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GEOLOGICAL REPORT
on the
Reeves Joint Venture Property
of
GOLDROCK RESOURCES INC.
and
GLEN AUDEN RESOURCES LIMITED
Reeves, Sewell, Penhorwood and Kenogaming Twps.
Porcupine Mining Division
by
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October, 1987

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TABLE

PAGE

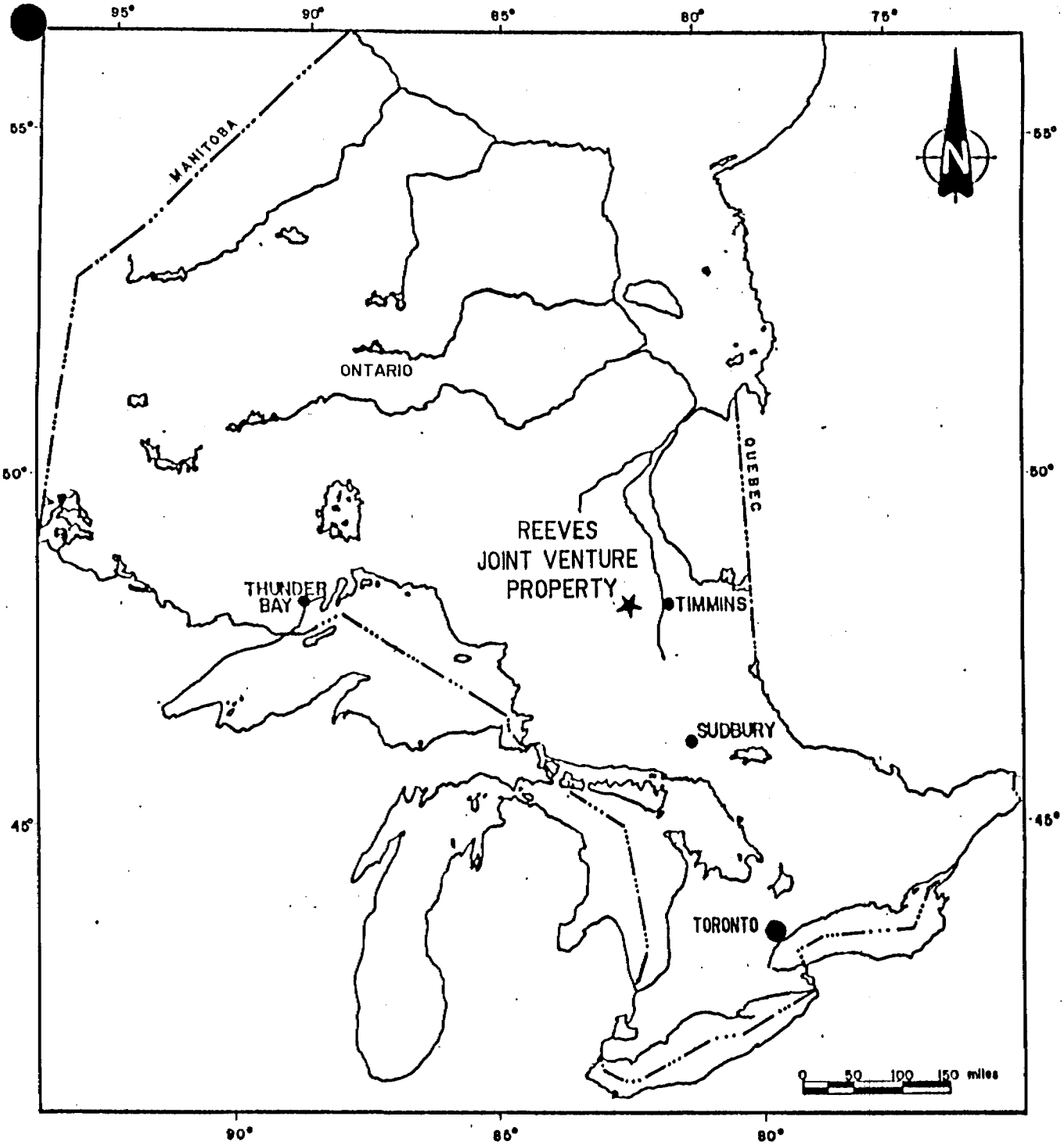
LIST OF FIGURES

INTRODUCTION

Geological mapping was done from May through September, 1987 on the 276 contiguous claims of the Reeves Joint Venture Property situated in Reeves, Sewell, Penhorwood and Kenogaming Townships, Porcupine Mining Division, Ontario. The property is held jointly by Goldrock Resources Incorporated and Glen Auden Resources Limited. Mapping was done by pace-and-compass method, and the accumulated information drafted at 1:2,500 scale. The fundamental objective of the mapping program was to identify any evidence of gold mineralization on the property.

PROPERTY LOCATION AND ACCESS

The Reeves Joint Venture (RJV) property encompasses approximately 4,400 hectares broadly centred on the contiguous four corners of Reeves, Sewell, Penhorwood and Kenogaming Townships, some 55 kilometers west of Timmins, Ontario (Figure 1). It is easily accessed via numerous logging roads branching southwards from Highway 101 which skirts the northern boundary of the property. A map showing the locations of all the claims forming the RJV property accompanies the report (see map envelope).



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC./ GLEN AUDEN RESOURCES LTD. J.V.		
	Title PROPERTY LOCATION MAP Fig.1		
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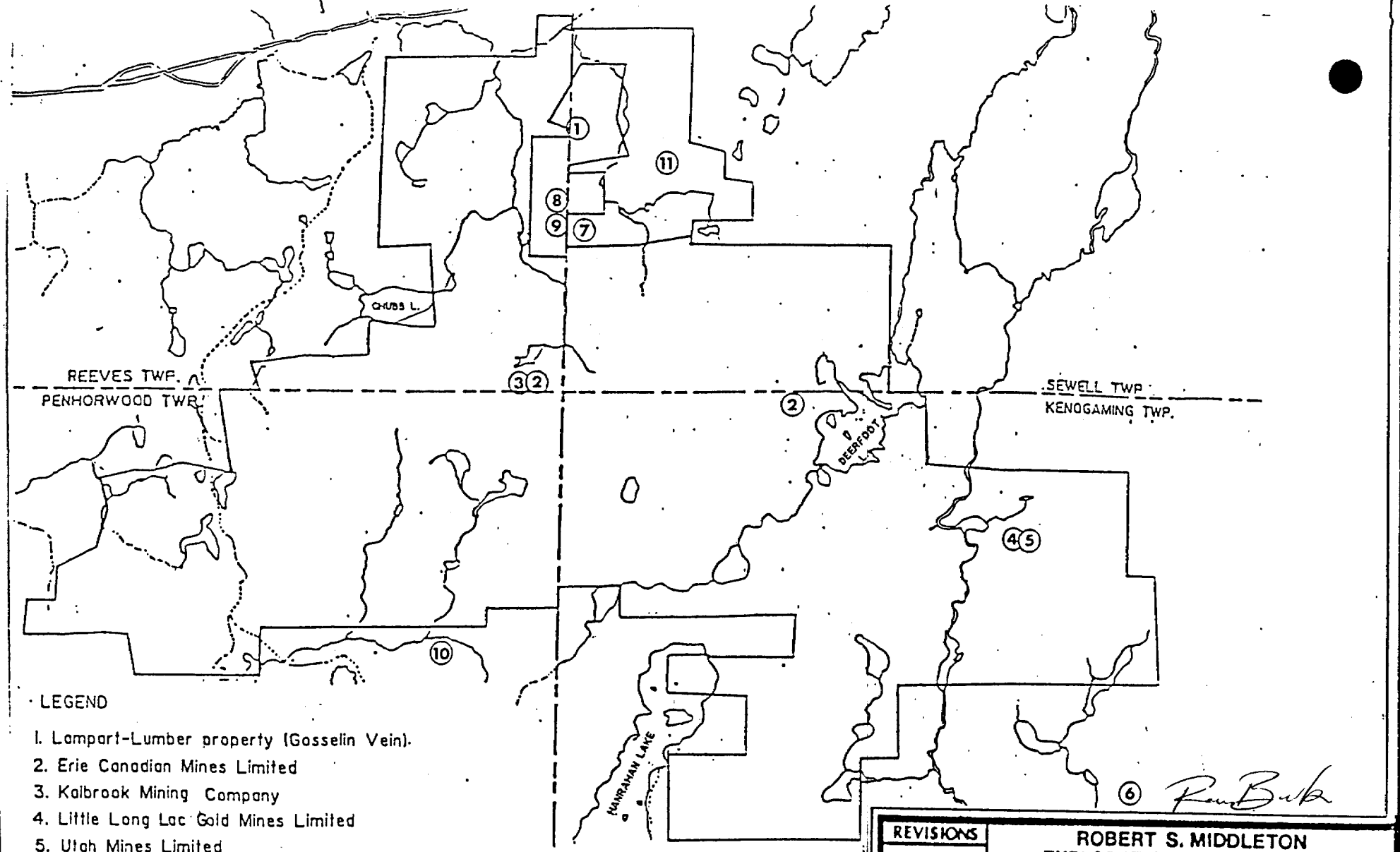
TOPOGRAPHY AND VEGETATION

There is generally little topographic relief on the property. As is common in this area of northeastern Ontario, low ridges are interspersed with broad low-lying areas. There are a number of small lakes on the claims. Deposits of glacial debris including eskers, sand hills and thick boulder tills form some of the more prominent topographic features on the property.

Logging has removed much of the original coniferous and mixed forest cover which has been replaced by secondary growth of poplar, birch and moose maple. Cedar woods are common in low-lying areas. Rock exposures constitute only a few percent of the total area, with the greatest concentration of outcrops occurring in the western part of the property where logging operations have been most recently carried out.

EXPLORATION HISTORY OF THE PROPERTY

Soon after prospectors began to venture westwards from the Porcupine mining camp gold was discovered in a quartz vein presently situated on a four-claim property that straddles the Reeves-Sewell township line (Figure 2), and is surrounded by the northernmost claims of the RJV property (see Lamport-Lumbers Property in Milne, 1972). The showing, referred to as the Gosselin Vein, consists of a north-northeast-striking zone of sheared and carbonatized mafic volcanic rock which hosts



LEGEND

1. Lampart-Lumber property (Gosselin Vein).
2. Erie Canadian Mines Limited
3. Kalbrook Mining Company
4. Little Long Lac Gold Mines Limited
5. Utah Mines Limited
6. Dunvegan Mines Limited
7. Card Lake Mines Limited
8. Texas Gulf Canada Limited
9. Comstate Resources Limited
10. W. Karvinen (Quinterra Resources, Utah Mines)
11. Goldrock Resources Incorporated

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	Title: PREVIOUS EXPLORATION WORK Fig. 2		
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irregular masses of quartz containing minor pyrite, pyrrhotite, chalcopyrite, tourmaline and fuchsite. The altered rock enclosing the quartz is commonly impregnated with disseminated iron sulfides. The quartz-rich zone has been exposed for 800 meters and is locally 15 meters wide.

In 1935, trenching was done on claims staked by M. Therieault and optioned to Erie Canadian Mines Limited, which correspond to the current claims 932074 in the southeast corner of Reeves Township, and 947258 located west of Deerfoot Lake in Kenogaming Township (Figure 2). Trenching in the Reeves Township claim exposes well foliated, carbonatized and sericitized mafic to intermediate volcanic rock. The apparently sheared and altered rock locally contains narrow quartz veins or lenses with moderate amounts of disseminated pyrite in the enclosing schist. Black, pyritic quartz rubble containing visible gold and assaying about 0.14 oz/ton gold was collected from one of these trenches. Milne (1972) reports that in 1946 Kalbrook Mining Company put down 13 diamond drill holes in the vicinity of the "float" trench in the southeast corner of Reeves Township. Apparently no mineralization of economic significance was encountered, although drill logs are not available. The trench west of Deerfoot Lake contains a feldspar porphyry dike intruding foliated mafic volcanic rock with moderate sulfide mineralization spatially associated with quartz stringers in the dike and surrounding

mafic rock. No gold values are reported from this trench.

In 1947, Little Long Lac Gold Mines Limited did geological mapping and drilled about 600 meters in six holes on a 35-claim property located in Kenogaming Township in the southeast corner of the RJV property (Figure 2). Two of the drill holes were targeted on the Nat River iron formation close to an outcrop of banded magnetitie-chert iron formation in contact with a lens of massive pyrite and pyrrhotite up to 1.5 meters in width. The best assay value for the sulfide rock was 0.04 oz/ton gold. In 1972, Utah Mines Limited conducted a magnetometer survey on 22 claims once held by Little Long Lac Gold Mines (Figure 2). Magnetically-responsive iron formation was readily detected, and an asymmetric fold in the unit was interpreted to occur in the northwest corner of RJV claim 949105. No additional work was done by Utah Mines.

Through the 1950's, Dunvegan Mines Limited, originally Hoodoo Lake Mines Limited, held a 126-claim property west of Akweska Lake and south of the RVJ property in Kenogaming Township (Figure 2). Gold associated with sphalerite was discovered in a northwest-trending zone of pyritic, quartz-sericite schist located some 300 meters west of the south end of Akweskwa Lake. Northwest of the gold showing but still south of the RJV property, a large outcrop of strongly serpentinized and carbonatized peridotite was found to contain minor disseminated

iron sulfides with grab samples assaying up to 2.5 percent nickel. In addition to the drilling done on this showing, Dunvegan Mines drilled three holes in altered ultramafic rocks on RJV claims 949096 and 949090 in th southeastern part of the property. No significant mineralization was reported.

An antimony occurrence is located in southwest Sewell Township east of the Gosselin Vein (Figure 2) and was likely discovered by prospectors searching for gold early in the region's exploration history. In 1971, Card Lake Copper Mines Limited staked 16 contiguous claims covering the showing. Small blast pits on the occurrence show it to consist of a 1 to 2 meter wide, northwest-oriented shear zone less than 100 meters in length within pillowed mafic flow rock. Berthierite, an Sb-As sulfide, occurs with minor amounts of copper sulfides and arsenopyrite in the pervasively silicified core of the zone. Nine short holes were drilled into the mineralization, finding it to be of no economic importance. In 1977, Texas Gulf Canada Limited carried out magnetic and electromagnetic surveys as well as geological mapping on a 13-claim property straddling the Sewell-Reeves township line and north of, and including, the antimony showing. While the Sb-mineralization shear zone gives a very weak magnetic and electromagnetic expression, a 3 to 4 meter wide graphitic argillite unit containing disseminated pyrite and minor chalcopyrite was readily outlined. Apparently, Card Lake

Copper Mines drilled this graphitic unit in 1972 and intersected 5 meters of 25 to 65 percent pyrrhotite and pyrite. In 1984, Comstate Resources Limited undertook geological mapping and rock sampling on five claims which also straddled the Reeves-Sewell township line and included the antimony showing. Trace element and, specifically, gold values proved to be unremarkable.

Less than 500 meters south of the RJV property boundary in Penhorwood Township, W. Karvinen identified outcrops of highly carbonatized ultramafic rock in contact with a reddish coloured, quartz-porphyritic rock to the south and cut by narrow feldspar porphyry dikes (Figure 2). Locally there is extensive quartz veining, silicification and pyritization where grab samples with low gold contents have been collected. Also in the immediate area is a quartz-ankerite vein with about 10 percent pyrite in the form of narrow massive bands. A maximum gold value for samples of the vein rock is 665 ppb. Claims covering these outcrops were optioned from Karvinen by Quinterra Resources in 1983 and then in 1986 by Utah Mines Limited. Utah Mines conducted limited VLF-EM, horizontal-loop EM and induced polarization surveys on the claims.

In 1984, Dighem Geophysics Limited was contracted by MPH Consulting Limited for a Dr. Leo Shack to do an airborne magnetometer and electromagnetic survey over a 27-claim property held by Mr. Shack in north-central Kenogaming Township. As a

whole, the airborne survey covers much of the area presently forming the RJV property, and constitutes valuable information for the current exploration program.

In 1986, Goldrock Resources Inc. carried out magnetic and VLF-EM surveys in addition to geological mapping and rock sampling on 18 contiguous claims in west-central Sewell Township and two isolated claims located along the southern boundary of Reeves Township. The 18 claims cover the antimony showing in Sewell Township and surround the patented claims on which the Gosslin Vein occurs. All of the 20 claims have been incorporated into the RJV property.

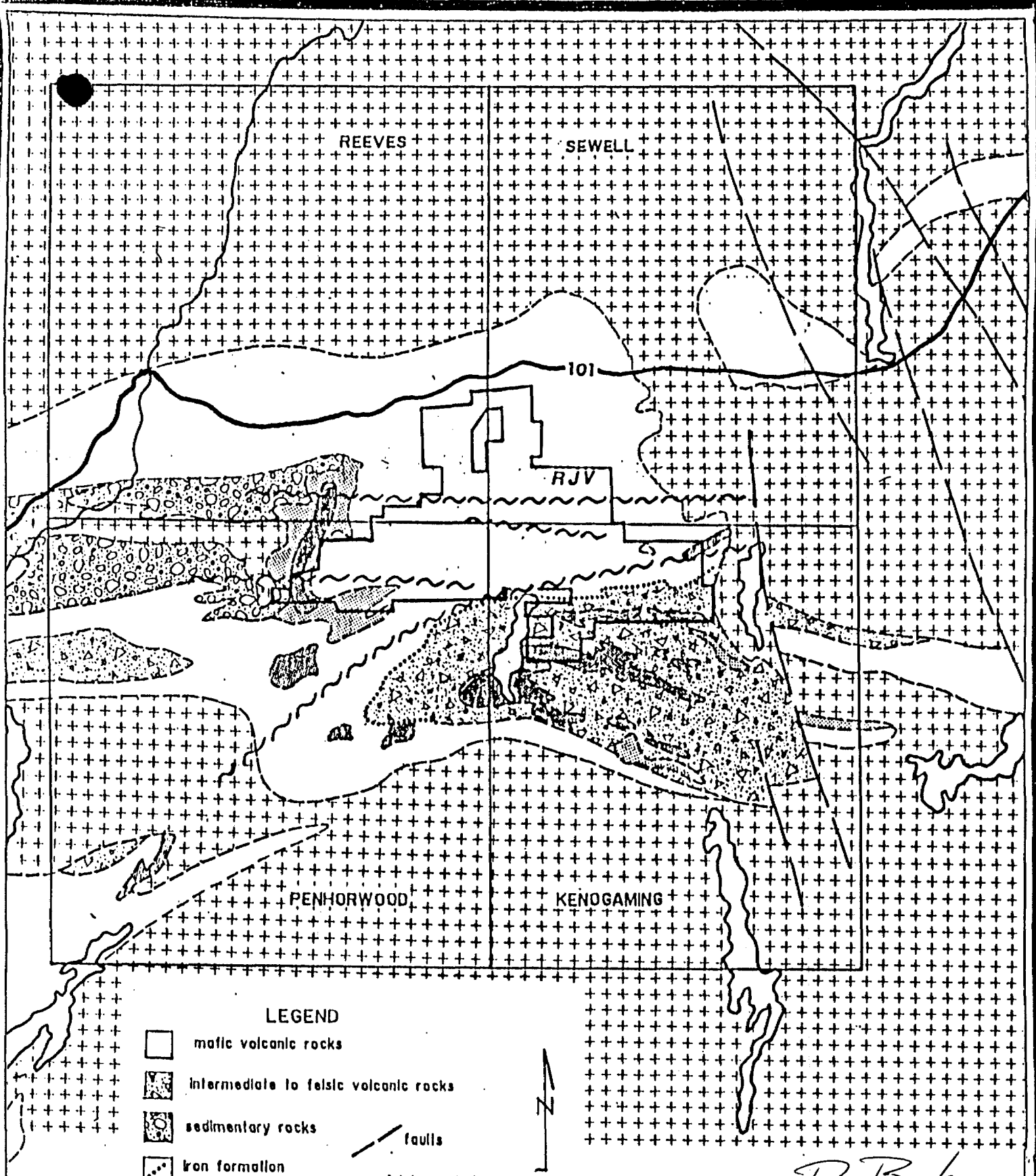
A geological report on the northern part of the Swayze greenstone belt, with particular attention given to the area of the contiguous corners of Reeves, Sewell, Kenogaming and Penhorwood Townships, has been prepared by D. Pyke (1987) for the holders of the RJV property. Based on field examination and whole rock chemical analyses, Pyke compares the volcanic sequences on the RJV with the Tisdale and Delora Group volcanic rocks of the Timmins mining camp.

Finally, the preliminary stages of a lithogeochemical study being conducted on the rocks of the RJV property is reported on by Burk (1987).

REGIONAL GEOLOGY

The Reeves Joint Venture property lies in the northern part of the Archean Swayze Greenstone Belt (Figure 3) which comprises typical Archean supracrustal sequences of mafic submarine flows with less abundant intermediate to felsic volcanics and units of epiclastic sedimentary rocks (Milne, 1972). Two substantial units of oxide and sulfide facies banded iron formation occur in the region; the Radio Hill iron formation, with a strike length of about 5 kilometers and a maximum thickness of 200 meters, in northwestern Penhorwood Township and the 20-kilometer long Nat River iron formation which lies at the contact between mafic and felsic volcanic sequences in Kenogaming and Penhorwood Townships. Intrusive sheets and pods of ultramafic and mafic rocks are locally abundant, with the largest of these intrusions hosting the Steetley talc deposit in Reeves Township. Numerous dikes and lens-shaped bodies of feldspar, quartz-feldspar and quartz porphyry have intruded the supracrustal rocks of the belt, the largest being located along the northern boundary of Penhorwood Township. Large granodioritic plutons surround the Swayze belt and all but completely separate it from the Abitibi Greenstone Belt to the east. Proterozoic diabase dikes, generally 10 to 30 meters wide, intrude all rock types in the region and typically trend north-northwest.

Geological mapping and lithogeochemical analyses has led



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Pyke (1987) to propose that the supracrustal sequences in the northern part of the Swayze belt are similar, texturally and compositionally, to the volcanics of the Timmins mining camp. Specifically, the folded felsic volcanics of the Hanrahan Lake Volcanic Complex and the Nat River iron formation in Kenogaming Township are compared with Deloro Group rocks of the Timmins area, while the mafic volcanic rocks which underlie much of the property resemble Tisdale Group iron tholeiites.

Three major fault trends have been identified in the northern part of the Swayze belt: north-northwest; west-northwest to west; and east-northeast (Milne, 1972; Pyke, 1987). The north-northwest structures tend to display left-handed displacements and are commonly occupied by diabase dikes. A series of westerly-trending faults occur north of the southern boundaries of Sewell and Reeves Townships and are marked by zones of schistose, carbonatized and sericitized mafic volcanic rocks. Milne (1972) discusses the possibility that these structures represent the western extension of the Destor-Porcupine Fault. Other westerly oriented fault zones are interpreted by Pyke (1987) to follow the margins of the belt of sedimentary rocks in Penhorwood and Keith Townships. A major east-northeast-trending fault is proposed by Pyke (1987) to partially follow the northern margin of the HFV complex (Figure 3). This fault is apparently occupied locally by schistose, carbonatized ultramafic rocks

commonly hosting quartz-feldspar porphyry dikes and quartz-carbonate veins. Pyke suggests that this structure may in fact be the western extension of the Destor-Porcupine Fault, while the series of faults to the north mark a splay structure. A west-northwest-trending shear zone is interpreted to occur between Deerfoot Lake and the four contiguous corners of Sewell, Reeves, Kenogaming and Penhorwood Townhips (Milne, 1972).

Mineral exploration began in the region at the end of the last century when prospectors and then mining companies assessed the economic potential of the Radio Hill and Nat River iron formations. Isoclinal folding of oxide facies iron formation in the Radio Hill area has formed a subeconomic deposit of about 158 million tons grading 21 percent magnetic iron. The ultramafic intrusive bodies in the region have also proven to be of economic interest. There are numerous asbestos showings in serpentinized ultramafics in Reeves, Penhorwood and Kenogaming Townships, the most important of which is the Reeves Mine which is currently the site of the Steetley talc mine. In addition, nickel occurrences are reported from shear zones in ultramafic rocks in northeast Kenogaming Township. Nickeliferous sulfides are associated with disseminated pyrrhotite and carbonatized serpentinite. Gold showings in the region are typical of Archean greenstone-hosted gold deposits, generally occurring in shear zones which consist of pyritic, chlorite-carbonate schists in mafic volcanic

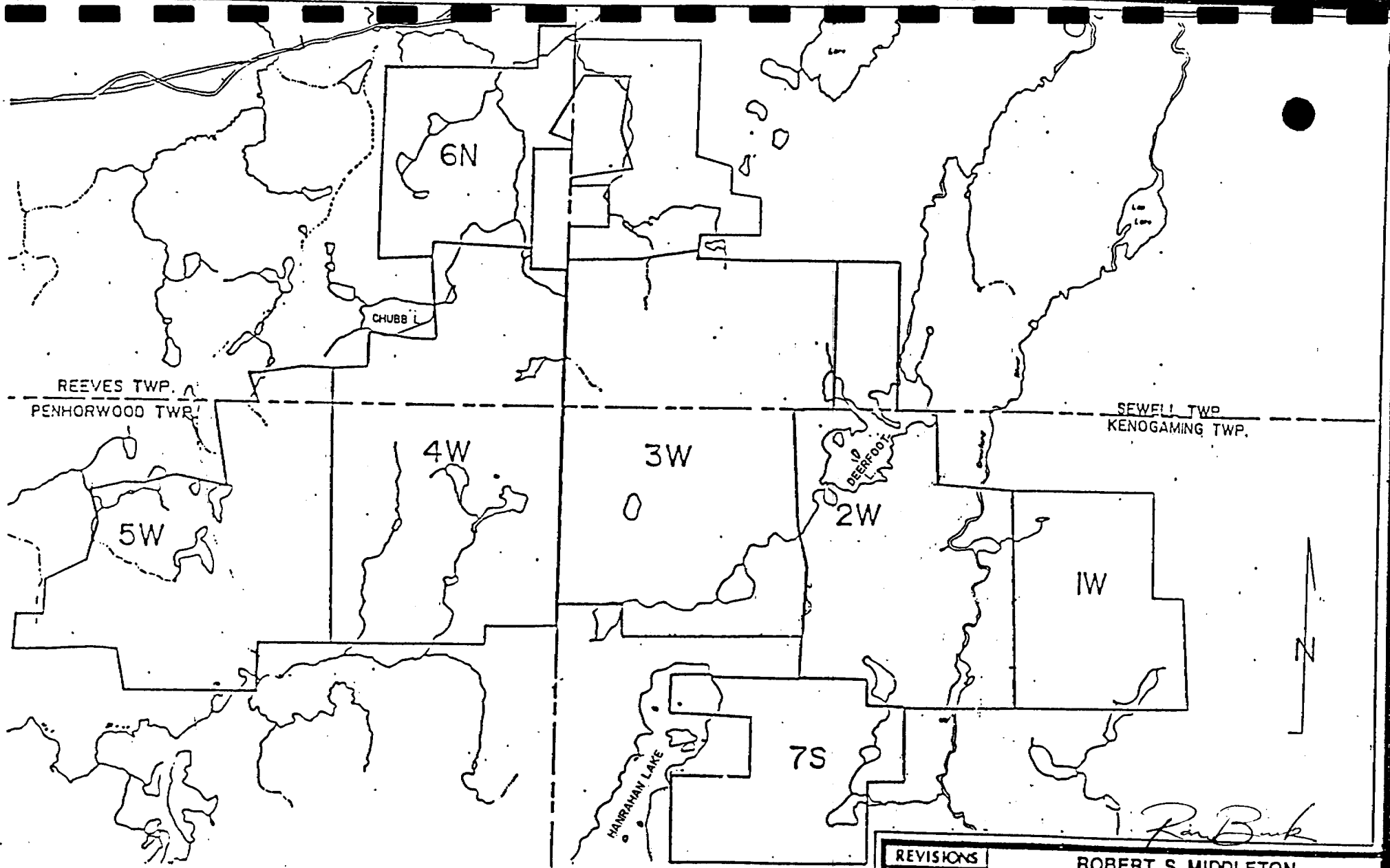
sequences and pyritic, sericite-carbonate schists in felsic volcanic rocks. Veins of quartz with or without carbonate are commonly present in the auriferous zones.

For a reasonably detailed account of the many mineral occurrences in the northern part of the Swayze greenstone belt the reader is referred to 'Geology of the Kakatush-Sewell Lake Area, District of Sudbury' (Milne, 1972).

PROPERTY GEOLOGY

Geological mapping of the RJV property, excluding the 20 claims originally held solely by Goldrock Resources Inc., was done by following claim lines and pace-and-compass-controlled traverses which bisected the claims. Maps of the observed geology are produced at the 1:2,500 scale. The size of the RJV property warranted its subdivision into eight individual map sheets, one being the previously-reported Goldrock Resources property geology map (see Figure 4).

In general, the geology of the RJV property comprises Archean supracrustal rocks which can be broadly subdivided into a thick sequence of mafic metavolcanic rocks underlying most of the northern half of the property and intermediate to felsic metavolcanic rocks on the southeastern part of the property. The latter group of volcanic rocks form the Hanrahan Lake Volcanic Complex (Milne, 1972) and is separated from the mafic volcanic



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	Title GEOLOGY INDEX MAP		
			Fig. 4
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rocks to the north by a thin unit of banded iron formation which is continuous along strike for 15 kilometers or more. Numerous mafic and ultramafic sheets and pods intrude the Hanrahan Lake complex in Kenogaming Township, and mafic intrusive rocks are common on the westernmost claims in Reeves Township. Intermediate to felsic intrusive rocks are relatively uncommon. Late Proterozoic diabase dikes intrude all rock types on the property.

The mineralogical compositions of the volcanic rocks indicate that regional metamorphism reached greenschist facies rank. For ease of communication, however, the prefix 'meta-', as in metavolcanic, is omitted in this report.

ROCK TYPES

Mafic Volcanics

Mafic volcanic rock is by far the most common rock type on the RJV property, underlying all the claims in Sewell Township, most of those in Reeves and Penhorwood Townships and 50 percent of those in Kenogaming Township. Forming massive and pillowed flows, the mafic rocks are generally greenish-grey on fresh surfaces weathering to a light grey or buff colour, and are fine-grained and massive in texture. Exposures of relatively undeformed pillows show dark green, chloritic selvages with flow tops facing south to southwest. Variolitic flows are uncommon;

one is exposed just north of the four contiguous township corners. Mineralogically, actinolite ($\pm$ chlorite) and plagioclase are the major components. The rocks contain visible amounts of magnetite or iron sulfides only very locally. A lithogeochemical study done by Pyke (1987) determined that the mafic flows consist primarily of iron tholeiitic basalts with some magnesian tholeiites present in the southernmost claims of the RJV property in Penhorwood Township (based on whole rock analyses evaluated using the Jensen Cation plot).

There are a number of broad but poorly defined, generally east-west-trending zones of carbonate, chlorite $\pm$ sericite alteration and increased fabric development. Interpreted as zones of relatively high strain deformation and, locally, fluid migration, they mark areas considered particularly prospective with respect to the localization of gold mineralization.

Intermediate to Felsic Volcanics

Intermediate to felsic volcanic rocks are most abundant in the southeast corner of the RJV property, underlying the southern half of the claim group in Kenogaming Township (Map 7S and 1W). These rocks form a portion of the Hanrahan Lake Volcanic Complex which makes up the core of a regional southwest-verging, northwest-plunging antiform fold. As described previously, mafic volcanic rocks surround the Hanrahan Lake complex on all sides

except in the east where trondjhemitic and granodioritic rocks truncate the fold.

The Hanrahan Lake Volcanic Complex on the RJV claims comprises primarily intermediate pyroclastics with less abundant dacitic flow rock. True felsic (rhyolitic) extrusive rocks were not positively recognized on the property, although outcrops of apparently siliceous tuff are mapped in the northwest corner of claim 987267. Fine-to medium-grained tuffs composed of plagioclase crystal fragments are the most common rock type in the complex. The tuffs are intercalated with units containing lapilli-to block-sized fragments of feldspathic and, less commonly, chloritic rock. Good exposures of an agglomerate unit were mapped in claims 987159, 987478 and 987147 close to the Nat River iron formation which marks the interface between the Hanrahan Lake complex and mafic volcanics to the north. A greenish-grey feldspar crystal tuff (pseudo-porphyritic in appearance) forms the matrix of the agglomerate, with angular volcanic rock clasts composed of fine-to medium-grained feldspar making up less than 20 percent of the rock. Long axes of the clasts are aligned roughly east-west. Intermediate ash and lapilli tuffs also occur within the mafic-dominated volcanic sequences north and west of the Hanrahan Lake Complex, specifically on claims 947104 and 947101 close to the west boundary of the RJV property in Penhorwood Township (Map 5W). A

feature of the intermediate tuffs in Penhorwood Township is the presence of thin chloritic lenses or clots up to about 2cm long which are interpreted to have originally been mafic lapilli-sized fragments.

Other than the alignment of coarse rock fragments and the development of weak foliations there are few indications of stratification of the pyroclastic rocks. In the northwest corner of the property on claim 947104 (Map 5W) there are outcrops of fine-grained intermediate rock displaying well developed cross-bedding, suggesting that the rock is a reworked tuff or tuffaceous sedimentary unit.

Clastic Sedimentary Rocks

Outcrops of clastic sedimentary rocks are common on the RJV property. A number of small exposures of fine-grained lithic wacke occur along a trail on claim 947094 in Sewell Township (Map 3W) and on claim 944914 in Penhorwood Township (Map 5W) where there is evidence of soft-sediment structures and folding on the outcrop scale. Sporadic outcrops of dark grey, slaty and apparently graphitic argillite were mapped on claims 901337 and 901329 in the southeast corner of Reeves Township (Map 4W). Minor amounts of pyrite were observed in a few of the outcrops. The argillite units appear to be thin, have undetermined strike lengths, and likely represent minor deposits of interflow

sediments which accumulated during pauses in the mafic volcanism.

Chemical Sedimentary Rocks (Cherts and Iron Formations)

The most conspicuous chemical sedimentary rock unit on the RJV property is the Nat River iron formation in Kenogaming Township. Lying at the contact between the Hanrahan Lake Volcanic Complex and mafic volcanic sequences to the north, the Nat River formation has a strike length on the property of about 6 kilometers and a maximum width of approximately 75 meters. The best exposures of the unit are in claims 987159, 987478 and 987147 south of Benbow Lake (Map 3W) and east of the Crawford River in claims 988388, 987262, 987267 and 987268 (Map 1W). The iron formation consists predominantly of banded magnetite-chert; fine-grained magnetite layers are typically less than one centimeter thick, while chert layers tend to be a few centimeters thick. East of the Crawford River, the magnetite and chert layers are locally interbedded with thin layers of greenish, tremolitic amphibole. Pyrite is commonly present in the magnetite-chert rock as disseminations, small clots and locally as thin massive layers. A more detailed description of the Nat River iron formation is given by Milne (1972; p.23-26).

In addition to the Nat River iron formation the mapping shows there to be two other narrow units of oxide facies banded iron formation on the property, both lying between basalt flows

in Penhorwood and Kenogaming Townships. Small, isolated outcrops of magnetite-chert rock were found on claim 944891 (Map 4W) and roughly 800 meters to the west, apparently along strike, in the vicinity of the #4 post of claim 944896 (Map 4W). The other iron formation is best exposed in an overgrown shallow trench located approximately 400 meters west of the four contiguous township corners. Apparently the same unit outcrops just west of Deerfoot Lake on claim 893527 (Map 3W). Pyrite-rich, sericitic beds a few centimeters thick have been observed with the magnetite-chert layers.

Mafic and Ultramafic Intrusive Rocks

Outcrops of gabbroic to dioritic rock are numerous on the southwestern portion of the RJV property in Penhorwood Township (Map 5W). These intrusive rocks are likely related to the large mafic-ultramafic complex centred on the Nat River in Penhorwood and southern Reeves Townships. Composed of varying proportions of typically medium-grained (2-5mm), equigranular plagioclase and green amphibole (pseudomorphing pyroxene crystals), freshly broken rock is light to dark green depending on the mafic mineral content and weathers to a pale greenish grey or cream colour. Generally, the gabbroic rocks do not attract a hand magnet, and the presence of accessory iron sulfides is uncommon. Outcrops of gabbroic rock with coarse pyroxene/amphibole crystals occur along

the southern boundaries of claims 947101 and 901360 (Map 5W). Other intrusive-looking mafic rocks are widely distributed across the portion of the property underlain by mafic flows, and are often difficult to distinguish from massive, medium-grained basalts. It is likely that some of the intrusives actually represent subvolcanic equivalents of the flows.

The greatest volume of mafic to ultramafic intrusive rock on the property occurs in the Hanrahan Lake Volcanic Complex, determined as much from an interpretation of aeromagnetic data (see assessment work file T-2877, Ontario Ministry of Natural Resources) as from mapping. Numerous outcrops of fine-to medium-grained, serpentinized and variably carbonatized peridotitic rock were located in the southernmost claims east of the Crawford River (Map 1W). Well exposed serpentinite also occurs north of the Nat River iron formation on claim 987262 (Map 1W). In the outcrop, a narrow zone of shearing and pervasive carbonatization is seen to contain approximately 5 percent pyrrhotite and pyrite. The only exposures of ultramafic intrusive rock mapped outside of the Hanrahan Lake complex are in the southwest corner of claim 947101 in Penhorwood Township (Map 5W). Here, a pyroxene cumulate texture can be recognized on some surfaces. High strain deformation and/or chemical alteration has locally converted the ultramafic rock to talc-chlorite-carbonate schist and to massive tremolitic rock.

Highly altered mafic to ultramafic rocks outcrop on claim 947253 (Map 4W). Situated within a proposed zone of shearing, one of the exposures is an old pit blasted into well foliated chlorite-fuchsite-ankerite rock with minor quartz-carbonate veining. Less than 50 meters from the pit is an outcrop of light brown talc-carbonate schist with chlorite lenses, 3 to 5 millimeters in length, aligned with the foliation. It is not clear if these schists represent altered intrusive rock, magnesian tholeiite or komateiitic rock.

Intermediate to Felsic Intrusive Rocks

Feldspar and quartz-feldspar-porphyry dikes are widely distributed but not abundant on the RJV property; the feldspar porphyries tend to be more common. The dikes are generally less than 50 centimeters wide and rarely greater than one meter in width. It is noteworthy that a narrow quartz-feldspar porphyry dike is present in an overgrown pit located roughly 400 meters west of Deerfoot Lake which is in carbonatized mafic volcanic rock hosting weak pyrite mineralization and quartz veining. Typical feldspar porphyry rock is composed of about 30 percent plagioclase phenocrysts in a dark grey matrix which becomes buff coloured when altered to carbonate and sericite. With the addition of bluish quartz grains the rock is identified as quartz-feldspar porphyry.

A boss of feldspar and/or quartz-feldspar porphyry with a diameter of about 500 meters is indicated by Milne (1972) to occur just north of the Nat River iron formation and west of Benbow Lake in Kenogaming Township. Interestingly, a magnetic 'high' corresponds with the indicated intrusion (see assessment work file T-2877, Ontario Ministry of Natural Resources).

Late Mafic Intrusive Rocks

The youngest rocks on the RJV property are northerly-trending Proterozoic diabase dikes. These dikes commonly form prominent ridges as seen on claim 915462 east of the Crawford River (Map 1W). Also, the dikes are readily discernible on the property-scale aeromagnetic map (file T-2877). The basaltic diabase rock is dark green to black, massive and coarse-grained in the core of a dike, becoming finer grained towards the margins.

STRUCTURE

The dominant regional structure in the area of the RJV property is the northwesterly plunging antiform well outlined by the Nat River iron formation, of which the core is occupied by the Hanrahan Lake Volcanic Complex (Milne, 1972). The absence of good marker horizons in the thick sequence of mafic volcanics north of the Hanrahan Lake Complex makes it difficult to

determine if the mafic flows are also folded around the antiform's southwesterly striking axial surface. Interpretation of the property-scale aeromagnetic map (file T-2877) does suggest that magnetically-responsive basalts strike in a westerly direction across the southern portion of the property in Penhorwood Township, trending away from the north limb of the antiform. It is possible that a major structural discordance exists close to, and perhaps along, the interface between the mafic volcanics on the property and the Hanrahan Lake complex. If a structural 'break' is in fact present, it would correspond with a proposed western extension of the Destor-Porcupine Fault (Pyke, 1987).

The paucity of well exposed sedimentary rocks precludes a conclusive determination of stratigraphic facings on the property. However, from a number of outcrops of relatively undeformed, pillowed basalts it appears that flow tops face south to southwest, an interpretation supported by mapping done by Pyke (1987) in the area. The suggestion that the mafic flows are southerly facing contradicts Milne's interpretation of the Nat River iron formation and the mafic volcanics to the north being younger than the intermediate volcanics of the Hanrahan Lake Volcanic Complex, unless a major structural break separates the two volcanic sequences.

While the mafic volcanics are generally massive to weakly

foliated, they do host a few poorly defined, east-west to east-southeast-trending zones of moderately to well foliated chloritic ($\pm$ sericitic) rock. The two most obvious zones are located between Deerfoot Lake and the four contiguous township corners (Map 3W) and parallel to the southern property boundary of Penhorwood Township (Map 4W). The zones are identified by the presence of highly strained or flattened pillow structures, diamond-shaped cleavage patterns and schistose rock. In addition to chlorite and sericite, rocks occurring within the high deformation zones typically contain carbonate, both calcite and ankerite, and locally combinations of talc, fuchsite, pyrite and quartz-carbonate veins. These zones likely mark shear structures, and may be splays off of the proposed western extension of the Destor-Porcupine Fault.

ECONOMIC GEOLOGY

Based on currently accepted gold deposit genetic models, the mapping has identified essentially two geologic settings considered here to have good potential for hosting gold mineralization: (1) areas with structurally deformed iron formation, and (2) carbonatized shear zones in mafic volcanic rocks.

The prime exploration target on the RJV property in terms of iron formation-hosted gold mineralization is the Z-type

asymmetric fold in the Nat River iron formation centred on the #1 post of claim 987262 (Milne, 1972; Map 1W). Gold can be precipitated from metalliferous hydrothermal fluids through the sulfidation of magnetite to pyrite as the fluids migrate through fractured iron formation. Evidence of this process having taken place, such as the presence of quartz veins with pyritic halos in iron formation were not observed on the property. The iron sulfide layers which are interbedded with the magnetite-chert layers are interpreted as syngenetic sulfide facies iron formation.

The two zones of high strain deformation and carbonate alteration described in the previous section dealing with structural aspects of the property geology are examples of the other geologic setting considered prospective for gold mineralization. These zones are henceforth referred to as the Deerfoot Lake Zone and, to the south, the Fuchsite Zone.

The Deerfoot Lake Zone is best exposed in two old pits, one located just west of the #1 post of claim 878419 (Map 3W), and the other about 200 meters west of the four contiguous township corners (Map 4W). In the pit west of Deerfoot Lake massive to weakly foliated mafic volcanic rock is pervasively carbonatized (ankeritized) with highly altered rock being a pale yellowish colour and host to 5 to 10 percent finely disseminated pyrite. A quartz-feldspar dike intrudes the altered mafic rock and is

itself carbonatized and pyritic. Irregular veinlets and pods of quartz are spatially associated with the porphyry dike. In the township corners pit the rock consists of greyish chlorite-sericite schist with ankerite laminations. Foliation surfaces display an orthogonal set of crenulations (with steep and subhorizontal plunge direcions). Quartz-carbonate veins commonly cross-cut the schistosity, and disseminated pyrite is most abundant in the vicinity of these veins. Trace amounts of chalcopyrite are found in some of the veins.

Outcrops of the Fuchsite Zone occur at the side of logging roads on claims 947253 and 947150 (Map 4W). The development of chlorite-fuchsite-ankerite and talc-ankerite schists suggests altered magnesian tholeiitic or ultramafic rocks occupy the deformation zone on these claims. Minor carbonate and quartz-carbonate veining was observed, but sulfide mineralization is rare or absent.

CONCLUSIONS

Mapping of the Reeves Joint Venture property at the 1:2,500 scale has generally confirmed the geological interpretation of the area presented by Milne (1972). In addition, the scale at which the mapping was done has expectedly given greater definition of the property geology than is shown on the government map. The following are key aspects of the RJV

property geology, many of which are deemed important in terms of their relationship to the potential of economic gold mineralization occurring on the property.

1. The RJV property is predominantly underlain by Archean metabasalts of tholeiitic composition. Intermediate to felsic pyroclastics and flows of the Hanrahan Lake Volcanic Complex occur in the southeastern portion of the property on about 20 percent of the total property area. The Nat River iron formation lies at the interface between the mafic and intermediate to felsic volcanic sequences. Numerous sheets and pods of mafic and ultramafic rock intrude the volcanics, with the ultramafics being most common in the Hanrahan Lake Complex.

2. The intermediate to felsic rocks of the Hanrahan Lake Complex generally lack structural features indicative of high strain deformation. The absence of sizeable zones of sheared or highly fractured rock which would focus the movement of mineralizing fluids, together with the paucity of hydrothermally altered rocks and gold-associated mineralization suggest that the Hanrahan Lake Complex on the property is not a particularly prospective geologic environment for gold.

3. Fold structures in the Nat River iron formation constitute potential sites for gold mineralization on the property which are analagous to the Little Long Lac mine of the Geraldton-Beardmore gold camp of north-central Ontario. However, extensive surface prospecting and diamond drilling of these targets have failed to discover any significant gold mineralization.

4. Zones of comparatively high strain deformation which also locally host chemically altered volcanic rocks have been identified in the mafic greenstones on the property. Two such zones, the Deerfoot Lake and Fuchsite Deformation Zones, are marked by planar fabric development of varying intensity, moderate to strong carbonate alteration, porphyry dike intrusion, quartz-carbonate veining and pyrite

mineralization. These same features are almost ubiquitous to not only gold deposits of the Timmins mining camp but many other gold deposits in the highly productive Abitibi Greenstone Belt.

RECOMMENDATIONS FOR FUTURE EXPLORATION

Based on the geologic data, it is recommended that a systematic gold exploration program be carried out on the Reeves Joint Venture property, primarily in areas underlain by mafic volcanic sequences. The deposit type for which the proposed exploration program is designed consists of sheared mafic rocks which are carbonatized, potentially silicified locally, and pyritic. Gold mineralization is typically associated with a quartz-carbonate vein system hosted by the altered rocks. The stages in the program are as follows:

1. Prospective shear structures are first to be delineated through detailed magnetic and VLF electromagnetic surveys centred on the deformation zones identified by geological mapping, particularly the Deerfoot Lake and Fuchsite Deformation Zones.

2. Induced polarization and resistivity surveys conducted over these structures will potentially outline disseminated sulfide mineralization and zones of relatively high resistivity corresponding to carbonatized and/or silicified host rocks.

3. Sections of the shear zones which may be mineralized can also be prospected for using geochemical exploration techniques. Specifically, rock sampling at surface on or close to the structures as well as sampling of glacial till down-ice of the zones may give direct indications of gold mineralization. This stage in the program may be done prior to the induced polarization and

resistivity surveys.

4. Contigent on the results of the previous stages, diamond drilling should be done on geophysically or geochemically defined targets, where coincident geophysical/geochemical anomalies would be of highest priority.

Respectfully submitted

Ron Burk, M.Sc.Eng.

2.10291

REFERENCES

BURK, R.
1987 — Preliminary lithogeochemical study, Reeves Joint Venture property for Goldrock Resources Inc. and Glen Auden Resources Limited.

FROSTAD, S.
1986 — Report on the geological survey on the Goldrock Resources Inc., Sewell and Reeves Townships property.

MILNE, V.G.
1972 — Geology of the Kukatash - Sewell Lake area, District of Sudbury; Ontario Department of Mines Geological Report 7, 116p., Maps 2230 and 2231.

PYKE, D.R.
1987 — Geological report on the Kukatash River area, Reeves, Sewell, Penhorwood and Kenogaming Townships.

The following reports can be obtained from the Ministry of Natural Resources assessment work files in Timmins, Ontario.

T-145 — Erie Canadian Mines Limited, 1935: Report on the Therieault claims, Reeves and Kenogaming Townships.

63A.35 — Little Long Lac Gold Mines Limited, 1947: Report on the Nat River iron formation property, Kenogaming Township.

T-527 — Dunvegan Mines Limited, 1952: Geological report on the Dunvegan Mines property, Kenogaming Township.

T-44 — Card Lake Copper Mines Limited, 1971: Report on geophysical surveys, Sewell and Reeves Townships property, Timmins area, Ontario.

REFERENCES (Cont'd)

T-1519 — Card Lake Copper Mines Limited, 1974: Report on diamond drilling, Sewell and Reeves Townships property.

T-1945 — Texas Gulf Canada Limited, 1979: Report on geophysical surveys on Sewell 21

Texas Gulf Canada Limited, 1980; Report on geological mapping on Sewell 21

T-1988 — Utah Mines Limited, 1980: Report on magnetometer survey, Nat River iron formation, Kenogaming Township

T-2877 — Dighem Limited for MPH Consulting Limited, 1983: Dighem survey of the Foleyet area, Ontario.

T-2898 — Comstate Resources Limited, 1984: Geochemical survey, Reeves-Sewell Township boundary, Porcupine Mining Division, Ontario

T-2814 — Quinterra Resources Inc., 1984: Geology of the Nat River property, Penhorwood Township.

T-3005 — Karvinen, W.O., 1985: Geology of the Nat River property, Penhorwood Township

Utah Mines Limited, 1986: Geophysical assessment report on the Nat River property, Penhorwood Township.

CERTIFICATION

I, Ron Burk of 29 Wardencourt Drive, Agincourt, Ontario certify that;

1. I am a graduate of the University of Toronto with a Bachelor of Applied Science in Geo-Engineering

2. I am a graduate of Queen's University with a Master of Science, Geological Engineering.

3. I have been practising my profession in Canada for 4 years.

4. I have no economic interests in the property covered by this report.

Dated this October 13, 1987
TIMMINS, Ontario

Ron Burk, M.Sc.Eng.

900

September 12, 1988

Your File: W8806-186
Our File : 2.11120

Mining Recorder
Ministry of Northern Development and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Notice of Intent dated August 23, 1988.
Geological Survey on Mining Claims P 987246 et al
in the Townships of Reeves and Kenogaming.

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan, Manager
Mining Lands Section
Mines & Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3
Telephone: (416) 965-4888

AB:sc

cc: Glen Auden Resources Ltd
Box 1637
Timmins, Ontario
P4N 7W8

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Resident Geologist
Timmins, Ontario

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File: 2.11120

Date: August 23, 1988

Mining Recorder's Report of Work No.: W8806-186

Recorded Holder: Glen Auden Resources Ltd.

Township ~~XXXXa~~: Reeves and Kenogaming

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	P 987246 to 59 inclusive
Magnetometer _____ days	987262 to 87 inclusive
Radiometric _____ days	987289 to 93 inclusive
Induced polarization _____ days	987295-96
Other _____ days	988374 to 76 inclusive
Section 77 (19) See "Mining Claims Assessed" column	988379 to 87 inclusive
Geological 20 days	988389
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

10 days	15 days
P 987288	P 987294
988378	988377
	988388

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

828 (85/12)

Ministry of Northern Development and Mines
Ontario

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

DOCUMENT No. W8806.186

Mining Act 2.11120

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
Geological	Reeves & Kenogaming

Claim Holder(s)	Prospector's Licence No.
Glen Auden Resources Ltd.	T-1915

Address: Box 1637 Timmins, Ont. P4N 7W8

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
R.S. Middleton Exploration Services Inc.	01 Day | 08 Mo. | 87 Yr. — 25 Day | 09 Mo. | 87 Yr.	N/A

Name and Address of Author (of Geo-Technical report): R. Burk c/o Box 1637 Timmins Ont P4N 7W8

Credits Requested per Each Claim in Columns at right

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

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

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

RECORDED APR 26 1988

Expenditures (Excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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

Date: April 26/88

Recorded Holder or Agent (Signature)

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	Please refer to Schedule "A" (attached)	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED JUN 30 1988 MINING LANDS SECTION

FORCUPINE MINING DIVISION RECEIVED APR 28 1988

Total number of mining claims covered by this report of work: 65

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1300	April 26/88	B White
	Date Approved as Recorded	Branch Director
	See revised statement.	

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying
Dan Farrow c/o Box 1637
Timmins, Ont. P4N 7W8

Date Certified: April 26/88

Certified by (Signature)

1362 (85/12)

SCHEDULE "A"

20 DAYS GEOLOGICAL SURVEY CREDITS

987246	987247	987248	987249	987250
987251	987252	987253	987254	987255
987256	987257	987258	987259	987262
987263	987264	987265	987266	987267
987268	987269	987270	987271	987272
987273	987274	987275	987276	987277
987278	987279	987280	987281	987282
987283	987284	987285	987286	987287
987288	987289	987290	987291	987292
987293	987294	987295	987296	988374
988375	988376	988377	988378	988379
988380	988381	988382	988383	988384
988385	988386	988387	988388	988389

Timmins, Ont. P4N 7W8

Date Certified April 26/88

Glen Ranch

2.11120

P 987246.	✓			987280.	✓			988389.	✓		
47.	✓			81.	✓						
48.	✓			82.	✓						
49.	✓			83.	✓						
50.	✓			84.	✓						
51.	✓			85.	✓						
52.	✓			86.	✓						
53.	✓			87.	✓						
54.	✓			88.	1/2						
55.	✓			89.	✓						
56.	✓			90.	✓						
57.	✓			91.	✓						
58.	✓			92.	✓						
59.	✓			93.	✓						
987262.	✓			94.	1/4						
63.	✓			95.	✓						
64.	✓			96.	✓						
65.	✓			988374.	✓						
66.	✓			75.	✓						
67.	✓			76.	✓						
68.	✓			77.	1/4						
69.	✓			78.	1/2						
70.	✓			79.	✓						
71.	✓			80.	✓						
72.	✓			81.	✓						
73.	✓			82.	✓						
74.	✓			83.	✓						
75.	✓			84.	✓						
76.	✓			85.	✓						
77.	✓			86.	✓						
78.	✓			87.	✓						
79.	✓			88.	1/4						

MELROSE TP. M.861

MUSKEGO TP. M.881

SEWELL TP. M.1102

PENHORWOOD TP. M.1055

PROJECTED LINE

THE TOWNSHIP OF REEVES

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH - 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C
PATENTED S.R.O.	

NOTES

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

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

Order No.	File	Date	Disposition
(2)	163002	2[illegible] 72	S.R.& M.R.

(2) S.R.O. withdrawn from staking under Sec. 34(d.) of the Mining Act (R.S.O. 960). File 163006

CANCELLED

JUL 22 1980

MINING ACT SECTION

Rec. Feb 11/80

PLAN NO. M.1074

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

42B01NE0032 2.11120 REEVES

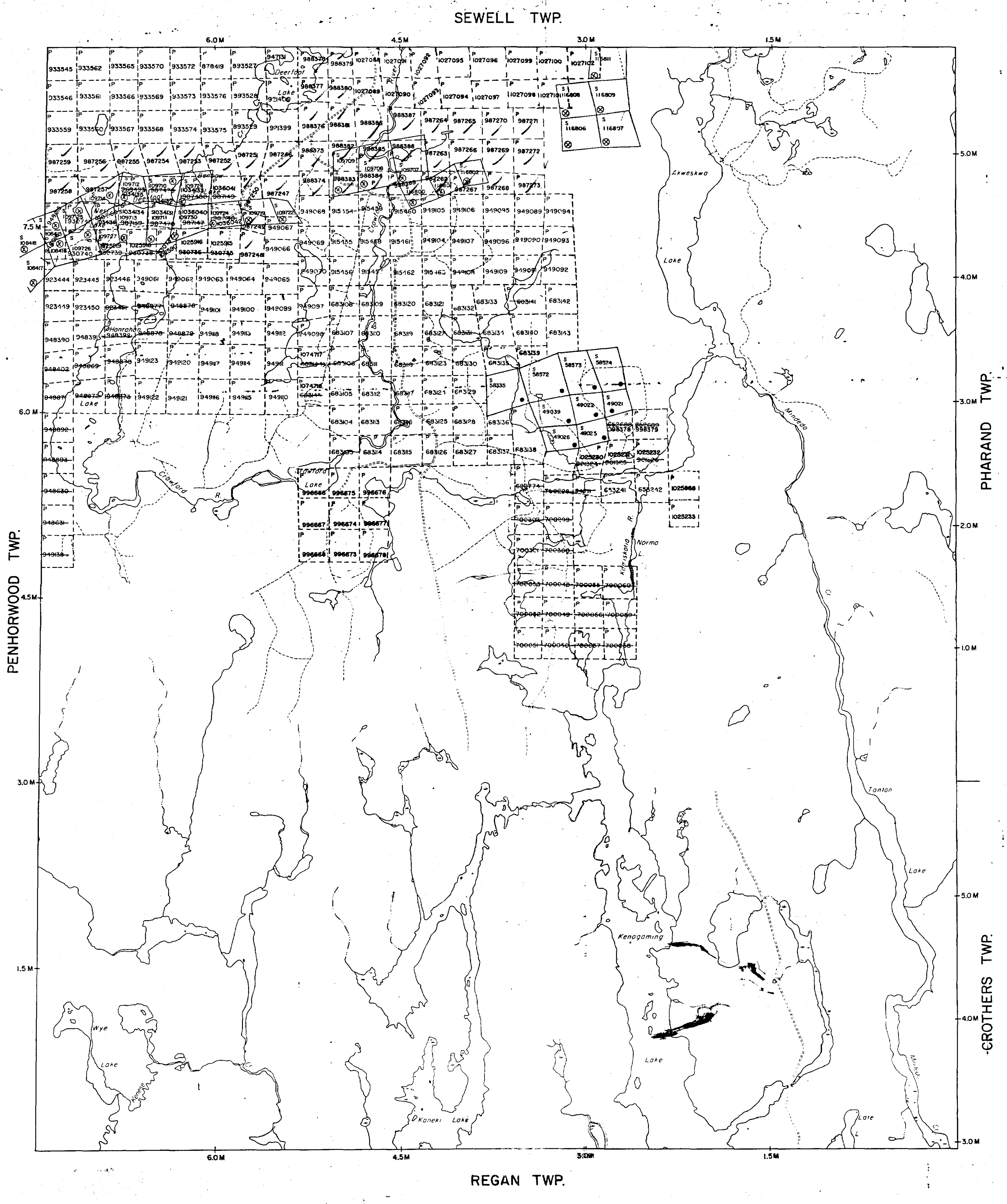
200

REFERENCE

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES:
TOWNSHIPS, BASE 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
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
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	OC
RESERVATION	®
CANCELLED	⊗
SAND & GRAVEL	ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

KENOGAMING

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario
Ministry of Natural Resources
Land Management Branch

Date APRIL 1985

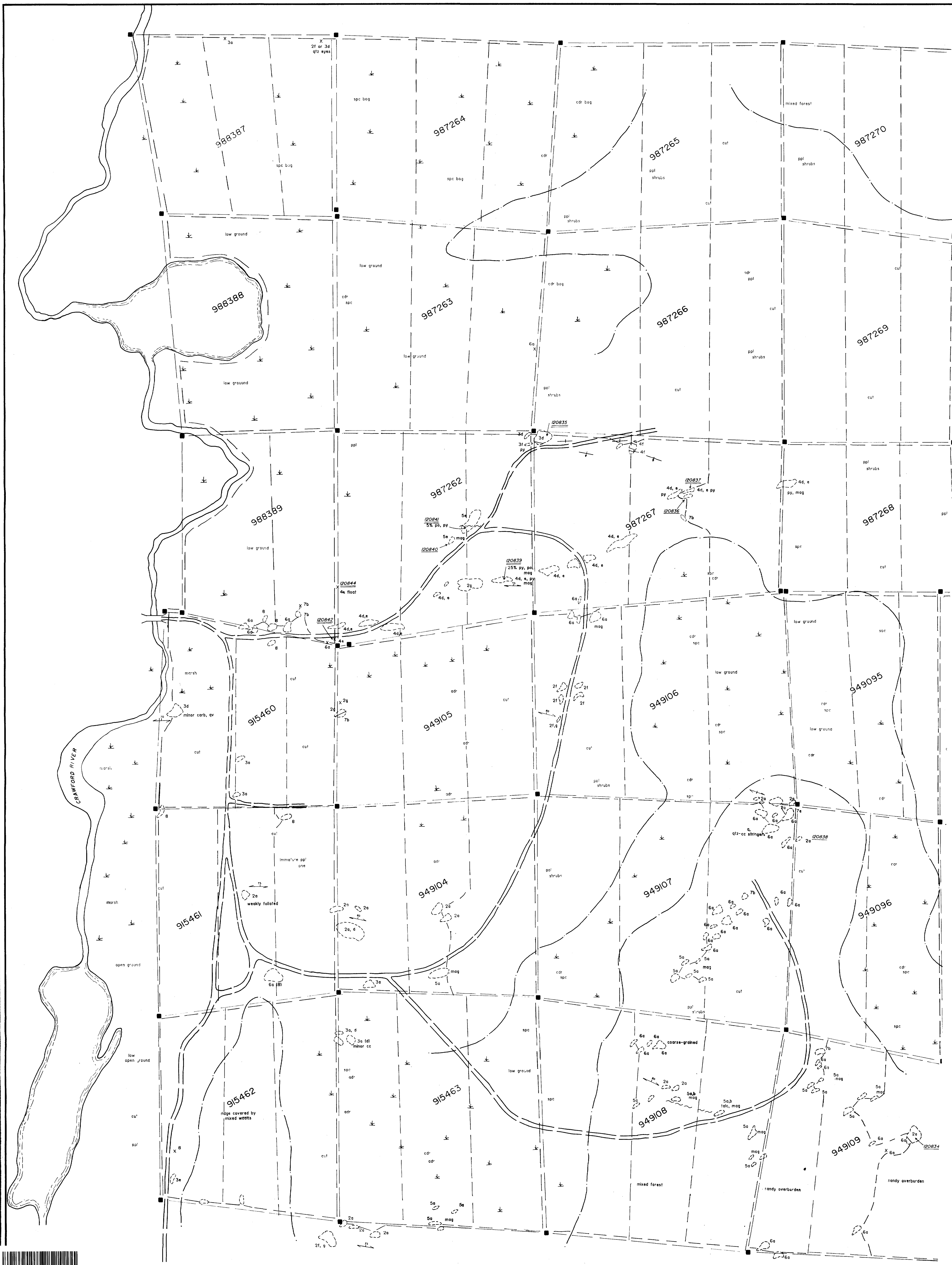
Number G-3239

RECEIVED APR 22/87

RECEIVED AUG 12

42B01NE0032 2.11120 REEVES

210



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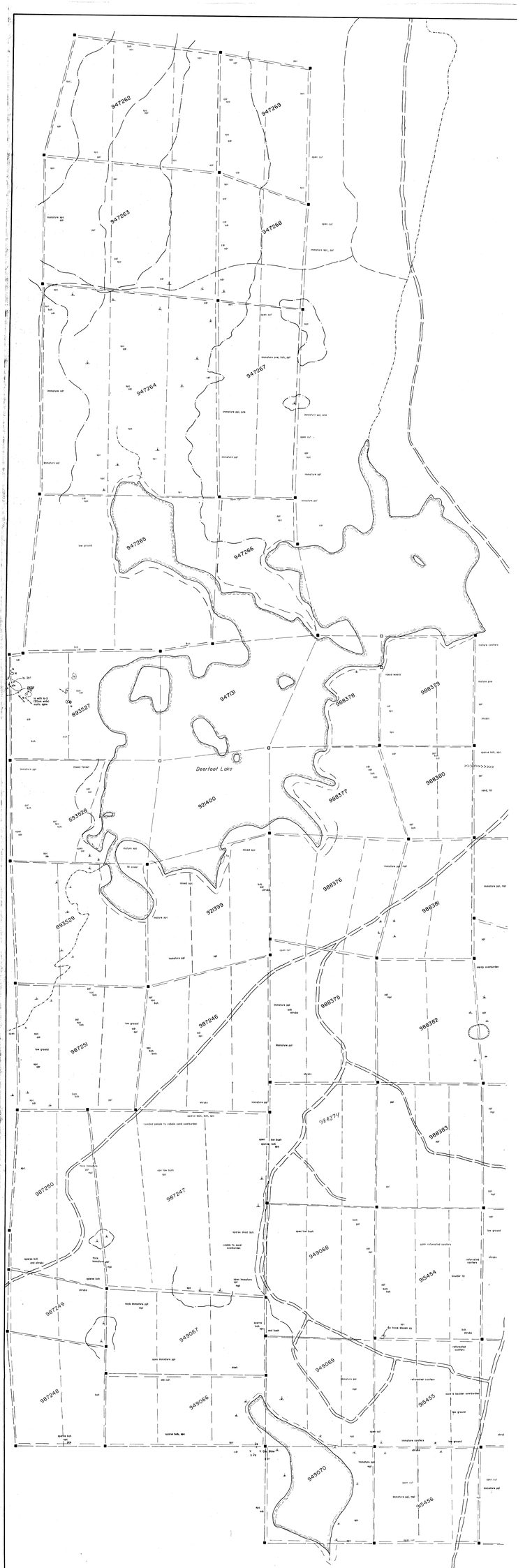


LEGEND

LATE INTRUSIVE ROCKS

6 Proterozoic diabase

7 EARLY FELSIC INTRUSIVE ROCKS

7a granitic rocks
7b quartz-feldspar porhyry

6 EARLY MAFIC AND INTERMEDIATE INTRUSIVE ROCKS

6a gabbro
6b pyroxene-porphyritic rock
6c diorite
6d feldspar porphyry

3 ULTRAMAFIC ROCKS

5a peridotite
5b serpentinized peridotite
5c komatietic rock
5d carbonatized ultramafic rock

4 SEDIMENTARY ROCKS

4a argilite
4b wacke (siltstone, sandstone)
4c conglomerate
4d chert
4e iron formation
4f graphitic rock

3 FELSIC VOLCANIC ROCKS

3a massive flow or undifferentiated
3b flow breccia
3c porphyritic flow
3d tuff, crystal tuff
3e lapilli tuff

2 INTERMEDIATE VOLCANIC ROCKS

2a massive flow or undifferentiated
2b pillow flow
2c pillow or flow breccia
2d amygdaloidal
2e porphyritic
2f tuff, crystal tuff
2g lapilli tuff
2h agglomerate
2i reworked tuff (tuffaceous sedimentary rock)

1 MAFIC VOLCANIC ROCKS

1a massive pillow or undifferentiated
1b pillowed flow
1c pillow or flow breccia
1d amygdaloidal
1e variolitic
1f porphyritic
1g pyroclastic

qtz quartz
qv quartz vein
sbc silicified
cbx carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
grt garnet
fsp feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

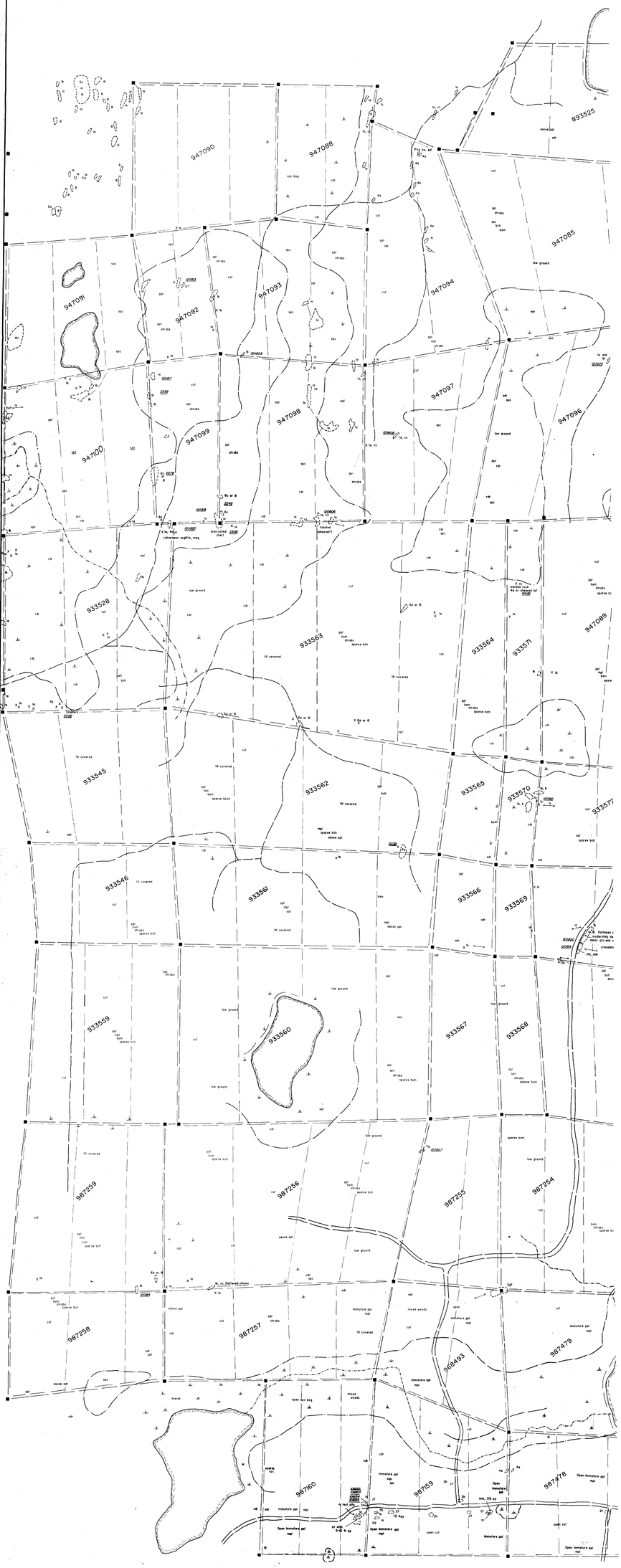
(0.034) whole rock and trace element sample

(0.034) trace element analysis only

- foliation with dip
- cleavage with dip
- lineation with plunge
- jointing with dip
- drag fold
- brecciation
- bedding with dip and tops direction
- pillow tops direction
- shearing
- rock outcrops
- scarp
- vegetation boundary
- wet lowland
- creek
- esker
- gravel road
- trail
- claim post and lines (assumed post)
- mapping traverse lines

TREES

- ald alder
- ptl poplar
- bch birch
- spc spruce
- mpl maple
- bam balsam
- cdr cedar
- pne pine



LEGEND

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5c komatiitic rock
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SEDIMENTARY ROCKS

4a argillite
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4c conglomerate
4d chert
4e iron formation
4f graphitic rock

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2g lapilli tuff
2h agglomerate
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1e variolitic
1f porphyritic
1g pyroclastic

atz quartz
qv quartz vein
silic silicified
carb carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

(20340) whole rock and trace element sample

(20341) trace element analysis only

foliation with dip
cleavage with dip
lineation with plunge
jointing with dip
drag fold
bedding with dip and tops direction
pillow tops direction
shearing
x rock outcrops
scarp
vegetation boundary
wet lowland
creek
esker
gravel road
trail
claim post and lines (assumed post)
mapping traverse lines

TREES

adr alder
ppl poplar
bch birch
spc spruce
mpl maple
bam balsam
cdr cedar
pne pine

LATE INTRUSIVE ROCKS

8 Proterozoic diabase

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7b quartz-feldspar porhyry

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1f porphyritic
1g pyroclastic

atz quartz
qv quartz vein
sht sheared
ch chlorite schist
cb carbonate
prk prehnite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
gyp gypsum/alite
cly chalcopyrite

(20140) whole rock and trace element sample
(20134) trace element analysis only

foliation with dip
cleavage with dip
direction with plunge
jointing with dip
drag fold
brecciation
bedding with dip and tops direction
pillow tops direction
shearing
rock outcrops
scarp
vegetation boundary
wet lowland
creek
esker
gravel road
trail
claim post and lines
lossumed post
mapping geometric lines

TREES

apr alder
ppl poplar
bch birch
spc spruce
mpl maple
bam balsam
cdr cedar
pne pine

LEGEND

LATE INTRUSIVE ROCKS

8 Proterozoic diabase

7 EARLY FELSIC INTRUSIVE ROCKS

7a granitic rocks
7b quartz-feldspar perhyry

6 EARLY MAFIC AND INTERMEDIATE INTRUSIVE ROCKS

6a gabbro
6b pyroxene-porphritic rock
6c diorite
6d feldspar porphyry

5 ULTRAMAFIC ROCKS

5a peridotite
5b serpentinized peridotite
5c komateiitic rock
5d carbonatized ultramafic rock

4 SEDIMENTARY ROCKS

4a argillite
4b wacke (siltstone, sandstone)
4c conglomerate
4d chert
4e iron formation
4f graphitic rock

3 FELSIC VOLCANIC ROCKS

3a massive flow or undifferentiated
3b flow breccia
3c porphyritic flow
3d tuff, crystal tuff
3e lapilli tuff

2 INTERMEDIATE VOLCANIC ROCKS

2a massive flow or undifferentiated
2b pillow flow
2c pillow or flow breccia
2d amygdaloidal
2e porphyritic
2f tuff, crystal tuff
2g lapilli tuff
2h agglomerate
2j reworked tuff (tuffacous sedimentary rock)

1 MAFIC VOLCANIC ROCKS

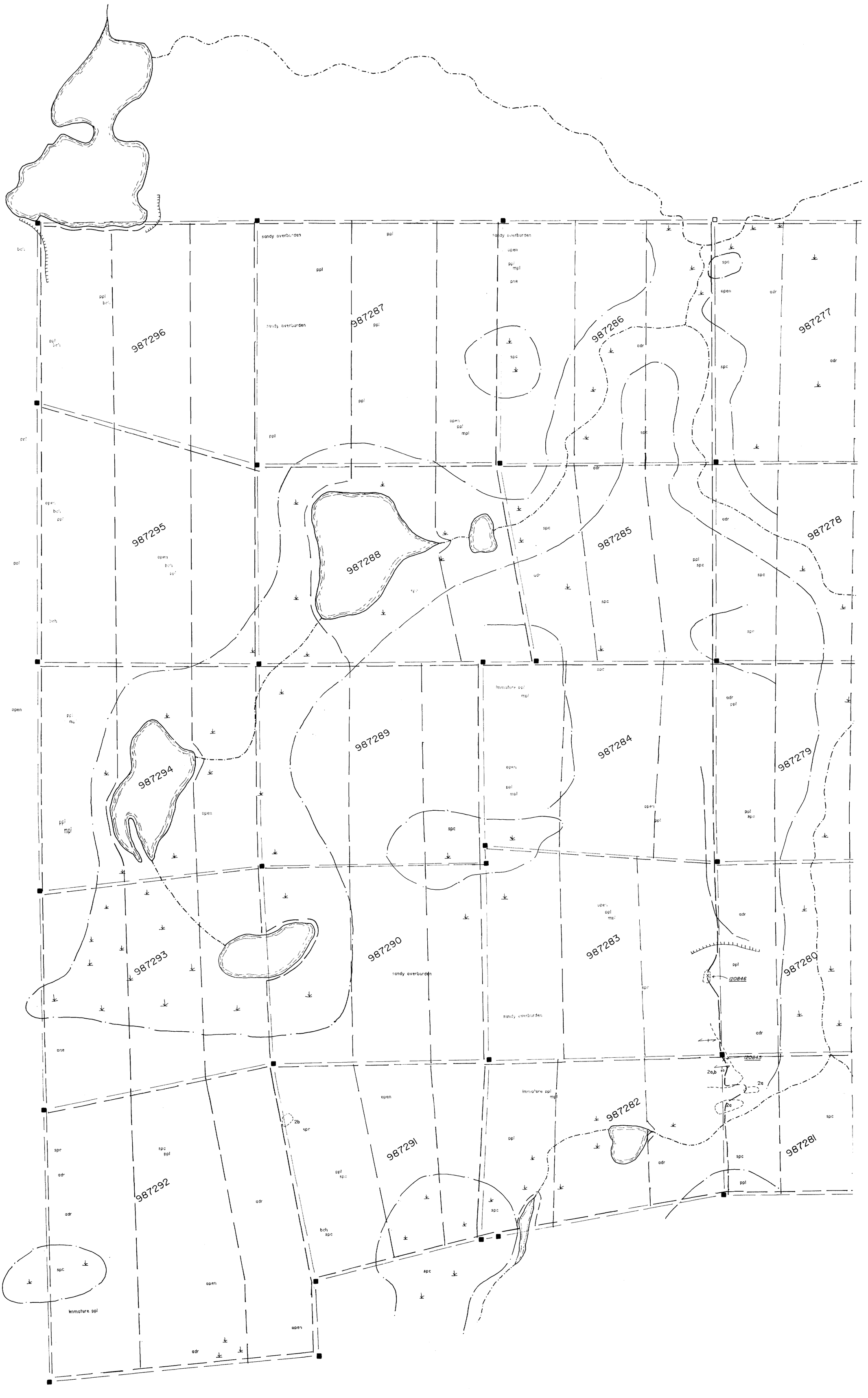
1a massive pillow or undifferentiated
1b pillowed flow
1c pillow or flow breccia
1d amygdaloidal
1e variolitic
1f porphyritic
1g pyroclastic

qtz quartz
qv quartz vein
silic silicified
carb carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

120340 whole rock and trace element sample
120341 trace element analysis only

foliation
cleavage
lineation
jointing
drag fol
brecciati
bedding and tops
pillow t
shearing

42B01NE0032 2.11120 REEVES



LEGEND

LATE INTRUSIVE ROCKS

6 Proterozoic diabase

7 EARLY FELSIC INTRUSIVE ROCKS

7a granitic rocks
7b quartz-feldspar porhyry

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4d chert
4e iron formation
4f graphitic rock

3 FELSIC VOLCANIC ROCKS

3a massive flow or undifferentiated
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2 INTERMEDIATE VOLCANIC ROCKS

2a massive flow or undifferentiated
2b pillow flow
2c pillow or flow breccia
2d amygdaloidal
2e porphyritic
2f tuff, crystal tuff
2g lapilli tuff
2h agglomerate
2j reworked tuff (tuffaceous sedimentary rock)

1 MAFIC VOLCANIC ROCKS

1a massive pillow or undifferentiated
1b pillowed flow
1c pillow or flow breccia
1d amygdaloidal
1e variolitic
1f porphyritic
1g pyroclastic

qtz quartz
qv quartz vein
silic silicified
carb carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

120340 whole rock and trace element sample
120341 trace element analysis only

foliation with dip
cleavage with dip
lineation with plunge
jointing with dip
drag fold
brecciation
bedding with dip and tops direction
pillow tops direction
shearing
x rock outcrops
scarp
vegetation boundary
wet lowland
creek
esker
gravel road
trail
claim post and lines (assumed post)
mapping traverse lines

TREES

adr alder
ppl poplar
bch birch
spc spruce
mpl maple
bsm balsam
cdr cedar
pne pine

HANRAHAN

LAKE

949061

949062

949063

949064

987284

949101

949100

949118

949113

949123

949120

949117

949114

949122

949121

949116

949115

scattered pne and shrub

adr,cdr

open

immature ppl

sparse bch, pne, spc

spc

cut

open

mixed woods

old cut

sparse bch

shrubs

adr

open

immature ppl mpl

sparse bch ppl

dead shrub

cdr

sparse bch

dead shrub

sparse bch pne

spc

immature ppl mpl

immature ppl mpl

old cut

adr

open

immature ppl

immature ppl mpl

cdr

5k

X 2a

shrubs

open

till cover

sparse bch

immature ppl mpl

sparse bch spc

cdr

OUTLINE OF MAGNETIC HIGH

winter trail

mixed forest

cdr

cut

open cut

bch immature ppl

immature ppl shrubs

adr

adr

open bch shrubs

sparse bch immature ppl shrubs

immature ppl mpl

immature ppl

cdr

adr

sparse bch

cdr and immature ppl

adr and immature ppl

adr

adr

adr and immature ppl

immature ppl

adr

adr

adr and immature ppl

immature spc

adr immature ppl

2a

adr and immature ppl

adr

adr

open bch, pne

immature ppl

bch

bch

open cut

bch bsm

immature ppl

bch

pne

open bch, pne

immature ppl

open cut

sparse bch, immature ppl

7a

open

immature ppl mpl

2a

bch spc

open adr

adr

2a

LEGEND

LATE INTRUSIVE ROCKS

8 Proterozoic diabase

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7a granitic rocks
7b quartz-feldspar porhyry

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3a massive flow or undifferentiated
3b flow breccia
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2c pillow or flow breccia
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2g lapilli tuff
2h agglomerate
2j reworked tuff (tuffaceous sedimentary rock)

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1a massive pillow or undifferentiated
1b pillowed flow
1c pillow or flow breccia
1d amygdaloidal
1e variolitic
1f porphyritic
1g pyroclastic

qtz quartz
qv quartz vein
silic silicified
carb carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

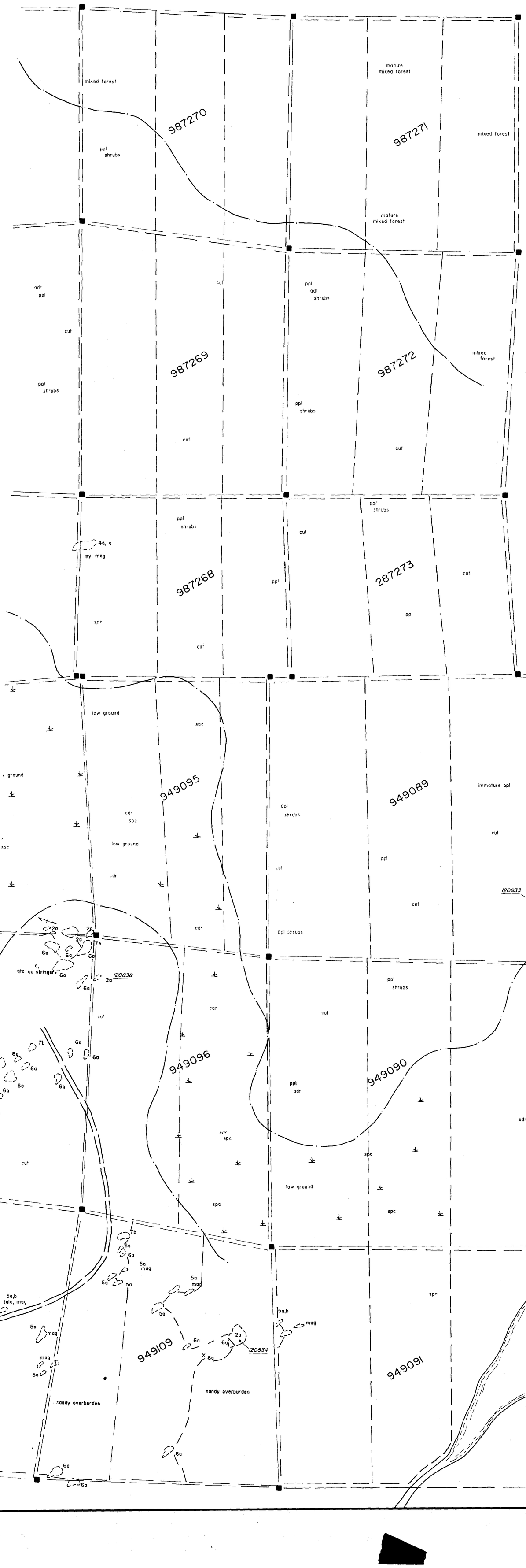
120340 whole rock and trace element sample

120341 trace element analysis only

foliation with dip
cleavage with dip
lineation with plunge
jointing with dip
drag fold
brecciation
bedding with dip and tops direction
pillow tops direction
shearing
x rock outcrops
scarp
vegetation boundary
wet lowland
creek.
esker
gravel road
trail
claim post and lines (assumed post)
mapping traverse lines

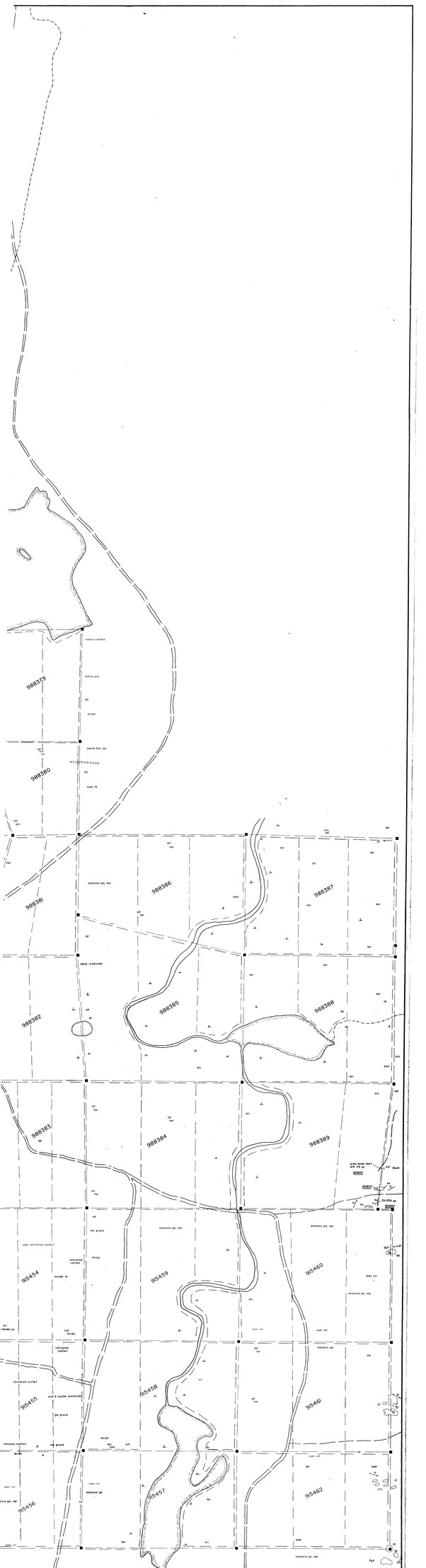
TREES

adr alder
ppl poplar
bch birch
spc spruce
mpl maple
bsm balsam
cdr cedar
pne pine



2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.		
	Title REEVES PROPERTY JOINT VENTURE		
	GEOLOGY MAP IW		
	Date: OCT/87	Scale: 1 : 2500	N.T.S.:
	Drawn: B.S.B./S.S.	Approved:	File: M-223



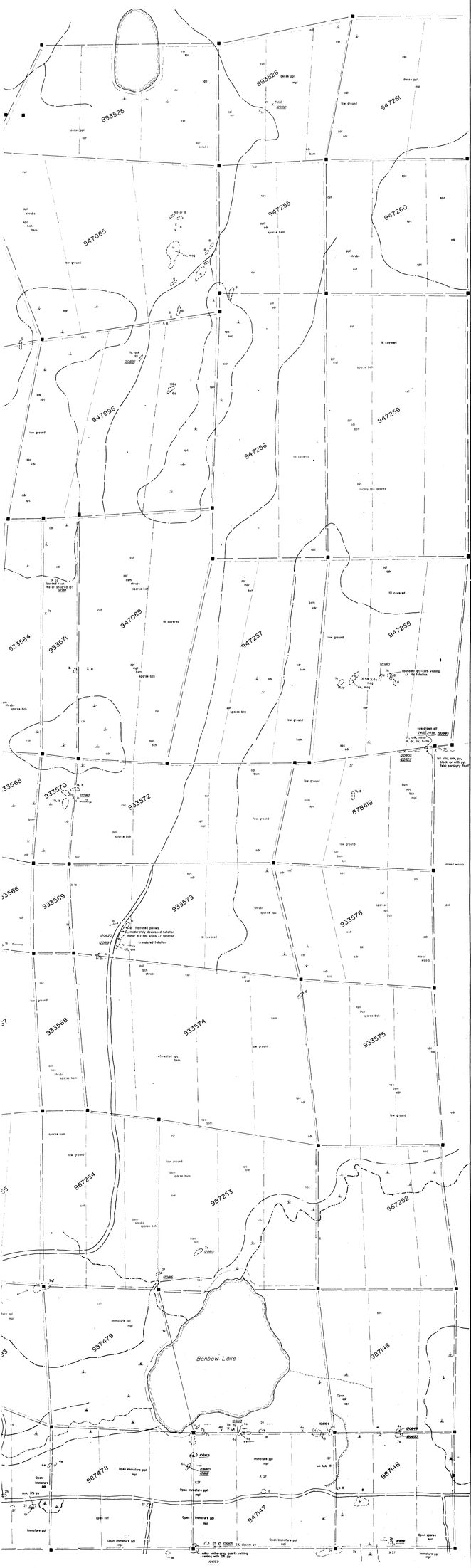
TREES

- cdr alder
- ppl poplar
- brh birch
- spc spruce
- mpl maple
- bsm balsam
- cdr cedar
- pne pine

lines

2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.
	Title REEVES PROPERTY JOINT VENTURE
	GEOLOGY MAP 2W
	Date: OCT/87 | Scale: 1 : 2500 | N.T.S.:
	Drawn: S.S.R./S.S. | Approved: | File: M-223



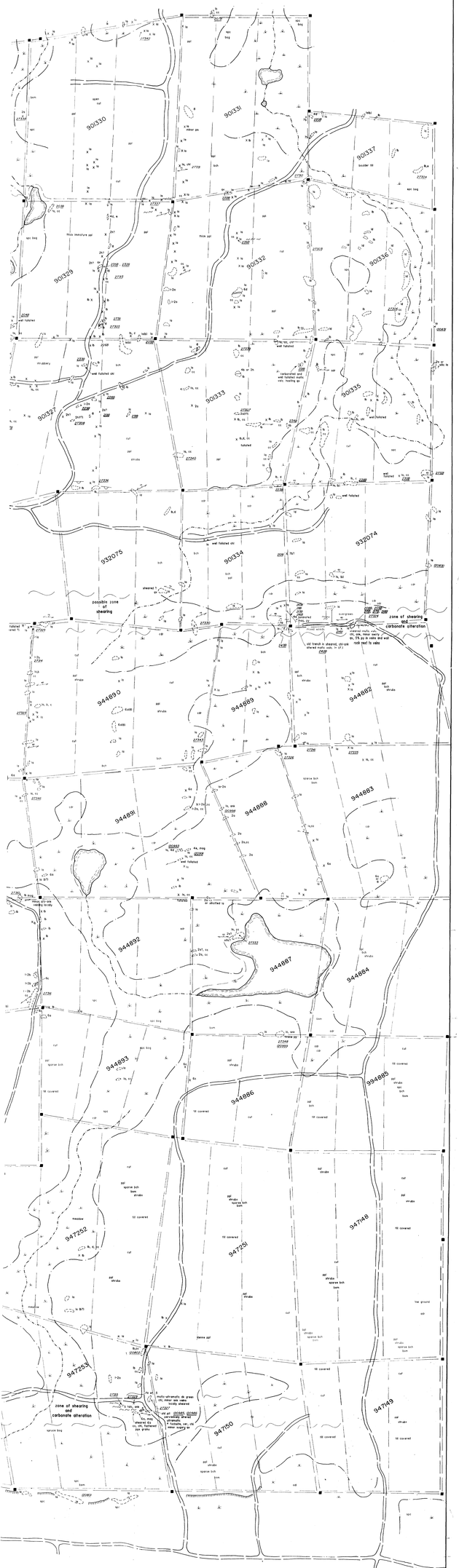
TREES

odr older
pgl poplar
bch birch
spc spruce
mpl maple
bsm balsam
cdr cedar
pne pine

2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.
	Title REEVES PROPERTY JOINT VENTURE
	GEOLOGY MAP 3W
	Date: OCT/87 Scale: 1:2500 N.T.S.:
	Drawn: R.S.M./S.S. Approved: File: M-223

rock lines



TREES

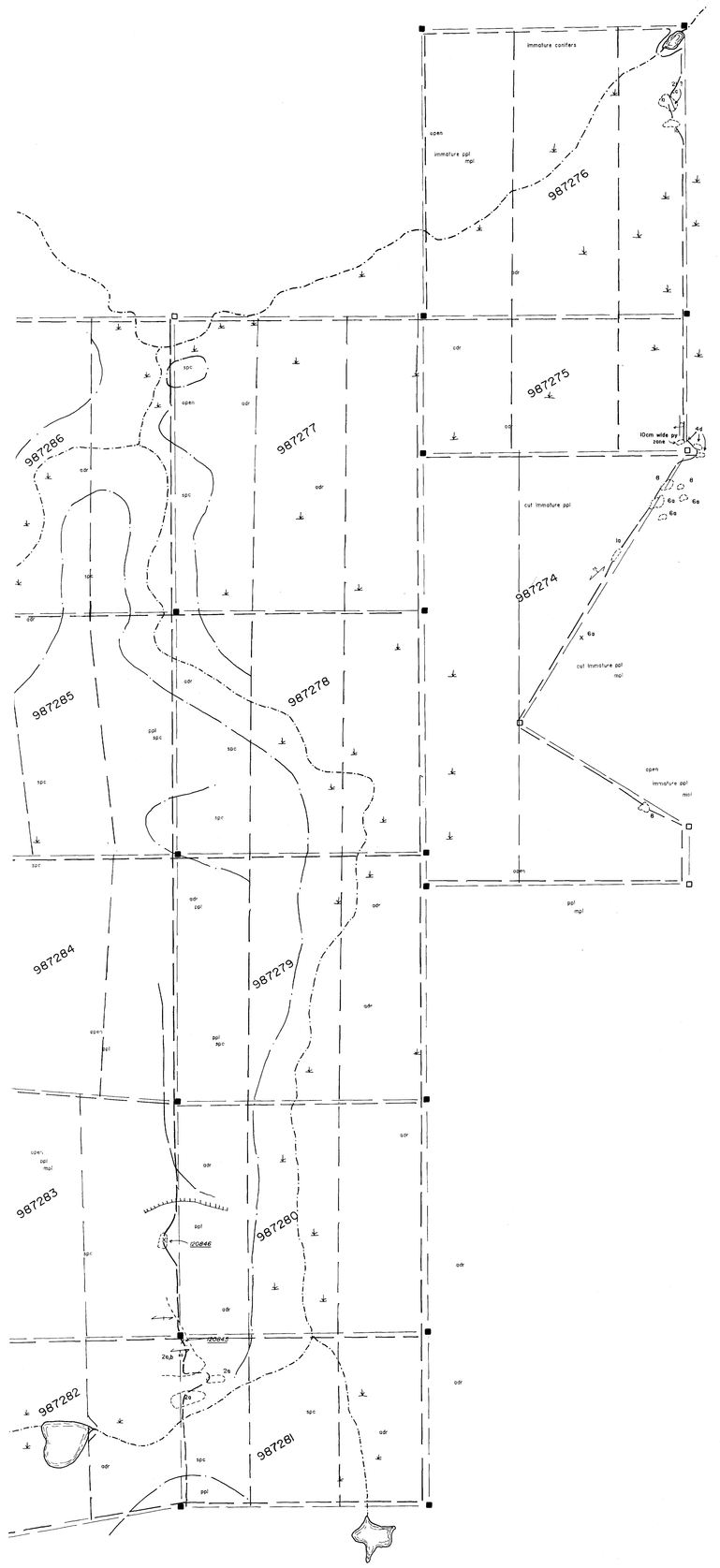
adr	alder
ppl	poplar
bch	birch
spc	spruce
mpl	maple
bsm	balsam
cdr	cedar
pne	pine

2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
	for COLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.	
	Title REEVES PROPERTY JOINT VENTURE	
	GEOLOGY MAP 4W	
	Date: OCT/87	Scale: 1 : 2500 N.T.S.:
	Drawn: S.B./E.S.	Approved: File: M-223

2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.		
	Title REEVES PROPERTY JOINT VENTURE		
	GEOLOGY MAP 5W		
	Date: OCT/87	Scale: 1:2500	N.T.S.:
	Drawn: S.S.B./S.S.	Approved:	File: M-223



TREES

adr	alder
ppl	poplar
bch	birch
spc	spruce
mpl	maple
bsm	balsam
cdr	cedar
pne	pine

2.11120

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.
	Title REEVES PROPERTY JOINT VENTURE
	GEOLOGY MAP 6N
	Date: OCT/87 Scale: 1 : 2500 N.T.S.:
	Drawn:B.S.B./S.S. Approved: File: M-223

949066
949065
949099
949097
949112
949098
949111
949110
sparse bch, spc
spc
cdr
2f
X Qtz blder
2g
old cut
open
Immature ppl mpl
spc adr
Immature ppl
open cut
adr
spc
1a
3
7a
2a
5b
bch cdr
bush
mixed forest
120847
120848
sparse bch
open adr
106156
106157
Immature ppl and mpl
cdr and Immature ppl
Milky white glassy quartz vein- no v. py
fractures a 180°/40°E
130°/60°W
bch spc
open cut
bch, spc
sparse bch
8
12
22
81

LEGEND

LATE INTRUSIVE ROCKS

[8] Proterozoic diabase

[7] EARLY FELSIC INTRUSIVE ROCKS

7a granitic rocks
7b quartz-feldspar porhyry

[6] EARLY MAFIC AND INTERMEDIATE INTRUSIVE ROCKS

6a gabbro
6b pyroxene-porphritic rock
6c diorite
6d feldspar porphyry

[5] ULTRAMAFIC ROCKS

5a peridotite
5b serpentinized peridotite
5c komateiitic rock
5d carbonatized ultramafic rock

[4] SEDIMENTARY ROCKS

4a argillite
4b wacke (siltstone, sandstone)
4c conglomerate
4d chert
4e iron formation
4f graphitic rock

[3] FELSIC VOLCANIC ROCKS

3a massive flow or undifferentiated
3b flow breccia
3c porphyritic flow
3d tuff, crystal tuff
3e lapilli tuff

[2] INTERMEDIATE VOLCANIC ROCKS

2a massive flow or undifferentiated
2b pillow flow
2c pillow or flow breccia
2d amygdaloidal
2e porphyritic
2f tuff, crystal tuff
2g lapilli tuff
2h agglomerate
2j reworked tuff (tuffaceous sedimentary rock)

[1] MAFIC VOLCANIC ROCKS

1a massive pillow or undifferentiated
1b pillowed flow
1c pillow or flow breccia
1d amygdaloidal
1e variolitic
1f porphyritic
1g pyroclastic

qtz quartz
qv quartz vein
silic silicified
carb carbonate
cc calcite
ank ankerite
ep epidote
chl chlorite
pyx pyroxene
feld feldspar
mag magnetite
py pyrite
po pyrrhotite
cpy chalcopyrite

120340 whole rock and trace element sample
120341 trace element analysis only

- foliation with dip
- cleavage with dip
- lineation with plunge
- jointing with dip
- drag fold
- brecciation
- bedding with dip and tops direction
- pillow tops direction
- shearing
- x rock outcrops
- scarp
- vegetation boundary
- wet lowland
- creek
- esker
- gravel road
- trail
- claim post and lines (assumed post)
- mapping traverse lines

TREES

adr alder
ppl poplar
bch birch
spc spruce
mpl maple
bsm balsam
cdr cedar
pne pine

0 25 50 75 100 125 150 Metres

N

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.		
	Title REEVES PROPERTY JOINT VENTURE		
	GEOLOGY MAP 7S		
	Date: OCT/87	Scale: 1 : 2500	N.T.S.: 2.11120
	Drawn: B.S.B./S.S.	Approved:	File: M-223