GEOLOGICAL REPORT AND MAPS 1986-1987 WORK PROGRAMME

MCDONOUGH LAKE PROPERTY

PURE GOLD RESOURCES LTD.

GEOLOGICAL REPORT FOR

THE MCDONOUGH PROPERTY

MCDONOUGH TOWNSHIP

RED LAKE AREA

DISTRICT OF KENORA

PATRICIA PORTION

ONTARIO

NTS 52M/1E; 52M/4W

William Donaldson B.Sc.
Eugene Flood, B.Sc.
November 15,1986.

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1.0 INTRODUCTION

A block of 133 claims in McDonough Township was staked in the spring of 1986 for the Greater Temagami Mining Company to explore the potential for gold mineralization in this area. Work in the mid-sixties by INCO and Cochenour Explorations and in 1984 by Dome Exploration has indicated gold mineralization associated with a quartz diorite intrusion and iron formation. C.D.I. Surveys of Val D'or, Quebec was employed to carry out a program of line cutting and geophysical surveys in October and November of 1986. Noramco Explorations Inc. employed two geologists; William Donaldson and Eugene Flood, to map, sample and interpret all information on the property. The following report outlines the work done, the results obtained and presents some analyses and conclusions based on the work.

2.0 SUMMARY

In the fall of 1986, most of the property was mapped, soil sampled, and covered by ground and airborne E.M. and magnetometer surveys.

The property is underlain by a sequence of metavolcanic flows and tuffs and clastic and chemical metasediments. These units comprise a southwest - striking, steeply north-dipping sequence.

A mafic metavolcanic sequence of fine - to - medium-grained massive flows with minor pillows occurs in the southeastern section. This unit contains trace disseminated pyrite and quartz veining. In the south-central portion, a coarse-grained, gabbroic-textured mafic flow contains quartz and carbonate stringers, and up to 1% disseminated pyrite.

Intermediate tuffaceous metavolcanic rock occurs along the top third of the property. The tuff is fine- to medium-grained, but minor lapilli tuff was observed.

Clastic metasediments are the main rock type, consisting of polymictic conglomerates, arkoses, quartzose arenites, wackes and biotite schists. Chemical metasedimentary rocks (chert, banded iron formation) are the least abundant.

The rocks have been metamorphosed to greenschist facies, with the intermediate tuffaceous unit locally metamorphosed to amphibolite facies.

Alteration features include quartz, carbonate and chlorite veining, fuchsite, and the presence of pyrite, tourmaline, galena, pyrrhotite and chalcopyrite.

There are two main intrusive bodies. A large quartz diorite intrusion extends from Slate Bay to the southwestern corner. A gabbroic body trends northeast along the shoreline of Hoyles Bay. Several small intrusions of a hornblende porphyritic quartz diorite occur in the northeast.

The metavolcanic-metasedimentary sequence trends northeast in the eastern half of the property. In the western half, the rocks trend east-northeast. A weak foliation is developed in these units parallel to the local strike.

No significant mineralization was observed, although one isolated gold value of 1310 ppb was obtained.

The field mapping and assessment work has identified four areas of economic interest:

1. A quartz-diorite intrusion.
2. A conductive stratabound horizon in the mafic flow unit
3. A fuchsite-chert-wacke-mafic flow sequence
4. A sulphide-bearing conglomerate horizon.

3.0 PROPERTY,LOCATION AND ACCESS

3.1 Property

The property consists of 133 contiguous, unpatented mining claims located in McDonough Township, Red Lake Mining Division, District of Kenora, Ontario (Figure 1). Claim numbers and locations are shown on Figure 2.

3.2 Location and Access

The property is located on the north side of Red Lake, immediately north of Post Narrows, approximately 10 kilometres north of the town of Red Lake. The property can be easily accessed by Pine Ridge road which is a 45 kilometre drive from Red Lake. This forestry haul road transects the northern boundary of the property and a winter road traverses the extreme western section. Access may also be gained by boat from Cochenour or Red Lake.

4.0 Previous Work

The earliest exploration work appears to have been some prospecting on the southeastern shore of Tomato Lake (Horwood, 1940). Between 1944 and 1946, some trenching and prospecting was done in the same area by C. Harvey.

In 1946, Dante Red Lake Gold Mines Ltd. conducted a magnetometer survey west of Tomato Lake over an area which includes four of the Greater Temagami claims. Several magnetic anomalies were defined including one on claim 865596. The extent of the company's follow up work is unknown.

In 1965, the Canadian Nickel Company Ltd. completed airborne and ground geophysical surveys over 6 claims in the southeastern section. Follow up work involved 2 diamond drill holes totalling 115 metres. Two bands of iron formation, a metasedimentary unit and a mafic volcanic unit were intersected. No assays were reported, but drill logs indicate that the core was only assayed for copper and nickel. The same area was prospected by Cochenour Explorations Limited in 1966. No economic values for base or precious metals were reported.

In 1977, Pirie and Sawitzky mapped McDonough Township for the Ontario Geological Survey at a scale of 1:12000. The following year, an Ontario Geological Survey input E.M. and magnetometer airborne survey outlined a series of northeast striking anomalies in the mafic unit. Drilling in the immediate area by Dome Exploration Limited., in 1984, determined that the basalt is magnetite-rich with several interbands of sulfide - facies iron formation. Gold assays of the iron formation of 686 ppb (0.02 ounce per ton) were reported for 8 separate intervals, the longest over 1.22 metres. Other auriferous units included a siltstone and a mafic flow unit. The drilling consisted of three holes on a block of claims still held by Dome within the southeast section of the Greater Temagami claim block.

The latest known work is an E.M. and magnetometer survey conducted in 1980 by Asarco over the northeastern corner. Encouraging results were not obtained.

5.0 WORK DONE

An airborne EM and magnetometer survey was flown over the property in August 1986. From September 22, 1986 to November 29, 1986, a grid was cut over most of the claim area. As it was cut, the grid was utilized for geological mapping, EM and magnetometer ground surveys.

5.1 GRID DESCRIPTION

A total of 28 kilometres of baseline and 182 kilometres of picketline were cut by C.D.I. Surveys of Val D'or, Quebec. On the main grid area north-south lines were cut at 100 metre intervals from an east-west oriented base line. In the southeast section, a much smaller grid was cut perpendicular to a baseline and tielines oriented at 040 degrees. On both grids pickets were set 25 metres apart.

5.2 GEOLOGY

Using the established grid, geological mapping was carried out at a scale of 1:5000. Lines were mapped as they were cut. By November 7,1986, when snow ended the field season, only 75% of the property had been mapped. Rock type, alteration, mineralization, structure, and any details of particular interest were noted. Topography wa mapped on a recognaissance basis. The resultant maps are located at the end of the report.

5.3 GEOPHYSICS

An airborne E.M. and magnetometer survey was conducted between August 27 and August 30, 1986, by DIGHEM Surveys and Processing Inc. A follow up ground magnetometer and max-min survey, conducted by C.D.I. Surveys of Val D'or, Quebec, was completed by December 1986.

5.4 SOIL GEOCHEMISTRY

A B-Horizon soil geochemical survey was completed over the grid in October, 1986. The results and interpretation of the survey are discussed in a separate report entitled "Geochemical Soil Survey Conducted on the McDonough Property". by S. Reid.

6.0 REGIONAL GEOLOGY

The Red Lake area is underlain by a 60 kilometre by 30 kilometre irregularly shaped area of metavolcanics and minor metasediments surrounded and intruded by diapiric granitoid plutons.

According to Pirie (1981), the belt consists of two predominantly volcanic successions, a lower tholeiitic to komatiitic sequence and an upper calc - alkaline sequence.

The older volcanic sequence has three main types of mafic volcanic flows; tholeiitic basalt, variolitic basalt and komatiites (1980). Felsic pyroclastics with minor flows and metasediments also occur within this sequence.

The sequence of calc-alkalic volcanic rocks is much more complex than the older sequence (Pirie 1980). Substantially different volcanic lithologies are intimately interbedded and interdigitate laterally suggesting contemporaneous extrusions of different composition such as quartz-phyric rhyolite flows, tuffs, lapillistone and breccias intermixed with dacitic to andesitic breccias, lapillistone and flows. Andesitic and basaltic flows are common.

U-Pb dating indicates a prolonged period of volcanic activity evolving from tholeiitic to dominantly calc-alkaline affinity and spanning a time interval of at least 2700 Ma. The supracrustal rocks have been intruded by a variety of felsic to intermediate stocks and dikes, such as the "Howey Diorite" just east of Red Lake and the "Dome Stock", a granodiorite in the centre of the belt. The emplacement of the Little Vermilion Lake and Hammell Lake batholiths to the north, marked the beginning of major felsic plutonism in the belt at 2731 and 2717 Ma respectively, and culminated in the emplacement of the Killala-Baird and Trout Lake batholiths at approximately 2700 Ma.

The structural signature of the Red Lake greenstone belt is dominated by the subvertical to vertical attitude of the stratigraphy and the widespread development of a penetrative L-S fabric, the latter accompanied by a variety of related brittle to brittle-ductile features (Hugon and Schwerdtner,1984,1985). The regional fabric manifests in pervasive foliation and cleavage development, which in the vicinity of batholith contacts, increases in intensity to define 2-3 kilometre wide strain aureoles of strongly deformed schistose to gneissose supracrustal rocks.

Foliation trajectories obtained from the foliation data available at the belt scale demonstrate that large and small scale conjugate transcurrent shear zones developed within the supracrustal material of the belt. These sets of shear zones form discrete linear zones of high strain (deformation zones) superimposed on the regional foliation trends. These deformation zones occur at the interface between the older and younger volcanic piles.

The combined structural evidence indicates that formation of the regional foliations and conjugate system of deformation zones was broadly synchronous and temporally related to the diapiric emplacement of the surrounding batholiths (Hugon and Schwerdtner, 1984).

Past and present-producing mines in the Red Lake area occur in zones of highly altered rock near the stratigraphic top of the lower tholeiitic sequence. A few past producers located within the Dome Stock and related McKenzie stocks represent the only exceptions.

The major gold deposits of the area and the highly altered rocks associated with them are spatially related to large, heterogeneous shear systems (deformation zones) which cut across the volcanic sequences on a regional scale.

Studies in the Campbell and Dickenson mines indicate that gold mineralization was broadly synchronous with the peak of thermal metamorphism, but post-dated much of the carbonate alteration and occurred late in the history of shear deformation. The combined evidence indicates that contact thermal metamorphism, shear deformation and intense hydrothermal alteration attending gold mineralization were broadly coeval and directly linked to the process of batholith emplacement.

6.2 PROPERTY GEOLOGY

The McDonough property is underlain by a sequence of metavolcanic flows and tuffs, and clastic and chemical metasediments. These units occur in a southwest striking, steeply north dipping sequence. The metavolcanic rocks have been intruded by a medium - to - coarse grained flow in the southeastern section. The clastic metasediments have been intruded by a large biotite-hornblende quartz diorite stock in the southwestern corner. There have been several localized intrusions of a hornblende porphyritic quartz diorite, in both the clastic metasediments and intermediate metavolcanic units. Deformation has produced a weak foliation in the metavolcanic and metasedimentary rocks.

6.2.1. METAVOLCANIC ROCKS

6.2.1a Mafic Metavolcanic Rocks

There are two areas underlain by mafic metavolcanic rocks. In the southeastern section, [illegible], fine to medium grained mafic rocks are [illegible] along with minor amounts of pillow flows. Foliations observed from this unit indicate a southwest trend. Quartz veins and carbonate stringers crosscut the mafic unit. Quartz veins are typically 2 to 4 centimetres wide, although two non-mineralized, milky quartz veins, [illegible] and 50 centimetres wide were observed. Fracture filling carbonate stringers are only a few millimetres wide. One percent disseminated pyrite occurs in this unit.

The second mafic metavolcanic unit is located in the south-central portion. These mafic rocks are very coarse grained, displaying a gabbroic texture. Quartz veins up to 0.5 centimetre and carbonate stringers were noted in some outcrops.

6.2.1b Intermediate Volcanic

Intermediate, fine - to - medium grained tuff, with minor lapilli-tuff occurs across the top third of the property. In the northeastern corner, the tuffaceous unit has been metamorphosed to a biotite-hornblende schist due to its proximity to the Little Vermilion Lake Batholith. A relatively high density of quartz and pegmatite veins and epidote staining was observed in the northwestern corner. The concentration of pyrite is less than 1% in the tuffaceous unit.

6.2.2 Metasedimentary Rocks

6.2.2a Clastic Metasedimentary Rocks

Clastic metasedimentary rocks comprise the bulk of the outcrops and are located mainly on the western half of the property. The main units are polymictic conglomerates, arkoses, quartzose arenites, wackes and biotite schists. The conglomerate clast size ranges from 0.5 centimetre to over 15 centimetres. The arkoses and quartzose arenites have been recrystallized, and are fine - to - medium grained. The wackes are very fine grained and dark grey in colour. Schistosity in the biotite schists ranges from poor to well-developed. Brownish red garnets and fuchsite are present in some outcrops. Quartz veins commonly contain pyrite as well as trace amounts of tourmaline and galena.

6.2.2b Chemical Metasedimentary Rocks

Chemical metsedimentary rocks, including chert and banded iron formation are the least abundant rock tpye. Chert metasediments were observed at three localities:

1) 24+50SW, at the southern claim boundary
2) 22+00SW, 2+00SE
3) 9+00SW, 7+00SE

The rock unit at the first locality was a two metre wide banded iron formation. Fuchsite was quite abundant near the unit. Pyrite and pyrrhotite concentrations were less than one percent. Due to recrystallization, the chert has a sacchroidal texture. Chert with magnetite seams less than 1 centimetre wide was present at the second locality. The third location contained massive chert with trace pyrite in a 5 metre outcrop.

6.2.3 Metamorphism and Alteration

Metamorphism increases in rank from lower greenschist to amphibolite grade northwards across the property with proximity to the Little Vermilion Lake batholith. Biotite and garnet are present locally within the sediments. Common alteration products observed to occur on the property include:

a) carbonization of the quartz diorite and mafic flows
b) quartz and chlorite veins in most rock types and
c) local sulphide mineralization (pyrite , galena) and tourmaline.

The most common alteration feature is the development of fuchsite in sediments. Fuchsite occurs as thin disseminated flakes, approximately one millimetre in length, in sedimentary outcrops on the extreme west side of the property, and just north of Tomato Lake. Along line 24+50W, near the southern claim boundary, fuchsite was found in massive, 8 centimetre wide lens, and as stringers in a wacke unit. The lens of fuchsite could be traced for 10 metres.

6.2.4 Intrusive Events

There are two main intrusive bodies as well as several smaller intrusions. A large quartz diorite intrusion extends from Slate Bay to the southwest corner of the property. This unit is relatively massive with minor pyritic quartz and pegmatite fracture fillings. Another exposure of quartz diorite 450 metres to the north, is believed to be related to the main body.

In the southeast quadrant, a large gabbroic body trends northeast across the shoreline of Hoyles Bay. This unit is quite massive and contains minor pyrite and chalcopyrite.

Several small intrusions of a hornblende porphyritic quartz diorite occur in the northwest quadrant. These are massive isolated bodies which contain virtually no sulphides with the exception of one area, where pyrite plus pyrrhotite concentrations locally exceed four percent. This particular exposure has a higher mafic content than the other hornblende porphyritic quartz diorite bodies and contains numerous quartz and pegmatite veins.

Narrow, late-stage lamprophyre dikes/sills intrude the stratigraphy in various locations across the property. These dikes typically contain trace sulphide mineralization with one exception where 2-5 percent pyrite and pyrrhotite were present.

6.2.5 Structure

The metavolcanic-metasedimentary sequence trends northeast across the eastern half of the property. In the western half, the rock units trend east-northeast. A weak foliation is developed in these units, roughly parallel to the local strike. A crenulation cleavage is present at the contact between the metasediment and metavolcanic rocks.

In the northwest quadrant sinistral and dextral faults, infilled with narrow quartz veins, show minor displacements. Prominent lineaments on the shore of Hoyles Bay, outlined on air photos, generally are believed to represent lithologic contacts. A synclinal axis parallels the contact between the mafic volcanic rocks near Hoyles Bay and the sediment package to the north. Approximately 1.5 kilometres to the west, an anticlinal axis also trending northeast, is interpreted to exist within the sedimentary package.

6.3 LITHOGEOCHEMISTRY

One hundred and thirty-six rock chip and channel samples were collected. The sample locations are shown on the sample location map in the back folder of this report. Assay certificates are included in the Appendix.

The samples were shipped to Swastika Laboratories in Swastika,Ontario for analysis. Their method for gold assaying has a lower detection limit of 5 ppb gold, and was completed using a combined fire-assay - atomic absorption technique on a one assay ton portion of nominal -100 mesh. A Varian AA 1275 atomic absorption unit was employed for the analysis.

Eighteen samples had values greater than 10 ppb.

Five samples had geochemically anomalous values greater than 50 ppb.

Sample A1349 (L22+00SW; 2+00SE) collected from a recrystrallized chert band in mafic volcanics, contained 50 ppb gold.

Sample A1635 (L2+00W; 14+63S) was collected from a 5 centimetre wide quartz vein in mafic volcanics. It contained 65 ppb gold.

Sample A1367 (L52+20W; 2+85N) was a porphyritic hornblende quartz diorite with 1% disseminated pyrite. It contained 140 ppb gold.

Samples A1353 and A1352 (L4+00W; 2+25N) were collected from a blast pile of iron-stained quartz-biotite schist, with 10% massive pyrite. Sample A1353 (from a 5 centimetre quartz vein) contained 50 ppb gold. Sample A1332 (from the schist) gave the highest gold value from the McDonough property, averaging 1310 ppb (0.039 ounce per ton) gold.

7.0 GEOLOGIC INTERPRETATION

Field evidence indicates the younging direction of the metavolcanic-metasedimentary sequence is to the northwest. There are several thin discontinuous chert-iron formation units through out the property suggesting the source of these sediments operated sporatically throughout the depositional history.

Stratigraphically overlying the chert unit in the southeast corner is an arkosic horizon. This strata represents a low energy regime of significant spatial continuity.

Next in the stratagraphic column is a sequence of pillowed mafic flows (1.2 kilometres thick) which contains only very minor amounts of intercalated sediments. This suggests a relatively uninterrupted irruptive cycle.

North of the mafic flow unit is an intermediate tuffaceous horizon which does not appear further to the southwest.

The presence of a sedimentary formation to the west of the mafic flows and to the north of the tuffaceous unit is interpreted to represent a hiatus in volcanic activity. In contact with the tuffaceous unit to the north is a channel fill conglomerate. The large size of the clasts (some exceeding 30 centimetres) indicates the depositional source would have been in close proximity to the northeast. On strike with this unit to the southwest is a chert pebble conglomerate which is interpreted to be the distal equivalent. To the west, the sedimentary package becomes very thick, exceeding two kilometres in places. The dramatic increase in thickness of this assemblage may indicate the edge of a depositional basin. Within this sedimentary package, there are four separate conglomerate horizons interbedded with arkoses, quartz arenites and greywackes.

Overlying the sediments is a tuffaceous unit consisting of fine tuffs, lapilli tuffs and lapillistones.

Small massive felsic intrusions, possibly contemporaneous with the large felsic batholiths in the region, intrude the sequence as do thin lamprophyre dikes and larger gabbroic intrusions.

A regional foliation developed in these units is due to a northwest-southeast compression.

8.0 ECONOMIC GEOLOGY

Mapping and prospecting during the 1986 field season failed to uncover any significant gold or base metal occurrence on the property. Geochemically anomalous gold values have been intersected in previous diamond drill holes by Dome Explorations Limited on the property. Gold assays typically range from nil to 40 ppb. One isolated anomalous gold assay of 1310 ppb was obtained from a metasediment. No altered significant concentration of base metal minerals such as pyrite, pyhhrotite and chalcopyrite were found. Platinum and palladium occur in trace amounts in a small intermediate to mafic plug in the northwest section of the property.

8.1 EXPLORATION POTENTIAL

Three areas have been identified that warrant further exploration:

1) A quartz-diorite intrusion in the southwest corner of the property.
2) A conductive stratabound mafic flow horizon in the southeastern corner of the property.

3) A fuschsite-chert-greywacke-mafic flow sequence in the south-central area.

8.1.1 QUARTZ DIORITE INTRUSION

Cochenour-Willans Mines drilled five holes in the quartz diorite intrusion in July 1967. Two drill holes intersecting the eastern side of the intrusion contained significant gold values. Drill hole X-8 contained 12 intersections greater than 1000 ppb gold over its 155.8 metre length. The highest value of 2743 ppb gold 0.3 metres was obtained from a silicified quartz porphyry breccia with pyrite and minor chalcopyrite.

Drill hole X-7 located 120 metres south of hole X-8 contained four intersections with values in excess of 1000 ppb gold. The highest value of 8914 ppb gold over 0.64 metres was obtained from a silicified felspar porphyry unit with pyrite and minor chalcopyrite. The gold mineralization is considered to be localized in quartz fracture-fillings which contain pyrite and trace chalcopyrite. The gold mineralization found in holes X-7 and X-8 trends in a northeasterly direction onto the McDonough property. Testing for the extension of this gold-bearing zone onto the McDonough property is considered high priority.

8.1.2. EM CONDUCTORS WITHIN MAFIC VOLCANICS

An airborne Dighem survey has identified several EM conductors within a sequence of mafic volcanics in the eastern half of the property. Dome Explorations Limited holds a block of 10 claims within this unit. Eight assays of 686 ppb gold were reported from iron formation, siltstone and basalt in two of the three holes they drilled. The longest auriferous interval was 1.22 metres. Banded iron formation was encountered in all three holes, the maximum thickness encountered was six metres.

In 1965, Inco drilled two holes in the southeast section of the property where numerous bands of iron formation were intersected in mafic volcanics and metasediments. Gold assays were not reported.

Testing the gold-bearing potential of the iron formations and possible coincident EM anomalies is recommended as the second priority.

8.1.3 FUCHSITE-CHERT-WACKE-MAFIC FLOW SEQUENCE

Located just north of the southern claim boundary near line 25+10 west, is a sequence of intercalated mafic volcanics and chemical and clastic sediments. Although only trace alterations of sulphides were found, massive fuchsitic alteration of the metasediments occurs. No previous drilling has been recorded in this area. Testing this zone for gold mineralization is considered a low priority.

8.1.4 ADDENUM

On line 4+00W and 2+20N, a sample of pyritic conglomerate taken from an old pit returned an assay of 1310 ppb gold. The metasediments containing the latter conglomerate unit narrows to a width of approximately 50 metres to the northeast. This northeast end of the metasediments is comprised of largely conglomerate which contains occasional sulphidic clasts. The conglomerate yielded only low gold assays.

In summary, there are four main areas of economic interest;

1) The quartz-diorite intrusion
2) The conductive stratabound horizons in the mafic volcanics.
3) The fuchsite-chert-wacke-mafic flow sequence
4) The sulphide-bearing conglomerate horizon

9.0 REFERENCES

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Regional Geological Setting of Gold Deposits in the Red Lake Area, Northwestern Ontario, in Genesis of Archean, Volcanic Hosted Gold Deposits, Ontario Geological Survey,M.P. 97 pp.

6.0 REID,S. 1986
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7.0 SMITH,P.A.,1986
Dighem III Survey of the McDonough Property, Red Lake Area, Ontario , for NORAMCO EXPLORATIONS INCORPORATED

8.0 THURSTON, P.C., and BARTLETT,J.R. 1981
Red Lake Sheet, Kenora District, Ontario Geological Survey, Prelim. Map.P.2365. Scale 1:126720

9.0 WINTER,L.D.S.1986
Geological Report on the Exploration Potential for Gold and Base Metals of the McDonough Property, Red Lake, Ontario. for the Greater Temagami Mining Company

CERTIFICATE OF QUALIFICATION

I, William Stratton Donaldson, do hereby certify:

1. that I am a geologist and reside at 1139 Edgeland Place, Ottawa, Ontario,K2C 2J9

2. that I graduated from Carleton University (Ottawa,Ontario) in 1985 with a Bachelor of Science (Honours) degree in Geology.

3. that I have practiced my profession continously since graduation.

4. that this Geological Report for the McDonough Property, Red Lake Area, Ontario is based on my personal knowledge of the geology of the area, field work carried out by and supervised by me, and on a review of published and unpublished information on the property and surrounding area, in conjunction with work done by Eugene Flood.

W.S.DONALDSON B.Sc.
(Honours)
November 15,1986

William Donaldson

CERTIFICATE OF QUALIFICATION

I, Eugene Flood, do hereby certify:

1. that I am a geologist and reside at 2045 Courtland Drive Burlington, Ontario. L7R 1R7

2. that I graduated from Lakehead University (Thunder Bay, Ontario) in 1985 with a Bachelor of Science degree in Geology

3. that I have practiced my profession continuously since graduation

4. that the report on the Geologic Mapping of the McDonough Property, McDonough Township, Ontario is based on my personal knowledge of the geology of the area, field work carried out by and supervised by me and on a review of published and unpublished information on the property and surrounding area in conjunction with work done by William Donaldson.

Eugene Flood

Eugene Flood, B.Sc.
November 15, 1986.

APPENDIX

52N04NW0009 2.10376 MCDONOUGH

900

November 12, 1987

Your File: 87
Our File: 2.10376

Mining Recorder
Ministry of Northern Development and Mines
P.O. Box 324
Red Lake, Ontario
POV 2M0

Dear Sir:

RE: Notice of Intent dated October 27, 1987
Geological Survey on Mining Claims KRL-865504
et al in the Township of McDonough

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 and Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

AB:pl
Enclosure: Technical Assessment Work Credits

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

Resident Geologist
Red Lake, Ontario

Pure Gold Resources Inc.
1210 Main Street West
North Bay, Ontario
P1B 2W6

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File
2.10376

Date	Mining Recorder's Report of Work No.
October 27, 1987	87

Recorded Holder: Pure Gold Resources Inc.

Township or Area: McDonough

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	See attached list
Electromagnetic ______ days	
Magnetometer ______ days	
Radiometric ______ days	
Induced polarization ______ days	
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 33 days	
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

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)

MCDONOUGH LAKE CLAIMS CONTINUED

CLAIM NO	CLAIM NO	CLAIM NO
865550	865588	869765
865552	865589	869766
865553	865590	869767
865554	865595	869768
865555	865596	869769
865556	865597	869770
865557	865598	869771
865558	865599	869772
865559	869709	869773
865560	869710	894602
865561	869711	894603
865562	869712	
865563	869713	
865564	869714	
865565	869715	
865566	869716	
865567	869717	
865568	869718	
865570	869719	
865571	869720	
865575	869721	
865576	869722	
865577	869723	
865578	869724	
865579	869725	
865580	869726	
865582	869759	
865583	869760	
865584	869762	
865586	869763	
865587	869764	

NOTE: CLAIMS 865551,865569,865572-74, 865581,865585,865591-94,869761, 894600-01 WERE PROBABLY NOT MAPPED, AND ARE THEREFORE NOT LISTED ABOVE.

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File ____________

McDonough Prop

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

Type of Survey(s): Geological Survey

Township or Area: McDonough Twp

Claim Holder(s): Pure Gold Resources Inc
1210 Main St W North Bay, Ont

Survey Company: Noramco Explorations Inc.

Author of Report: Eugene Flood

Address of Author: P.O. Box 825 Conehenour-Wollans Minesite, Red Lake

Covering Dates of Survey: 22/09/86 - 07/11/86 (linecutting to office)

Total Miles of Line Cut: 210 km.

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	
--Magnetometer	
--Radiometric	
--Other	
Geological	40
Geochemical	

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

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

DATE: Sept 16, 1987 SIGNATURE: Michelle Dubeau
Author of Report or Agent

Res. Geol. ____________ Qualifications 2.8953

Previous Surveys

File No.	Type	Date	Claim Holder

RECEIVED
SEP 22 1987
MINING LANDS SECTION

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically
(cont'd on list appended)

(prefix)	(number)
865504	865527
KRL 865505	865528
865506	865529
865507	865530
865508	865531
865509	865532
865510	865533
865511	865534
865512	865535
865513	865536
865514	865537
865515	865538
865516	865539
865517	865540
865518	865541
865519	865542
865520	865543
865521	865544
865522	865545
865523	865546
865524	865547
865525	865548
865526	865549

TOTAL CLAIMS 119

If space insufficient, attach list

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations ______________ Number of Readings ______________

Station interval ______________ Line spacing ______________

Profile scale ______________

Contour interval ______________

MAGNETIC

Instrument ______________

Accuracy – Scale constant ______________

Diurnal correction method ______________

Base Station check-in interval (hours) ______________

Base Station location and value ______________

____

ELECTROMAGNETIC

Instrument ______________

Coil configuration ______________

Coil separation ______________

Accuracy ______________

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

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

Parameters measured ______________

GRAVITY

Instrument ______________

Scale constant ______________

Corrections made ______________

____

Base station value and location ______________

____

Elevation accuracy ______________

INDUCED POLARIZATION RESISTIVITY

Instrument ______________

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time ______________ Frequency ______________

– Off time ______________ Range ______________

– Delay time ______________

– Integration time ______________

Power ______________

Electrode array ______________

Electrode spacing ______________

Type of electrode ______________

MCDONOUGH LAKE CLAIMS CONTINUED

CLAIM NO	CLAIM NO	CLAIM NO
865550	865588	869765
865552	865589	869766
865553	865590	869767
865554	865595	869768
865555	865596	869769
865556	865597	869770
865557	865598	869771
865558	865599	869772
865559	869709	869773
865560	869710	894602
865561	869711	894603
865562	869712	
865563	869713	
865564	869714	
865565	869715	
865566	869716	
865567	869717	
865568	869718	
865570	869719	
865571	869720	
865575	869721	
865576	869722	
865577	869723	
865578	869724	
865579	869725	
865580	869726	
865582	869759	
865583	869760	
865584	869762	
865586	869763	
865587	869764	

NOTE: CLAIMS 865551,865569,865572-74, 865581,865585,865591-94,869761, 894600-01 WERE PROBABLY NOT MAPPED, AND ARE THEREFORE NOT LISTED ABOVE.

SELF POTENTIAL

Instrument ____________________ Range ____________

Survey Method ____________________

____

Corrections made ____________________

____

RADIOMETRIC

Instrument ____________________

Values measured ____________________

Energy windows (levels) ____________________

Height of instrument ____________________ Background Count ____________

Size of detector ____________________

Overburden ____________________

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey ____________________

Instrument ____________________

Accuracy ____________________

Parameters measured ____________________

____

Additional information (for understanding results) ____________________

____

____

AIRBORNE SURVEYS

Type of survey(s) ____________________

Instrument(s) ____________________

(specify for each type of survey)

Accuracy ____________________

(specify for each type of survey)

Aircraft used ____________________

Sensor altitude ____________________

Navigation and flight path recovery method ____________________

____

Aircraft altitude ____________________ Line Spacing ____________

Miles flown over total area ____________________ Over claims only ____________

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken ______________________________

____

____

Total Number of Samples ______________________________

Type of Sample ______________________________
(Nature of Material)

Average Sample Weight ______________________________

Method of Collection ______________________________

____

Soil Horizon Sampled ______________________________

Horizon Development ______________________________

Sample Depth ______________________________

Terrain ______________________________

____

Drainage Development ______________________________

Estimated Range of Overburden Thickness ______________________________

____

____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis ______________________________

____

____

____

General ______________________________

____

____

____

____

____

____

____

____

____

ANALYTICAL METHODS

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

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

Others ______________________________

Field Analysis (______________________________ tests)

Extraction Method ______________________________

Analytical Method ______________________________

Reagents Used ______________________________

Field Laboratory Analysis

No. (______________________________ tests)

Extraction Method ______________________________

Analytical Method ______________________________

Reagents Used ______________________________

Commercial Laboratory (______________________________ tests)

Name of Laboratory ______________________________

Extraction Method ______________________________

Analytical Method ______________________________

Reagents Used ______________________________

General ______________________________

____

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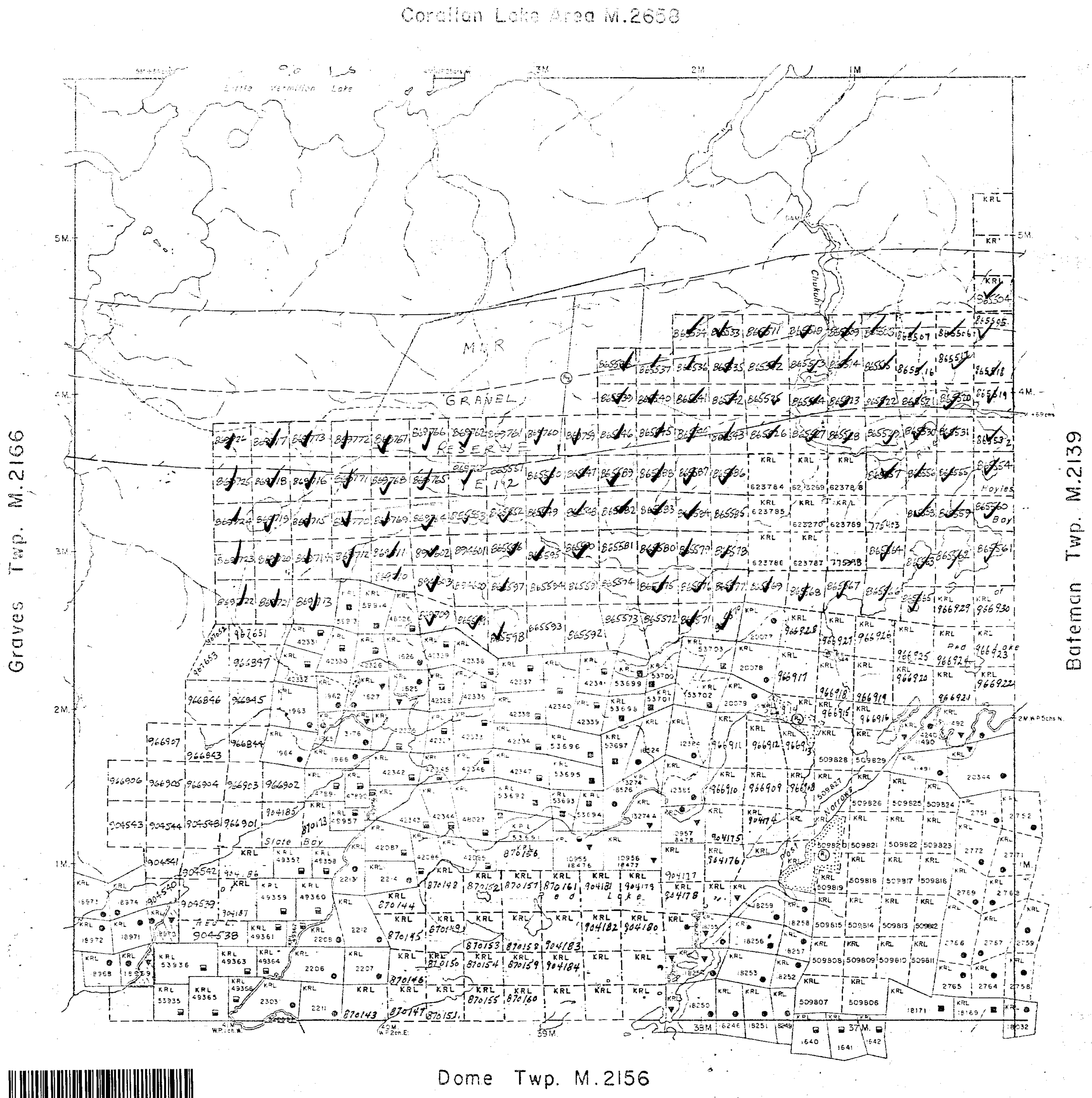


THE TOWNSHIP OF

McDONOUGH

DISTRICT OF
KENORA
PATRICIA PORTION

RED LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

DISPOSITION OF CROWN LANDS

- PATENT, SURFACE AND MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LEASE, SURFACE AND MINING RIGHTS
- " , SURFACE RIGHTS ONLY
- " , MINING RIGHTS ONLY
- LICENCE OF OCCUPATION
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

RED LAKE MINING DIVISION
FEB 12 1987
RED LAKE, ONTARIO

NOTES

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

Flooding on Chukuni River above dam to contour elevation 1198.5' ▽6923 file.147880

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

Order No	File	Date	Disposition
Ⓡ	163474	Aug 20, '70	surface rights only
Ⓢ	"	May 4, '71	" "
Ⓢ W.8/81	63288	8/10/81	
O. 19/83		July 15, 1983	
1E6 CHANGED TO 1E12		JULY 18, 1984	

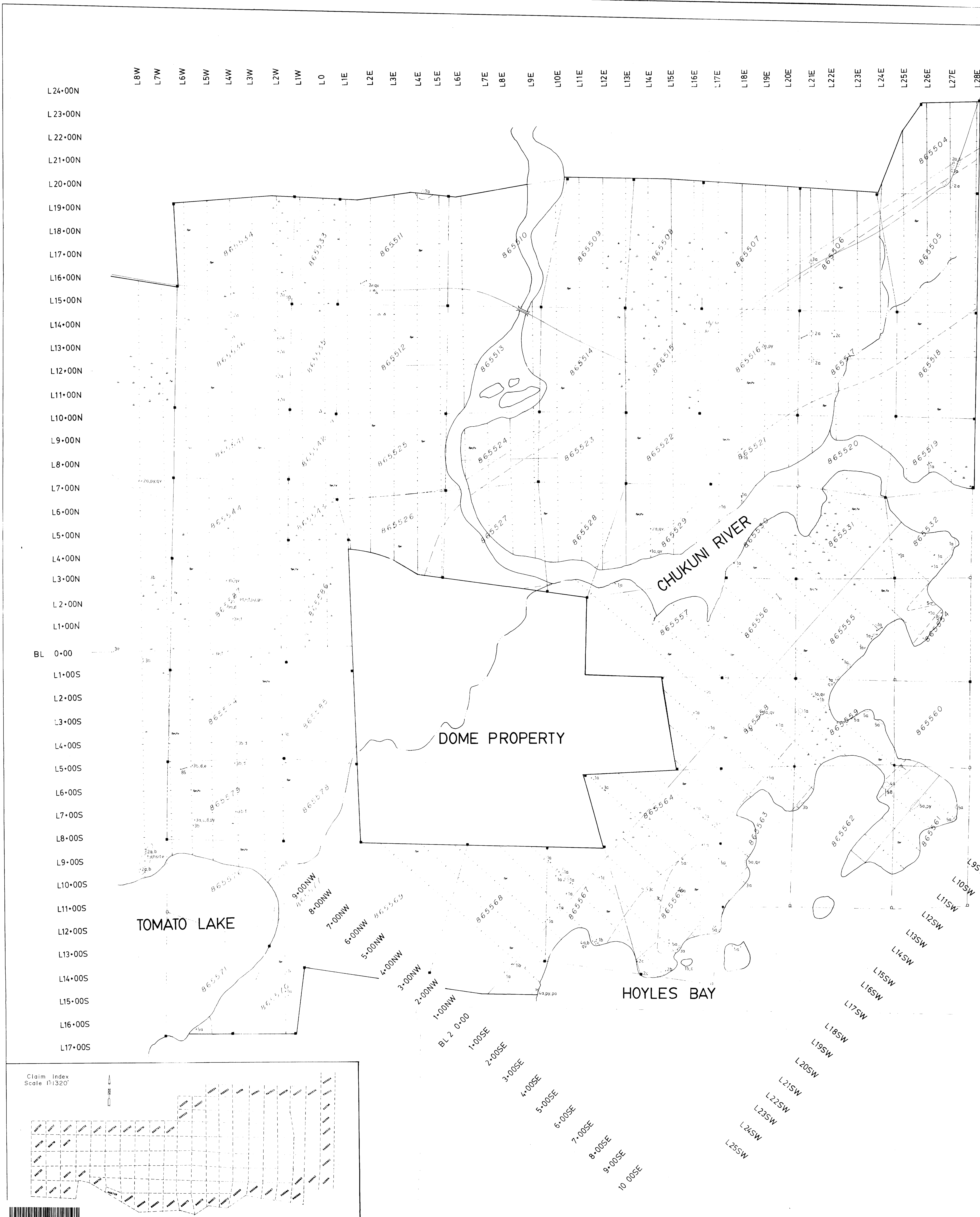
Areas open to staking June 1, 1987 at 7:00 A.M. Central Standard Time

PLAN NO. M.2182

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

52N04NW0009 2.10376 MCDONOUGH

200



DOME PROPERTY
CHUKUNI RIVER
TOMATO LAKE
HOYLES BAY
L8W L7W L6W L5W L4W L3W L2W L1W L0 L1E L2E L3E L4E L5E L6E L7E L8E L9E L10E L11E L12E L13E L14E L15E L16E L17E L18E L19E L20E L21E L22E L23E L24E L25E L26E L27E L28E
L24+00N
L23+00N
L22+00N
L21+00N
L20+00N
L19+00N
L18+00N
L17+00N
L16+00N
L15+00N
L14+00N
L13+00N
L12+00N
L11+00N
L10+00N
L9+00N
L8+00N
L7+00N
L6+00N
L5+00N
L4+00N
L3+00N
L2+00N
L1+00N
BL 0+00
L1+00S
L2+00S
L3+00S
L4+00S
L5+00S
L6+00S
L7+00S
L8+00S
L9+00S
L10+00S
L11+00S
L12+00S
L13+00S
L14+00S
L15+00S
L16+00S
L17+00S
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8+00NW
7+00NW
6+00NW
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4+00NW
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1+00NW
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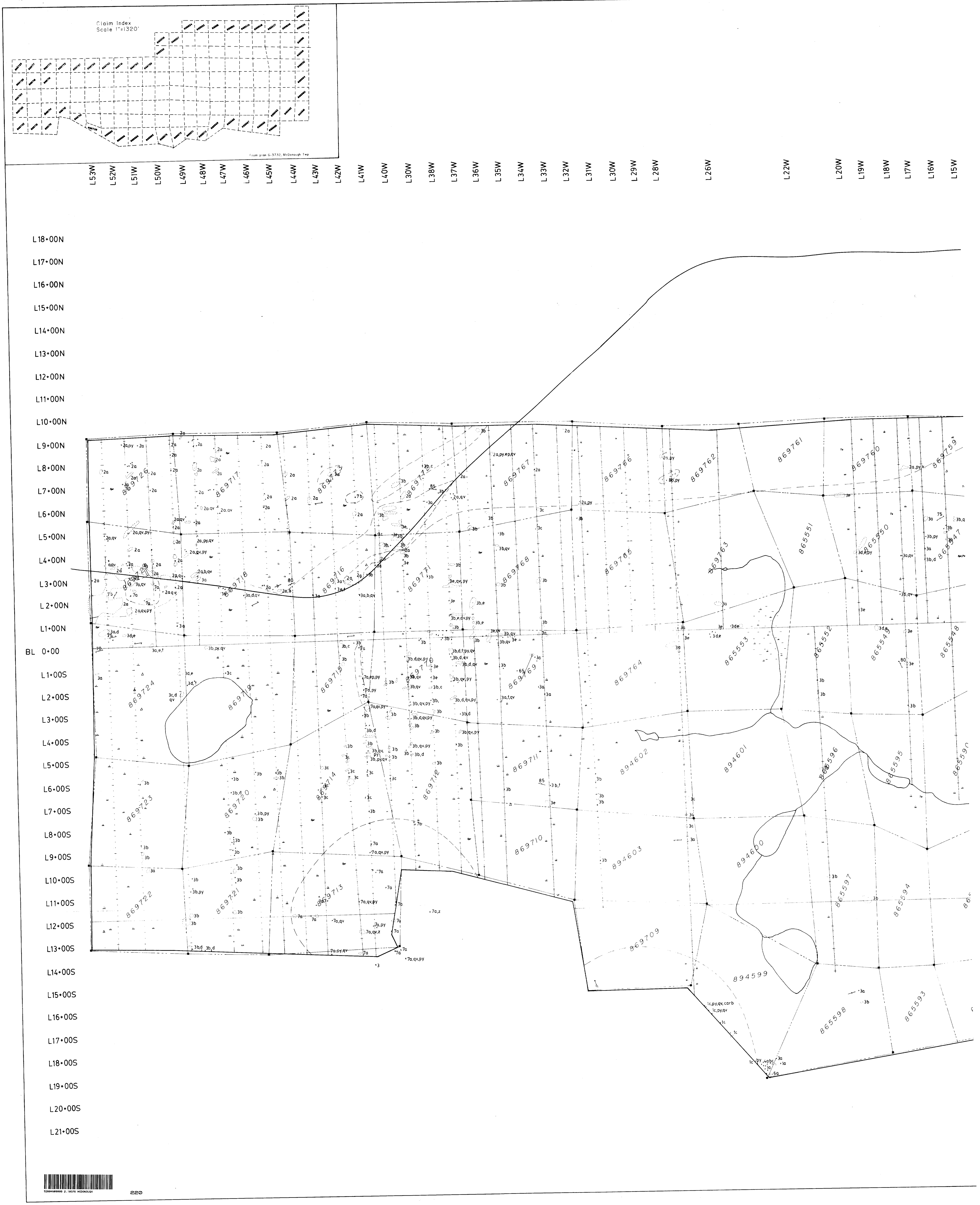
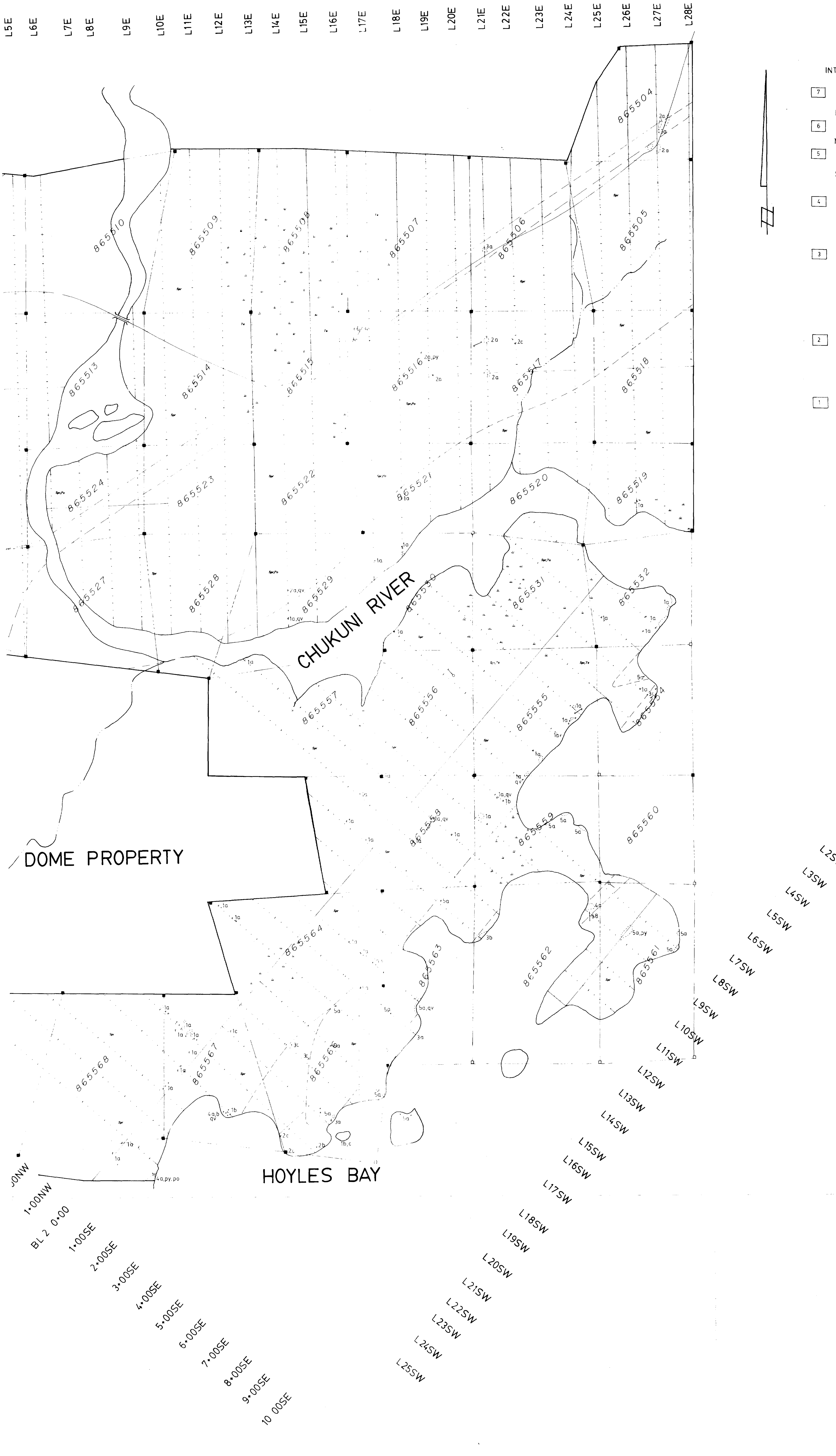
865568
Claim Index
Scale 1":1320'



Claim Index
Scale 1"=1320'
L53W L52W L51W L50W L49W L48W L47W L46W L45W L44W L43W L42W L41W L40W L30W L38W L37W L36W L35W L34W L33W L32W L31W L30W L29W L28W L26W L22W L20W L19W L18W L17W L16W L15W
L18+00N L17+00N L16+00N L15+00N L14+00N L13+00N L12+00N L11+00N L10+00N L9+00N L8+00N L7+00N L6+00N L5+00N L4+00N L3+00N L2+00N L1+00N
BL 0+00
L1+00S L2+00S L3+00S L4+00S L5+00S L6+00S L7+00S L8+00S L9+00S L10+00S L11+00S L12+00S L13+00S L14+00S L15+00S L16+00S L17+00S L18+00S L19+00S L20+00S L21+00S
869726 869717 869773 869772 869767 869766 869762 869761 869760 869759
869718 869716 869771 869768 869765 869763 865551 865550 865547
869724 869719 869715 869770 869769 869764 865553 865552 865549 865548
869723 869720 869714 869712 869711 894602 894601 865596 865595
869722 869721 869713 869710 894603 894600 865597 865594
869709 894599 865598 865593

220



LEGEND

INTERMEDIATE TO FELSIC INTRUSIVE ROCKS

PLUTONIC BATHOLITHIC PHASES

7	7a	Biotite-hornblend quartz diorite
	7b	Porphyritic hornblende quartz diorite

HYPABYSSAL PHASES

6	6a	Quartz-feldspar porphyry

MAFIC INTRUSIVE ROCKS

5	5a	Gabbro
	5b	Lamprophyre

SEDIMENTS

Chemical Sediments

4	4a	Chert
	4b	Iron formation
	4c	Magnetite-bearing
	4d	Pyrrhotite-, pyrite-bearing

Clastic Sediments

3	3a	Conglomerate, polymictic
	3b	Arkose, quartzose arenite
	3c	Wacke
	3d	Garnet-bearing
	3e	Biotite-schist
	3f	Fuchsite-bearing, green carbonate

VOLCANICS

Intermediate Volcanics

2	2a	Lapilli-tuff, tuff, lapillistone
	2b	Tuff-breccia, lapillistone
	2c	Flow, massive to foliated
	2d	Hornblend schist
	2e	Garnet-bearing

Mafic Volcanics

1	1a	Massive to foliated flow, fine grained
	1b	Pillowed flow
	1c	Coarse-grained flow (gabbroic)

qv	Quartz veins	py	Pyrite
q	Silicified	po	Pyrrhotite
ep	Epidote		

SYMBOLS

Open swamp	Geologic boundary
Muskeg-swamp	Assumed geologic boundary
Bridge	Foliation (inclined, vertical)
Road	Strike and dip
River	Esker
Small outcrop	Boulder pile
Boundary of outcrop	Glacial striae
Diamond drill hole	

Eugene Flood 2.10376

NORAMCO EXPLORATIONS INC.

GREATER TEMAGAMI MINING CO.

Mcdonough Twp.
Red Lake Mining Division

McDonough Property
GEOLOGY

EAST SHEET

SCALE 1 5000	DATE DEC. 86	DRAWN BY RS	Rev. July/87
PROJECT No. 1447	DRAWING No. 1447-86-005	CHECKED BY	

LEGEND

INTERMEDIATE TO FELSIC INTRUSIVE ROCKS

PLUTONIC BATHOLITHIC PHASES

[7]
- 7a Biotite-hornblend quartz diorite
- 7b Porphyritic hornblende quartz diorite

HYPABYSSAL PHASES

[6]
- 6a Quartz-feldspar porphyry

MAFIC INTRUSIVE ROCKS

[5]
- 5a Gabbro
- 5b Lamprophyre

SEDIMENTS

Chemical Sediments

[4]
- 4a Chert
- 4b Iron formation
- 4c Magnetite-bearing
- 4d Pyrrhotite-, pyrite-bearing

Clastic Sediments

[3]
- 3a Conglomerate, polymictic
- 3b Arkose, quartzose arenite
- 3c Wacke
- 3d Garnet-bearing
- 3e Biotite-schist
- 3f Fuchsite-bearing, green carbonate

VOLCANICS

Intermediate Volcanics

[2]
- 2a Lapilli-tuff, tuff, lapillistone
- 2b Tuff-breccia, lapillistone
- 2c Flow, massive to foliated
- 2d Hornblend schist
- 2e Garnet-bearing

Mafic Volcanics

[1]
- 1a Massive to foliated flow, fine grained
- 1b Pillowed flow
- 1c Coarse-grained flow (gabbroic)

qv	Quartz veins	py	Pyrite
q	Silicified	po	Pyrrhotite
ep	Epidote		

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Piver	Esker
Small outcrop	Bouaer pile
Boundary of outcrop	Glacial striae
Diamond drill hole	

Eugene Flood 2.10376

NORAMCO EXPLORATIONS INC.

GREATER TEMAGAMI MINING CO.

McDonough Twp.,
Red Lake Mining Division

McDonough Property
GEOLOGY

WEST SHE

SCALE 1 5000	DATE Nov. 1986	DRAWN BY RS	Rev. July /87
PROJECT No 1447	1447-86-006 DRAWING No	CHECKED BY	