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Geology by A.F. Park and S. Ralser, 1988-1989 (Department of Geology, University of New Brunswick), A.R. Miller, 1988, and S. Tella, 1989 (Geological Survey of Canada, Ottawa) (south of 62°10′, west of 93°30′)

Compiled by A.F. Park and S. Ralser, 1990

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

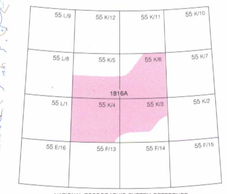
Base map assembled and modified by the Geological Survey of Canada from maps 55 K/3, 55 K/4, 55 K/6 (1972) and 55 K/5 (1975) published at 1:50 000 scale by the Surveys and Mapping Branch

Copies of the topographical editions covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0E9

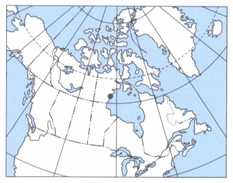
The proximity of the North Magnetic Pole causes the magnetic compass to be erratic in this area

Mean magnetic declination 1992, 3°51′ West, increasing 6.9′ annually. Readings vary from 2°34′ W in the SW corner to 5°12′ W in the NE corner of the map

Elevations in metres above mean sea level for NTS sheet 55 K/5 and in feet above mean sea level for NTS sheets 55 K/3, 55 K/4 and 55 K/6



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE


INDEX MAP

94°00′ 50′ 40′ 30′ 20′ 10′ 93°00′ — 62°30′ — 20′ — 10′ — 62°00′

Contribution to Canada-Northwest Territories Mineral Development Subsidiary Agreement 1987-91, under the Economic Development Agreement. Project funded by the Geological Survey of Canada

Contribution à l'Entente auxiliaire Canada-Territoires du Nord-Ouest d'exploitation minérale 1987-1991, dans le cadre de l'Entente de développement économique. Projet subventionné par la Commission géologique du Canada

Northwest Territories Energy, Mines and Petroleum Resources

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601 Booth Street, Ottawa, Ontario K1A 0E8
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LEGEND

PHANEROZOIC

QUATERNARY

Q — *Glacial, periglacial, fluvial, and marine deposits*

PROTEROZOIC

Pd — *Mafic dykes: gabbro and diabase dykes of the Mackenzie swarm*

Pgb — *Gabbro sills and plugs in the Hurwitz Group*

HURWITZ GROUP (early Proterozoic; **PHK-PHT**)

PHT — *TAVANI FORMATION: white and pink lithic arkoses and feldspathic arenite/ litharenite, local shale partings, red shale rip-up breccia, and polymict conglomerate*

PHK — *KINGA FORMATION: (Whiterock Lake Member) white orthoquartzite, locally pink, local sericitic and carbonate rich layers and dolostone. Lowermost* **PHK** *consists of reddened sandstone, siltstone, and shale, mass-flow polymict breccia, impure grey quartz-arenite*

LATE ARCHEAN OR EARLY PROTEROZOIC

d — *Mafic dykes: diabase dykes with abundant plagioclase megacrysts (Kaminak dyke swarm). Margins sometimes foliated*

ARCHEAN

Ag_{1-7} — *Granitoids: (**Ag** undivided) two groups recognized: late to posttectonic granite to granodiorite plutons, include the 'East Lake' (Ag_1), south Gill Lake (Ag_2), and east Gill Lake (Ag_3) plutons, and a granodiorite-monzonite body north of Last Lake (Ag_4); syntectonic granitoids and granodiorite to granites and quartz-monzonite with subordinate quartz diorite, diorite and gabbro, include the north Gill Lake pluton (Ag_5), Tavani (Ag_6), and Last Lake (Ag_7) granites. Syntectonic granitoids have a marginal migmatite zone. Numbering does not reflect relative age of these bodies*

Ad — *Diorite: unknown relationship to Archean* **Agb**, *no associated gabbro*

Agb — *Gabbro and related rocks (subordinate diabase, diorite, quartz-diorite, tonalite, trondhjemite around Gill Lake) of the Kiksautituk suite. Porphyritic, glomerophyric, and minor non-porphyritic varieties, all variably deformed especially at their margins (schistose margins). Gabbros, quartz-gabbros, and diorite of the 'Fat Lake' suite, all plagioclase megacryst bearing*

Am — *Migmatite: mafic paleosomes, dioritic to tonalitic neosomes, paleosome relics suggest affinities with Atungag and Akliqnaktuk formations*

(Granitoids are the youngest of these plutonic rocks: relative ages of the gabbros, diorites and migmatites to each other are ambiguous, but they are older than the granitoids)

ARCHEAN SUPRACRUSTAL ROCKS

AT — *TAGIULIK FORMATION: quartz-poor turbidites and magnetite-chert ironstone. Turbidite units range from coarse psammite wackes and matrix supported breccias to fine lithic siltstones and chert-ironstone. Conglomerate, carbonate, sulphidic pelite locally developed at base of succession. Exposed base of Tagiulik Formation at Gill Lake and Mistake Bay is a high strain zone (probable thrust). This formation is allochthonous with respect to the Kasigialik Group*

KASIGIALIK GROUP (**AKA - AE**)

AE — *EVITARUKTUK FORMATION: dominantly quartz-rich greywacke; turbiditic cycles grade from coarse arenite to shale-slate. Local feldspathic quartz-arenite and arkose, matrix-supported polymict conglomerate near base of succession*

AAm / AAf / AAs — *AKLIQNAKTUK FORMATION:* **AAm**, *predominantly mafic volcanic rocks, lavas - pillowed, massive, variolitic, porphyritic and non-porphyritic; hyalocastite, epiclastic breccia;* **AAf**, *predominantly felsic volcanic rocks, rhyolitic and dacitic lavas, epiclastic breccia, and coarse sandstone;* **AAs**, *predominantly sedimentary, volcaniclastic arenite and siltstone, quartz arenite, polymict conglomerate, oligomict granite conglomerate, carbonate ironstone, chert, black slate*

AKA — *ATUNGAG FORMATION: mafic pillow lavas and subordinate massive mafic lavas, lava tubes, dykes, sills, minor chert*

Area of outcrop
Geological boundary (defined, approximate, assumed)
Geological boundary (inferred)
Bedding, top known (inclined, vertical, overturned)
Cleavage (inclined, vertical)
S_1
S_2
S_3
Lineation (mineral or stretching)
Fault (defined, approximate)
Fault (inferred)
Thrust fault (teeth indicate upper tectonic unit; defined, approximate)
Thrust fault (teeth indicate upper tectonic unit; inferred)
Anticline, antiform (defined, approximate)
F_1
F_2
F_3
Anticline, antiform (inferred)
F_1
F_3
Syncline, synform (defined, approximate)
F_1
F_2
F_3
Syncline, synform (inferred)
F_2
F_3
Radiometric date in millions of years — 2666 ± 9
U-Pb (zircon)
U-Pb (sphene)
Pb-Pb (galena)
Mineral prospect (Park and Ralser, 1991; Heywood, 1973)

MINERALS

Chalcopyrite	cp	*Nickel*	Ni
Galena	gn	*Pyrite*	py
Gold	Au	*Zinc*	Zn
Iron oxide	Fe		

MAP 1816A

GEOLOGY

SOUTHWEST PART OF TAVANI MAP AREA

DISTRICT OF KEEWATIN

NORTHWEST TERRITORIES

Scale 1:100 000 - Échelle 1/100 000

Kilometres 2 0 2 4 6 8 Kilometres

Universal Transverse Mercator Projection

Projection transverse universelle de Mercator

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1992: Geology, southwest part of Tavani map area, District of Keewatin, Northwest Territories, Geological Survey of Canada, Map 1816A, scale 1:100 000

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