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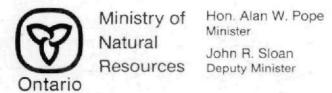
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MARGINAL NOTES MINERAL PRODUCTION AND RESOURCES The name and ownership of many mineral occurrences shown on this WINDIGO map are given on Map 2310, Ontario Mineral Map, 1974. The map area contains occurrences and deposits of asbestos, beryl, cesium, copper, gold, iron, lead, lithium, molybdenum, nickel, silver, tantalum, tin, tungsten, and zinc. During 1981, gold was mined by Northern Concentrators Limited at the Crooked Green Creek Property in Pifher Township. In 1982, Consolidated Louanna Gold Mines Limited commenced production of gold concentrate at O'Sullivan Lake. The Pan Empire Joint Venture reactivated he former Northern Empire Mine, and commenced gold production in **OMBABIKA** 1982. Initial mill feed was derived from the waste dump. The first discovery of gold within the map area was the Dodds Occurrence on the Kawashkagama River at Howard Falls in 1915. Gold was discovered in the Beardmore area at the Northern Empire Mine in 1925. In the Geraldton area, gold in glacial float was first reported during World War I on Kenogamisis Lake, but the discovery of gold occurrences at Kenogamisis Lake and Magnet Lake was made later in 1931 and 1932, respectively. During 1934, gold was discovered in the Jellicoe area on Twenty-one mines (defined as having extracted 100 ounces of gold or more) produced precious metals at various times and intervals from 1934 to 1968. Totals of approximately 4 115 000 ounces of gold and 318 500 ounces of silver were produced during the above period. The last 2 mines to cease production were the Macleod-Cockshutt Mine and the Leitch Mine. Production for each ended in 1968 and was 1 475 728 and 847 690 ounces of gold and 101 388 and 31 802 ounces of silver, respectively. Approximately 50 000 tons of waste dump material from the Leitch Mine were processed in 1980. Copper, as well as gold and silver, was produced at the property of Tashota Nipigon Mines Limited near Onaman Lake with a yield of 360 539 pounds of copper. During 1942 and 1943, 9900 pounds of high and low grade concentrates of WO_3 were processed by Little Long Lac Gold Mines Limited and 9800 bounds by Leitch Gold Mines Limited. Base metal deposits containing zinc and lead with precious metals, and copper with precious metals, occur west and northwest of Onaman LAKE Lake. Copper-lead-zinc deposits with gold and silver in the Marshall Lake-Gripp Lake area have received continuous attention from explorationists. Two copper-nickel deposits occur in the map area, at Juneau Lake and in Elmhirst Township. Pegmatite deposits containing 1 or more of beryl, cesium, lithium, molybdenum, and tantalum occur mainly in the northwestern portion of the map area. Cassiterite is found in granitic dikes at Linklater Lake northwest of Windigo Bay, Lake Nipigon. Iron deposits exist throughout the area: at Briarcliffe Lake and Two Mile Lake north of Nakina; in Suni Township south of Kowkash; at Barton Bay, Kenogamisis Lake at Geraldton; at North Lamaune Lake northwest of Millercamp Auden; northeast of Summit Lake; north of Stewart Lake; and in Irwin Township, near Beardmore. Gold exploration has retained the highest priority within the Wabigoon metavolcanic-metasedimentary belt, particularly between Lake Nipigon ROCK SUCCESSION AND STRATIGRAPHY The legend for the Early Precambrian is based on lithology. Metavol-50°00' canic and metasedimentary rocks are subdivided into 4 major map units (1 to 4) which have been observed to succeed each other in various order within any subarea. Hence no stratigraphic succession is intended by their numerical sequence in the legend. Similarly, intrusive ultramafic to felsic rocks are subdivided into 6 major map units (5 to 10) without regard to succession. The felsic intrusive rocks however, can be subdivided generally into pre- to syntectonic bodies and essentially unmetamorphosed late to posttectonic intrusions. The former tend to be tonalite to granodiorite in composition (e.g. most of the Onaman-Twin Lakes Batholithic Complex); the latter tend to be granodiorite to monzogranite in composition (e.g. the crescent-shaped Onaman Lake Pluton). The northern 1/3 of the map area comprises the English River Subprovince, typified by epiclastic sediments that progressively grade northward to metasedimentary migmatite and more predominant granitoid The Middle Precambrian suite overlies the Early Precambrian rocks with angular unconformity. This suite is dominantly represented by sheets of gabbro locally intruded into epiclastic sandstones and calcareous mud-The main trends of diabase dikes in the map area are northwesterly in the northern 1/3 of the map area and northerly further south. TERMINOLOGY FOR INTRUSIVE BODIES For the sake of uniformity of terminology the felsic to intermediate intrusions and groups of intrusive bodies are referred to in the following ways: 'stock' is a body of plutonic rock that covers less than 100 km2 (e.g. Deeds Lake Stock); "batholith" is a body of plutonic rock larger than a stock, which may or may not have been emplaced during a single intrusive episode; "pluton" refers to plutonic bodies of batholithic proportion that are known to have been emplaced during a single intrusive episode e.g. Onaman Lake Pluton); "batholithic complex" is an agglomeration of batholiths, stocks, plutons, and relict supracrustal rocks that together constitute a whole (e.g. the Onaman-Twin Lakes Batholithic REFERENCE 1976: To Each Plutonic Rock its Proper Name; Earth-Science Review, Volume 12, GEOLOGICAL RELIABILITY DIAGRAM Detailed mapping by the Ontario Geological Survey only, scale 1:31 680 or 1 inch to ½ mile; some at 1:15 840 or 1 inch to ¼ mile, and 1:12 000 or 1 inch to 1000 feet 12a Islands B Semi-detailed mapping, scale 1:63 360 or 1 inch to 1 mile Reconnaissance mapping, scale 1.126 720 or 1 inch to 2 D Reconnaissance mapping, scale 1:253 440 or 1 inch to 4 NIPIGON LAKE E No systematic mapping by government agencies P-274

LOCATION MAP

Scale 1-1 584 000



Resources Deputy Minister

ONTARIO GEOLOGICAL SURVEY

MAP P.257 (Revised)

COMPILATION SERIES-PRELIMINARY MAP

LAKE NIPIGON SHEET

THUNDER BAY DISTRICT

NTS References: 42E, 42L, 52H, 52I ODM-GSC Aeromagnetic Maps: 2120G-2122G, 2128G-2130G, 2135G-

ODM Geological Compilation Map: 2102

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SYMBOLS

position interpreted Synclinal or synformal ___ axis, with plunge Anticlinal or antiformal

Geophysically inferred dike ___ axis, with plunge

ABBREVIATIONS

PROPERTIES

PRODUCING MINES 1. Consolidated Louanna Gold Mines Ltd. Northern Concentrators Ltd. 3. Pan Empire Joint Venture Au, Ag PAST PRODUCING MINES 4. Bankfield Consolidated Mines Ltd. Brenbar Mines Ltd. Consolidated Mosher Mines Ltd. Au, Ag Gulch Mines Ltd. Au, Ag 8. Hard Rock Gold Mines Ltd. Au, Ag 9. Jellicoe Mines (1939) Ltd. Au, Ag Leitch Gold Mines Ltd. Au, Ag, W 11. Leitch Gold Mines Ltd. (Sand River) Au, Ag Little Long Lac Gold Mines Ltd. Au, Ag, W Macleod-Cockshutt Gold Mines Ltd. Au, Ag Magnet Consolidated Mines Ltd. Au, Ag

Au, Ag

Au, Ag

Aù, Ag

Au, Ag

Au, Ag

Au, Cu, Ag

Orphan Property (Dikdik)

16. Sturgeon River Mines Ltd.

17. Tashota Nipigon Mines Ltd.

18. Theresa Gold Mines Ltd.

19. Tombill Mines Ltd.

20. Tombill Mines Ltd.

INTRUSIVE CONTACT METAVOLCANICS AND METASEDIMENTS METASEDIMENTS Clastic Metasediments

LEGEND

Sand, gravel, clay

MIDDLE TO L'ATE PRECAMBRIAN (PROTEROZOIC)^a

12a Diabase dikes and sills

11 Unsubdivided

10 Unsubdivided

EARLY PRECAMBRIAN (ARCHEAN)

12c Ultramafic dikes and sills

UNCONFORMITY

12b Porphyritic diabase dikes and sills

11a Pass Lake Formation: Conglomerate, sandstone 11b Rossport Formation: Calcareous mudstone

10a Massive to foliated equigranular biotite and horn-

10b Massive to foliated equigranular hornblende and biotite-hornblende tonalite to granodiorite

10c Equigranular biotite and hornblende-biotite mon-

10d Equigranular hornblende and biotite-hornblende

10f Porphyritic hornblende monzogranite to grano-

10g Equigranular and porphyritic syenite, quartz

10 Quartz feldspar porphyritic to equigranular alkal

9a Foliated to gneissic, biotite and hornblende-biot-

9c Foliated to massive biotite and hornblende diorite,

9d Foliated to massive biotite and hornblende mon-

8a Biotite-quartz-feldspar metasedimentary metatex-

8b Hornblende-quartz-feldspar gneiss (mafic meta-

METAMORPHOSED FELSIC TO INTERMEDIATE SUBVOLCANIC

METAMORPHOSED MAFIC TO INTERMEDIATE INTRUSIVE

6b Anorthosite to anorthositic gabbro

INTRUSIVE CONTACT

5 Peridotite, pyroxenite, serpentinite

METAMORPHOSED ULTRAMAFIC INTRUSIVE ROCKS®

7a Quartz and/or feldspar porphyry

INTRUSIVE CONTACT

ite to granitic inhomogeneous diatexite, and met-

asediments with interlayered intrusive granitic

rocks; (containing greater than 40% interlayered

volcanics with greater than 40% interlayered

syenite, monzonite, quartz monzonite, monzodiorite, quartz monzodiorite, diorite, quartz diorite.

10e Porphyritic biotite monzogranite to granodiorite

INTRUSIVE CONTACT

UNCONFORMITY

zogranite to syenogranite

monzogranite to syenogranite

10h Nepheline syenite and syenite

METAMORPHOSED FELSIC TO INTERMEDIATE INTRUSIVE

ite diorite, tonalite to granodiorite

tonalite to granodiorite

METAMORPHOSED MIGMATITIC ROCKS

granitic rocks)f

granitic rocks)

6a Gabbro, norite

6d Mafic dikes

6c Diorite, quartz diorite

INTRUSIVE ROCKS

zogranite to granodiorite^e 9e Quartz and/or feldspar porphyry

blende diorite, tonalite to granodiorite

feldspar granite^c

UNMETAMORPHOSED FELSIC TO INTERMEDIATE INTRUSIVE

blende-biotite tonalite to granodiorite

PHANEROZOIC

PRECAMBRIAN

__ sime__ ____

CENOZOIC

QUATERNARY

SIBLEY GROUP

PLEISTOCENE AND RECENT

MAFIC INTRUSIVE ROCKSb

4 Unsubdivided 4a Conglomerate 4b Mudstone, siltstone, argillite, slate, and metamorphosed equivalents

4c Wacke and metamorphosed equivalents 4d Arenite and metamorphosed equivalents 4e Migmatized wacke, mudstone (containing 10-40% interlayered granitic rocks)

Magnetite chert ironstone Sulphide ironstone : Carbonate ironstone

METAVOLCANICS Felsic to Intermediate Metavolcanics Dacite to rhyolite flows

Chemical Metasediments

Unsubdivided ironstone

2b Fine pyroclastic rocks (tuff, lapilli tuff, lapillistone), some intermixed flows, dacite, to rhyolite 2c Coarse pyroclastic rocks (tuff breccia, pyroclastic breccia), some intermixed flows, dacite to rhyolite 2d Quartz feldspar porphyritic flows (some may be

Matic and Intermediate Metavolcanics Basalt to Andesite flows, massive Pillowed flows

synvolcanic intrusive rocks)

1c Mafic hyaloclastic and pyroclastic rocks 1d Coarse-grained flows or intrusions 1e Foliated to gneissic amphibolites 1f Migmatitic matic volcanics (10-40% granitic

(a) Rocks are subdivided lithologically, order does not imply age relationships

(b) All intrusive rocks are classified according to the recommendations of the IUGS Subcommission on the Systematics of Igneous Rocks (Streckeisen (c) Units 1 to 10 are of Archean age except unit 10h (probably Proterozoic) and

unit 10i (of known Proterozoic age). (d) Granitic intrusive rocks are assigned to Unit 9 if their nature is unknown. (e) includes bodies of homogeneous granitic diatexite (>90% granitic rocks) in

the Ogoki River region. (f) May include felsic and intermediate tuffaceous metatexite. The letter "G" preceding a rock unit number, for example "G9", indicates interpretation from geophysical data in drift covered or unmapped areas.

The letter "D" preceding a rock number, for example "D1c", indicates interpreta-The legend, properties, symbols, abbreviations, and marginal notes, apply to

87°45' maps P.241(Rev), P.257(Rev), P.267(Rev), and P.274(Rev). All rock units may not

appear on this map.

Revised geological compilation by G.M. Stott, 1984 Mineral occurrences compilation by C.D. McConnell, G.M. Stott, and Original compilation by E.G. Pye and F.R. Harris, 1964.

CREDITS

SOURCES OF INFORMATION

Tashota-Geraldton Sheet, Thunder Bay and Cochrane Districts; Ontario

Department of Mines, Map 2102, by E.G. Pye, F.R. Harris, K.G. Fenwick,

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Base map from Maps 42E/NW, 42L/SW, 52H/NE, 52I/SE of the National

opographic Series, with additional information from Ontario Ministry of

and J. Baillie, 1966, scale 1:253 440 or 1 inch to 4 miles.

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Natural Resources Road Network maps.

Metric Conversion Factor: 1 foot = 0.3048 m

Magnetic declination approximately 1°20'W in 1984.

maps of mining companies.

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