountain formation when both plates are continental. See also *divergence*.

crystal
A mineral in which the systematic internal arrangement of atoms is outwardly reflected as a latticework of repeated three-dimensional units that form a geometric solid with a surface consisting of symmetrical planes.

D

diamond drill
Means a machine designed to rotate under pressure, using an annular diamond studded cutting tool to produce a more or less continuous sample of material that is drilled

dike
A discordant *pluton* that is substantially wider than it is thick. Dikes are often steeply inclined or nearly vertical. See also *sill*. dilatancy The expansion of a rock's volume caused by *stress* and deformation.

diorite
Any of a group of dark, phaneritic, *intrusive* rocks that are the *plutonic* equivalents of *andesite*.

dip
The angle formed by the inclined plane of a geological structure and the horizontal plane of the Earth's surface.

divergence
The process by which two lithospheric plates separated by *rifting* move farther apart, with soft mantle rock rising between them and forming new oceanic *lithosphere*. See also *convergence*.

dome
A round or oval bulge on the Earth's surface, containing the oldest section of rock in its raised, central part. See also basin. drainage basin The area from which water flows into a *stream*. Also called a *watershed*.

E

EM
Means an electromagnetic geophysical survey method

esker
A ridge of *sediment* that forms under a glacier's *zone of ablation*, made up of sand and gravel deposited by meltwater. An esker may be less than 100 meters or more than 500 kilometers long, and may be anywhere from 3 to over 300 meters high.

extrusive rock
An *igneous* rock formed from *lava* that has flowed out onto the Earth's surface, characterized by rapid solidification and grains that are so small as to be barely visible to the naked eye.

F

fault
A *fracture* dividing a rock into two sections that have visibly moved relative to each other.

fold
A bend that develops in an initially horizontal layer of rock, usually caused by *plastic deformation*. Folds occur most frequently in *sedimentary* rocks.

foliation
The arrangement of a set of minerals in parallel, sheet-like layers that lie perpendicular to the flattened plane of a rock. Occurs in *metamorphic rocks* on which *directed pressure* has been exerted.

G

g/t
grams per ton

geologic time scale
The division of all of Earth history into blocks of time distinguished by geologic and evolutionary events, ordered sequentially and arranged into eons made up of eras, which are in turn made up of periods, which are in turn made up of epochs.

geology
The scientific study of the Earth, its origins and evolution, the materials that make it up, and the processes that act on it.

geophysics
The branch of *geology* that studies the physics of the Earth, using the physical principles underlying such phenomena as *seismic waves*, heat flow, *gravity*, and *magnetism* to investigate planetary properties.

gneiss
A coarse-grained, *foliated metamorphic rock* marked by bands of light-colored minerals such as quartz and feldspar that alternate with bands of dark-colored minerals. This alternation develops through *metamorphic differentiation*.

granite
A pink-colored, felsic, *plutonic* rock that contains potassium and usually sodium feldspars, and has a quartz content of about 10%. Granite is commonly found on continents but virtually absent from the ocean basins.

greenstone belt
Folded sequence of metamorphosed volcanic and sedimentary rocks generally bounded by plutonic granitoid intrusives

H

HLEM
Means a horizontal loop electromagnetic geophysical survey method

hydrothermal deposit
A mineral deposit formed by the precipitation of metallic ions from water ranging in temperature from 50º to 700ºC.

hypothesis
A tentative explanation of a given set of data that is expected to remain valid after future observation and experimentation. See also *theory*.

I

igneous rock
A rock made from molten (melted) or partly molten material that has cooled and solidified.

intrusive rock
An *igneous rock* formed by the entrance of *magma* into preexisting rock.

J

joint
A *fracture* dividing a rock into two sections that have not visibly moved relative to each other. See also *fault*.

K

km
Means kilometers

L

luster
1. The reflection of light on a given mineral's surface, classified by intensity and quality. 2. The appearance of a given mineral as characterized by the intensity and quality with which it reflects light.

M

m
Means meter

magma
Molten (melted) rock that forms naturally within the Earth. Magma may be either a liquid or a fluid mixture of liquid, crystals, and dissolved gases.

massive sulfide deposit
An unusually large deposit of sulfide minerals.

metamorphic grade
A measure used to identify the degree to which a *metamorphic rock* has changed from its parent rock. A metamorphic grade provides some indication of the circumstances under which the metamorphism took place.

metamorphism
The process by which conditions within the Earth, below the zone of *diagenesis*, alter the mineral content, chemical composition, and structure of solid rock without melting it. *Igneous, sedimentary*, and *metamorphic rocks* may all undergo metamorphism.

mineralization
Means a natural aggregate of one or more minerals, which has not been delineated to the extent that sufficient average grade or dimensions can be reasonably estimated or called “a deposit” or “ore”. Further exploration or development expenditures may or may not be warranted by such an occurrence depending on the circumstance.

mineral
A naturally occurring, usually inorganic, solid consisting of either a single element or a *compound*, and having a definite chemical composition and a systematic internal arrangement of atoms.

N

normal fault
A *dip-slip fault* marked by a generally steep *dip* along which the hanging wall has moved downward relative to the footwall.

O

ore
A mineral deposit that can be mined for a profit.

ounce
Means troy ounce

oxidation
The process of combining with oxygen ions. A mineral that is exposed to air may undergo oxidation as a form of *chemical weathering*.

oxide
One of several minerals containing negative oxygen ions bonded to one or more positive metallic ions.

oz./t
Ounce per ton

P

pegmatite
A coarse-grained *igneous rock* with exceptionally large *crystals*, formed from a *magma* that contains a high proportion of water.

pluton
An *intrusive rock*, as distinguished from the preexisting *country rock* that surrounds it.

plutonic rock
An *intrusive rock* formed inside the Earth.

ppb
Parts per billion

ppm
Parts per million

Proterozoic
Geologic eon that occurred from 570 to 2500 million years ago

pyroclastic
Being or pertaining to rock fragments formed in a volcanic eruption.

Q

Quaternary ice age
An *ice age* that began approximately 1.6 million years ago and continues to the present time.

R

regional metamorphism
Metamorphism that affects rocks over vast geographic areas stretching for thousands of square kilometers.

resource
A mineral or fuel deposit, known or not yet discovered, that may be or become available for human exploitation.

rhyolite
Any of a group of felsic *igneous rocks* that are the *extrusive* equivalents of *granite*.

rock
A naturally formed aggregate of usually inorganic materials from within the Earth.

S

schist
A coarse-grained, strongly *foliated metamorphic* rock that develops from *phyllite* and splits easily into flat, parallel slabs.

sediment
A collection of transported fragments or precipitated materials that accumulate, typically in loose layers, as of sand or mud.

sedimentary rock
A *rock* made from the consolidation of solid fragments, as of other rocks or organic remains, or by precipitation of minerals from solution.

silicate
One of several rock-forming minerals that contain silicon, oxygen, and usually one or more other common elements.

sill
A concordant *pluton* that is substantially wider than it is thick. Sills form within a few kilometers of the Earth's surface. See also *dike*.

strike 1.
The horizontal line marking the intersection between the inclined plane of a solid geological structure and the Earth's surface. 2. The compass direction of this line, measured in degrees from true north.

Strike length
Means the longest horizontal dimension of a body or zone of mineralization

Stripping
Removing overburden from bedrock

sulfide
One of several minerals containing negative sulfur ions bonded to one or more positive metallic ions.

syncline
A concave *fold*, the central part of which contains the youngest section of rock. See also *anticline*.

T

theory
A comprehensive explanation of a given set of data that has been repeatedly confirmed by observation and experimentation and has gained general acceptance within the scientific community but has not yet been decisively proven. See also *hypothesis* and *scientific law*.

topography
The set of physical features, such as mountains, valleys, and the shapes of landforms, that characterizes a given landscape.

U

unconformity
A boundary separating two or more rocks of markedly different ages, marking a gap in the geologic record.

V

volcanic rock
See *extrusive rock*.

CERTIFICATE

(1) I, John R. Boissoneault, of 670 Spruce Street North Timmins, Ontario, P4N 6P3, declare that I am a Qualified Person for the purposes of National Instrument 43-101; and that I am the author of this report entitled "Technical Report on the Don McKinnon Property for Baltic Resources Inc."

(2) I have a Diploma in Technology from Haileybury School of Mines (1956) and a B.Sc. in Geological Sciences from McGill University (1960).

(3) I am a registered Professional Engineer in the Province of Ontario, and I have been for thirty four years.

(4) I have been involved in all aspects of mineral exploration for thirty years, in the United States, Mexico, South and Central America, British Columbia, the Northwest Territories, and particularly in 1heCanadian Shield of northern Ontario and north-western Quebec.

(5) In the last twenty years my experience has been mainly with exploration for gold deposits.

(6) I made a personal examination of the McKinnon property on July 27, 2004.

(7) I have reviewed all of the data on file at the Resident Geologist's Office in Timmins, Ontario and the report is a summary and analysis of this information.

(8) I am not aware of any material fact or of any material change with respect to the subject matter of this technical report, which has not been reviewed and might make the report misleading.

(9) I am an independent person with respect to the Don McKinnon Property and with respect to Baltic Resources Inc. I own no interest in either of these entities nor do I expect or intend to receive any such interest in the future.

(10) I have read National Instrument 43-101 and Companion Policy 43-101 CP and have prepared this report in compliance with their standards.

Dated at Timmins, Ontario, on August 18, 2004

John R Boissoneault, B.Sc. P.Eng.,

Appendix

Table 5 - Falconbridge Diamond Drill Hole Intercepts

(Falconbridge Diamond Drilling Program, 1984-85)
(estimates compiled by Garth Pierce, BSc.)

DDH#	From (metres)	To (metres)	Range (grams per tonne)	Estimated Average (grams per tonne/ metres)
GO-01	84.2m	96.5m	0.13gpt-1.4gpt	0.6gpt/12.3m
GO-02	170.2	185.0	0.07-0.44	0.10/14.8
GO-04	84.6	101.6	0.14-2.7	0.80/17.0
GO-05	138.4	155.0	0.20-1.35	0.60/11.6
GO-06	191.0	200.0	0.11-0.16	0.12/9.0
GO-08	17.5	43.8	0.16-2.1	0.40/26.3
GO-09	23.6	43.8	0.15-0.6	0.35/20.2
GO-10	26.4	64.6	0.15-0.9	0.50/38.2
GO-11	26.4	57.7	0.12-0.95	0.25/31.3
	64.2	70.8	0.20-1.5	0.30/6.6
GO-12	11.4	31.2	0.15-0.21	0.15/19.8
	35.1	48.8	0.10-0.56	0.20/13.7
	67.8	73.9	0.03-2.1	0.50/6.1
GO-13	27.2	35.4	0.12-0.49	0.20/8.2
	69.2	80.3	0.14-0.46	0.20/11.1
	87.3	96.4	0.10-1.6	0.40/9.1
	102.3	110.9	0.10-0.68	0.20/8.6
GO-14	22.8	42.9	0.12-2.9	0.45/20.1
	59.8	67.8	0.10-0.32	0.20/8.0
GO-15	28.9	46.0	0.25-1.5	0.60/17.1
GO-16	34.1	52.0	0.10-0.5	0.30/17.9
GO-17	32.6	53.1	0.18-1.6	0.60/20.5
GO-18	59.7	81.4	0.10-2.8	0.60/21.7
GO-19	76.3	99.9	0.15-3.1	0.80/23.6
GO-20	72.8	93.8	0.15-7.5	0.65/21.0
GO-21	82.0	92.6	0.19-10.3	0.60/10.6
GO-22	80.3	95.0	0.05-1.6	0.40/14.7
	104.6	122.7	0.10-2.2	0.40/18.1
GO-23	71.0	93.2	0.15-1.8	0.45/22.2
GO-24	75.8	99.5	0.10-2.3	0.55/23.7
GO-25	81.0	102.3	0.18-4.6	0.70/21.3
GO-26	83.0	108.5	0.18-3.4	0.70/25.5
GO-27	73.7	99.0	0.18-2.9	0.55/15.3
GO-28	77.0	83.0	0.14-10.5	1.75/6.0
GO-29	69.2	93.0	0.16-5.23	0.80/23.8
GO-30	80.3	102.2	0.16-1.4	0.65/21.9
GO-31	70.5	91.2	0.18-4.4	>1.0/20.7

Table 5 ct'd - Falconbridge Diamond Drill Hole Intercepts

(Falconbridge Diamond Drilling Program, 1984-85)
(estimates compiled by Garth Pierce, BSc.)

DDH#	From (metres)	To (metres)	Range (grams per tonne)	Estimated Average (grams per tonne/ metres)
GO-32	75.0	92.3	0.14-4.5	>1.0/17.2
GO-33	57.2	91.2	0.15-23.0	2.0/34.0
GO-34	111.0	133.0	.010-8.9	1.0/22.0
GO-35	77.0	93.0	0.15-6.28	0.75/16.0
GO-36	85.0	108.8	0.11-17.0	0.60/23.8
GO-37	36.5	55.9	0.10-1.03	0.30/19.4
	60.0	66.2	0.10-2.99	0.35/6.2
GO-38	63.8	77.0	0.15-0.68	0.20/14.2
	83.9	90.0	0.10-0.24	0.10/6.1
GO-39	80.0	101.0	0.12-1.33	0.35/21.0
GO-40	93.7	110.0	0.15-8.92	>1.0/16.3
GO-41	17.3	23.0	0.13-0.57	0.30/5.7
	30.0	38.0	0.19-0.63	0.35/8.0
	45.0	71.0	0.47-15.3	>1.0/26.0
GO-42	48.8	91.0	0.14-12.6	>1.0/42.2
GO-43	36.0	78.0	0.16-5.51	0.35/42.0
GO-44	148.0	165.0	0.18-4.77	0.80/17.0
GO-45	168.0	188.4	0.15-5.05	0.80/20.4
GO-46	149.0	170.2	0.20-4.96	>1.0/21.2
GO-47	126.0	140.0	0.20-3.45	0.91/14.0
GO-48	75.0	98.0	0.20-2.57	0.90/23.0
GO-49	151.0	169.0	0.10-2.96	0.80/18.0
GO-50	86.0	109.8	0.18-2.05	0.6/23.8
GO-51	152.0	175.1	0.15-3.5	0.6/23.1
GO-52	136.6	160.7	0.15-2.67	0.8/24.1
GO-53	165.8	194.8	0.15-3.94	0.8/29.0
GO-54	164.0	190.1	0.17-1.37	0.4/26.1
GO-55	339.8	371.3	0.17-1.03	0.5/31.5
GO-56	254.0	274.6	0.17-3.26	0.8/20.6
GO-57	268.4	302.0	0.17-1.7	0.5/33.6
GO-58	105.5	149.4	0.17-5.3	0.4/43.9
GO-59	168.0	181.0	0.17-5.7	0.6/13.0

Table 5 ct'd - Falconbridge Diamond Drill Hole Intercepts

(Falconbridge Diamond Drilling Program, 1984-85)
(estimates compiled by Garth Pierce, BSc.)

DDH#	Estimated Average
GO-01	weak
GO-02	weak
GO-03	weak
GO-04	weak
GO-05	0.3gpt/29.0m ; 0.5gpt/16.6m
GO-06	weak
GO-07	weak
GO-08	0.4/29.0 ; 0.5/20.3
GO-09	0.24/40.5
GO-10	0.90/38.0 ; 1.3/23.0
GO-11	0.22/28.7
GO-12	weak
GO-13	0.22/23.6 ; 1.03/2.4
GO-14	0.52/20.0 ; 0.70/12.5
GO-15	0.68/16.4 ; 0.73/12.1
GO-16	weak
GO-17	0.63/19.0 ; 0.91/9.6
GO-18	0.68/21.7 ; 0.95/13.4
GO-19	0.89/22.6 ; 1.07/17.2 ; 1.5/8.0
GO-20	1.0/20.0 ; 1.6/9.7
GO-21	1.33/10.6 ; 10.3/1.1
GO-22	0.32/42.4 ; 0.78/4.5
GO-23	0.48/22.2 ; 1.5/2.0
GO-24	0.84/21.7 ; 1.8/5.9 ; 5.8/1.4
GO-25	0.93/20.0 ; 1.65/8.0 ; 2.9/3.0
GO-26	0.77/25.5 ; 1.35/11.0
GO-27	0.55/23.9 ; 0.95/10.5 ; 2.1/2.4
GO-28	1.75/6.0 ; 4.9/2.0
GO-29	0.77/23.8 ; 1.1/13.7 ; 1.5/5.0
GO-30	0.6/21.9 ; 0.75/14.9 ; 0.85/4.0
GO-31	0.58/20.7 ; 0.78/13.4 ; 3.1/1.9
GO-32	1.5/17.2 ; 1.84/12.1
GO-33	1.88/32.9 ; 3.4/17.3 ; 7.5/7.1
GO-34	1.04/22.0 ; 1.3/17.4 ; 1.63/4.9
GO-35	1.16/15.8 ; 1.6/10.8 ; 3.1/4.6
GO-36	0.89/24.0 ; 1.33/15.0 ; 2.93/5.0
GO-37	0.35/29.7 ; 0.47/10.1

Table 5 ct'd - Falconbridge Diamond Drill Hole Intercepts

(Falconbridge Diamond Drilling Program, 1984-85)
(estimates compiled by Garth Pierce, BSc.)

DDH#	Estimated Average
GO-38	0.33/13.2 ; 0.47/4.0
GO-39	0.33/19.0 ; 0.53/7.0
GO-40	1.59/16.4 ; 1.9/13.0
GO-41	1.3/39.0 ; 3.2/10.0
GO-42	1.54/38.0 ; 1.75/28.0 ; 3.0/13.0
GO-43	0.47/41.0 ; 1.7/8.0
GO-44	1.09/16.0 ; 1.8/5.0
GO-45	1.06/18.0 ; 1.8/9.0
GO-46	1.3/17.0 ; 1.7/12.0 ; 2.03/6.0
GO-47	1.0/13.0 ; 1.1/11.0 ; 1.4/7.0
GO-48	0.65/23.0 ; 0.95/13.0 ; 1.1/7.0
GO-49	0.65/16.0 ; 0.77/13.0 ; 1.7/4.0
GO-50	0.58/22.0 ; 1.04/9.0 ; 1.2/6.0
GO-51	0.49/22.0 ; 0.68/12.0
GO-52	0.77/22.4 ; 1.0/16.0 ; 1.49/7.0
GO-53	0.82/29.0 ; 1.1/19.8 ; 1.16/18.0
GO-54	0.37/23.4
GO-55	0.61/30.1 ; 0.89/9.0
GO-56	0.73/21.8 ; 1.1/8.3
GO-57	0.45/32.5 ; 0.72/12.6
GO-58	0.37/36.7 ; 0.97/4.5
GO-59	1.2/11.5 ; 1.6/7.5 ; 2.5/4.5

Table 6 – Verification Sample Assay Sheet
(as determined by Swastika Laboratories Ltd., Swastika, Ontario)

FROM :SWASTIKA LABORATORIES LTD FAX NO. :705 642 3300 Aug. 16 2004 02:56PM P1

Swastika Laboratories Ltd

Established 1928

Assaying - Consulting - Representation

Assay Certificate

4W-1693-RA1

Company: **MCKINNON PROSPECTING**

Date: AUG-16-04

Project:

Attn: J. Boissoneault

We hereby certify the following Assay of 6 Chip samples submitted AUG-04-05 by .

Sample Number	Au g/tonne	Au Check g/tonne	Ag g/tonne
6953	0.06	0.08	0.1
6954	0.23	-	0.9
6955	0.01	-	0.1
6956	0.03	-	0.8
6957	1.59	1.36	0.9
6958	0.09	-	0.3

Certified by Denis Chartrand

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

Mining Lands - Mining Claims Summary

Sault Ste. Marie - Division 50

CLAIM NUMBER: SSM 1229071 **(Click Claim Number for Details)**
Unit Size: 8
Township/Area: HAWKINS (G-2316)
Lot Description:
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 1997-Jun-06
Due Date: 2005-JUN-06
Work Required: 3200
Total Applied: 19200
Work Performed: 21140
Total Reserve: 5140 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 1229072 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description:
Staker: MCKINNON, DONNY LAUGHLIN (M21873)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 1997-Jun-06
Due Date: 2005-JUN-06
Work Required: 6400
Total Applied: 38400
Work Performed: 100886
Total Reserve: 24192 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 1229073 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description:
Staker: HURTUBISE, PATRICK HENRY (M25353)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 1997-Jun-06
Due Date: 2005-JUN-06
Work Required: 6400
Total Applied: 38400
Work Performed: 3306
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3002377 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jun-12
Due Date: 2005-JUN-12
Work Required: 6400
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3016341 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jul-14
Due Date: 2005-JUL-14
Work Required: 6400
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3016342 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jul-14
Due Date: 2005-JUL-14
Work Required: 6400
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3016376 **(Click Claim Number for Details)**
Unit Size: 15
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jul-09
Due Date: 2005-JUL-09
Work Required: 6000
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3016377 **(Click Claim Number for Details)**
Unit Size: 15
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jul-09
Due Date: 2005-JUL-09
Work Required: 6000
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3017789 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2004-Jun-24
Due Date: 2006-JUN-24
Work Required: 6400
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: SSM 3017790 **(Click Claim Number for Details)**
Unit Size: 16
Township/Area: HAWKINS (G-2316)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2004-Jun-24
Due Date: 2006-JUN-24
Work Required: 6400
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

Mining Lands - Mining Claims Summary

Porcupine - Division 60

CLAIM NUMBER: P 3002378 **(Click Claim Number for Details)**
Unit Size: 10
Township/Area: WALLS (G-2360)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jun-12
Due Date: 2005-JUN-12
Work Required: 4000
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

CLAIM NUMBER: P 3002396 **(Click Claim Number for Details)**
Unit Size: 15
Township/Area: WALLS (G-2360)
Lot Description: \r\n
Staker: KORBA, EDWARD JOSEPH (M20807)
Recorded Holder: MCKINNON, DONALD (100.00 %)
(Click Holder for Details)
Recording Date: 2003-Jun-12
Due Date: 2005-JUN-12
Work Required: 6000
Total Applied: 0
Work Performed: 0
Total Reserve: 0 **(Click Reserve for Details)**
Present Work Assignment: 0
Claim Bank: 0
Claim Status: ACTIVE

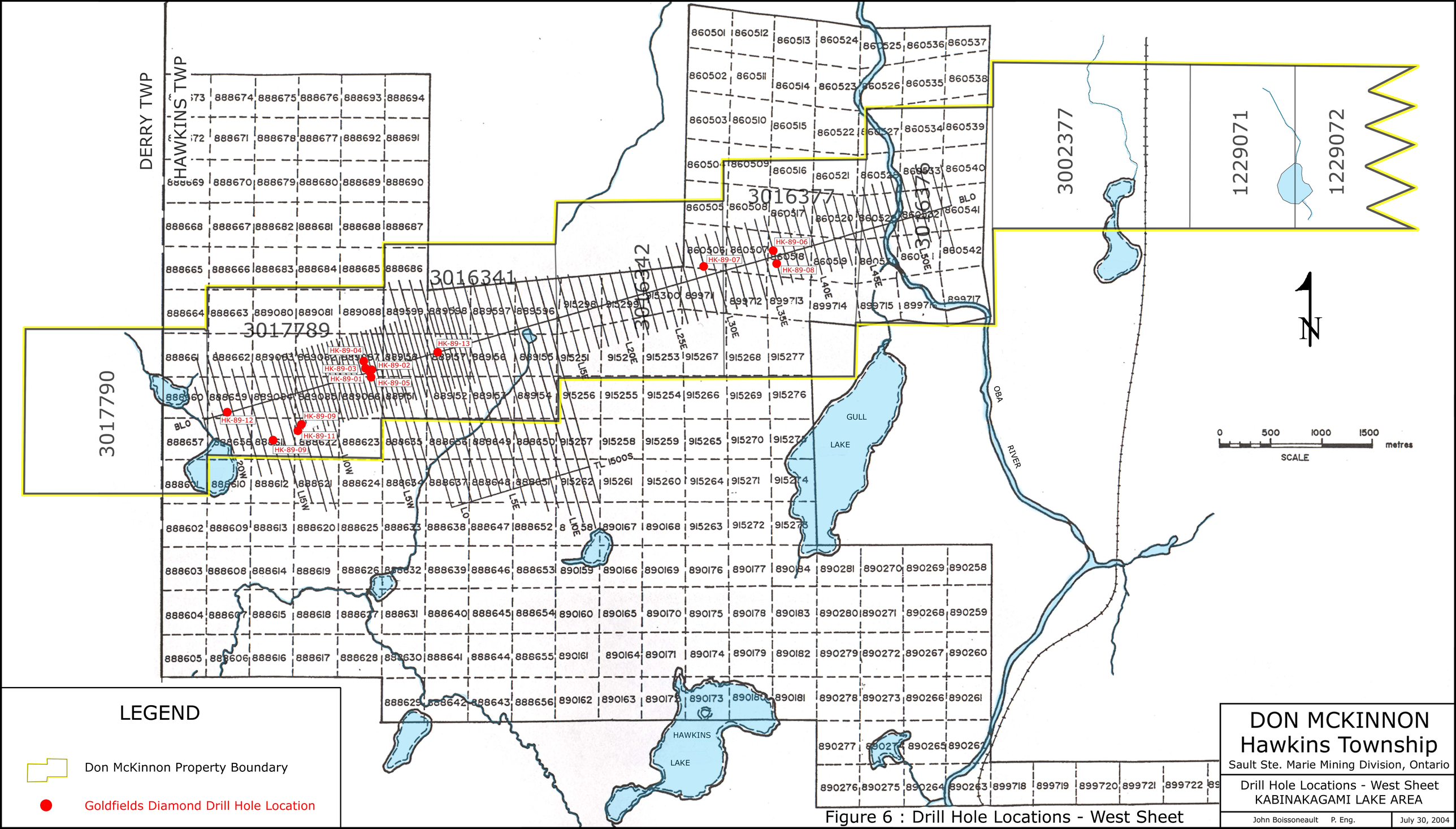


Figure 6 : Drill Hole Locations - West Sheet

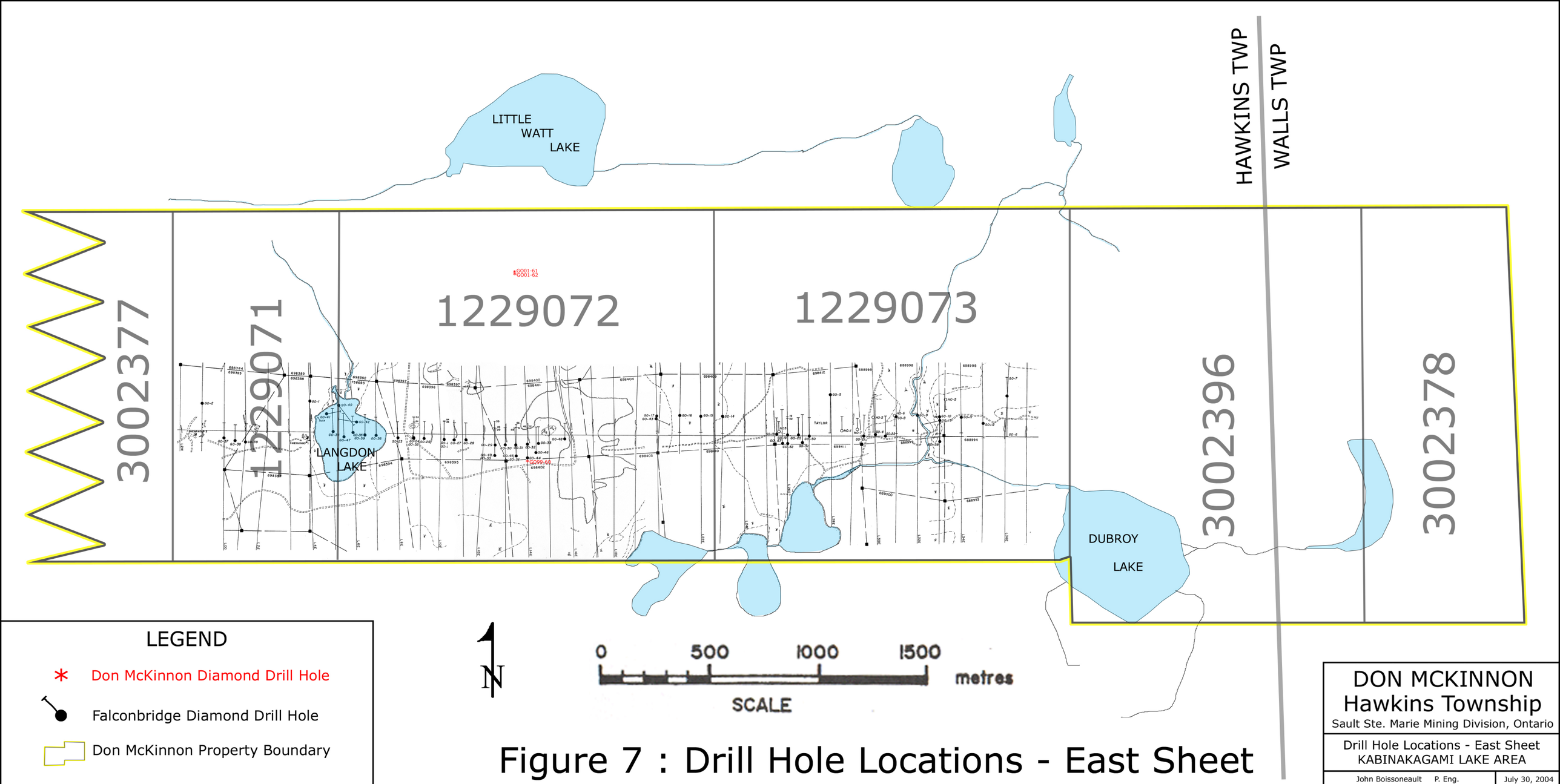


Figure 7 : Drill Hole Locations - East Sheet

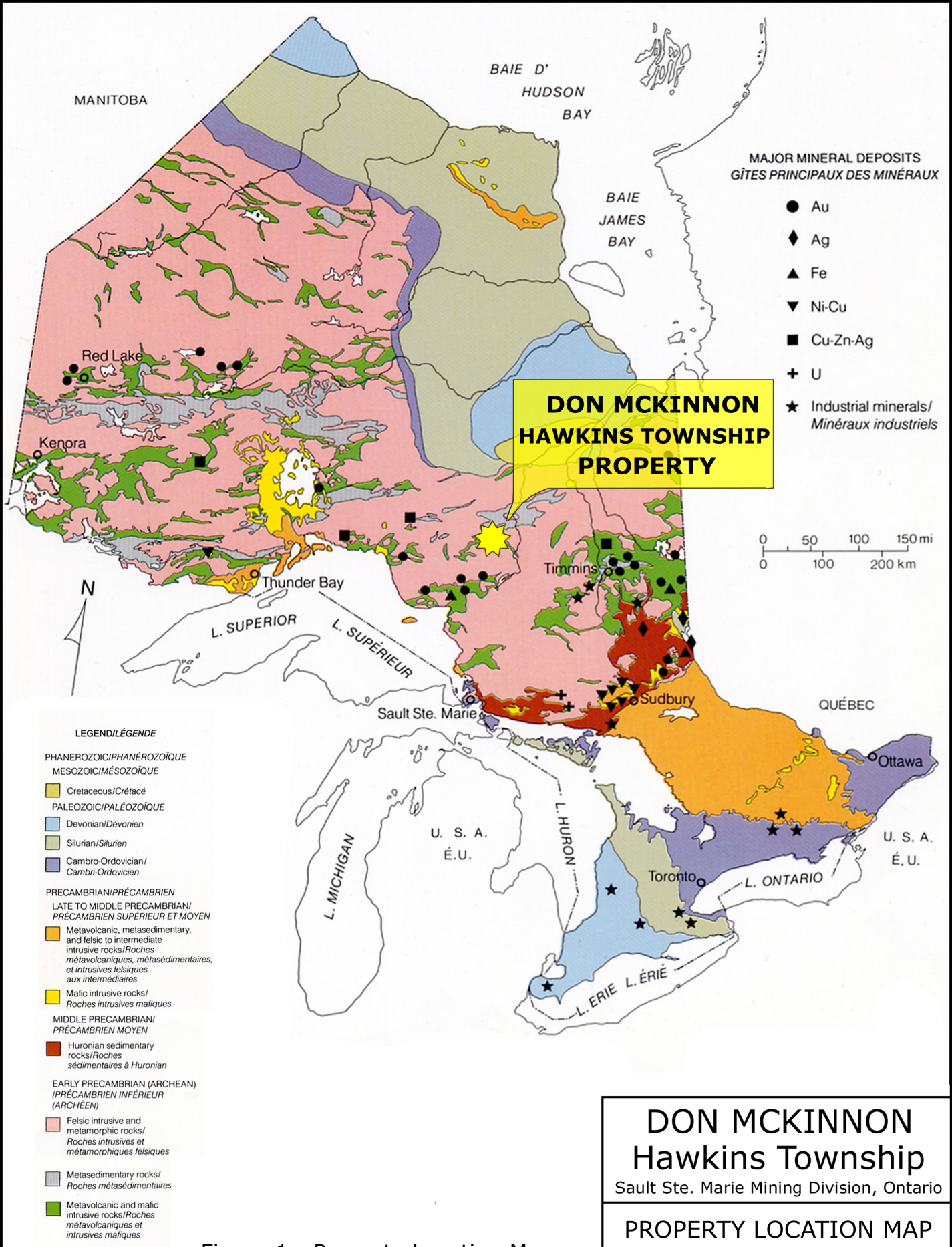
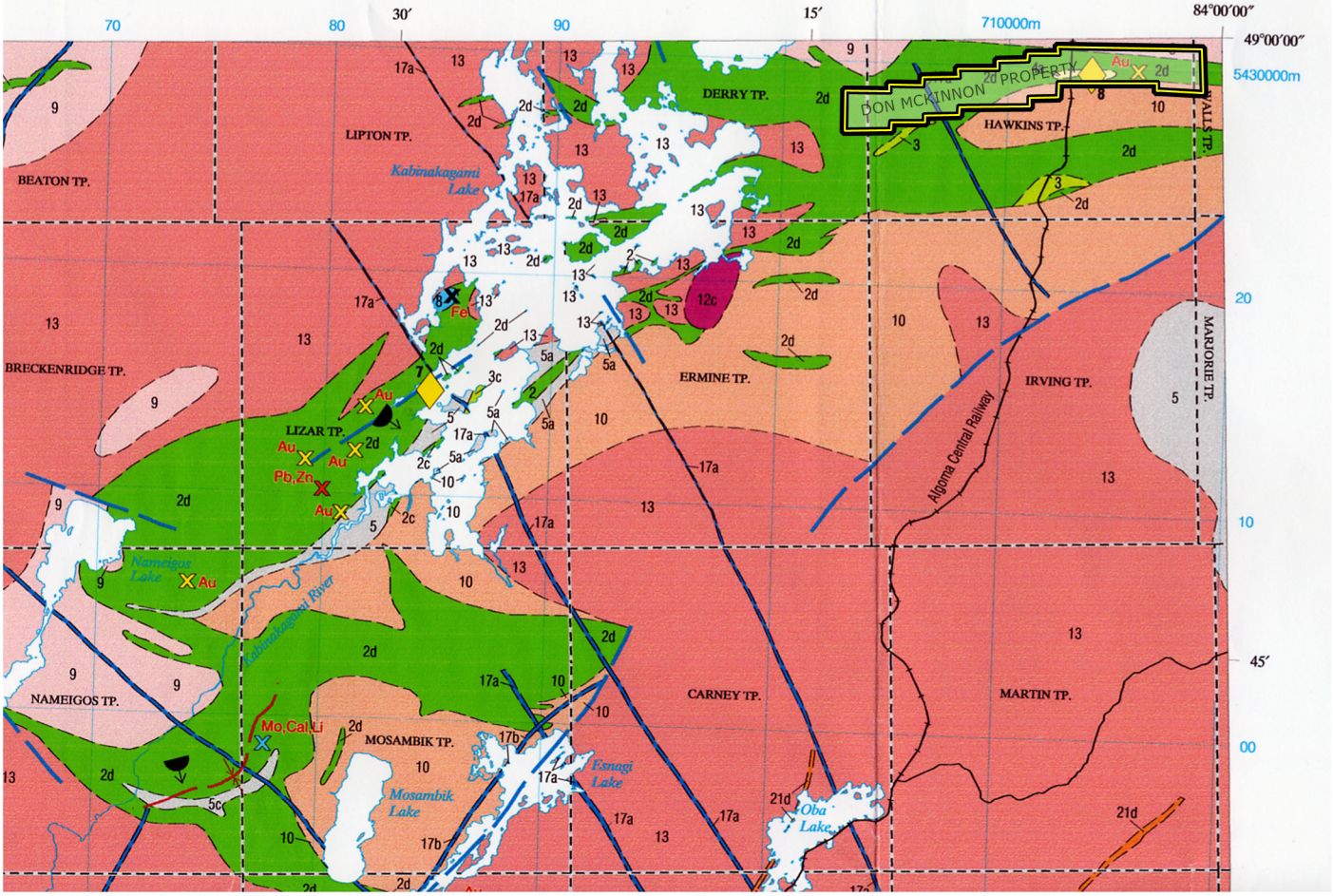


Figure 1 : Property Location Map

DON MCKINNON
Hawkins Township
Sault Ste. Marie Mining Division, Ontario

PROPERTY LOCATION MAP

John Boissoneault P. Eng. | July 30, 2004



LEGEND[ab]

PRECAMBRIAN[c]

PROTEROZOIC

MESOPROTEROZOIC (0.9 to 1.6 Ga)

COLDWELL INTRUSIVE COMPLEX (1103 to 1109 Ma)

21 **Mafic Intrusive Rocks (Keweenawan age)[d]**
- 21a Gabbro (diabase): sills and associated dikes; minor anorthosite and granophyre, locally composite, reverse magnetic polarity (Nipigon sills,1109 Ma)
- 21b Gabbroic to granophyric intrusive rocks: dikes; ultramafic, gabbroic, leucocratic pegmatoidal and granophyric intrusions (St. Ignace Island intrusion)
- 21c Gabbro (diabase): dikes; olivine bearing; normal magnetic polarity (Pukaskwa dike swarm)
- 21d Gabbro (diabase): dikes (Abitibi dike swarm, 1141 Ma)

PALEOPROTEROZOIC (1.6 to 2.5 Ga)

17 **Gabbro (diabase):** dikes and dike swarms
- 17a Matachewan–Hearst swarm (2450 Ma)
- 17b Marathon swarm: includes dikes correlated to the Preissac dike swarm (2150 Ma)

ARCHEAN[e]

NEO- TO MESOARCHEAN (2.5 to 3.4 Ga)

13 **Granite-Granodiorite:** massive to foliated texture; locally porphyritic (phenocrysts include quartz, feldspar, biotite, and amphibole minerals); quartz diorite, diorite in some plutons or plutonic complexes
- 13a Potassium-feldspar megacrystic granite, quartz monzonite
- 13b Granodiorite monzodiorite: hornblende and biotite bearing

Sanukitoid Intrusive Suite (2680 to 2700 Ma)

12 **Diorite-Monzonite-Granodiorite**
- 12a Monzonite-granodiorite
- 12b Granodiorite: minor monzonite, syenite and diorite
- 12c Diorite: includes associated syenite and monzonite

Foliated–Gneissic Intrusive Suite

10 **Foliated Tonalite Suite:** locally massive or gneissic; biotite bearing, amphibole bearing; locally leucotonalite, granodiorite, quartz diorite, monzogranite, or quartz monzonite

9 **Gneissic Tonalite Suite:** locally contains associated foliated or lineated biotite- and/or amphibole-bearing tonalite

Mafic Intrusive Suite

8 **Gabbro:** dikes; locally subordinate diorite, anorthositic gabbro, and anorthosite
- 8a Gabbro: pervasively serpentinized

Keewatin-Type Supracrustal Rocks

5 **Mixed Clastic Sedimentary Rocks:** wacke-dominated, lesser conglomerate, mudstone and carbonate rocks; includes associated paragneiss and migmatite
- 5a Wacke: (argillite) minor siltstone and polymictic conglomerate, arkose
- 5b Conglomerate: polymitic; locally derived
- 5c Migmatite: biotite-quartz-feldspar paragneiss
- 5d Slate: schistose texture; locally graphitic; locally contains chert

4 **Felsic Volcanic Rocks:** massive flows; minor pyroclastic rocks; dominantly rhyolite, locally dacite
- 4a Massive to foliated flows
- 4b Pyroclastic rocks; tuff and lapilli tuff, tuff breccia
- 4c Epiclastic rocks
- 4d Pervasively hydrothermally altered
- 4e Porphyritic and aphyric intrusions (felsite)

3 **Felsic and Intermediate Volcanic Rocks:** unsubdivided rhyolite, dacite, and andesite
- 3a Flows
- 3b Tuff and lapilli tuff
- 3c Epiclastic rocks

2 **Mafic Volcanic Rocks:** subaqueous flows and minor pyroclastic rocks; mainly basalt and locally includes andesite or dacite
- 2a Massive to foliated flows
- 2b Pillowed flows
- 2c Volcaniclastic and epiclastic rocks
- 2d Amphibolite; mafic schist and gneiss; locally garnetiferous

SYMBOLS

- Geological boundary
- Geological boundary, interpreted from geophysical data
- Fault or deformation zone (where present, arrows indicate sense of movement)
- Major fold (syncline)
- Major fold (anticline)
- Syncline, inclined axial plane, limbs dipping in same direction
- Unconformity
- IF Iron formation
- Regional stratigraphic younging direction (indicated by volcanic lava flow; by sedimentary feature)
- Major highway
- Secondary road
- Railway
- Township boundary
- Park Boundary
- Indian Reserve

N

Scale 1:250 000

5000 m 0 5 10 km

Projection of map UTM Zone 16N, using Datum NAD 27.
NTS Reference: 42C

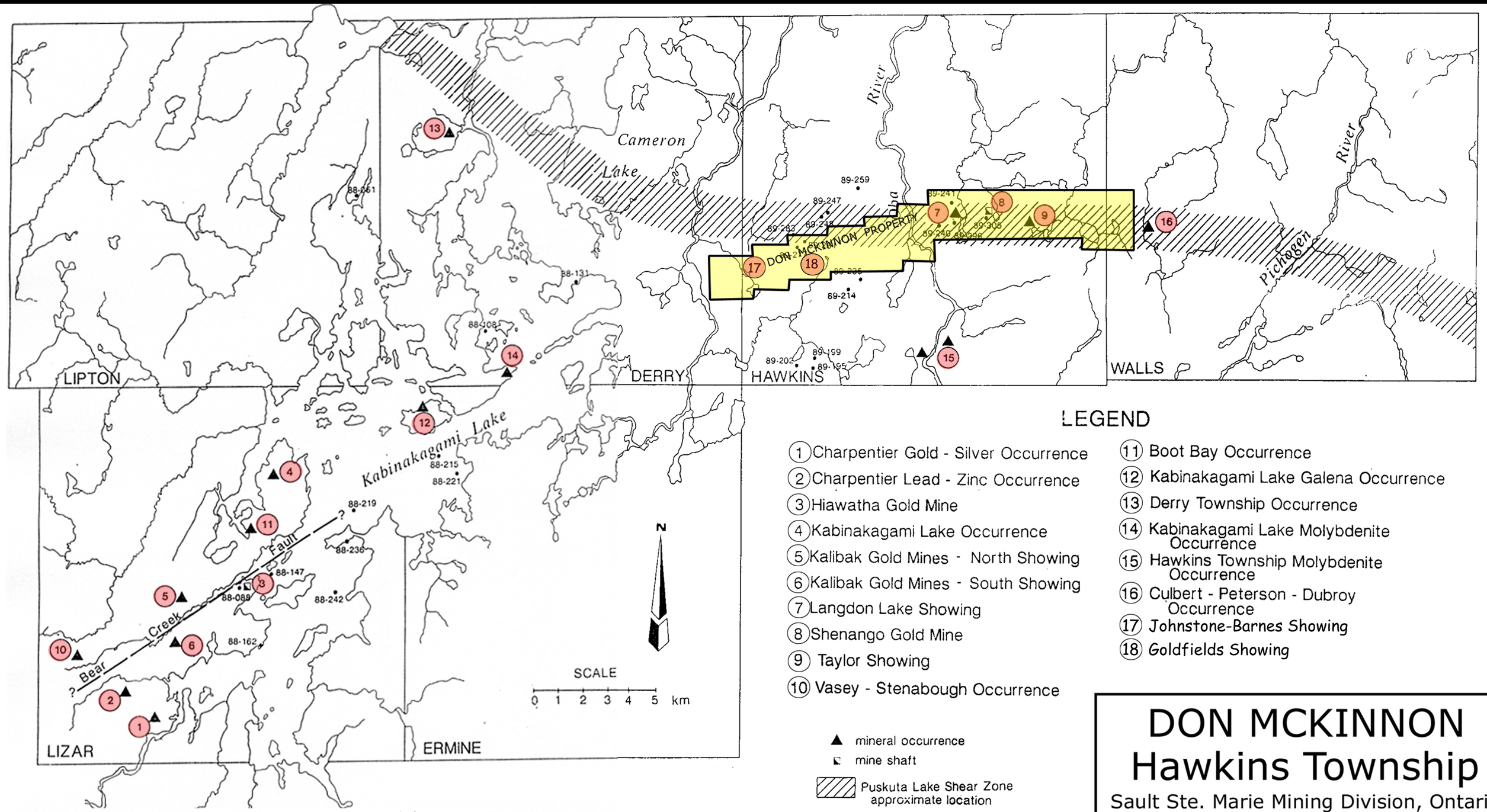
DON MCKINNON
Hawkins Township

Sault Ste. Marie Mining Division, Ontario

REGIONAL GEOLOGY

John Boissoneault P. Eng. | July 30, 2004

Figure 2 : Regional Geology



data from Maynard (1929), Giblin (968), Ferguson et al. (1971), Siragusa (1977)

Figure 3 : Mineral Occurrences, Kabinakagami Lake area

DON MCKINNON
Hawkins Township

Sault Ste. Marie Mining Division, Ontario

MINERAL OCCURRENCES
KABINAKAGAMI LAKE AREA

John Boissoneault P. Eng. | July 30, 2004

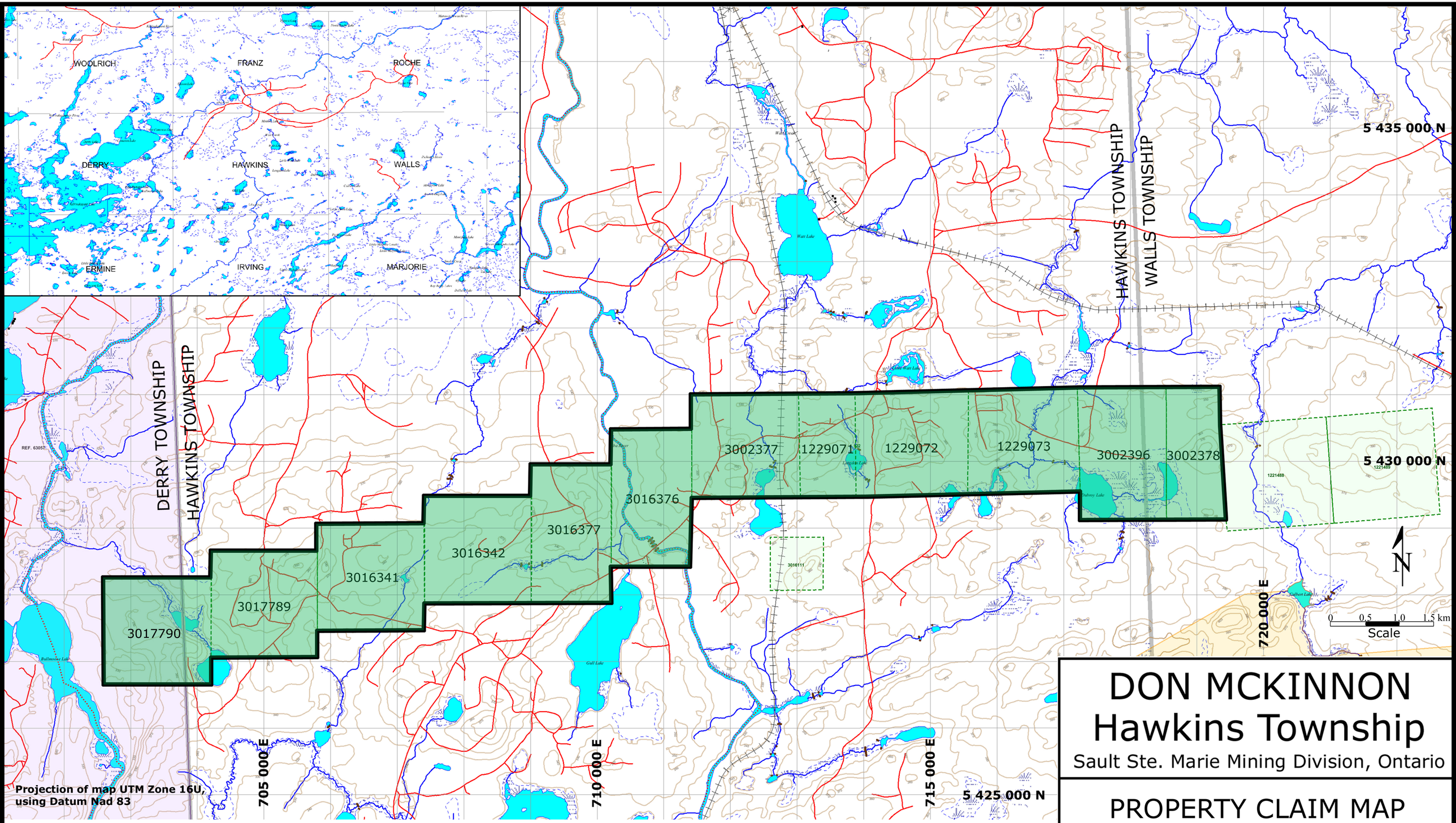
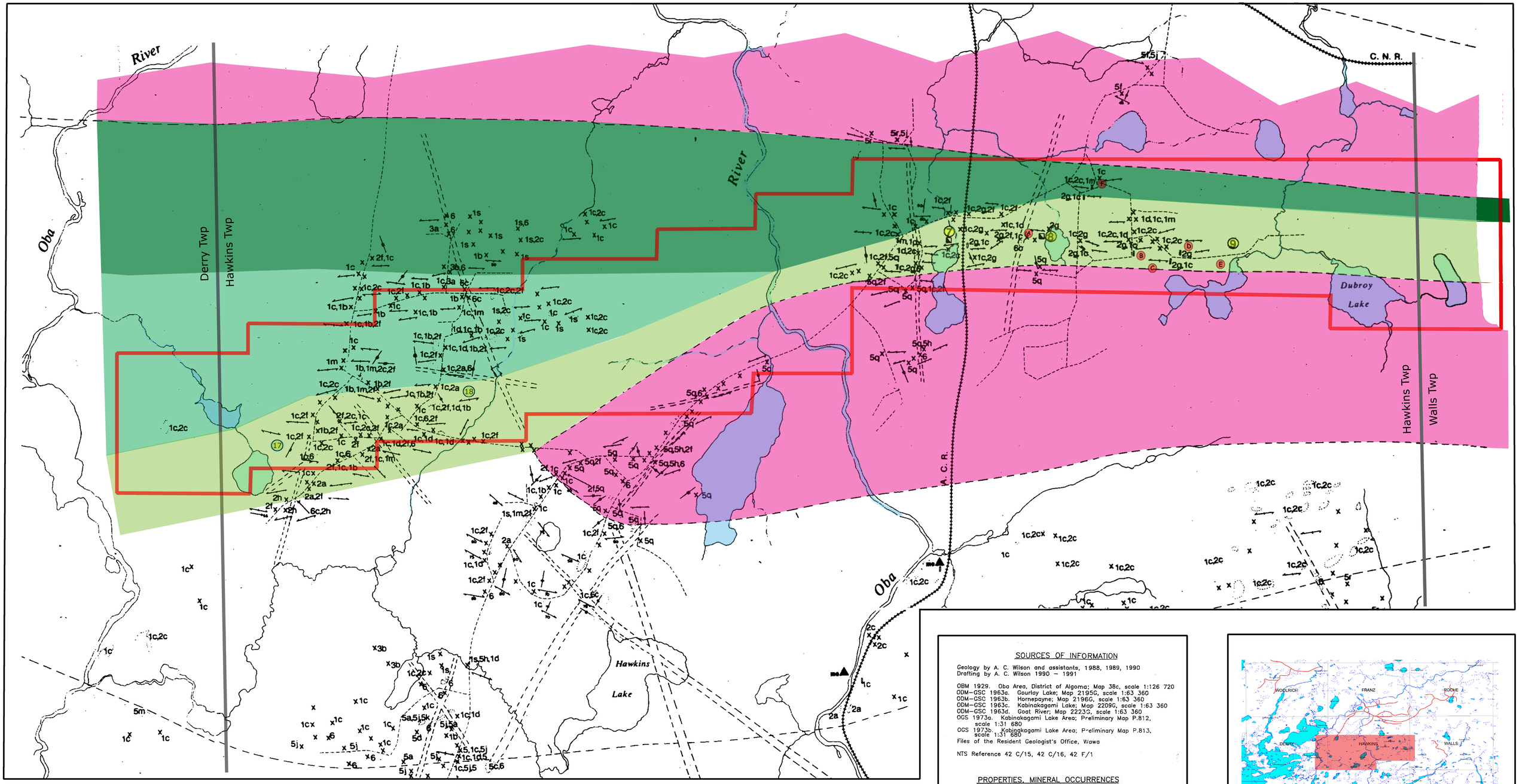


Figure 4 : Property Claim Map



Precambrian Geology

LEGEND

6 MAFIC INTRUSIVE ROCKS
- 6 diabase dike
- 6a porphyritic (plagioclase) diabase dike
- 6b lamprophyre dike with magnetite phenocrysts

Intrusive Contact

5 FELSIC INTRUSIVE ROCKS
- 5 undifferentiated
- 5a biotite trondhjemite to granodiorite
- 5b potassium feldspar porphyritic biotite trondhjemite to granodiorite
- 5c gneissic trondhjemite to granodiorite
- 5d hornblende–biotite trodhjemite to granodiorite
- 5e garnetiferous hornblende–biotite trondhjemite to granodiorite
- 5f biotite–hornblende granodiorite to diorite
- 5g undifferentiated felsic intursive rock with magnetite phenocrysts
- 5h aplitic veins and dikes
- 5j biotite pegmatite veins and dikes
- 5k granitic rocks containing hornblende–rich xenoliths
- 5m migmatite
- 5p hornblende granodiorite to quartz monzonite
- 5q sheared tonalite
- 5r undifferentiated gneissic intrusive

Intrusive Contact

4 MAFIC AND ULTRAMAFIC INTRUSIVE ROCKS
- G4 metagabbro (geophysically interpreted)

Intrusive Contact

3 CLASTIC METASEDIMENTARY ROCKS
- 3 undifferentiated
- 3a foliated wacke, siltstone
- 3b garnetiferous wacke, siltstone
- 3c wacke/granite intrusion breccia

2 INTERMEDIATE TO FELSIC METAVOLCANIC ROCKS
- 2 undifferentiated
- 2a foliated felsic flows
- 2b quartz porphyritic felsic flows
- 2c felsic sills
- 2d tuff
- 2e monolithic breccia
- 2f quartz–feldspar porphyry dikes and sills
- 2g sheared pyritiferous flows
- 2h heterolithic breccia

1 MAFIC TO INTERMEDIATE METAVOLCANIC ROCKS
- 1 foliated fine– to medium–grained flows
- 1b pillowed flows
- 1c amphibolitic mafic metavolcanics
- 1d foliated fine– to medium–grained flows containing epidote and quartz lenses
- 1e finely layered mafic and felsic flows
- 1f mafic sills
- 1g flow top breccia
- 1h monolithic breccia (mafic fragments in mafic groundmass)
- 1j monolithic breccia (felsic fragments in mafic groundmass)
- 1k heterolithic mafic breccia
- 1m garnetiferous mafic metavolcanics
- 1q chlorite schist
- 1r intrusion breccia
- 1s sheared mafic metavolcanics

- small bedrock outcrop
- area of bedrock outcrop
- geological contact; position interpreted
- fault; position interpreted
- foliation (inclined, vertical)
- jointing (inclined, vertical)
- bedding (inclined, vertical)
- lineation with plunge
- mineral occurrence
- trench
- shaft

Au gold
cp chalcopyrite
gn galena
mo molybdenite

fel/int volcanic rocks

mafic volcanic rocks

mafic volcanic rocks / felsic sills

felsic intrusive rocks

SOURCES OF INFORMATION

Geology by A. C. Wilson and assistants, 1988, 1989, 1990
Drafting by A. C. Wilson 1990 – 1991

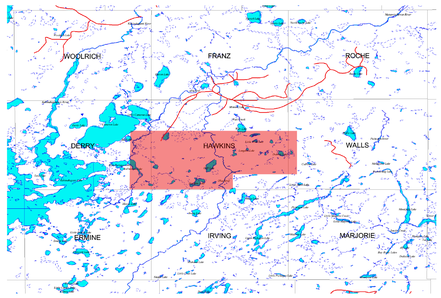
OBM 1929. Oba Area, District of Algoma; Map 38c, scale 1:126 720
ODM–GSC 1963a. Gourlay Lake; Map 2195G, scale 1:63 360
ODM–GSC 1963b. Hornepayne; Map 2196G, scale 1:63 360
ODM–GSC 1963c. Kabinakagami Lake; Map 2209G, scale 1:63 360
ODM–GSC 1963d. Goat River; Map 2223G, scale 1:63 360
OGS 1973a. Kabinakagami Lake Area; Preliminary Map P.812, scale 1:31 680
OGS 1973b. Kabinakagami Lake Area; Preliminary Map P.813, scale 1:31 680
Files of the Resident Geologist's Office, Wawa

NTS Reference 42 C/15, 42 C/16, 42 F/1

PROPERTIES, MINERAL OCCURRENCES

7 Langdon Showing
8 Shenango Gold Mine
9 Taylor Showing
17 Johnstone–Barnes Showing
18 Goldfields Showing

(A) to (F) - John Boissoneault Verification Sample Locations, July 27, 2004



N

0 0.5 1.0 1.5 km
Scale

DON MCKINNON
Hawkins Township
Sault Ste. Marie Mining Division, Ontario

PROPERTY GEOLOGY

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Figure 5 : Property Geology