



**LEGEND**

**QUATERNARY**

Qu Overburden of sand and gravel; esters

**PALEOPROTEROZOIC**

**WOPMAY OROGEN**

Wp1 Pegmatite; white coarse grained granite; muscovite, biotite, bismuthite

**HELVETIA INTRUSIVE SUITE**

Phg1 Basaltic gabbro; gabbro-diorite; diorite and quartz diorite; Plut, commonly with microcline megacrysts, pagonite Plgt, locally Rapakivi textured

Phg2 Dabasogabbro; dikes and sills including metamorphosed equivalents

**COROMANTION SUPERGROUP**

**SHAKE GROUP**

Ps Undifferentiated, thin to thick bedded shales, siltstone, sub-greywacke, dolomite, quartzite, quartz pebble conglomerate and metamorphosed equivalents

Ps1 - correlative siliciclastic facies

Ps2 - siliciclastic facies

Ps3 - Gneiss and schist derived from the Shake Group; rusty colored rocks characterized by the presence of K-feldspar, granoblastic composition, local leucosome, and (derived to the east by the siliciclastic facies)

Ps4 - Shale-siltstone; including siltstone, spotted siltstone and sub-greywacke

Ps5 - Dolomite; finely bedded dolomite and musky dolomite

Ps6 - Calcic dolomite; calcic dolomite and dolomite with calcic and calcic-silicate minerals

Ps7 - Quartzite; white to grey, quartz-rich sandstone, grey sandstone, orthoquartzite, finely sandstone and arkose

Ps8 - Quartz pebble conglomerate; clean, mostly close-packed quartz pebbles; minor garnite, myxite, amphibolite with minor argillaceous, sandy or limy matrix, locally gneiss

Ps9 - Migmatite and gneiss; probably derived from Shake Group and/or equivalent to the Yellowknife Supergroup, with local unfoliated pink granite, tourmaline granite Pmp

**NEOARCHAIC**

Am Migmatite and gneiss; probably derived in part from Archaean rocks; equivalent to the Yellowknife Supergroup metasedimentary rocks Arns amphibolite paleosome equivalent to the Yellowknife Supergroup metasedimentary rocks Arns

Ag Basement granitoid rocks; mostly of granodiorite composition and similar to those in the Slave Structural Province; K-feldspar augen granite Agt

**MESOARCHAIC**

**SLAVE STRUCTURAL PROVINCE**

Pd1 Dabasite; diabase and gabbro dikes and their metamorphosed equivalents; including the north diorite stock was situated in the northwest and east-northeast trending swarms

**NEOARCHAIC**

Ap1 Biotite granodiorite; anorthositic stocks and bosses characterized by abundant inclusions of diorite composition derived in part from units A1a and A1b

Ap2 Plutonic rocks; undifferentiated plutonic rocks of granodiorite Aggt, tonalite Agt, and gneiss Agg; composition, locally megacrystic Agg, gneiss Agg

Am1 Migmatite, gneiss and schist; undifferentiated, of mostly granodiorite composition with minor, massive to slightly foliated anorthositic

Am2 Migmatite derived in part from unit A1a

Am3 Migmatite derived in part from unit A1b

Am4 Migmatite derived in part from unit A1c

Am5 Migmatite with biotite gneiss

Am6 schlieren migmatite

Am7 bedded and layered migmatite

Am8 breccia or agmatite migmatite

Am9 anorthositic pegmatite

**YELLOWKNIFE SUPERGROUP**

Ys1 Metasedimentary rocks; biotite, muscovite, hornblende, amphibole, quartz, calcic dolomite, siliciclastic facies

Ys2 - correlative siliciclastic facies

Ys3 - Metasedimentary rocks; biotite, muscovite, hornblende, amphibole, quartz, calcic dolomite, siliciclastic facies

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**NEOARCHAIC**

Ab Basement complex; include biotite, granitoid gneiss, and migmatite of granodiorite Aggt, granite Agt, and tonalite composition; Abm, situated by metabasite dikes Abg, possibly associated with Yellowknife volcanic and secondary apfite and muscovite-bearing pegmatites

Note: Unit in parentheses on the map indicates local presence only

**Geological boundary (defined, approximate, assumed)**

**Bedding, top assumed (inclined, overturned)**

**Bedding, top unknown (inclined, vertical)**

**Bedding (inclined, top unknown)**

**Bedding (inclined, top known)**

**Bedding (vertical, top unknown)**

**Bedding (vertical, top known)**

**Flow area, top known (overturned, dip unknown)**

**Flow area, top unknown**

**Fault (thrust, normal, inclined, vertical, dip unknown, way megacryst trend, 1<sup>st</sup> generation)**

**Fault (thrust, normal, inclined, vertical, dip unknown, 2<sup>nd</sup> generation)**

**Fault (thrust, normal, inclined, vertical, dip unknown, 3<sup>rd</sup> generation)**

**Clast elongation (1<sup>st</sup>, 2<sup>nd</sup> generation, arrow indicates plunge)**

**Lineation (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> generation, arrow indicates plunge)**

**Minor fold axis (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> generation, arrow indicates plunge)**

**Lineament (from air photograph)**

**Fault, arrows indicate relative movement (defined, approximate, assumed, local area)**

**Thrust fault (with in direction of dip, defined)**

**Normal fault (with in direction of dip, defined)**

**Synformal axis (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> generation)**

**Antiformal axis (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> generation)**

**Anticline, syncline (arrow indicates plunge)**

**Strike (direction of flow known or assumed)**

**Mineral occurrence**

**Gossan**

**MINERALS / ELEMENTS**

Androsite	an	Muscovite	ms
Copper	cu	Orthopyroxene	op
Cordierite	cd	Sillimanite	sl
Epidote	ep	Spinel	sp
Garnet	gt	Staurolite	st
Gold	au	Zinc	zn
Lead	pb		

Geology by R.A. Firth based on fieldwork in 1972, 1973, and 1974 and on previously published maps, as shown in accompanying diagram

Geological cartography by the Geological Survey of Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map enlarged from 1:250 000 scale published by the Army Survey Establishment R.C.E. 1959-61

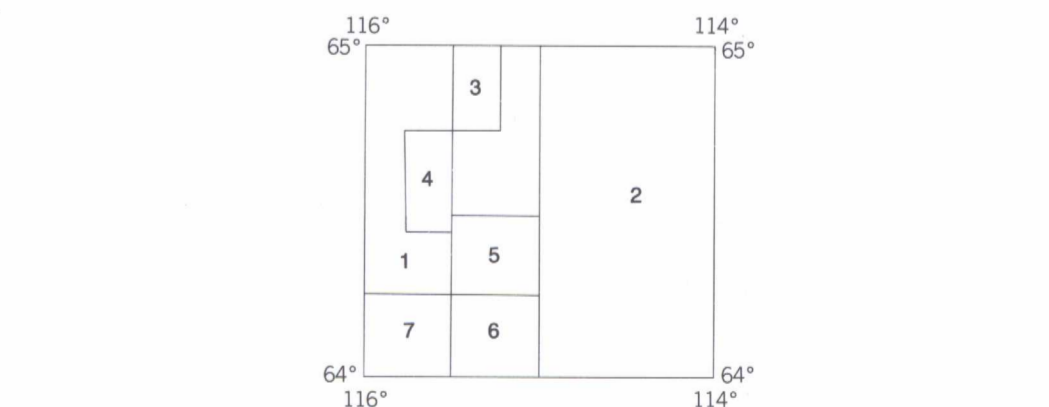
Copies of the topographical edition covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0S9

Mean magnetic declination 1992, 29°15' E decreasing 19.1' annually. Readings vary from 28°47' E in the SW corner to 31°02' E in the NW corner of the map

Elevation in feet above mean sea level

**INDEX TO PREVIOUSLY PUBLISHED MAPS**

1. Lovell, 1942, GSC Memoir 255
2. Firth, 1962, GSC Paper 69-26
3. Firth, 1966, GSC Bulletin 124
4. McGlynn and Firth, 1963, GSC Paper 63-26
5. Sisson et al., 1964, GSC Map 1022A
6. Tremblay et al., 1953, GSC Map 1022A
7. Smith, 1963, GSC Map 64-1963 (last revised September, 1967)



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GEOLOGICAL SURVEY OF CANADA  
COMMISSION GÉOLOGIQUE DU CANADA

JUN 7 1993

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MAP 1662A  
GEOLOGY  
INDIN LAKE  
DISTRICT OF MACKENZIE  
NORTHWEST TERRITORIES  
Scale 1:125 000 - Échelle 1/125 000

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