

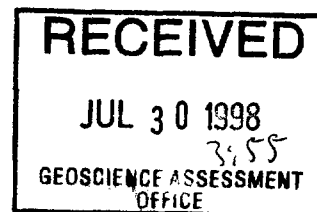


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REPORT ON THE
GEOLOGICAL SURVEY
THUNDER SWORD RESOURCES INC.
PIPE LAKE PROPERTY
PILOT HARBOUR AREA.
N.T.S. 41N/13, ONTARIO.



26

July 29, 1998
Val d'Or, Quebec.

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**REPORT ON THE
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1.0 INTRODUCTION

At the request of Mr. Siggy Naguschewski of Thunder Sword Resources Inc. the author conducted a property visit to the Pipe Lake Property on July 24, 1998 to investigate 6 on land, weak-moderate Airborne Geophysical Electromagnetic In-Put anomalies found on the property.

The Thunder Sword Resources Inc.'s Pipe Lake Property consists of 50 mining claims, (800 hectares), and is located in Pilot Harbour Area, Sault Ste. Marie Mining Division, Ontario. The Pipe Lake property has four known gold showings, three of which are labelled, from east to west, the Skyhook, V.G., and Siggy (Creek). The most notable of these is the V.G. Occurrence which has an average grade of 0.461 OPT Au over a strike length of 650 feet.

The July 1998 geology survey concentrated on seven claims which show 6 weak-moderate Airborne Geophysical Electromagnetic In-Put anomalies. The purpose of this survey was to determine if the Airborne Electromagnetic Anomalies were caused by mineralization and if so does the mineralization contain economic concentrations of minerals which would warrant a follow up program.

To date, four ore zones have been discovered in the Mishibishu belt, **The Magnacon Zone** hosts reserves of about 1.3 mt of 8.6 GPT gold, while **The Mishibishu Main Zone** has indicated reserves of 1.1 mt of 5.7 GPT gold, **The Eagle River Gold Mine** deposit of 1.2 mt of 10.91 GPT gold and **The Edwards Gold Mine** with 156,100 t of 12.09 GPT gold. At present River Gold Mines Ltd. is the main producer of gold in the area and owns the Eagle River Gold Mine, the Edwards Gold Mine and the River Gold Mill. In 1998 the River Gold Mill is scheduled to treat approximately 260,000 tonnes of ore at an

average rate in excess of 700 tonnes per day. At present the average cost to produce an ounce of gold by River Gold mines Ltd. is US\$211, making it one of the few mines in Canada making a profit with these depressed gold prices.

2.0 LOCATION AND ACCESS

The Mishibishu Greenstone Belt is located immediately north of Lake Superior between Wawa and Hemlo, Ontario. Road access is available to the belt via a gravel road from Highway 17 (50km northwest of Wawa) to the vicinity of the Magnacon and Eagle River Mines. Property access is then best achieved by either float-equipped aircraft to Pipe Lake or helicopter.

3.0 PROPERTY DESCRIPTION

The Oil City property consists of 50 contiguous unpatented mining claims located in the Pilot Harbour area in the Sault Ste. Marie Mining Division, (see Figure 1). The claim numbers are:

SSM 1037232 to 1037362 inclusive

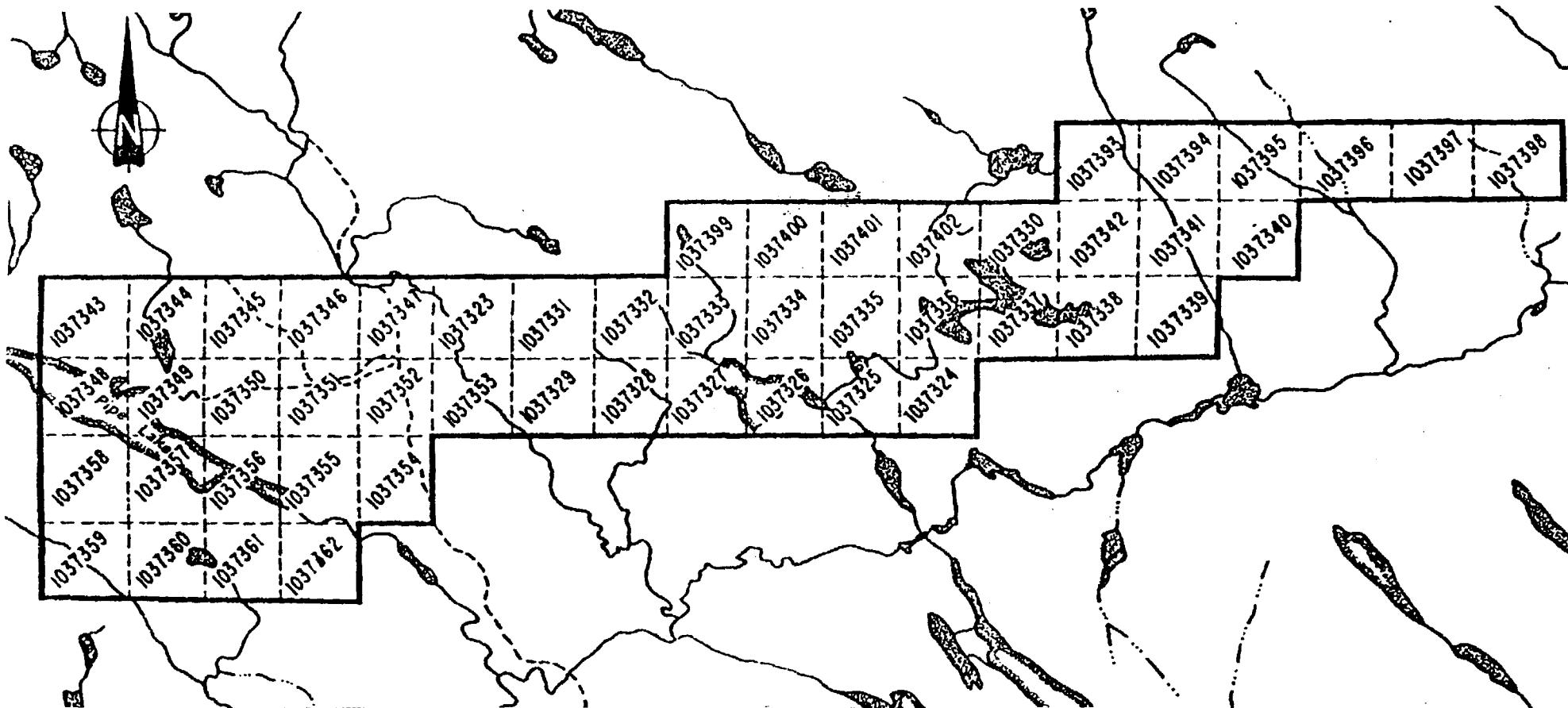
SSM 1037393 to 1037402 inclusive

All claims are currently held in good standing. The July 1998 geological program was performed on 7 claims (1037341, 1037336, 1037327, 1037355, 1037360 and 1037361).

4.0 GEOLOGY

4.1 REGIONAL GEOLOGY

The Mishibishu area has been described in several O.M.N.R. and O.G.S. geoscience and miscellaneous reports. Bennett, G. and Thurston, P.C. mapped the Mishibishu Lake Belt in 1968 for the O.M.N.R. and published their results with accompanying geological maps at a scale of 1:63,350 or 1 mile to the inch in 1977, (Geoscience Report 153). In 1985, the belt was remapped by Bowen



THUNDER SWORD RESOURCES INC.

PIPE LAKE PROPERTY

CLAIM MAP

PILOT HARBOUR AREA

MINING DIVISION - SAULT STE. MARIE

FIGURE - 1

SCALE - 1:50,000

and published on preliminary maps P2970, 2968, 2971 and 2972. A more intensive mapping program was completed by Bowen in 1986 and Reid, in 1987.

The Mishibishu Lake belt is a typical Archean Greenstone Belt; an arc-shaped package of metavolcanic and metasedimentary rocks located within the Superior structural province and the Wawa belt subprovince of the Canadian Shield (Stockwell et al., 1968). It is one of many belts of supracrustal rocks that are similar in trend, variable in size and separated by intrusive granites and tonalitic gneisses. The belt has an east-west orientation measuring 16 km. (9.9 mi.) wide and 55 km. (34 mi.) in length.

Particularly, the belt consists of sequences of mafic to felsic metavolcanics and chemical/clastic metasediments cut by mafic to felsic dykes and sills bounded by granitic plutonic and batholithic rocks. These rocks, are in turn, cut by an unusually high number of diabase dykes. The belt's form is described as a broad anticline. It is flanked on the south and north by large granitic batholiths (Southern Batholith and the Northern Batholith) and centrally by the Bowman Lake Batholith. This has been intruded by a granitic pluton and stock (the Central Pluton and the Mishibishu Lake Stock).

The Central Pluton separates the Belt into two distinct bands or limbs; the northern limb has a higher proportion of sedimentary rocks; the southern limb has a greater quantity of mafic volcanic rocks and oxide iron formations.

The "deformation zones", locally accompanied by intense alteration in addition to sulphides and gold mineralization, are the main targets of exploration.

Gold mineralization in the northern limb, like that of the Magnacon Mine, is generally accompanied by arsenopyrite whereas in the southern limb there is an absence of an arsenopyrite association; an example being the Eagle River Deposit.

The majority of supracrustal rocks in the region are Late Archean in age. The volcanics are thought by O.G.S. geologists to consist of a single volcanic sequence of mafic, massive and

pillowed flows and pyroclastics of magnesium tholeiite, iron tholeiite and calc-alkalic affinity. This author, however, feels that there are at least three volcanic sequences, possibly four; the result probably of a single source.

Chemical metasediments, typically a narrow package, found usually at the interface with clastic metasediments or within the metavolcanic sequence can be used as a marker horizon distinguishing one volcanic sequence from the next. These chemical metasediments consist of magnetitic chert interbedded with magnetite ironstone which, in some places, are extremely contorted and brecciated. Sulphitic (pyrite) and graphitic units are less common. The clastic metasediments consist of polymictic matrix and clast-supported conglomerates, oligomictic quartz pebble and granule conglomerates, wacke, arkose, and laminated mudstones.

All rocks sequences are modified by the large-scale igneous intrusions which caused a greater degree of extensionalism within the mid-to-northern limb areas and intense compression within the southern limb areas. This modification also created an aureole around each intrusion where all rocks experienced contact metamorphism. In these areas, all primary textures have been destroyed and in adjacent areas, overprinted.

Several thick gabbroic-textured flows and synvolcanic sills and dykes were mapped by O.G.S. geologist in 1985. Their follow up analysis indicated that the metavolcanics were derived from a single source.

Intermediate/felsic flows and moderately thick units, 1 metre (3.3 ft) to 5 metres (16.4 ft.), of pyroclastic rocks, are intercalated with mafic metavolcanics. Felsic and intermediate metavolcanics comprise less than 10% of the rocks in the area central to Mishibishu Lake with mafic metavolcanics and metasediments comprising 30% to 40% each and the remaining 10% to 30% plutonic rocks.

In the Mishibishu Lake area, a series of basalt flows (iron theleiitic?) and pyroclastics (tuffs) were mapped by government geologists. These flows are massive with some extensive pillowed

basalt flows. Porphyritic flows with plagioclase phenocrysts varying from 1 cm (.39 in.) to 2 cm (.79 in.) to upwards of 10 cm (3.9 in.) were used as marker units. The basaltic flows and pyroclastic units often are separated by interflow metasediments commonly separated by felsic welded tuffs and porphyritic flows. The welded tuffs are only identifiable by thin section work and not discernable in the field. The felsic units, in some instances, show definite cross cutting relationships to the mafic units suggesting that they are intrusions.

Contacts between the mafic and felsic units have been observed only rarely. Preliminary thin section work by the O.G.S. has identified a tuffaceous origin for two of the felsic units.

Several felsic to intermediate plutonic bodies, the most extensive being the Mishibishu Lake monzonite stock, occur throughout the region. The rock is coarse grained, orange-red to orange with magnetite dusting throughout the extensive epidote alteration. Quartz is rare and pyroxene is the major mafic mineral. Some of these plutonic bodies are massive while others are foliated; this may indicate age differences. The conformable nature of the foliation and the sills within the belt is the result of high shear strains and progressive reorientation during the shear zone's evolution (Gold '86, p. 49).

The entire region, as previously mentioned, is cut by diabase dykes which generally reflect a more mafic appearance in the older the dyke. Generally, the preferred strike direction is N30E, N40W and N-S. Two types are observed: an olivine-bearing diabase, usually N-S trending and a quartz-bearing diabase, commonly either NE or NW trending.

Regional metamorphism is to greenschist facies with amphibolite facies encountered near the contact with stocks and batholiths. Rocks within the greenschist facies exhibit alteration as intense carbonatization such as calcite and ankerite and sericitization. In rocks within the amphibolite facies, carbonatization is not present but garnet, staurolite, and biotite reflect alteration.

All known gold occurrences to date have been discovered in the greenschist facies rock or within greenschist retrograded, amphibolite facies of rocks (Heather, 1985).

The government geological survey conducted during 1985 observed that mafic diatremes of Proterozoic age occurred in a few areas as well as that several flat-lying amygdaloidal basalt flows occurring unconformably over steeply dipping Archean rocks. Generally, bedding dips moderately to steeply to the north, however, there is a lack of definitive structural or stratigraphic data over the entire greenstone belt.

The supracrustal rocks have been affected by a number of brittle-ductile deformation zones, the most notable being the Mishibishu Deformation Zone (MDZ) which is 200 (656.2 ft) to 500 metres (1,640.4 ft.) wide. This structure consists of a number of discrete subparallel zones of highly sheared and variable altered rock separated by areas of less deformed rock. A strong chlorite/sericite/quartz composition layering interpreted as a shear foliation characterized these fault rocks.

The most intense deformation occurs in clastic metasediments along primary lithological contact. To date, the most intense deformation, and alteration occurs proximal to the Mishibishu Lake Stock. Elements of the deformation zone can be traced east and southeastward to Lake Superior and west to David Lakes.

4.2 PROPERTY GEOLOGY

The Oil City claims lie on the south limb of the Mishibishu Greenstone Belt along strike with River Gold Mines Ltd. Eagle River Mine.

The rocks consist of east by northeast and east by southeast striking supracrustal mafic to intermediate volcanic rocks. Mafic intrusive bodies of gabbroic (west) and dioritic (east) rocks have been mapped and show variable deformation. Diabase dykes vary in width up to 70m wide and predominately trend northwest although some north-south dykes are also known. A pluton of dioritic composition displays potassic alteration of feldspar grains, giving

it a reddish colour. Some chlorite and epidote alteration also occurs, typically fracture related. The alteration and locally more intense foliation development often give the diorite a banded appearance.

All lithologies have been metamorphosed to lower greenschist facies with local amphibolite facies proximal to the intrusive bodies.

The Oil City geology may be divided into four basic units; each may be further subdivided by internal variations.

Unit 1 - Mafic To Intermediate Metavolcanics

Mafic volcanic rock predominated across the south and northeastern portions of the property. They consist of aphanitic, massive to foliated flows, black to dark green in colour which weather green to buff. A rarer porphyritic flow is also noted. Euhedral hornblende phenocrysts are discernable within the melanocratic ground mass.

Mafic volcanoclastic sequences are interbedded with and possibly to flows described above. An agglomerate unit with elongate mafic clasts has been observed in the past, in various locations across the property. At one location it is overlain by an ash tuff containing intermediate bombs.

The tuff is often a lapilli-tuff with a mixture of rounded mineral crystals and volcanic grains. In some outcrops, grading suggests tops to the north.

Unit 2 - Felsic To Intermediate Metavolcanics

Intermediate to felsic volcanic rock is comprised mostly of dacitic flows and lapilli-tuff. These units predominate in the northern half of the property. The flows are massive with rare rhyolite flows.

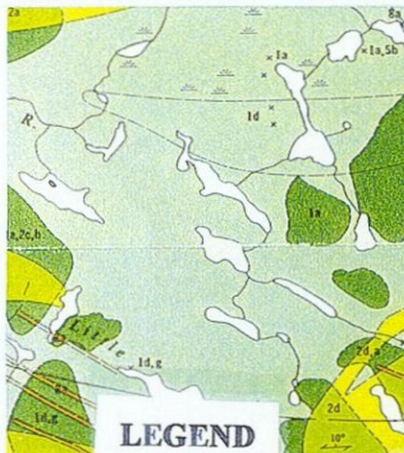
The tuffs and lapilli-tuffs contain a large percentage of small, rounded feldspar phenocrysts in addition to mafic grains and occasional rounded quartz eyes.

Unit 6 - Felsic Intrusives

To the east a dioritic body is exposed. Zones of silicification, pink staining (potassic feldspar or hematite) and biotite enriched bands are developed in weak shears.

PUKASKWA RIVER

THUNDER BAY DISTRICT



LEGEND

EARLY TO LATE PRECAMBRIAN

- 8 Unsubdivided.
- 8a Diabase.
- 8b Gabbro.

BATHOLITHIC GRANITIC ROCKS

- 6 Unsubdivided.
- 6a Biotite trondhjemite to quartz monzonite.
- 6b Hornblende trondhjemite to quartz monzonite.
- 6c Biotite quartz monzonite.
- 6d Biotite trondhjemite.
- 6e Porphyritic granite.
- 6f Hornblende diorite gneiss to biotite granite gneiss.
- 6g Pegmatite, aplite.
- 6h Hybrid granite.
- 6j Migmatite.
- 6k Pegmatitic muscovite granite.

METAVOLCANICS

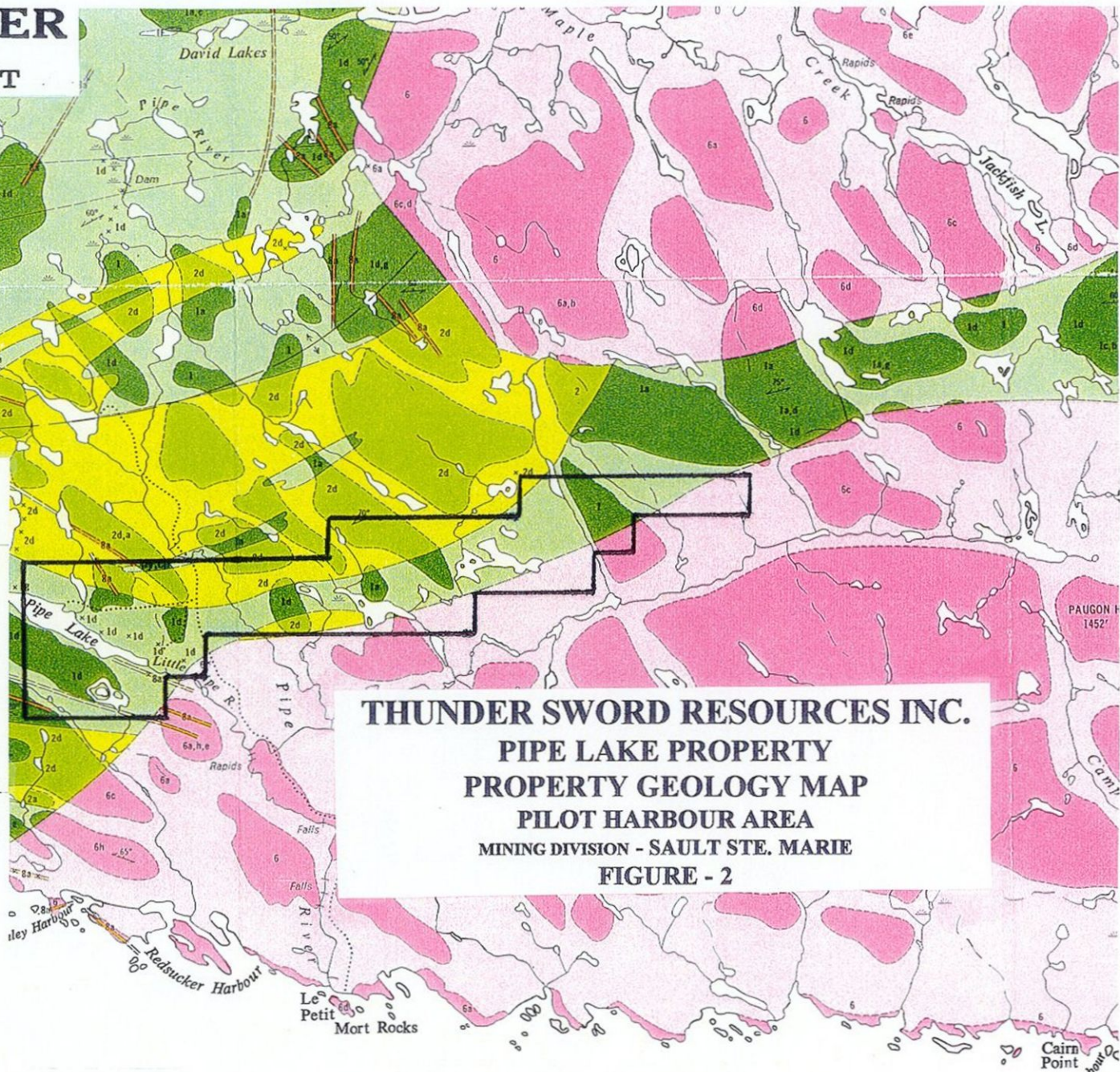
FELSIC TO INTERMEDIATE METAVOLCANICS

- 2 Unsubdivided.
- 2a Dacite to rhyolite (flows).
- 2b Quartz-feldspar porphyry (flows and sills).
- 2c Felsic tuff, felsic agglomerate.
- 2d Porphyritic dacite.

- IF Iron Formation

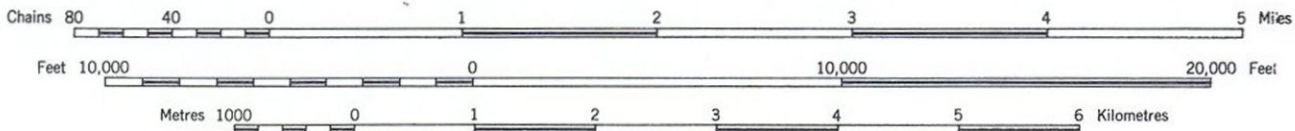
MAFIC TO INTERMEDIATE METAVOLCANICS

- 1 Unsubdivided.
- 1a Massive to foliated andesite to basalt.
- 1b Pillowed andesite to basalt.
- 1c Amphibolite.
- 1d Metagabbro to metadiorite (early mafic intrusive rocks).
- 1e Banded amphibolite (orthogneiss).
- 1g Porphyritic basalt.
- 1h Chlorite schist, chlorite-biotite schist.



THUNDER SWORD RESOURCES INC.
PIPE LAKE PROPERTY
PROPERTY GEOLOGY MAP
PILOT HARBOUR AREA
 MINING DIVISION - SAULT STE. MARIE
FIGURE - 2

Scale 1: 63,360 or 1 Inch to 1 Mile



To the south the diorite is quartz rich but becomes more feldspathic to the north, possibly indicating more than one phase of intrusion.

Unit 8 - Diabase Dykes

Dykes in the region are equigranular, medium grained, magnetite-epidote bearing intrusives with traces of pyrite and rare pyrrhotite. They trend WNW generally, dip vertically and are most concentrated in the southwest corner of the property. Two north-south dykes in this area appear to act as feeders to the smaller dykes.

Continuous magnetic trends have been found to correlate well with certain diabase dykes. This is considered to represent late-stage dykes with a stronger signature than earlier dykes.

See Figure 2

4.3 ECONOMIC GEOLOGY

An excellent gold potential exists in the region. Numerous, parallel to subparallel, extensive and structurally complex deformation/shear zones with associated local packages of highly developed alteration have been and continue to be discovered in the belt as more exploration is completed.

Gold mineralization appears to be structurally controlled and can occur in any rock type given the right set of conditions. The potential for an exhalative syngenetic gold deposit is minimal and field mapping to date has revealed little evidence to suggest any encouragement to this line of thinking.

Structures such as shear zones, intersections of two shear zones or a shear zone in an impervious rock type appear to be the favourable areas to explore for hydrothermal alteration. The most favourable environment for gold mineralization appears to be quartz stockworks located in the core of sericitic alteration zones.

Besides gold, the area possesses little potential for base metals, although previous exploration has discovered small occurrences west of Macassa Creek.

Lack of road transportation previously experienced within the belt has precluded the use of heavy equipment for stripping and trenching which has hindered exploration significantly.

Presently, the Mishibishu Lake greenstone belt hosts all known gold showings and deposits within zones of high strain, commonly localized at lithological contacts such as volcanic-sediment contacts; this is due to the competency contrast between lithologies. The most widely known, because of the O.G.S.'s limited investigations, is the Mishibishu Deformation Zone (MDZ) located on the northern limb; probably the result of the large Pukaskwa Gneiss Complex intrusion to the north.

Immediately to the north of the Mishibishu Lake Stock, within the 7 km (4.4 mi.) long portion of the Mishibishu Deformation Zone six presently known significant gold showings occur within extensive zones of intense hydrothermal alteration. Several of these showings exhibit a systematic pattern of alteration which are gradational in nature. In order of increasing proximity to the mineralized zone, the predominant alteration consists of:

- (i) chlorite-calcite
- (ii) chlorite-ankerite
- (iii) chlorite-sericite
- (iv) sericite-quartz schists

The O.G.S. found that the gold bearing zones occurred within the sericite-quartz schists as vein complexes which appear to cut the foliation at low angles. This suggests that they occupy brittle fractures which as shear fractures which developed late in the shear zone's development (after Heather, 1985).

Within the Mishibishu Lake area, quartz feldspar and feldspar porphyry dykes are observed to be cut by and cut the gold mineralization.

The extensive exploration completed within the Mishibishu Greenstone Belt in 1988 has resulted in the knowledge that each area in the belt is different. The mode and extent of gold mineralization cannot be modelled until further in-depth exploration and analysis is completed in all areas of the belt. The type of gold deposits, having either synvolcanic and/or

metamorphic ores, based on stratigraphic and structural relationships will aid in the discovery of future deposits in the area.

It is important when exploring any area of the belt to remember that the gold mineralization may occur in any rock type including the granite.

Exploration work in the belt, as previously stated, has resulted in extensive information about the nature of the gold mineralization. This information indicates that the geology of the northern and southern limbs and the central regions differ greatly.

Several important considerations should be considered:

- 1) The Eagle River deposit on the southern limb is genetically a low - sulphide system characterized by intense silicification, and potassic alteration assemblages; the Magnacon deposit is also a low sulphide system characterized by a calc-silicate alteration assemblage.
- 2) All gold mineralization is hosted in shear zones and faults.
- 3) Structures in the zone are characterized by a progressive transition from early ductile deformation to a later brittle deformation.
- 4) The early deformation features are characterized by linear, roughly north-south folds.
- 5) The later deformations, noted by diabase offsets, appear to be oblique strike-slip faulting events probably representing a second period of faulting.
- 6) The primary gold mineralization is characterized by a complex history of alteration and veining with the alteration intensity varying to complete textural destruction.
- 7) Generally, the gold occurs as free gold in the form of coarse grains and fines in quartz veins and in alteration zones. However, not all quartz veins, even those associated with alteration, are mineralized.
- 8) The gold probably was remobilized during hydrothermal alteration and greenschist metamorphism.
- 9) A well developed fracture system accompanies by quartz veining was intensively fractured by faulting.

5.0 RIVER GOLD MINES LTD. DEPOSITS

I have put this section into the report as that River Gold Mines Ltd. has and is the only mining company in the area that has conducted extensive exploration and mining in the area over a continuous length of time. This being the case the company probably has the best understanding of the controls of gold emplacement in this area and that some knowledge may be gained from what they report.

5.1 EAGLE RIVER MINE

River Gold's wholly owned Eagle River Gold Mine is located 50 kilometres due west of Wawa in Northern Ontario. The mine is reached by a 70 kilometre gravel road that runs south from the Trans-Canada Highway.

From the first gold poured in October 1995 to the end of 1997, the Eagle River Mine produced 119,293 ounces of gold from 346,940 tonnes of ore milled. In 1997, the mine produced 45,070 ounces of gold grading 9.28 grams per tonne. Approximately 10% of the tonnage was derived from low grade, low cost, surface mining. Minesite cash costs averaged US\$211 per ounce of gold.

At the end of 1997, proven and probable ore reserves contained an estimated 408,300 ounces of gold. Approximately 63,000 ounces of this amount was present in surface ore stockpiles or broken ore underground, with only transportation and milling costs remaining to be incurred. Several ore zones remain open at depth in the mine, indicating excellent potential for replacing and increasing reserves.

The Eagle River orebody is a shear zone hosted, quartz vein, lode gold deposit, that occurs within volcanic and intrusive rocks of the Archean-age Mishibishu greenstone belt. The ore zones are vertically dipping, plunging moderately to steeply east and display mineable widths of 1.5 to 10.0 metres. They occur as clusters of tabular lenses. The currently defined ore reserve can be traced over a strike length of 2.5 kilometres. Deep exploration drilling has identified ore grade gold over mineable widths to depths of up

to 550 metres below surface. In addition, several gold showing with the potential to be developed into economic reserves have already been identified along the shear zone, which is known to extend for 14 kilometres along strike across the large Eagle River property.

Recent surface exploration has identified as priority targets the Fork Vein and the newly discovered Iron Hat Vein, both of which occur along the interpreted extension of the shear zone which hosts the Eagle River Mine Deposit. The Fork Vein is 1.5 metres wide, exposed over a strike length of 115 metres and returned samples from trenching of up to 98.65 grams of gold per tonne. The Iron Hat Vein is hosted by a strongly developed shear zone and returned assays of 14.81, 35.66 and 150.57 grams of gold per tonne from two separate veins with exposed widths of up to 1.0 metres.

See Figure 3

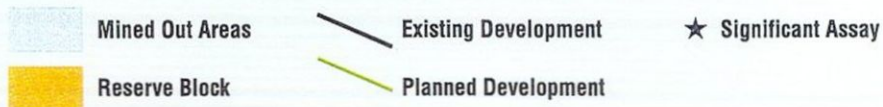
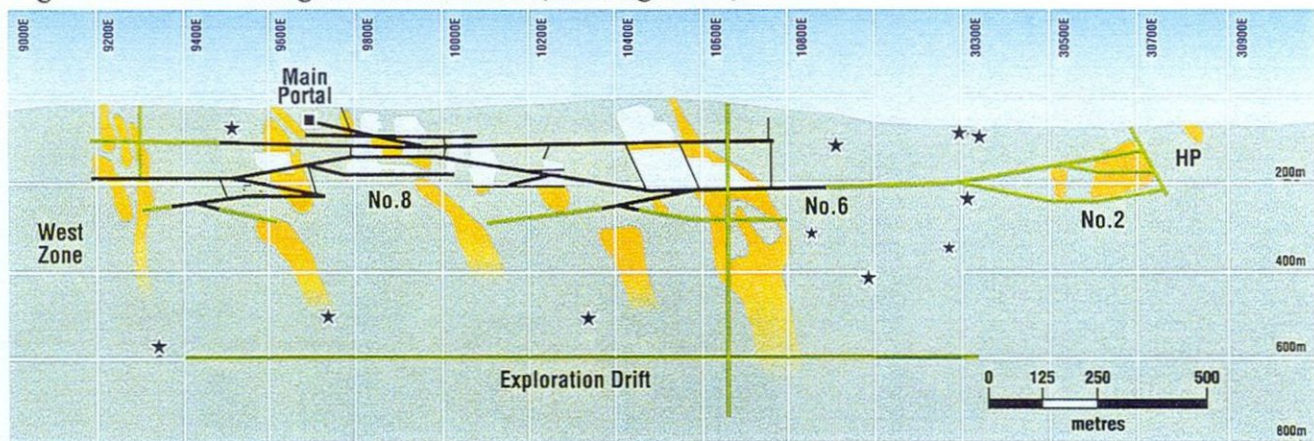
5.2 EDWARDS MINE

The Edwards Mine is located 100 kilometres by road northeast of the River Gold Mill. Under a leasing agreement with VenCan Gold Corporation, River Gold develops, mines and mills the Edwards deposit and splits net profits equally after recovering its costs.

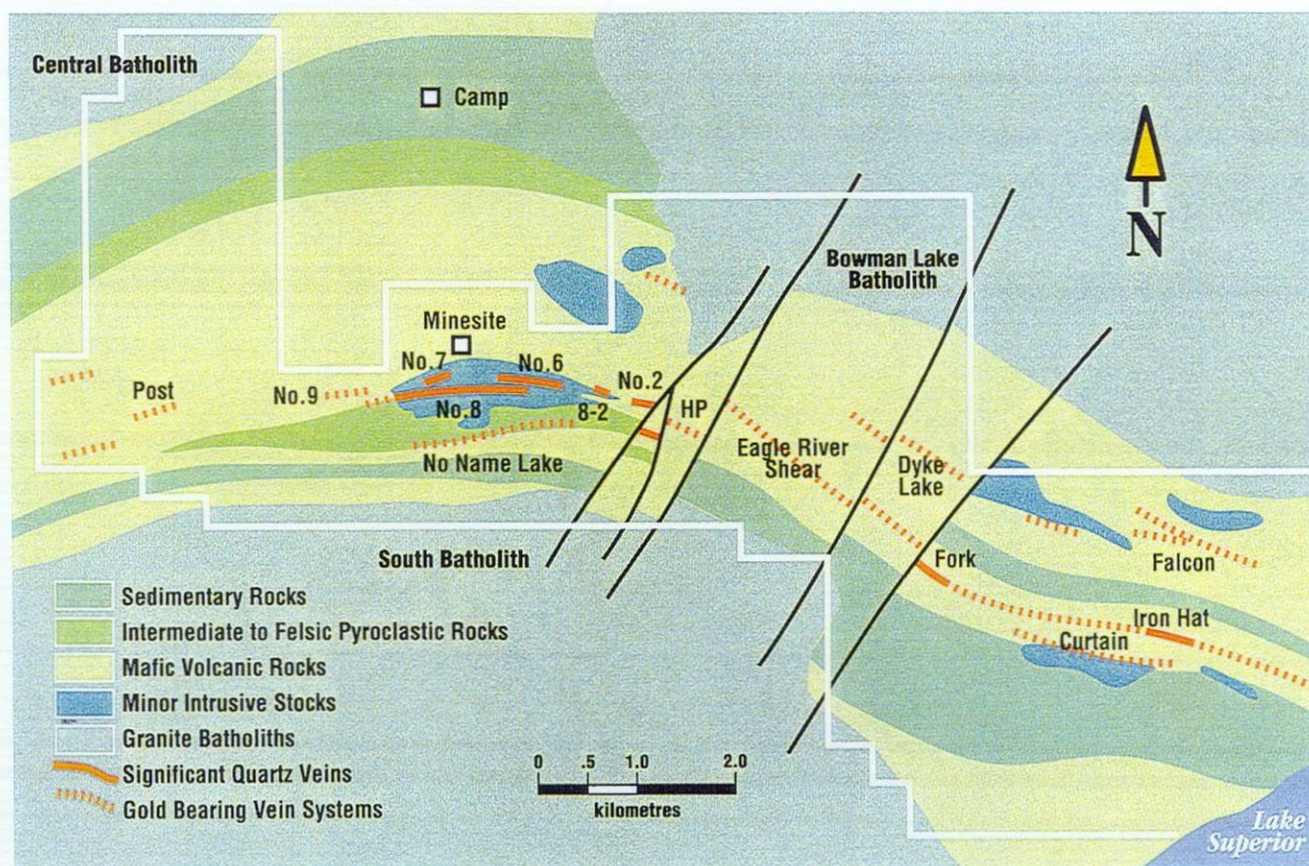
From September through November 1997, the River Gold Mill processed 63,000 tonnes of Edwards ore averaging 15.55 grams of gold per tonne to produce 30,414 ounces of gold. The ore was mined from above the 100 metre level in the Carbonate and Porphyry zones, two of a series of sub-parallel, narrow, high grade, east-plunging structures.

At the end of 1997, proven and probable reserves above the 200 metre level in the Edwards deposit amounted to 156,100 tonnes grading 12.09 grams of gold per tonne and contained an estimated 60,700 ounces of gold. The potential to increase reserves through underground drilling and development is considered very good as demonstrated by the recent exploration drift on the 100 metre level of the Shaynee Zone. Channel sampling returned an uncut grade of 26.8 grams of gold per tonne over a strike length of 118 metres,

Eagle River Mine – Longitudinal Section (looking north)



Eagle River Property – General Geology



THUNDER SWORD RESOURCES INC.
EAGLE RIVER DEPOSIT EXAMPLE
PROPERTY GEOLOGY MAP
WAWA AREA
MINING DIVISION - SAULT STE. MARIE
FIGURE - 3

exceeding by far results from previous surface drilling.
See Figure 4

6.0 PREVIOUS WORK

In 1988 Dominion Explorers Inc. performed an exploration program on the Pipe Lake Property which was optioned to Central Crude Ltd. by Oil City Lubricants Ltd.

Listed below is a description on mineralization encountered by Dominion Explorers.

6.1 Mineralization

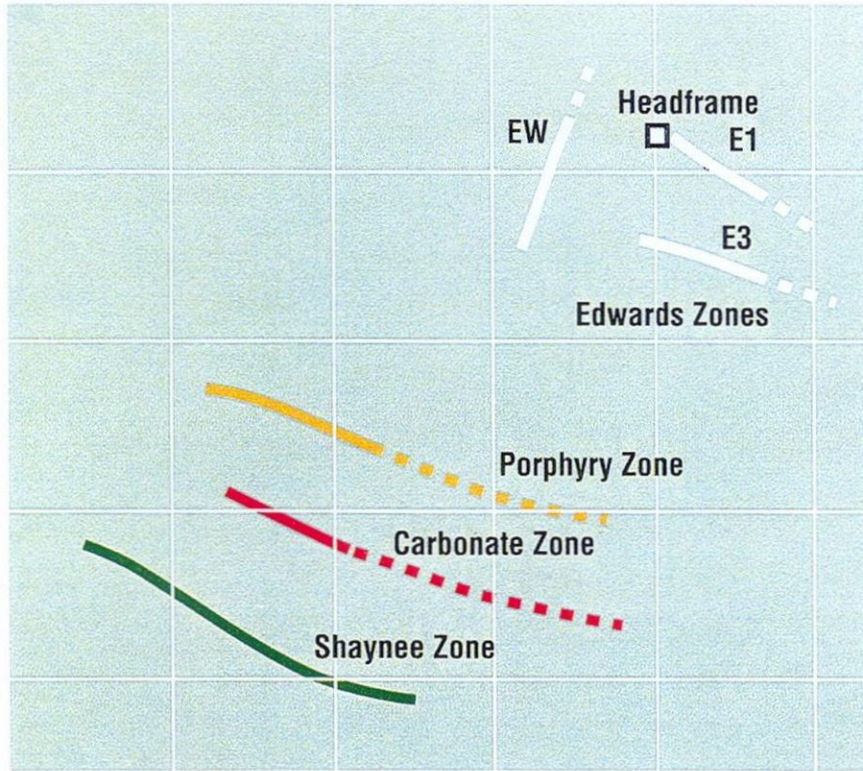
Previous analysis indicates that the mode of gold mineralization, both low and anomalous values, is primarily that of fissure filling and impregnation.

Pyrite, usually disseminated in nature and in amounts up to 8%, is the main sulphide although very minor chalcopyrite was encountered.

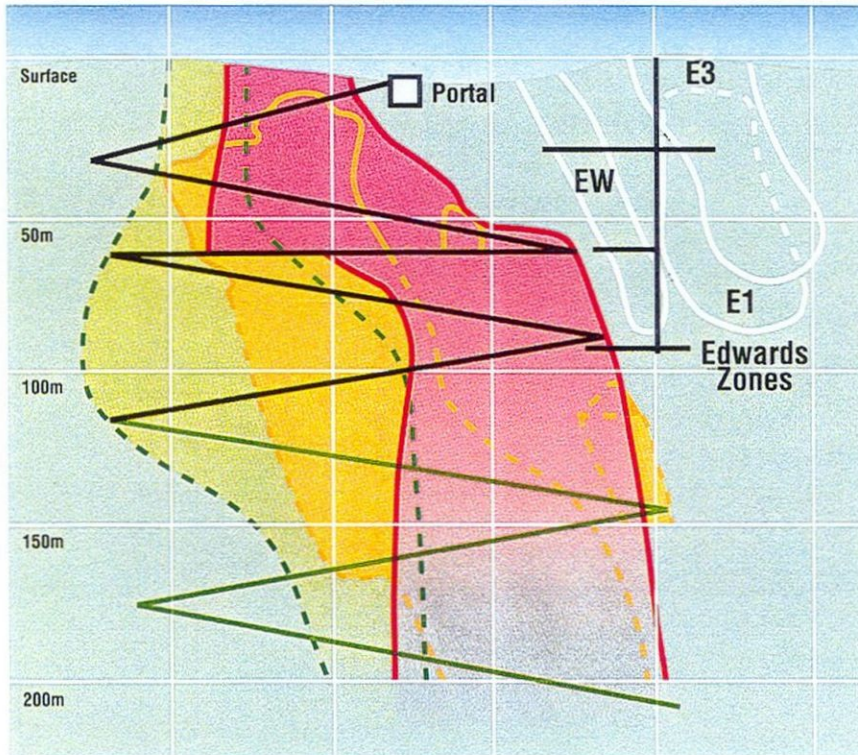
Visible gold was observed within a 20 centimetre (8 inch) wide pyrite-bearing, hematite stained quartz vein in one location, on very high ground straddling the north-south claim line between SSM 1037341 and SSM 1037340. Nine quartz vein grab samples returned an average grade of 0.46 oz/ton Au with up to 2 ppb Ag. Twenty-four rock samples were taken from the showing and from nearby outcrops; only the quartz and wall rock was assayed. A twenty kilogram (44 lb.) bulk sample was taken from the main vein and divided into six "grab" bags; this returned an assay value of .599 oz/ton Au. Another bag of quartz fragments (GR-003) collected within the area in which visible gold was noticed returned an assay value of only 34 ppb Au.

The enclosing intermediate volcanics and volcanoclastics of the showing are north dipping, ranging from 24 to 60 degrees, east-west trending with a distinct layered appearance. A felsic porphyry dyke and a northwest trending diabase dyke occur

Edwards Mine – Surface Plan



Composite Longitudinal Section (looking North)



THUNDER SWORD RESOURCES INC.
EDWARDS DEPOSIT EXAMPLE
PROPERTY GEOLOGY MAP
WAWA AREA
MINING DIVISION - SAULT STE. MARIE
FIGURE - 4

immediately to the west. This requires stripping to investigate structural implications.

Open folding exhibited the same north trending, easterly dipping (70 degrees) attitude axial plane and an approximate 36 degree northerly plunge. A weak foliation of the country rock was found to trend southwest and dip 28 to 66 degrees to the northwest.

The showing is comprised of the "main" 20 centimetre (8 in.) quartz vein, a parallel 2 centimetre (.8 in.) quartz vein several centimetres to the immediate south of the main vein and another 2 centimetre (.8 in.) quartz vein 8 metres (26 feet) west of and on strike of the main vein. These veins are opaque and generally fine grained, granular in texture with minor disseminated pyrite and hematite stained in fractures. Tourmaline occurs locally in small amounts. No obvious alteration with the exception of an extremely siliceous east-west trending, northerly dipping structure to the immediate west of the diabase dyke was noted which requires investigation.

South of the showing approximately 35 metres (115 ft.), numerous exposures of fine grained, foliated altered rock probably gabbroic or intermediate volcanics occur. An east-west trending quartz veinlet with a trace of gold, 23 ppb, was encountered here. Ironstone float was also found here. Northeast of the showing approximately 50 metres (165 ft.), a barren 20 centimetre (8 in.) wide brittle, northeast trending quartz vein was discovered. Southwest, approximately 15 metres (49 feet), a coarse grained leucocratic, porphyry dyke of undetermined width intrudes the gabbro. To the west, approximately 60 metres (197 ft.) a major NNW-SSE trending ravine was noted within which a 360 metre long (1,181 ft.), lake exists. Prospecting found the existence of carbonated, brecciated, pyritiferous volcanic rock. No rock outcrops exist within 100 metres (328 ft.) north of and 200 metres (656 ft.) east of the showing.

In 1989 Noranda Exploration Company Ltd. was included within the option with Central Crude Ltd. Listed below is a description

of mineralization encountered and descriptions of the areas trenched.

Three significant occurrences were found within the eastern part of the Oil City Property.

The first is a zone of sheared diorite hosting at least four conformable quartz veins ranging from 10 to 25 cm width as well as several smaller conformable veins (Skyhook Showing). This is located roughly 50m south of the contact between the diorite and a mafic volcanic unit to the north.

The quartz has a sugary texture due to re-crystallization, and shows strong limonitic staining and trace amounts of pyrite. The strike of the shear zone is roughly 30 degrees; the dip is roughly 65 degrees to the northwest and the zone is from six to ten metres in width. Its strike length is undetermined due to the limited surface exposure. However, similar quartz-bearing shear zones have been seen roughly along strike length approximately 200m away from the occurrence both to the NE and the SW. Assays of samples from this occurrences were insignificant.

The second occurrence is located within a large lineament, easily identified by the presence of a deep, narrow gorge, trending at 330 degrees (Siggy Occurrence). A small stream flows along its base. The centre of the lineament is strongly brecciated, regardless of local lithology, with strong epidote, hematite, and potassic alteration along stringers. Potassic alteration of the feldspar grains has also occurred within the host rock. Local carbonate, chlorite and sericitic alteration also occurs. The alteration zone extends for roughly 100m on either side of the brecciated core.

At roughly 106+75N, along flagged line 149E, there is a strongly brecciated zone with quartz-carbonate-hematite injection along fractured surfaces. Locally, the quartz is abundant, with weak to moderate pyrite mineralization, and extensively fractured.

The adjacent rock is strongly silicified, with moderate amounts of fine grained pyrite mineralization. Numerous small

quartz "splays" are visible in outcrops roughly 10m to the west. The highest assays returned in this vicinity was 2.34 g/t Au.

A region of small, roughly parallel shear zones extends from L146E to L142E between 105+50N and 105+00N. Many of these zones host small conformable quartz veins with limonitic alteration and pyrite mineralization both within the quartz and the host rock. No significant assays were returned from this area.

The third occurrence is known as the VG showing which consists of a 2-10cm wide gold bearing quartz vein within sheared gabbro/diorite. The shear zone has been traced for approximately 200 metres and is located in the eastern portion of the property.

6.2 TRENCH GEOLOGY

VG Showing

The VG vein is hosted by chlorite schist in a linear zone of sheared gabbro/diorite. The VG vein appears to have been the first vein explaced along this structure and was folded and disrupted by the later intrusion of felsic dykes and barren quartz veins accompanied by further shearing.

In the area of the original showing quartz-carbonate alteration is evident probably associated with the intrusion of a later felsic dyke. A fine grained sericite-feldspar schist becomes more common along the eastern extension of the zone.

The shear zone itself is very linear having been followed along a strike length of 200m at azimuth 70 degrees. The zone is generally expressed by a topographic low with massive prophyritic gabbro exposed to the north and a foliated gabbro with amphibolitic and prophyritic bands exposed to the south. The massive prophyritic gabbro generally dips steeply to the north (50-80 degrees) while the banded gabbro is more shallowly dipping at 20-50 degrees north. The shear zone dips between 45 and 80 degrees north.

A total of 94 samples, mainly rock chip, were taken in the six trenches excavated along and across strike.

Significant assays have been received from samples taken along the VG vein up to 30 g/t, up to 114 g/t previously). However in

the area of the original showing thicknesses range from 2 to 20cm with the vein fading into a chlorite schist stringer zone exposed within the trenches. Sampling of other veins and alteration in the zone has generally failed to produce encouraging results. One trench 90m to the east exposed a well mineralized quartz vein (1-5% py, 1% cpy) 40cm to 50cm wide in a chlorite schist/sericite schist zone up to 3m wide. This is the widest known occurrence of the zone however trenches 45m to the west and 35m to the east failed to reveal any significant quartz veining and the width of the shearing is decreased to 1m or less. The last trench completed to the east exposed only a 20cm chloritic shear.

Skyhook Showing

Discontinuous quartz veins occur in a discreet zone 2 to 3m wide, exposed along 50m hosted in porphyritic mafic volcanics. Veins vary from 1 to 30cm wide with 1-3% py, minor cpy, asp, and are associated with localized weak hematite, epidote, and potassic alteration. Orientation of the zone is fairly consistent striking at about 30 degrees and dipping 60 degrees north.

A sheared contact with diorite occurs within 10m to the south of the zone. The diorite is generally massive, equigranular with weak foliated structures.

A total of 13 samples were taken in a 100m long trench excavated across strike of the original exposure. Sampling was a combination of chip and grab.

An attempt was made to follow the Skyhook zone along strike initially. However, the quartz stringers appeared to terminate near the last point of previous trenching and merged with a zone of weak carbonate alteration. No continuation of the zone was evident in the across-strike trench completed 20m downstrike (south-west). A weak alteration zone with minor quartz and carbonate veinlets with 1% py, minor cpy may represent the extension of the target in the across-strike trench. A sheared contact with the diorite approximately 10m to the south does not appear to host any significant veining or mineralization. Minor shears and quartz

veining trending sub-parallel to the Skyhook occur throughout the exposed section in the porphyritic mafic volcanics and the diorite.

6.3 DIAMOND DRILLING

In December 1989, Noranda drilled two holes to investigate the VG Showing. Listed below is a description of their findings.

A diamond drill program was conducted on the property from December 10 to December 15, 1989. a total of 416 ft. of AXT core was recovered from 2 holes. The core was logged and split, and is currently stored at Cameron Lake and at the drill site. Selective splitting was done on zones of alteration, mineralization, shearing, etc., with samples shipped to Warnock Hersey Laboratories in Winnipeg where analyses for gold were completed using fire assay techniques. The purpose of this drill program was to test the continuity of the visible gold showing at depth.

The predominant rock type in the vicinity of the gold showing is a weakly sheared, medium grained diorite. The diorite-mafic volcanic rocks, east-west trending contact is about 15m south of the showing exposed by surface trenching. Several small, conformable units of intermediate volcanic flows, as well as small mafic to intermediate dykes were noted. Most rock types are affected by narrow, weak to intense silicification.

Measurements of foliation angles to core axis indicated a general east-west trending and moderately north dipping lithological units. However considerable abrupt changes of foliation make it difficult to determine orientation of the shear zones.

The present drilling program revealed three moderately north dipping shear zones. The most northerly shear zone consists of sheared diorite with chloritic alteration and minor quartz stringers. The second shear zone which was the target of the drill program is localized in intermediate volcanic rocks associated with minor quartz veining. The third zone only intersected in hole OC-1, consists of sheared intermediate to mafic volcanic flows with a quartz-rich section approximately 16 inches thick. The later is

associated strong epidote and chlorite alteration and about 5% sulphide mineralization in the form of chalcopyrite, pyrite, and pyrrhotite, (area sampled by the author).

Both holes Oc-1 and OC-2 intersected the weakly sheared target visible gold zone in intermediate flows with chlorite, biotite, traces of sericite alteration and quartz stringers. But analyses of the core yielded anomalous gold values of only 0.34 and 0.51 gpt, respectively. The gold values obtained in the surface quartz vein do not appear to extend to any depth. Hole OC-1 intersected the zone at 23.6m below surface and OC-2 at 55.0.

6.4 PAST GEOLOGICAL SURVEYS

Geological surveying and mapping was conducted by H. Ferderber Geophysics Ltd. by the author during October, 1994. The survey concentrated in the areas which comprise the 4 gold showings, intense structural deformation and strong alteration-mineralization. Mapping was performed at a scale of 1 inch equals 100 feet and channel/grab/core samples analyzed for gold in ppb. An E-W base line was established using the claim post #1 of claim 1037341 for a zero reference point. All geological traverses used the base line for position placement.

Concurrent with mapping, sampling was carried out over quartz veins, silicified zones, structurally deformed zones and sulphide enriched areas. Old workings and drill hole collars were located, as along with drill core left on sight. Rock core description, assays and type of samples are presented in Appendix 1.

In the area of the Creek Occurrence (Siggy) (Map G.1) on the west side on the N-NW linear lake-river system an area of intense brecciation, silicification, alteration and sulphide enrichment was encountered. Mineralization consisted mainly of 1-20% fine disseminated pyrite with some breccias containing 2-4% chalcopyrite and malachite. Sample 9763 which was a breccia as described above assayed 3760 ppm Cu. Other samples of breccia zones with carbonate and epidote alteration returned assays of 220, 10, and 10 ppb Au respectively. In the VG Occurrence area all trench workings were

mapped. No samples were taken of the trenches due to the great number previously taken by Dominion Explorers and Noranda.

To the west of the VG Occurrence and on strike of the main mineralized quartz vein system, 2 quartz veins were uncovered which are thought to represent the western extension. Quartz vein sample 9769 assayed 10 ppb. Again on strike to the west in the creek breccia zone area, sample 9751 assayed 220 ppb Au and may be related to the VG Occurrence.

To the south of the VG Occurrence various mineralized areas were uncovered near the intrusive/mafic volcanic southern contact. Sample 19503 of sheared hornblende-biotite granodiorite with pyrite and chalcopyrite mineralized assayed 20 ppb Au and 370 ppm Cu.

To the north at the Skyhook Occurrence multi-quartz veins, 2 inches to 2 feet were observed. Sample 9771 located in a rusty, strongly sheared intermediate metavolcanic returned values of 210 ppb Au.

The Noranda drill core left on site was viewed and two samples taken from Hole OC-1. Sample 9775 from 194-196.5 ft. (2.5 ft.) of a weakly sheared chloritic felsic volcanic with 1-5% pyrite and 1% chalcopyrite assayed 30 ppb Au. Sample 9775 from 196.5 to 198.5 ft. (2.0 ft.) was a continuation of the above described unit and returned an assay of 10 ppb Au.

Two other sections of core from OC-2, with unknown footage, returned nil values.

In 1996 the title of the Pipe Lake Property holding was transferred to the current owners Thunder Sword Resources Ltd.

7.0 GEOLOGICAL SURVEY

On July 22, 1998 the author drove from Val D'Or, Quebec to Wawa, Ontario to conduct a geological investigation on Thunder Sword's Pipe Lake Property. Due to inclement weather on July 23, 1998 the property visit had to be postponed until the following day. On July 24, 1998 the author employed the services of Northern Mountain Helicopters Inc. based out of Marathon, Ontario. The helicopter used was a Jet Ranger II.

The purpose of this trip was to investigate 6 on land, weak-moderate Airborne Geophysical Electromagnetic In-Put anomalies and to explain their cause, (See Figure 5 and 6).

An explanation of the cause for each geophysical response was found and is explained below under the heading of each site visited, (See Figure 7).

SITE -1

Site - 1 is a Category 3 Electromagnetic In-Put anomaly located in the southwest part of the property on claim 1037360. The area traversed was surrounding a topographic low which contains swamps and a small lake. The cause of this anomaly was a diabase dyke 15 metres wide striking west-southwest with a vertical dip. The dyke is equigranular, medium grained, with 10-25% magnetite and 5% epidote. The weathered surface was buff in color and black on the fresh broken surface. No visible mineralization was seen. The magnetite content of the diabase dyke is in large enough concentrations to be the cause of the electromagnetic conductor. Metagabbro's were found on the contact of the both sides of the dyke with well developed chill margins. No visible mineralization was seen at the contacts.

SITE -2

Site - 2 is a Category 5 Electromagnetic In-Put anomaly located in the southwest part of the property on claim 1037356. The area is on the edge of Pipe Lake and the traversed line was along the shoreline next to a cliff base and around the backside on top of the cliff. The cause of this anomaly was another diabase dyke with the same attitude and composition as described above. The metagabbro contacts had well developed chill margins and no visible mineralization was seen in the diabase dyke or gabbro. The concentration of magnetite within the dyke was great enough to cause the electromagnetic anomaly.

SITE -3

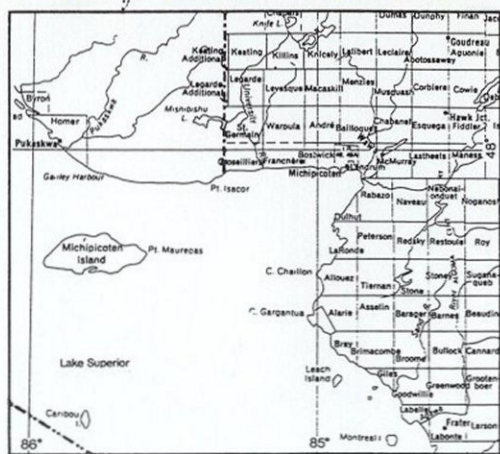
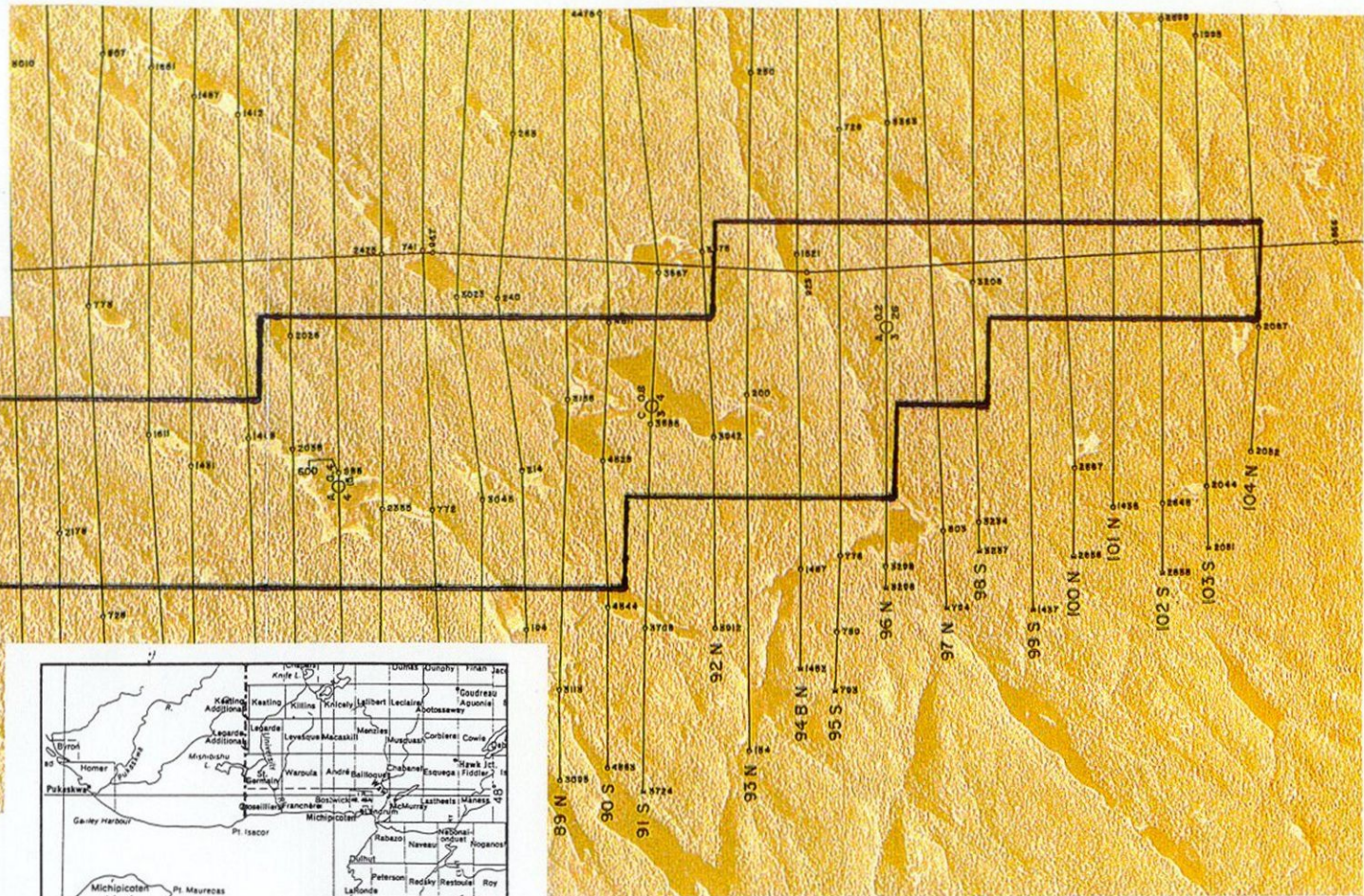
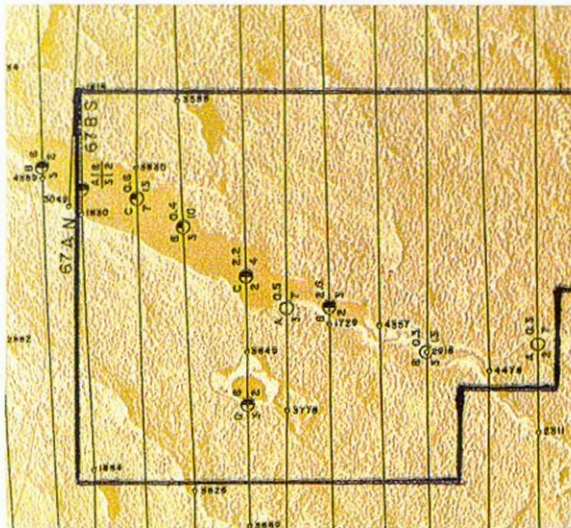
Site - 3 is a Category 5 Electromagnetic In-Put anomaly located in the southwest part of the property on claim 1037355. The area traversed was low lying swamp ground with the occasional bed

Category

- 1: 735 Hz In-phase \geq 20 ppm
- 2: $6 \leq$ 735 Hz In-phase < 20 ppm
- 3: $2 \leq$ 735 Hz In-phase < 6 ppm
- 4: 3220 Hz In-phase \geq 6 ppm
- 5: 3220 Hz In-phase < 6 ppm

200 Magnetic Correlation

Anomaly Letter B | 2.2 Apparent Conductance (siemens)
 In-phase Amplitude 2 | 4 Quadrature Amplitude (ppm)



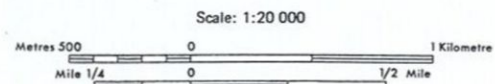
- Legend**
- Flight line, number and direction ----- 20 S
 - Control point ----- 2498
 - Uncontrolled point ----- 2795
 - Mean EM and Mag sensor altitude above terrain ----- 30 m
 - Mean flight line spacing ----- 200 m
 - Magnetic tie line ----- MTL

Ontario Geological Survey
 Geophysical/Geochemical Series
 MAP 80481

Homer Township Area Eastern Part

Airborne Electromagnetic Survey

District of Thunder Bay



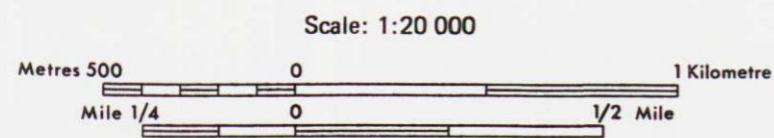
NTS Reference: 41 N/13, 42 C/4
 ODM-GSC Aeromagnetic Map: 2164 G, 2165 G
 ODM Geological Compilation Map: 2220 © OMNR-OGS 1980.

THUNDER SWORD RESOURCES INC.
PIPE LAKE PROPERTY
AIRBORNE EM - INPUT SURVEY MAP
PILOT HARBOUR AREA
 MINING DIVISION - SAULT STE. MARIE
FIGURE - 5

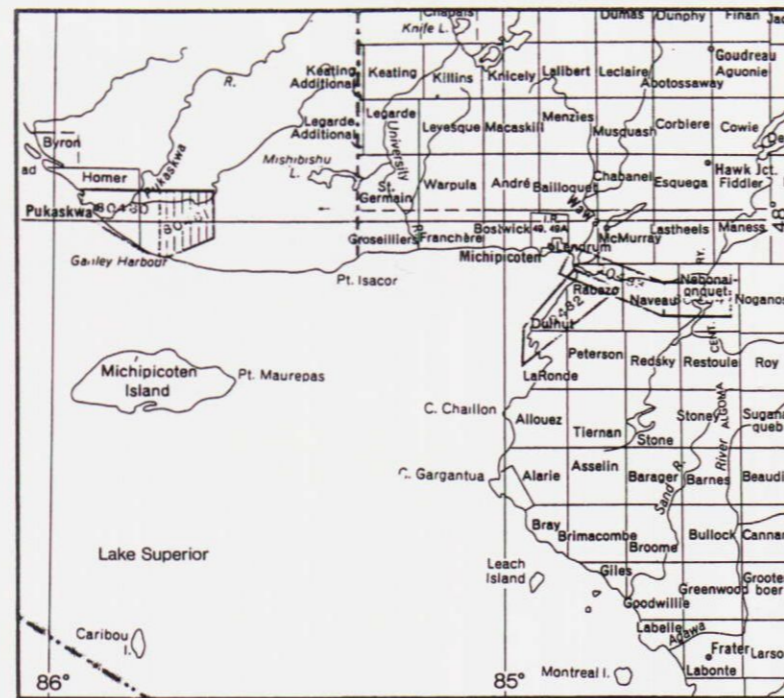
Homer Township Area

Eastern Part

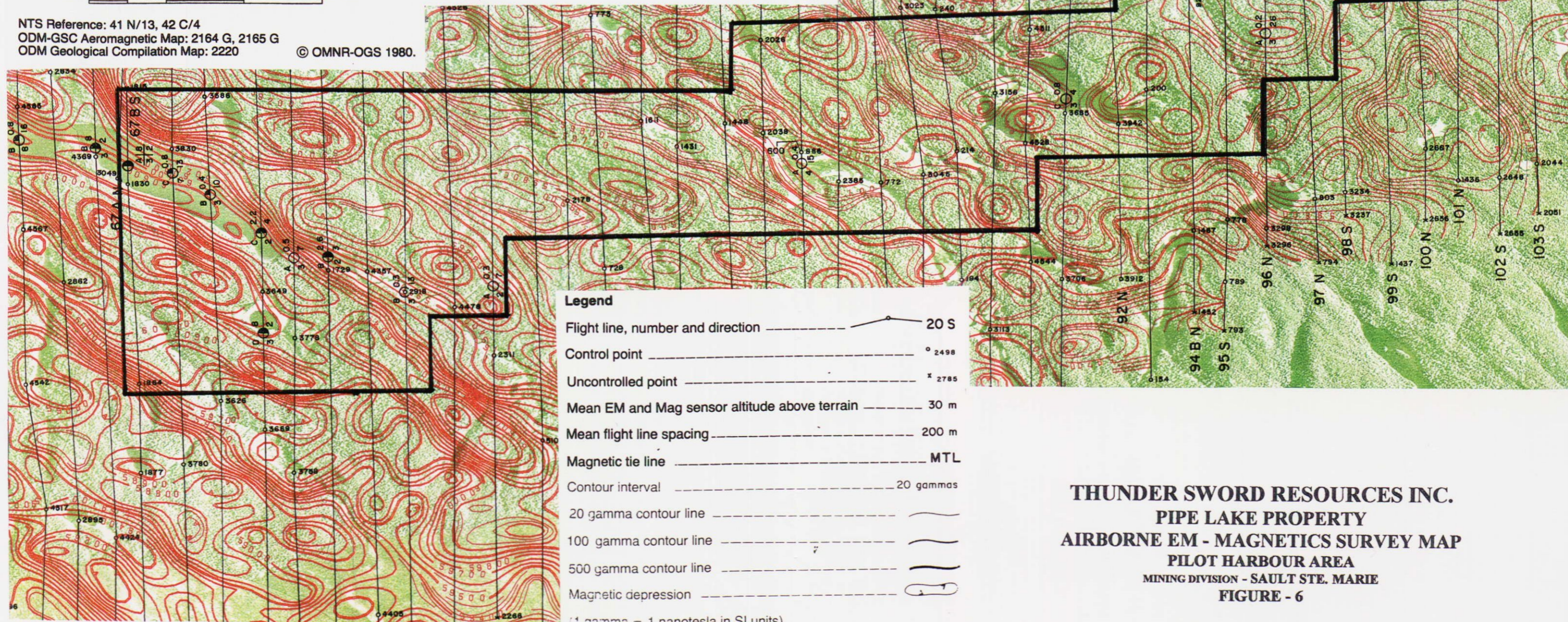
Airborne Electromagnetic Survey
 Total Intensity Magnetic Survey
 District of Thunder Bay



NTS Reference: 41 N/13, 42 C/4
 ODM-GSC Aeromagnetic Map: 2164 G, 2165 G
 ODM Geological Compilation Map: 2220 © OMNR-OGS 1980.



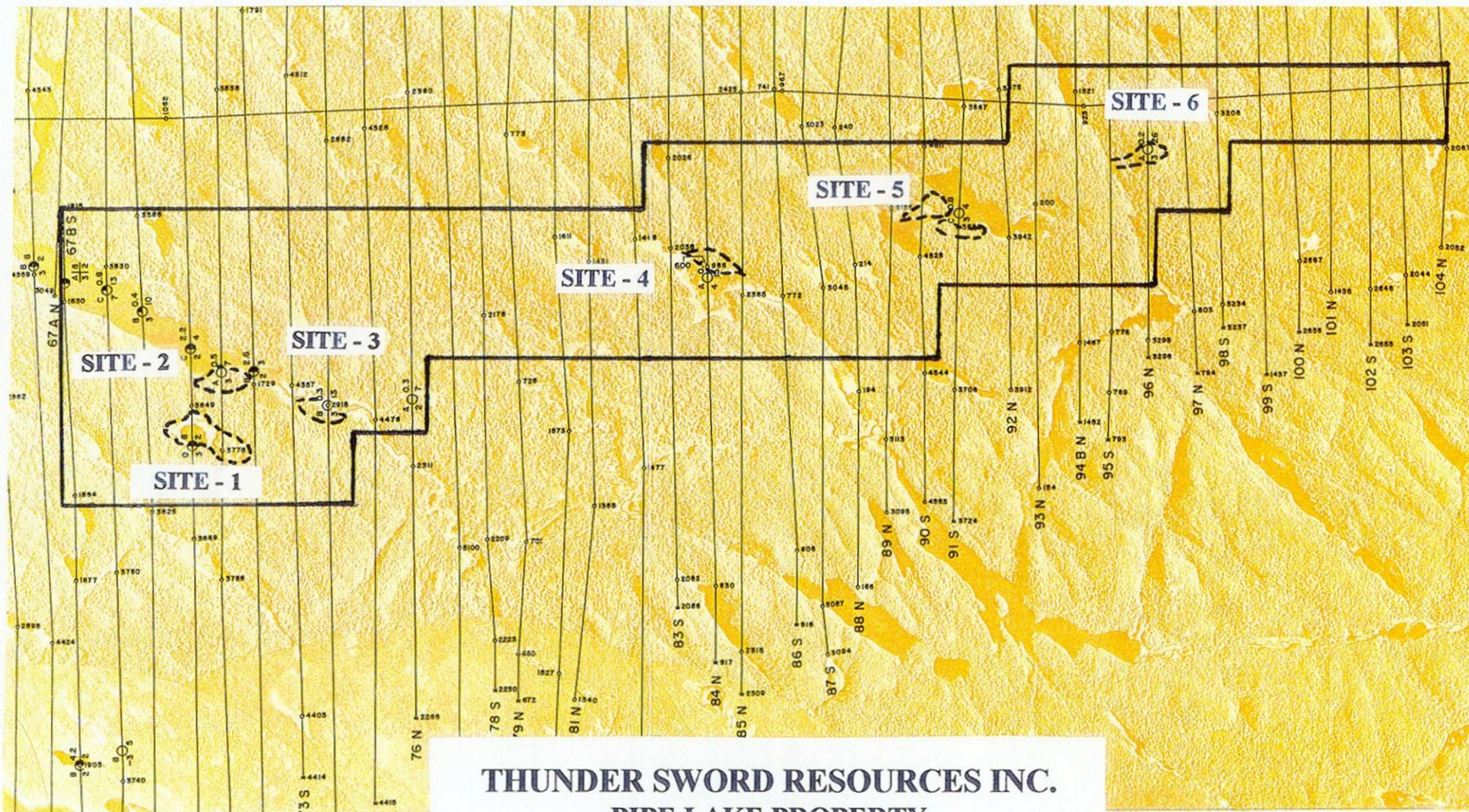
Index Map Scale 1:1 216 512



Legend	
Flight line, number and direction	----- 20 S
Control point	o 2498
Uncontrolled point	x 2785
Mean EM and Mag sensor altitude above terrain	----- 30 m
Mean flight line spacing	----- 200 m
Magnetic tie line	----- MTL
Contour interval	----- 20 gammas
20 gamma contour line	-----
100 gamma contour line	-----
500 gamma contour line	-----
Magnetic depression	-----

(1 gamma = 1 nanotesla in SI units)

THUNDER SWORD RESOURCES INC.
PIPE LAKE PROPERTY
AIRBORNE EM - MAGNETICS SURVEY MAP
PILOT HARBOUR AREA
 MINING DIVISION - SAULT STE. MARIE
FIGURE - 6



THUNDER SWORD RESOURCES INC.
PIPE LAKE PROPERTY
PROPERTY TRAVERSE LOCATIONS
WITH SITE NUMBERS MAP
PILOT HARBOUR AREA
MINING DIVISION - SAULT STE. MARIE
SCALE - 1:20,000
FIGURE - 7

LEGEND
 TRAVERSE LINES - - - - -
 SITE LOCATIONS ○

rock exposure. The cause of this anomaly was a diabase dyke with the same attitude and composition as described above. This anomaly as represented by the diabase dyke is on strike with Site-2 and has the same attitude thus it is the author's opinion that it is the continuation of the same unit. Due to the lack of outcrop the contacts were not visible. No visible mineralization was seen. The concentrations of magnetite present are great enough to cause an electromagnetic anomaly.

SITE -4

Site -4 is a Category 5 Electromagnetic In-Put anomaly located in the central part of the property on claim 1037327. The area traversed was along a lake shore at the base of a ridge and back along the top of the ridge to the helicopter. This anomaly was explained by the contact of a metagabbro with andesite. The andesite weathered buff white, black on a fresh surface, aphanitic and homogenous and contained nil sulphides. The metagabbro was weathered green to buff, dark green on fresh surface, aphanitic with euhedral hornblende phenocrysts within a melanocratic ground mass and no visible mineralization. Along the contact small pods or concentrations of magnetite were seen which gave a good response to a pocket magnetic. The contact was brittle with no shearing observed. This electromagnetic anomaly can be explained by the magnetite concentrations along the contact between the andesite and the metagabbro.

SITE - 5

Site - 5 is a Category 5 Electromagnetic In-Put anomaly located in the central eastern part of the property on claim 1037336. The two areas traversed were along the shore lines at the base of ridges between a narrow inlet and then back along the top of the ridges to complete the loop. The contact between a mafic volcanic lapilli tuff and a felsic dacitic flow with minor interbedded felsic lapilli tuffs was observed. The contact had an attitude of 70 degrees azimuth dipping steeply to the north and was brittle. The mafic volcanic lapilli tuff was weathered green - buff, dark green on a fresh surface, aphanitic ground mass with

rounded mineral crystals, (occasional magnetite), and volcanic grains. The felsic dacitic flow weathered a buff brown, olive green on fresh surface and massive. The felsic lapilli tuff weathered buff, light green on fresh surface with feldspar phenocrysts, mafic grains and lesser rounded quartz eyes. No visible mineralization was seen in any unit or at the contact. It is thought that the electromagnetic anomaly maybe caused by a high concentration of magnetite or accessory minerals contained in the mafic volcanic lapilli tuff along with a concentration of the same at or near the contact. The author did not view this and as such this is only a possible explanation. Due to the weak amplitude of the anomaly this type or amount of concentrations of minerals at the right place may cause such an anomaly.

SITE - 6

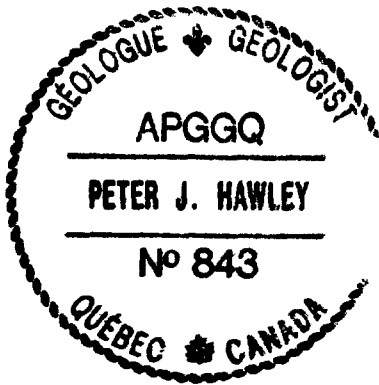
Site - 6 is a Category 5 Electromagnetic In-Put anomaly located in the eastern part of the property on claim 1037341. The area traversed was from the ridge floor upwards to the top of a plateau and back. This anomaly corresponds with the exact location of the VG Showing. The VG Showing contains a vein hosted by a chlorite schist in a linear zone trending 70 degrees azimuth, of sheared gabbro. Alteration present is mostly quartz - carbonate and the showing can be viewed over 200 metres in a trenched - stripped area. The contact between the northern massive prophyritic gabbro which dips steeply north and a foliated gabbro shallow dipping with amphibolitic and prophyritic bands in the south. Mineralization present is pyrite, chalcopyrite and minor magnetite along the contacts of the two gabbroic units. No samples were taken due to the past extensive sampling and mapping programs. The electromagnetic anomaly can be explained by the gabbroic units and the sulphide concentration found along the shear contact and within the vein unit.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The July, 1998 geological property visit has explained the causes of the six airborne electromagnetic In-Put geophysical

anomalies. Unfortunately Sites 1-5 were caused by either diabase dykes or concentrations of magnetite with or at the contact of lithological units. Site 6 was found to represent the VG Showing which is a gold bearing quartz vein exposed for over 200 metres on surface. The results show that this type of investigation was warranted and has resulted in proper explanations of the anomalies.

It is the authors recommendation that no other follow up work be performed in the area of anomaly Sites 1-5. Further evaluation of the property should be considered over the entire property as in its true overall potential has never been properly evaluated. This is especially true for the central and western sectors of the property. Strong consideration should be given to prospecting over this area and the contacts between units closely examined. The results of this inexpensive exploration may warrant a more detailed exploration program on newly discovered areas.



Peter J. Hawley

July 29, 1998
Val d'Or, Quebec.

Peter J. Hawley, B.Eng., B.Sc.,
P. Geol., APGGQ

adjoining
contiguous link

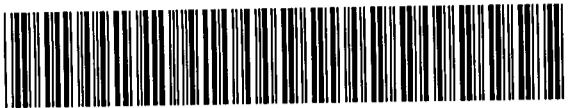
Ministry of
Northern Development
and Mines

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
19850-00051
Assessment Files Research Imaging

FINAC REUSED



41N13NE2001 2.18711 PILOT HARBOUR 900

Subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the Act, you may view the assessment work and correspond with the mining land holder. Recorder, Ministry of Northern Development and Mines, 8th Floor.

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

2.18711

Name <u>THUNDER SWORD RESOURCES INC.</u>	Client Number
Address <u>SUITE 6031 TRANQUILLE PLACE</u>	Telephone Number <u>(604) 275-8222</u>
<u>RICHMOND, B.C. V7C-2T2</u>	Fax Number <u>(604) 274-5600</u>
Name	Client Number
Address	Telephone Number
	Fax Number

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs) Physical: drilling, stripping, trenching and associated assays Rehabilitation

Work Type <u>GEOLOGICAL SURVEY</u>	Office Use
Dates Work Performed From <u>24</u> <u>07</u> <u>1998</u> To <u>24</u> <u>07</u> <u>1998</u>	Commodity
Global Positioning System Data (if available)	Total \$ Value of Work Claimed <u>71540</u>
Township/Area <u>PILOT HARBOUR AREA</u>	NTS Reference <u>JUL 30 1998</u>
M or G-Plan Number <u>NTS 41N/13</u>	Mining Division <u>GEOCHEMISTRY ASSESSMENT OFFICE</u>
	Resident Geologist District <u>South St. Marie</u>

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name <u>PETER J. HAWLEY</u>	Telephone Number <u>(819) 824-6154</u>
Address <u>169 PERREAULT AVE, VAL D'OR, PQ. J9P-2H1</u>	Fax Number <u>(819) 824-8460</u>
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

4. Certification by Recorded Holder or Agent

I, PETER J. HAWLEY (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent <u>Peter J. Hawley</u>	Date <u>July 29, 1998</u>
Agent's Address <u>169 PERREAULT AVE, VAL D'OR, PQ. J9P-2H1</u>	Telephone Number <u>(819) 824-6154</u>
	Fax Number <u>(819) 824-8460</u>

Document not to 10/1000

Revised July 31 1998 \$24,000.00051.1

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$ 4,000	0	\$4,892
1 1037 341	16 ha	\$1,251	N/A	\$1,200	\$51
2 1037 336	16 ha	\$1,251	N/A	\$1,200	\$51
3 1037 327	16 ha	\$1,253	\$400	\$400	\$853
4 1037 355	16 ha	\$1,251	N/A	\$1,200	\$51
5 1037 360	16 ha	\$1,251	N/A	\$1,200	\$51
6 1037 361	16 ha	\$1,253	N/A	\$1,200	\$53
7					
8					
9					
10					
11					
12					
13					
14					
15					
Column Totals		\$7,510	\$400	\$6,400	\$710

2. 187 11

1. PETER J. HAWLEY, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorder Holder or Agent Authorized in Writing: Peter J. Hawley Date: July 31, 1998

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

RECEIVED
 JUL 31 1998
 from the Bank first
GEOSCIENCE ASSESSMENT OFFICE

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

JUL 31 '98 11:41 H FERDERBER GEO. 002 P03
 work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W9850..00051

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg TB 7827	18 ha	\$28,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$ 4,000	0	\$4,892
1 1037 323	16 ha	∅	‡ 400 /	∅	∅
2 1037 325	16 ha	∅	‡ 400 /	∅	∅
3 1037 328	16 ha	∅	‡ 400 /	∅	∅
4 1037 329	16 ha	∅	‡ 400 /	∅	∅
5 1037 331	16 ha	∅	‡ 400 /	∅	∅
6 1037 332	16 ha	∅	‡ 400 /	∅	∅
7 1037 333	16 ha	∅	‡ 400 /	∅	∅
8 1037 334	16 ha	∅	‡ 400 /	∅	∅
9 1037 335	16 ha	∅	‡ 400 /	∅	∅
10 1037 346	16 ha	∅	‡ 400 /	∅	∅
11 1037 347	16 ha	∅	‡ 400 /	∅	∅
12 1037 353	16 ha	∅	‡ 400 /	∅	∅
13 1037 359	16 ha	∅	‡ 400 /	∅	∅
14 1037 399	16 ha	∅	‡ 400 /	∅	∅
15 1037 400	16 ha	∅	‡ 400 /	∅	∅
Column Totals		∅	‡ 6,000	∅	∅

2. 18711

I, PETER J. HAWLEY, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Record Holder or Agent Authorized in Writing: Peter J. Hawley Date: July 31, 1998

C. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

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 JUL 31 1998
 1:45
 GEOSCIENCE ASSESSMENT
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Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

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Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

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Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W 9850. OD 851

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number located on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg TB 7827	16 ha	\$20,825	N/A	\$24,000	\$2,825
eg 1234567	12	0	\$24,000	0	0
eg 1234568	2	\$ 8,892	\$ 4,000	0	\$4,892
1 1037401	16 ha	∅	1400	∅	∅
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Column Totals		∅	1400	∅	∅

2. 187 11

I, PETER J. HAWLEY, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

Peter J. Hawley

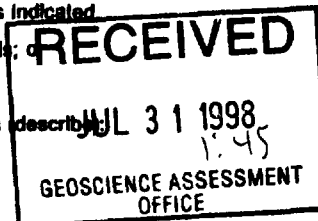
Date

July 31, 1998

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated
- 2. Credits are to be cut back starting with the claims listed last, working backwards;
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows described:



Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp

Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	

Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of work Depending on the type of work, list the number of hours/day worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
FIELD GEOLOGY	1 DAY	{ 400 / DAY	{ 400 ⁰⁰
GEOLOGICAL REPORT	4 DAYS	{ 400 / DAY	{ 1600 ⁰⁰
REPORT COMPILATION	1 DAY	{ 400 / DAY	{ 400 ⁰⁰
2. 187 11			
Associated Costs (e.g. supplies, mobilization and demobilization).			
MOB/DEMORB - 2 DAYS		{ 400 / DAY	{ 800 ⁰⁰
RAIN DAY - STANDBY - 1 DAY		{ 400 / DAY	{ 400 ⁰⁰
TELEPHONE/FAX SERVICE		{ 49.87	{ 49.87
REPORT RELATED SERVICES & COSTS.		{ 702.95	{ 702.95
COURIER SERVICE (x2)		{ 30.00	{ 60.00
Transportation Costs			
	FUEL	{ 98.45	{ 98.45.
1413 Kms.		{ 0.30 / Km.	{ 423.90.
Food and Lodging Costs			
FOOD.		{ 109.81	{ 109.81
LODGING		{ 105.28	{ 105.28
Total Value of Assessment Work			{ 7,509.51

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 3:15
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Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, PETER J. HAWLEY (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

Declaration of Work form as AGENT I am authorized to make this certification.
(recorded holder, agent, or state company position with signing authority)

Signature <i>Peter J. Hawley</i>	Date <i>July 29, 1998</i>
-------------------------------------	------------------------------

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9846
Fax: (877) 670-1555

December 9, 1998

THUNDER SWORD RESOURCES INC.
6031 TRANQUILLE PLACE
RICHMOND, B.C.
V7C-2T2

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

Submission Number: 2.18711

Status

Subject: Transaction Number(s): W9850.00051 Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in **DUPLICATE** to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Bruce Gates by e-mail at gatesb2@epo.gov.on.ca or by telephone at (705) 670-5856.

Yours sincerely,



ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Work Report Assessment Results

Submission Number: 2.18711

Date Correspondence Sent: December 09, 1998

Assessor: Bruce Gates

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9850.00051	1037341	PILOT HARBOUR	Approval After Notice	December 05, 1998

Section:

12 Geological GEOL

The 45 days outlined in the Notice dated October 21, 1998 have passed.

Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

Correspondence to:

Resident Geologist
Sault Ste. Marie, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Peter J. Hawley
VAL D'OR, QUEBEC

THUNDER SWORD RESOURCES INC.
RICHMOND, B.C.

PENN-GOLD RESOURCES INC.
VANCOUVER, BC

Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: December 09, 1998

Submission Number: 2.18711

Transaction Number: W9850.00051

<u>Claim Number</u>	<u>Value Of Work Performed</u>
1037341	723.00
1037336	723.00
1037327	723.00
1037355	723.00
1037360	723.00
1037361	727.00
Total: \$	4,342.00



NOTES

LAND UNDER LAKE SUPERIOR WITHDRAWN FROM STAKING BY ORDER OF COUNCIL, DATED APRIL 30, 1912.

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

Bonley Harbour Wilderness Area withdrawn from staking

La Pointe St. Marie

SMALL POST ZACHARAE T.E.S. NORTH D.C.

LEGEND

- HIGHWAY AND ROUTE NO.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- TOWNSHIPS, RANGE LINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
- LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS, ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATION
- ORIGINAL SHORELINE
- MARSH OR MUDFLAT
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LAND

- TYPE OF DOCUMENT**
- PATENT, SURFACE & MINING RIGHTS
 - SURFACE RIGHTS ONLY
 - MINING RIGHTS ONLY
 - LEASE, SURFACE & MINING RIGHTS
 - SURFACE RIGHTS ONLY
 - MINING RIGHTS ONLY
 - LICENCE OF OCCUPATION
 - ORDER-IN-COUNCIL
 - RESERVATION
 - CANCELLED
 - SAND & GRAVEL
- NOTE: MINING RIGHTS IN PARCELS CANCELLED BY THE LAND ACT, R.S.O. 1914, CAP. 280, SEC. 10.

SCALE: 1 INCH = 200 CHAINS

DATE OF SECTION AREA
DEC 11 1988
PROVINCIAL RECORDS OFFICE - SUBURBAN

PILOT HARBOUR

M.N.R. ADMINISTRATIVE DISTRICT
WAWA
MINING DIVISION
SAULT STE. MARIE
LAND TITLES / REGISTRY DIVISION
THUNDER BAY

Ministry of Northern Development and Mines
Ontario

DATE: JULY 1986
NUMBER: G-2



TRIM TO THIS LINE ALL ROUND