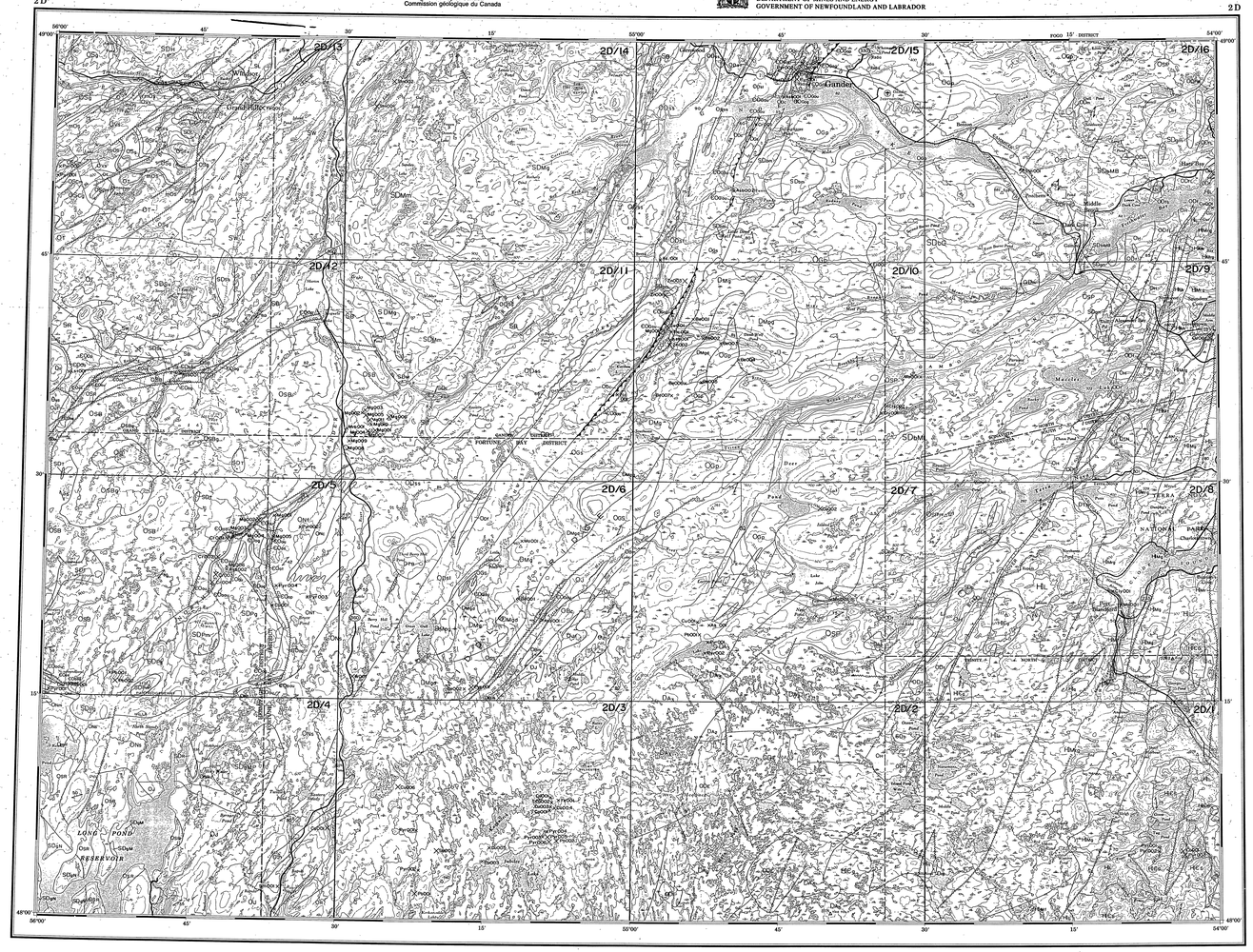
Energy, Mines and Resources Canada / Énergie, Mines et Ressources Canada
Geological Survey of Canada / Commission géologique du Canada

MINERAL DEVELOPMENT DIVISION
DEPARTMENT OF MINES AND ENERGY
GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

2D



GANDER LAKE
NEWFOUNDLAND
MINERAL OCCURRENCE MAP

Scale 1:250,000 Échelle

Miles 5 0 5 10 15 20 Miles
Kilomètres 0 5 10 15 20 25 30 Kilomètres

Geological compilation by R.F. Blackwood, S.P. Colman-Sadd and S. O'Brien (1982) and J. Hibbard (1983). Mineral occurrences compiled and revised by J. Meyer (1982), S. Tomlin (1982) and R. Green (1982).

Geological cartography by Drafting Section, Mineral Development Division, Department of Mines and Energy, Government of Newfoundland and Labrador.

Copies of this map may be obtained from the Publications and Information Section, Mineral Development Division, Department of Mines and Energy, P.O. Box 4750, St. John's, Newfoundland A1C 5T7.

Base maps at scale 1:250,000 published by Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa.

Elevations in feet above mean sea level.

This project was financed under the Canada/Newfoundland Mineral Development Subsidiary Agreement (1977-1981) by contributions from the Government of Newfoundland and Labrador (10 percent) and from the Departments of Regional Economic Expansion (45 percent) and Energy, Mines and Resources (45 percent) of the Government of Canada. Printing was paid for by the Geological Survey of Canada under the Canada-Newfoundland cooperative mineral program (1982-1984).

LEGEND

DEVONIAN AND EARLIER

Devonian

Du — *Fine to medium grained massive gabbro and diorite*

SDt THROUGH HILL GRANITE *and related intrusives: medium to coarse grained muscovite-garnet granite.*

SDg OVERFLOW POND GRANITE: *medium grained biotite garnet granite*

SDm HODGES HILL GRANITE: *medium to coarse grained, locally porphyritic biotite-hornblende-muscovite granite, locally contains pink orthoclase and myrmekite*

SDL LEMOYNE'S LAKE GRANITE: *fine to medium grained, locally foliated porphyritic biotite granite and granodiorite, minor gabbro and diorite*

SDw MOUNT PEYTON INTRUSIVE SUITE: SDwm - *fine to medium grained gabbro and diorite* SDwg - *fine to medium grained pink granite, granite*

Sk ROGERSON LAKE CONGLOMERATE *Red conglomerate with thin beds of red sandstone and siltstone. Probably equivalent to Binkwood Group.*

SILURIAN TO UPPER ORDOVICIAN

FROZEN OCEAN GROUP

OSfo *Interbedded red and green argillite, siltstone, shale and greywacke, minor rocks yellow lime*

OSfs *Green yellow lime, pyroclastic breccia; minor agglomerate, mafic tuff, felsic volcanic rocks and blue-green chert.*

OSfc *Greywacke, conglomerate and interbedded siltstone, argillite and black shale, minor chert, calcareous sandstone and thin limestone beds*

OSfd DOMPLEAGH LAKE QUARTZ MONZONITE: SDdc - *coarse grained biotite granite and diorite* SDdu - *medium grained quartz monzonite and granodiorite*

MIDDLE ORDOVICIAN

mOq *Black shale and slate, locally contains graptolites, subordinate chert, cherty argillite and minor interbedded greywacke*

MIDDLE TO LOWER ORDOVICIAN

VICTORIA LAKE GROUP

Ot TALLY POND VOLCANICS: *Green, mafic to intermediate pillow lava, pillow breccia and interbedded pyroclastic breccia, lapilli tuff and tuff, minor epiclastic volcanic rocks, diabase and gabbro dikes and sills and rare felsic tuff and breccia*

Otvs *Siliceous siltstone, green and black argillite and shale, minor red chert, red argillite, tuff and mafic volcanic rocks*

Ou Ouv - *unsaponaceous serpentinite schist;* Ous - *unsaponaceous talcose crystal tuff*

MIDDLE TO LOWER ORDOVICIAN

OSb SPRUCE BROOK UNIT: *soft bedded sandstone, siltstone and shale with minor conglomerate.* OSbl - *limestone (derived from Sandy Brook unit)*

Ok *Unbedded banded gneisses and migmatites (including bands of granitic gneiss, amphibolite and paragneiss)*

LOWER ORDOVICIAN TO UPPER CAMBRIAN

OPRGLOTIC ROCKS SURROUNDING AND NEAR THE GANDER RIVER BELT, INCLUDE GREAT BEND, LOY POND and PERVERSE POND COMPLEXES and PINE FALLS FORMATION

COOcs *Conglomerate, shale and sandstone conformable on COOu*

COOu *Mafic pillow lava and intermediate rocks, locally includes minor sedimentary rocks, tuffaceous and quartz*

COOm *Trondhjemite and tonalite/lava*

COOc *Coarse to fine grained gabbro and diabase, locally includes dyke/sills associated with gabbro and peridotite.*

COOu *Mostly serpentinized peridotite with subordinate pendotite, and pyroxenite with minor amphibolite, talc-carbonate schist, diabase.* COOuc - *highly deformed and/or metamorphosed equivalent of COOu*

DUNNAGE ZONE

ORDOVICIAN

Ohc *Mafic intrusions* Ohcb - **ROUND POND GABBRO/NORITE:** *norite, gabbro and hornblendite* Ohcc - **CHANGE MOUNTAIN LAKE PLUTON:** *gabbro and diorite*

BAIE D'ESPOIR GROUP (includes Ob, Obc, Ob, Obr, Ob, Obh - *stratigraphic succession uncertain*)

Obs *Unassigned* **BAIE D'ESPOIR GROUP.** Obs - *mafic to intermediate volcaniclastic rocks, felsic crystal-lithic tuff and minor basalt* Obs - *polymictic pebble to cobble conglomerate and interbedded sandstone*

Obc NORTH STEADY POND FORMATION. Obc - *interbedded gray-green volcaniclastic sandstone and siltstone, locally conglomeratic* Obcl - *felsic and intermediate tuff and flows, includes Hearse Harbour Member* Obcl - *dacite flows, pillow lava and mafic tuff*

Ogc ST. JOSEPHS COVE FORMATION: *interbedded brown siltstone and gray to black shale and slate, includes rare sandstone and conglomerate beds* Ogcl - **BLACK BROOK MEMBER:** *felsic pyroclastic rocks.*

Oh RICHES ISLAND FORMATION: *green interbedded shale and siltstone with minor red siltstone, sandstone, graphitic shale, and minor volcanic rocks.*

Ol ISLE GALET FORMATION: *felsic and mafic tuffs and breccia, with interbedded graywacke, shale and siltstone, graphitic slate, minor conglomerate and limestone.* Olm - *mostly felsic volcanic and sedimentary rocks.* Olv - *mostly mafic volcanic and volcaniclastic rocks.*

Ogl SALMON RIVER DAM FORMATION *well bedded mudstone, siltstone and minor shale*

OPRGLOTIC ROCKS OF THE "GANDER RIVER BELT" INCLUDE *mafic volcanic rocks in and near the eastern margin of the Gander Group*

COOvs *Mostly yellow lime and intermediate rocks, minor felsic tuff and lapilli tuff, includes quartz porphyry and amphibolite*

COOvm *Trondhjemite and associated quartz-feldspar porphyry and tonalite/lava*

COOvc *Fine to coarse grained gabbro and diabase*

COOvu *Serpentinized and metamorphosed pyroxenite and peridotite; locally includes talc-carbonate schist, gabbro and hornblende equivalents*

DEVONIAN

Dt ACKLEY GRANITE
- Dtm - *coarse grained porphyritic biotite hornblende granodiorite*
- Dtq - *coarse grained microclase porphyritic granite*
- Dtq - *medium to coarse grained, porphyritic biotite muscovite granite*
- Dtq - *medium grained porphyritic biotite granite*
- Dtq - *coarse grained orthoclase porphyritic biotite granite*
- Dtq - *unbroken massive biotite granite*

SDt — *Fissile and boulder conformable soft layers of bedded sandstone*

STONY LAKE UNIT

SDcs *Subaerial rhyolite and rhyodacite flows, breccia and tuff*

SDsd *Red and green sandstone and siltstone with rhyolitic clasts and tuffaceous rocks*

SDtg BOOM MOUNTAIN GRANITE SDtgg - *medium to coarse grained, chlorite-biotite granite, locally contains muscovite grains, followed in southerly portions* SDtgm - *medium grained biotite-muscovite granite (high silica phase).*

SDtt THIRD BERRY HILL POND GRANITE SDTtm - *fine to medium grained muscovite-biotite granite, locally contains quartz and feldspar phenocrysts* SDTtb - *coarse grained, feldspar porphyritic biotite granite*

SDd ROCKY BOTTOM TONALITE: *medium grained biotite-hornblende tonalite*

SILURIAN

BOTWOOD GROUP

Sb *Unbroken* **BOTWOOD GROUP.** *Gray, red and green sandstone and siltstone, locally conglomerate, minor red and gray conglomerate and fossiliferous calcareous rocks*

Sw WIGHAM FORMATION. *Red, brown and green siltstone, mudstone and siltstone, locally crossbedded and carbonate cemented, minor conglomerate and fossiliferous limestone and minor calcareous rocks.*

SL LAWRENCETOWN FORMATION. *mafic, fine grained massive and pillowed lava, interbedded with black, poorly developed shale, minor pyroclastic rocks and rare limestone*

Dv *Fine to medium grained, massive gabbro and diorite*

Dw MIDDLE RIDGE GRANITE Dwgr - *fine grained to porphyritic muscovite biotite granite and granodiorite* Dwgm - *medium grained biotite-muscovite granite, rare garnets.* Dwg - *medium to coarse grained biotite muscovite granite, rare garnets*

SDbm *Mostly biotite muscovite granite and granodiorite, locally contains garnet, sillimanite, or hornblende, includes small stock on* SDbr - *northwest of Great Sandy Pond*

SDb *Mostly massive, medium to coarse grained, feldspar porphyritic or megacrystic biotite granite.* SDbmb - **MIDDLE BROOK MEGACRYSTIC BIOTITE MONZONITE GRANITE.** SDbML - **MADDLES LAKE GRANITE**

SDbf *Mostly foliated, fine to medium grained biotite-muscovite garnet quartz monzonite*

DO6 EASTERN BEDLPADS COMPLEX. *un-foliated, locally foliated, medium to coarse grained, locally porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks. May include rocks equivalent to* COO

SDbs *Mostly foliated, fine to medium grained biotite-muscovite garnet quartz monzonite*

DO6 EASTERN BEDLPADS COMPLEX. *un-foliated, locally foliated, medium to coarse grained, locally porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

SDbm *Mostly foliated, fine to medium grained biotite-muscovite garnet quartz monzonite*

SDbf *Mostly foliated, feldspar porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

SDbm *Mostly foliated, fine to medium grained biotite-muscovite garnet quartz monzonite*

DO6 EASTERN BEDLPADS COMPLEX. *un-foliated, locally foliated, medium to coarse grained, locally porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

SDbf *Mostly foliated, feldspar porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

SDbm *Mostly foliated, fine to medium grained biotite-muscovite garnet quartz monzonite*

DO6 EASTERN BEDLPADS COMPLEX. *un-foliated, locally foliated, medium to coarse grained, locally porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

SDbf *Mostly foliated, feldspar porphyritic biotite hornblende granodiorite, biotite-muscovite granite and muscovite-garnet tourmaline granite. Include minor sedimentary rocks May include rocks equivalent to* COO

DO6 EASTERN BEDLPADS COMPLEX. *un-foliated, locally foliated, medium to coarse grained, locally