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MARGINAL NOTES

INTRODUCTION AND ACCESS

Leclaire Township is centred at Latitude 48°14'00"N and Longitude 84°44'00"W.

A rough trail, indicated as a road on the map, from the western boundary of Leclaire Township extends to the Magpie River and permits access to the south-central part of the township. The northeastern corner and the western side of the Magpie River are accessible by 4-wheel drive trucks over long-abandoned logging roads. The northwestern corner and central portion of the township is easily accessible only by helicopter to numerous small lakes. The Magpie River permits access by boat to the eastern side of the township. A former townsite exists at the former Magpie Iron Mine. There are presently no permanent residents in Leclaire Township, but a number of summer cottages are present on the larger lakes and along the Magpie River. Access to these cottages is by boat or by 4-wheel drive vehicles.

MINERAL EXPLORATION

In the northeastern part of the township the North Evans Creek iron formation consisting of chert-magnetite was tested by diamond drilling for its iron content by Algoma Ore Properties Limited in 1953 and 1954. Records of Algoma Ore Properties Limited indicate the North Evans Creek iron range is divided into 4 segments from west (North Evans Creek 4) to east (North Evans Creek 1). Segments 2, 3, and 4 appear to represent a distinct stratigraphic horizon. North Evans Creek 1, however, may correlate with the South Evans Creek iron range on the basis of linear aeromagnetic trends and the presence of siderite which is absent from other segments of the North Evans Creek iron range. On North Evans Creek 3, Algoma Ore Properties Limited has completed at least 7 diamond-drill holes totalling 861 m (2826 feet). On North Evans Creek 2, at least 2 diamond-drill holes totalling 417 m (1367 feet), and on North Evans Creek 1, 1 drillhole totalling 132 m (433 feet). The drill log for North Evans Creek 1 indicates the presence of siderite which is present in the Godon Lake iron range. Godon Lake iron range is the western to southwestern extension of the South Evans Creek iron range. Incomplete records of Algoma Ore Properties suggest that the Godon Lake iron range has been diamond drilled. Only 1 log could be located which indicated a drillhole totalling 188 m (616 feet) had been completed in 1954 (Assessment File Research Office, Ontario Geological Survey, Toronto (AFRO)). The iron formation contains minor bands of siderite that the core logger estimated to be 15% of the iron formation.

Approximately 0.4 km (1/4 mile) east of Punk Lake, Algoma Ore Properties Limited completed 2 diamond-drill holes in 1954 totaling 369 m (1061 feet). This drilling is on the Reynolds iron range and from west to east encountered graphitic chert, massive chert and bedded chert with thin bands of pyrrhotite, magnetite, and siderite. This drilling was done on what is referred to as the Gibson Property.

The Magpie iron mine is located in the southeastern corner of the township. This mine closed in 1922 after producing 1.5 million tons of siderite (AFRO). Reserves of 0.75 million tons of siderite remain within the mine. The siderite deposit was developed by a 203.6 m vertical shaft and considerable lateral work (AFRO). During 1908 to 1910, 16 surface diamond-drill holes totalling 2202 m (7224 feet) were completed by the Lake Superior Corporation Limited. In 1952 Algoma Ore Properties Limited completed 4 deep diamond-drill holes below the old mine workings to test for the downward extension of the siderite. This drilling totalled 1680 m (5512 feet) (AFRO).

The Alice iron range occurs southeast of the Magpie Mine and is the extension of the Magpie Mine iron range. This range was subjected to extensive trenching and diamond drilling in 1910 by the Lake Superior Corporation Limited. Drilling on this iron range totalled 1428 m (4862 feet) (AFRO). This drilling encountered massive magnetite with minor amounts of pyrite and pyrrhotite.

The township has been subjected to airborne geophysical surveys in search of base metal deposits. Follow-up work to these surveys has been completed by Acme Gas and Oil Limited, Union Miniere Exploration Mining Corporation Limited and Noranda Exploration Company Limited (AFRO). The township is currently being examined by Manwa Exploration Services Limited.

In the area of limited outcrop approximately 1.6 km (1.0 mile) north of Clearview Lake, Acme Gas and Oil Limited tested a conductive horizons by diamond drilling during 1966 to 1967 (AFRO). This drilling totalled 160 m (527 feet) and encountered graphite, pyrite, pyrrhotite, and minor chalcopyrite (AFRO).

The company also completed 1 drillhole and lost a second drillhole in the proximity of Evans Creek in the northeastern corner of the township. This drilling totalled 71 m (232 feet) and encountered graphite, pyrite, and pyrrhotite.

In 1975, Union Miniere Explorations Mining Corporation Limited completed 4 diamond-drill holes totalling 375 m (1229 feet) on conductive horizons (AFRO). A drillhole completed approximately 0.8 km (1/2 mile) east of Kapimchigama Lake encountered graphite and pyrite; and 2 drillholes completed on the western side of Pashoskiota Lake encountered graphite, pyrite, and pyrrhotite. The fourth drillhole was completed in an area of little outcrop in the north-central part of the township. This drillhole encountered pyrrhotite.

In 1981 as a result of follow-up work on airborne conductors, Noranda Exploration Company Limited completed 1 drillhole totalling 61 m (200 feet) near Evans Creek in the northwestern corner of the township (AFRO). This drillhole encountered pyrrhotite.

Approximately 1.2 km (3/4 mile) east of Alice Lake galena-bearing quartz, calcite, fluorite veins underwent considerable trenching and pitting. It is not known when this work was completed.

GENERAL GEOLOGY

Leclaire Township is underlain dominantly by intermediate to felsic and intermediate to mafic metavolcanic rocks. Iron formation is common and forms good marker horizons. The iron formations commonly consist dominantly of chert; with subordinate graphite, pyrite, pyrrhotite, magnetite, and siderite. The Magpie Mine iron range is massive siderite with subordinate iron sulphide and the Alice iron range is dominantly massive magnetite with subordinate iron sulphides.

Metasedimentary rocks form a distinct but poorly exposed unit along the northern part of the township and a band of fine-grained wacke crosses the southwestern corner of the township. Wackes occur east of Lund Lake and extend westward beyond the township boundary. The metasedimentary band along the northern part of the township separates the metavolcanic rocks of the supracrustal sequence from the granitic rocks that enclose the supracrustal sequence.

The intermediate to felsic metavolcanic rocks consist of sericite schist, tuff, lapilli tuff, breccias, and massive flows. Below the Magpie iron mine extensive outcrops of coarse breccia are present. These breccias consist of rounded to angular clasts of fine-grained felsic metavolcanics set in a matrix that is commonly rich in chlorite. The felsic clasts commonly comprise between 50% and 70% of the breccia outcrops. Clasts up to 1 m are present within this breccia unit but most clasts are 0.3 m or less in maximum dimension. The area near the Magpie Mine was likely proximal to a volcanic vent.

Good exposures of mafic polymictic breccia are present along the abandoned railway grade to the former Magpie Mine. These breccias consist of rounded to angular clasts varying from mafic to felsic in composition set in a chloritic matrix. Clasts up to 1 m are present but most are much smaller. Clasts comprise up to 50% of the outcrop.

The intermediate to mafic metavolcanic rocks consist dominantly of chlorite schist, massive and pillowed units, and relatively rare breccias.

The metavolcanic and metasedimentary rocks are intruded by a number of massive medium-grained mafic intrusions.

At Lund Lake a small medium-grained equigranular granodiorite stock intrudes the metavolcanic and metasedimentary rocks. Similar granitic rocks are exposed in the east-central part of the township west of Evans Creek and approximately 1.2 km (3/4 mile) east of Alice Lake.

The Magpie iron range is composed almost exclusively of siderite in contrast to the iron ranges in other parts of the Wawa area where they consist of a repetitive sequence of siderite (bottom) sulphide, magnetite-chert, chert - wacke, and graphite -chert - argillite (top). Mapping suggests that iron formation deposition was interrupted by renewed volcanism and that the Reynolds iron range, represented by sulphide, chert-magnetite, chert - wacke - argillite - graphite, represents the upper facies missing from the Magpie iron range. Two and possibly 3 volcanic cycles are represented in Leclaire Township. The intermediate to felsic and intermediate to mafic metavolcanics below the Magpie iron range and below the South Evans Creek and Godon Lake iron range represent the upper part of Cycle One volcanism (Sage 1981). The intermediate to mafic metavolcanics that interrupt iron formation deposition are a subcycle within Cycle Two volcanism. The intermediate to mafic metavolcanics above the Reynolds iron range represent Cycle Two volcanism interrupted by a period of fine-grained wacke sedimentation. The metasedimentary units are likely the lateral erosional products of intermediate to felsic volcanism associated with the upper portion of Cycle Two volcanism. Cycle Two intermediate to felsic metavolcanics are not exposed in Leclaire Township. Above the metasediments and continuing beyond the limits of the township are intermediate to mafic metavolcanics possibly representing a third cycle of volcanism.

The North Evans Creek and South Evans Creek iron ranges are not likely fold- repeated equivalents. The 2 iron ranges are separated by a zone of strike-slip shearing along Evans Creek. The South Evans Creek iron range caps Cycle One volcanism and the North Evans Creek iron range most likely occurs within Cycle Two metavolcanics.

The intermediate to felsic metavolcanic rocks below the Magpie iron range and intermediate to mafic metavolcanic rocks above the iron formation have been altered and partly silicified.

The change from massive siderite in the Magpie iron range to magnetite in the Alice iron range is likely the result of metamorphism. The presence of small isolated granitic outcrops east of the Alice iron range implies granitic emplacement at depth. The change from massive siderite to massive magnetite along strike may be the result of contact metamorphism in the thermal aureole of granitic rocks emplaced at depth. The transformation of massive siderite to massive magnetite occurs wherever siderite is cut by younger diabase dikes illustrating contact metamorphic effects on siderite. The metavolcanic and metasedimentary rocks have been metamorphosed to the greenschist facies rank.

Diabase dikes occupy a conjugate fracture-fault system.

STRUCTURAL GEOLOGY

The structure of the rocks within Leclaire Township is complex. The dominant structure is the Centre Anticline, first identified by Goodwin (1963, 1962). The general pattern of this fold is apparent both by using iron formation as a marker horizon and on airborne magnetic and electromagnetic surveys of the township. The core and axial plane of the fold are characterized by highly fissile sericite and chlorite schists. The axial plane of the fold has been moved northward from the position indicated by Goodwin (1962) so that it is symmetrically distributed with respect to the opposing limb of the fold. The axial plane is the locus of faulting which is indicated by left lateral offset of approximately 0.3 km (1000 feet).

The Lund Lake granodiorite stock has been emplaced into the nose of the Centre Anticline. Its emplacement was likely controlled by faulting and shearing along the axial plane of the fold.

Using pillow shape to determine facing direction, and pillow elongation as a crude indication of bedding: the 2 limbs of the Centre Anticline are subparallel indicating the fold is chevron-like. The northern limb is subvertical in attitude. The southern limb varies from subvertical in the centre of the township to slightly overturned towards the southwestern corner.

West of Eva Lake more than 2 iron formations are indicated to be present. There may be unresolved low angle strike-slip faulting in this area and parts of the stratigraphic section repeated. Topographic linears and positioning of the iron formation suggests that minor conjugate northeast- and northwest - striking faults exist in the Magpie Mine and Alice Lake areas.

Northwest- and northeast-striking diabase dikes most likely fill a conjugate fracture-fault pattern. The northwest trend has been interpreted by the author to be a Late Archean event in McMurray Township 20 km (12 miles) south of Leclaire Township. In McMurray Township northwest-trending sinuous mafic intrusions characteristic of Archean mafic intrusions are common. These dyke mafic intrusions are parallel to younger diabase dike trends. The northwest- northeast fracture-fault pattern in Leclaire Township is also probably of Late Archean age. Reactivation of the fracture-fault system took place in the Proterozoic at the time of diabase dike emplacement. Crosscutting relations between the 2 trends of diabase diking have not been observed. The 2 trends are likely coeval representing a single event. Deflections in dike trends in proximity to Evans Creek in the northeastern corner of the township and in the northwestern corner of the township suggest post-dike tectonic adjustments perhaps related to shearing within the Evans Creek shear zone.

RECOMMENDATIONS FOR THE PROSPECTOR

Not all conductive horizons within the township have been tested and several may warrant rechecking along strike from previous test sites. The iron formations have not been systematically sampled for gold or base metals. Long segments of iron formation remain unsampled for gold or base metal due to lack of outcrop. The alteration in proximity to the former Magpie Mine warrants additional study to determine if it is a favourable style of alteration for base metal and gold deposition. The lack of known gold showings in Leclaire Township contrasts with most other townships in the Wawa area where gold showings are common.

The galena, fluorite, ±quartz, and ±carbonate veins east of Alice Lake warrant re-examination.

The iron formations contain an insufficient volume of siderite or magnetite to be of current economic interest, however their iron content may be of interest in the future.

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LIST OF PROPERTIES AND OCCURRENCES

1 Acme Gas and Oil Limited
 1A Magpie Grid 1
 1B Grid 4
2 Alice iron range
3 Algoma Ore Properties Limited
 3A Gibson Property
 3B Godon Lake iron range
 3C Magpie Mine (Lake Superior Corp. Ltd.)
 3D North Evans Creek 1
 3E North Evans Creek 2
 3F North Evans Creek 3
 3G North Evans Creek 4
4 Noranda Exploration Company Limited
5 Union Miniere Explorations Mining Corp. Ltd.
 5A Kapimchigama Lake Property
 5B Pashoskoota Lake Property
 5C Northern Leclaire Township Property

METAL AND MINERAL ABBREVIATIONS

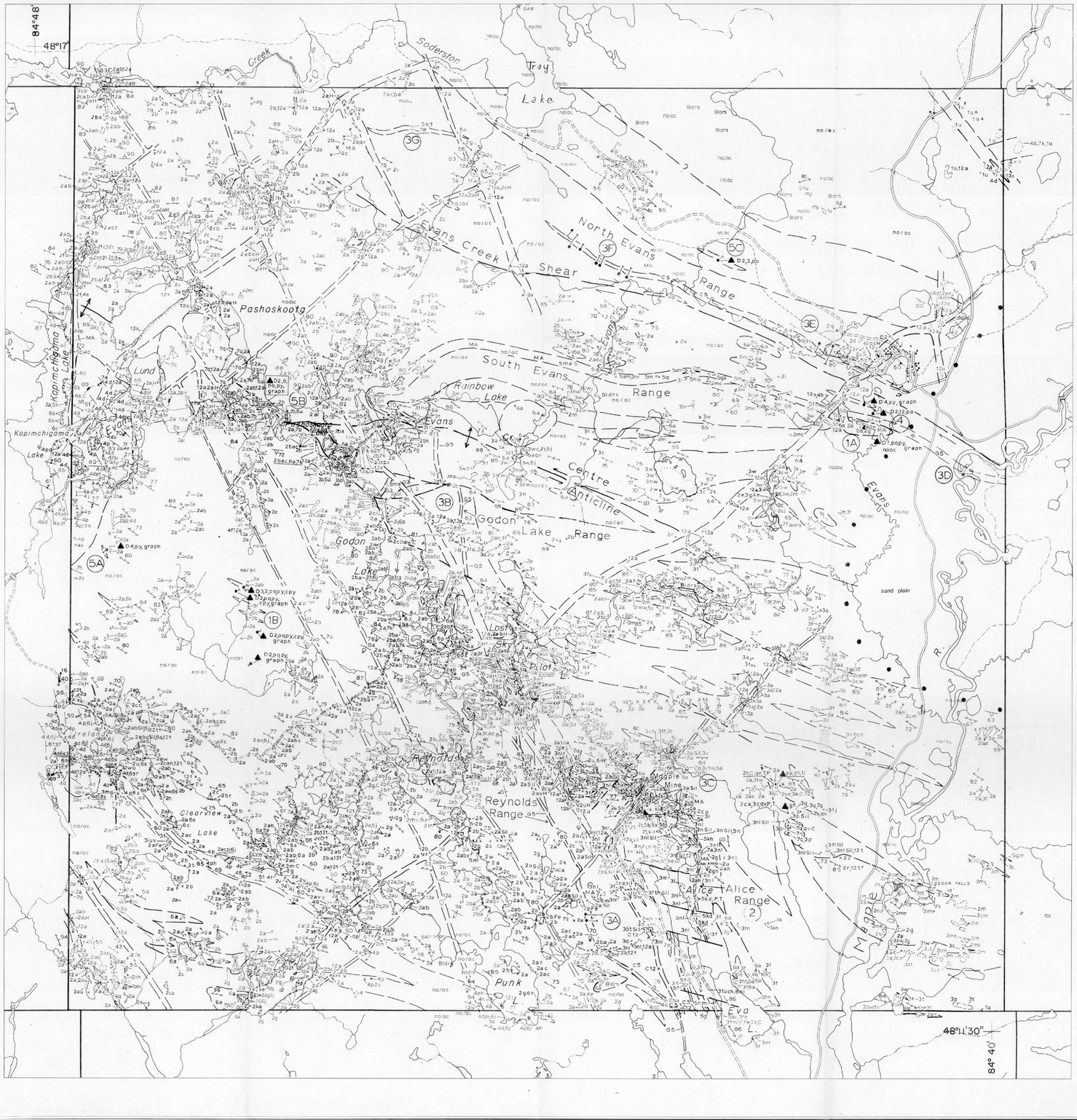
Ag	silver	IF	iron formation
Au	gold	po	pyrrhotite
cpy	chalcopyrite*	py	pyrite
fl	fluorite	qv	quartz vein
gn	galena	cl	chloritoid*
graph	graphite*		

* Not standard abbreviations for Ontario Geological Survey

SYMBOLS

- Glacial striae
- Small bedrock outcrop
- Area of bedrock outcrop
- Bedding, top (arrow) from grain gradation; (inclined, vertical, overturned)
- Bedding, top (arrow) from cross-bedding; (inclined, vertical, overturned)
- Bedding, top (arrow) indicated by flame structures in interbedded sandstone-siltstone; (inclined, vertical, overturned)
- Pillow volcanics, dip and facing direction, indicated; (inclined, overturned)
- Pillow elongation, facing direction unknown; (inclined, vertical)
- Paleocurrent direction as suggests by ripplemarks
- Schistosity; horizontal, inclined, vertical
- Lineation, bearing and plunge indicated; (m=mullion structure, c=clast, p=pillow, s=slickensides, b=biotite, i=intersection of 2 foliations, F=fold axis of minor fold, Se=stretched spherulites)
- Banding; horizontal, inclined, vertical
- Geological boundary observed
- Geological boundary interpreted
- Geological boundary geophysically inferred
- Minor shear; horizontal, inclined, vertical
- Major shear; attitude uncertain; attitude indicated
- Lineament
- Lineament, possibly a fault zone
- Jointing; inclined, vertical
- Kinkband, plunge of fold and direction of movement indicated; (inclined, vertical)
- Minor fold; strike and dip of axial plane, bearing and plunge of fold axis
- D — Data from diamond-drill hole
- MA — Magnetic anomaly
- Mine
- ▲py — Mineral occurrence
- a — Shaft, depth in feet
- T — Trench
- P — Pit

Note: Not all symbols may appear on this map sheet



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Ontario Geological Survey
MAP P.2636
Geological Series—Preliminary Map

PRECAMBRIAN GEOLOGY
LECLAIRE TOWNSHIP
DISTRICT OF ALGOMA

Scale: 1:15 840

Mile Metres Kilometre

NTS Reference: 42 O/2,7
ODM-GSC Aeromagnetic Map: 2192G, 2193G
ODM Geological Compilation: 2220

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LOCATION MAP

Scale: 1 : 1 548 000 or 1 inch to 25 miles

LEGEND[a]

PHANEROZOIC
CENOZOIC
QUATERNARY
PLEISTOCENE AND RECENT
- Organic soils, sandy till, glaciofluvial sand and gravel

UNCONFORMITY

PRECAMBRIAN
LATE PRECAMBRIAN
MAFIC INTRUSIVE ROCKS

12	12	Unsubdivided
	12a	Diabase
	12b	Porphyritic (feldspar) diabase
	12c	Glomeroporphyritic (feldspar) diabase
	12d	Diabase with minor biotite
	12n	Carbonatite
	12p	Olivine lamprophyre
	12q	Carbonatite-silicocarbonatite[b]
	12r	Ferruginous carbonate
	12s	Syenite
	12t	Biotite lamprophyre
	12u	Porphyritic (feldspar) lamprophyre
	12v	Lamprophyre with xenoliths

CARBONATITE INTRUSIVE ROCKS
FIRESAND CARBONATITE
- 11a Sovite[b]
- 11b Silicocarbonatite[b]
- 11c Rauhaugite (ferruginous dolomite)

INTRUSIVE CONTACT

EARLY PRECAMBRIAN (ARCHEAN)
FELSIC INTRUSIVE ROCKS

7	7	Unsubdivided
	7a	Quartz-feldspar porphyry
	7b	Feldspar porphyry
	7c	Quartz porphyry
	7d	Diorite, quartz diorite[d]
	7e	Granodiorite, granite[e]
	7f	Aplite
	7g	Diorite, granodiorite
	7i	Porphyritic granodiorite to quartz monzonite
	7j	Felsic dikes
	7m	Trondhjemite, granodiorite, quartz feldspar porphyry[f]
	7n	Felsic intrusive, fine-grained, rare quartz or feldspar phenocryst
	7p	Intrusive breccia
	7q	Equigranular quartz monzonite to granite
	7r	Porphyritic (plagioclase) diorite, granodiorite
	7t	Porphyritic quartz monzonite to granite
	7u	Syenite to quartz syenite
	7v	Monzonite to quartz monzonite

INTRUSIVE CONTACT

METAMORPHOSED MAFIC TO ULTRAMAFIC INTRUSIVE ROCKS

6	6	Unsubdivided
	6a	Gabbro, diorite
	6b	Anorthositic gabbro
	6c	Anorthosite
	6d	Diabase
	6f	Hornblende diorite
	6g	Feldotite
	6h	Pyroxenite
	6i	Talc schist
	6j	Mafic dikes
	6k	Quartz diorite, trondhjemite[g]
	6m	Quartz gabbro
	6n	Xenolithic gabbro
	6q	Porphyritic gabbro, diorite
	6p	Carbonatized or carbonate-bearing mafic intrusion
	6r	Hornblendite
	6s	Hornblende-biotite rock with xenoliths (intrusive breccia)[h]

INTRUSIVE CONTACT

METASEDIMENTARY ROCKS
CHEMICAL METASEDIMENTARY ROCKS

5	5	Unsubdivided or compiled from external source
	5a	Magnetite/hematite chert iron formation
	5b	Carbonate, commonly with minor chert, pyrite, and rarely arsenopyrite
	5c	Sulphide, commonly associated with subordinate siderite and chert
	5d	Chert, may contain subordinate siderite and pyrite locally may be graphitic
	5e	Graphite-argillite, commonly pyritic, argillaceous and associated with manganese
	5f	Chert and iron oxide in approximately equal portions
	5g	Chert and carbonate in approximately equal portions
	5h	Chert and sulphide in approximately equal portions
	5i	Chert, graphite, argillite; (black chert containing graphite)
	5k	Chert, siderite, and magnetite
	5m	Chert, wacke or siltstone
	5n	Chert cemented with iron oxides; i.e., weathered iron formation (chert breccia)
	5p	Chert, hematite
	5q	Iron oxide, chert, wacke
	5r	Iron oxide, wacke
	5s	Chert breccia

CLASTIC METASEDIMENTARY ROCKS

4	4	Unsubdivided
	4a	Volcanic clast wacke
	4b	Chert
	4c	Plagioclase-quartz-biotite schist
	4d	Wacke, lithic wacke
	4e	Argillite
	4f	Interlaminated siltstone, mudstone
	4g	Conglomerate with granite clasts
	4h	Volcanic clast conglomerate
	4i	Siltstone, sandstone, lithic sandstone
	4k	Quartz arenite, arkose, lithic arkose
	4m	Carbonate-rich metasediment[i]
	4n	Lithic arkose
	4p	Thinly bedded wacke, siltstone
	4q	Carbonate, ferrugimous limestone

METAVOLCANIC ROCKS
INTERMEDIATE TO FELSIC METAVOLCANIC ROCKS

3	3	Unsubdivided
	3a	Sericite schist
	3b	Heterolithic breccia
	3c	Monolithic lapilli tuff
	3d	Tuffaceous quartz-eye, feldspar clast, sericite schist
	3e	Banded tuff with fiamme
	3f	Massive flow
	3g	Monolithic breccia (felsic matrix, mafic clasts)
	3h	Porphyritic (feldspar) flow
	3i	Feldspar crystal tuff, intermediate
	3j	Porphyritic (quartz) flow
	3k	Spherulitic flow
	3l	Breccia, greater than 50% felsic clasts in chlorite matrix
	3m	Flow banded lava
	3n	Autoclastic monolithic breccia
	3o	Intermediate tuff
	3p	Heterolithic lapilli tuff
	3q	Quartz-eye crystal tuff
	3r	Heterolithic quartz-eye crystal tuff, lapilli tuff
	3s	Heterolithic crystal tuff, breccia
	3t	Tuff
	3u	Laminated tuff
	3v	Chlorite-sericite schist
	3w	Feldspar crystal tuff, felsic
	3y	Crystal (quartz-feldspar) tuff
	3z	Heterolithic (cataclastic) breccia

MAFIC TO INTERMEDIATE METAVOLCANIC ROCKS

2	2	Unsubdivided
	2a	Massive flows
	2b	Pillowed flows
	2c	Chlorite schist
	2d	Heterolithic breccia
	2e	Monolithic breccia (mafic matrix, felsic clasts)
	2f	Porphyritic (feldspar) flows
	2g	Massive medium-grained flows[k]
	2h	Magnetite-bearing flows
	2i	Tuffaceous chloritic schist
	2j	Pillowed porphyritic (feldspar) flows
	2k	Spherulitic flows
	2l	Amygdaloidal flows
	2m	Feldspar (quartz) crystal tuff
	2n	Heterolithic breccia, lapilli size clasts
	2p	Breccia (mafic matrix, intermediate to felsic clasts)
	2q	Amphibolite
	2r	Laminated tuff, lapilli tuff
	2s	Crystal (feldspar) tuff, crystal lithic tuff
	2t	Talc-actinolite, actinolite rock
	2u	Monolithic breccia (mafic matrix, mafic clasts)
	2v	Laminated tuff
	2w	Lapilli tuff
	2y	Porphyritic (amphibole) flows
	2z	Tuff, chloritic schist with quartz[l]

UNCONFORMITY

EARLY FELSIC PLUTONIC ROCKS[a]
GNEISSIC GRANITIC ROCKS

1a	Aplite
1b	Pegmatite
1c	Diorite, quartz diorite
1d	Trondhjemite
1e	Trondhjemite, gneissic to massive
1f	Leucocratic trondhjemite
1g	Porphyritic biotite trondhjemite dikes

MASSIVE GRANITIC ROCKS[a]

1n	Aplite, pegmatite dikes
1p	Diorite, quartz diorite
1q	Trondhjemite
1r	Granodiorite, quartz monzonite
1s	Monzonite, quartz monzonite
1t	Porphyritic monzonite, quartz monzonite
1u	Granodiorite, trondhjemite weakly foliated
1v	Porphyritic granodiorite
1w	Massive quartz monzonite

Bx	Breccia	H	Hornfels
my	Mylonite	gos	Gossan
C	Carbonatized	Fe	Iron staining
Sil	Silicified		

NOTES

a) This is a field legend and may be changed subsequent to laboratory investigations. The legend applies to all maps, resulting from current mapping programs in the Wawa area. Units listed may not all be present in each township. Where a rock-unit code is followed by a second code in brackets the second unit occurs within the first unit. Many drillholes, pits, trenches, and all surveyed claims were deleted due to lack of space.
b) Greater than 50% silicate-oxide minerals.
c) Greater than 50% carbonate.
d) Colour index 20 to 40.
e) Colour index 10 to 25.
f) Transitional porphyritic to nonporphyritic.
g) Associated with mafic intrusive rocks.
h) A chemical sedimentary bed which contains 33% of more of the common iron minerals by volume. This does not include commonly associated interbeds of chert or clastic sedimentary material. A sufficiently extensive mappable unit containing a significant proportion of ironstone interbeds may be designated as an iron formation.
i) Doré type conglomerate.
j) Green mica may be present.
k) Mafic intrusive rocks.
l) Greater than 5% quartz.
m) Possibly contemporaneous with unit 7.
n) May be Proterozoic.
p) Legend established in 1979 and in order to maintain continuity between map sheets it will be retained. Uranium-lead isotopic ages. Turek *et al*(1982, 1984) have so far indicated that the external granites are younger than the supracrustal rocks.

SOURCES OF INFORMATION

Base map derived from Forest Resources Inventory maps, Lands and Waters Group, Ontario Ministry of Natural Resources.

Assessment Files Research Office, Ontario Geological Survey, Toronto (AFRO)

Resident Geologist's Files, Ontario Ministry of Natural Resources, Sault Ste. Marie

Records, The Algoma Steel Corporation Limited (formerly Algoma Ore Properties Limited), Sault Ste. Marie

Assessment Files Office, Algoma Central Railway, Sault Ste. Marie (ACR)

Geology not tied to surveyed lines

Magnetic declination approximately 6°26'W in 1979

Metric Conversion Factor: 1 foot = 0.3048 m

CREDITS

Geology by R.P. Sage, and assistants, 1981-1984.

Every possible effort has been made to ensure the accuracy of the information presented on this map; however, the Ontario Ministry of Northern Affairs and Mines does not assume any liability for errors that may occur. Users may wish to verify critical information; sources of references listed here, and information on file at the Regional Geologist's office and the Mining Recorder's office of the map area.

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Information from this publication may be quoted if credit is given. It is recommended that the reference to this map be made in the following form:

Sage, R.P.
1985: Precambrian Geology of Leclaire Township, District of Algoma; Ontario Geological Survey, Geological Series - Preliminary Map, P.2636, scale 1:15 840 or 1 inch to 1/4 mile. Geology 1981-1984.