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

DESCRIPTIVE NOTES

This 9200 km² area of west-central Newfoundland covers portions of Red Indian Lake and Sandy Lake map sheets.

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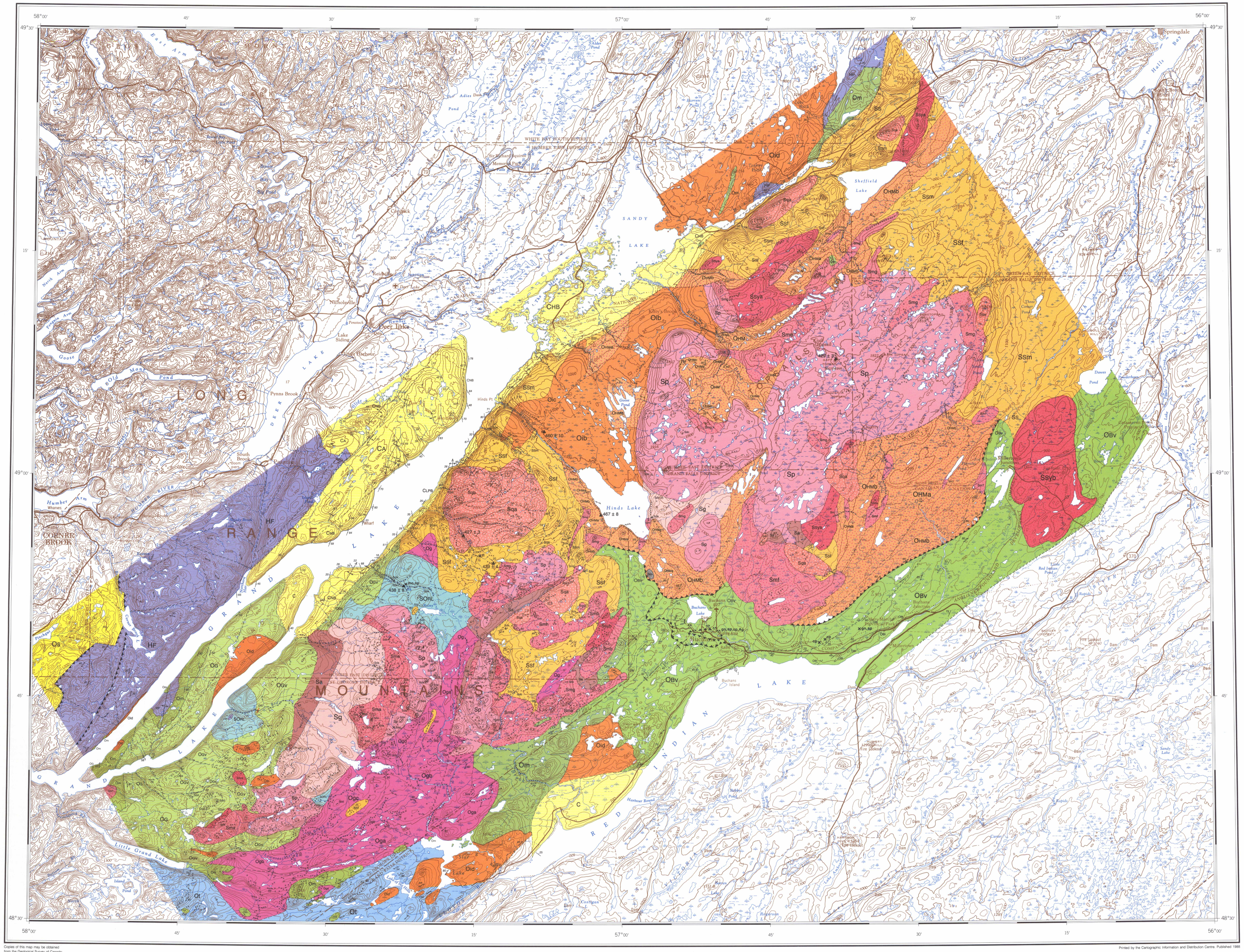
Canada



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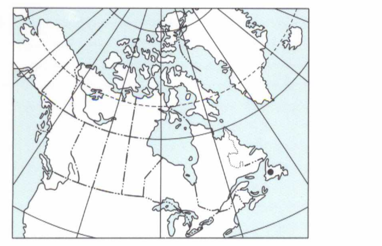


MAP 1680A

GEOLOGY

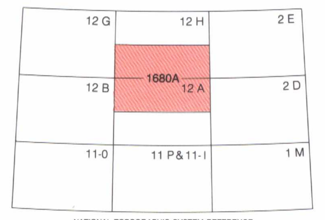
TOPSAILS IGNEOUS TERRANE

NEWFOUNDLAND

Scale 1:200 000 - Échelle 1/200 000

Kilometres 4 0 4 8 12 16 Kilomètres

Universal Transverse Mercator Projection / Projection transverse universelle de Mercator



LEGEND

PALEOZOIC
CARBONIFEROUS

C — *Carboniferous clastic sedimentary rocks;* **CA**, *Anguille Group, sandstone, siltstone, arkose and mudstone;* **CNB**, *North Brook and Rocky Brook formations, pink to orange conglomerate and sandstone, granite wash;* **CLPB**, *Little Pond Brook Formation, grey to green muscovitic sandstone, quartz-pebble conglomerate;* **CHB**, *Howley Beds, grey sandstone, minor conglomerate and siltstone*

SILURIAN

TOPSAILS INTRUSIVE SUITE (**Sa-Sq**)

Sq — *Quartz-feldspar porphyry, rhyolite, minor basalt;* **Sqa**, *orange to green quartz-K-feldspar porphyry, in large part peralkaline;* **Sqb**, *orange to red quartz-K-feldspar porphyritic rhyolite and minor amygdaloidal basalt flows, felsic volcanics in large part subalkaline;* **Sqc**, *composite rhyolite-basalt dyke*

Sd — *Dyke rocks;* **Sda**, *fine- to medium-grained diabase and plagioclase-porphyritic diabase;* **Sdb**, *orange quartz-K-feldspar porphyry;* **Sdc**, *white to beige amphibole-clinopyroxene aplite and quartz-K-feldspar porphyritic peralkaline aplite;* **Sdd**, *red aplite and flow banded rhyolite*

Sm — *White to red, fine- to medium-grained equigranular granite; minor quartz-feldspar porphyritic granite and aplite;* **Sma**, *biotite two feldspar granite;* **Smb**, *biotite-amphibole two-feldspar granite;* **Smc**, *amphibole-biotite two-feldspar granite and granodiorite;* **Smd**, *biotite one-feldspar granite;* **Sme**, *biotite-amphibole one-feldspar granite;* **Smf**, *amphibole-biotite one-feldspar granite;* **Smg**, *amphibole-sodic pyroxene one-feldspar granite;* **Smh**, *red epidotized and chloritized granophyric aplite*

Sp — *White to red medium- to coarse-grained equigranular amphibole ± sodic pyroxene one-feldspar granite, may include minor unit* **Sm**, *in large part peralkaline*

Sg — *White to pink medium- to coarse-grained biotite-amphibole two-feldspar granite, contains pink fine- to medium-grained granite with pegmatitic patches near margins*

Ssy — **Ssya**, *red medium grained K-feldspar porphyritic amphibole-biotite two-feldspar quartz syenite to granite;* **Ssyb**, *grey to orange medium- to coarse-grained amphibole ± clinopyroxene gabbro to quartz syenite*

Sa — *Agmatite of mafic to ultramafic blocks in granitic to granodioritic matrix, blocks may be as old as unit* **Om**, *matrix may be as young as unit* **Sm**

SPRINGDALE GROUP

Ss — **Ssf**, *red flow banded rhyolite, rhyolite breccia, laharic breccia and silicic tuff;* **Ssm**, *amygdaloidal and massive subaerial basalt, minor andesite;* **Sss**, *arkose, conglomerate and siltstone*

SILURIAN OR ORDOVICIAN
RAINY LAKE COMPLEX

SORL — *Fine- to coarse-grained amphibole-clinopyroxene gabbro, diorite and quartz diorite and amphibole-biotite granodiorite, also includes younger red fine grained biotite-amphibole two-feldspar granite*

ORDOVICIAN

Oi — *Massive to slightly foliated granite to granodiorite;* **Oia**, *FEEDER GRANODIORITE; pink to red, biotite-amphibole two-feldspar granite;* **Oib**, *HINDS BROOK GRANITE; white to pink medium- to coarse-grained biotite-amphibole K-feldspar porphyritic two-feldspar granite;* **Oic**, *pink fine- to medium-grained biotite ± muscovite granite and aplite;* **Oid**, *undivided medium- to coarse-grained, white to pink, biotite, amphibole and/or muscovite granite, may include areas of hybrid gneisses*

BUCHANS GROUP

OB — **OBv**, *basalt, rhyolite, tuff, breccia, minor subaqueous conglomerate;* **OBi**, *fine- to coarse-grained diabase and gabbro, may be as young as unit* **Sda** *in part*

GLOVER GROUP

OG — *Pillow basalt, agglomerate, diabase, tuff and conglomerate;* **OGv**, *pillow basalt, massive basalt and minor rhyolite;* **OGs**, *tuff, tuffaceous sediments and conglomerate*

Os — *Platformal sedimentary rocks; includes Table Head Formation, St. George Group, and Grand Lake Brook Group*

Og — *Massive to moderately foliated granodiorite and minor tonalite, with many small mafic to ultramafic fragments, relations between subunits uncertain;* **Oga**, *grey to pink medium- to coarse-grained biotite and biotite-amphibole granite to granodiorite, minor amphibole granodiorite;* **Ogb**, *white coarse grained amphibole granodiorite;* **Ogc**, *white to pink coarse grained amphibole-biotite quartz-eye porphyritic granite to granodiorite;* **Ogd**, *grey medium grained biotite-muscovite granodiorite and migmatite;* **Oge**, *pink medium- to coarse-grained biotite granite*

Ot — *White to grey medium- to coarse-grained hornblende ± biotite tonalite to diorite, moderately to strongly foliated, with many small to large mafic to ultramafic inclusions*

HUNGRY MOUNTAIN COMPLEX

OHM — *Moderately to strongly foliated gabbro to granite with many small to large mafic to ultramafic inclusions;* **OHMa**, *fine- to coarse-grained hornblende gabbro, amphibolite, diorite and quartz diorite;* **OHMb**, *medium- to coarse-grained white to pink amphibole-biotite quartz-eye porphyritic granite to granodiorite, K-feldspar porphyritic biotite-amphibole granite, and tonalite;* **OHMc**, *medium grained white to pink biotite-muscovite gneiss*

Om — *Mafic to ultramafic rocks; basalt, gabbro, hornblendite, pyroxenite, ophiolitic suites; some may be as young as* **Sda**

HADRYNIAN TO LOWER PALEOZOIC
FLEUR DE LYS SUPERGROUP

HF — *Semipelitic schist and psammitic gneiss*

Rock outcrop (area of outcrop)
Geological boundary (defined, approximate, assumed)
Bedding, tops known (inclined, overturned) 25
Bedding, tops unknown (inclined, vertical) 25
Schistosity, foliation (inclined, vertical, dip unknown) 25
Minor fold (arrow indicates plunge) 25
Fault (assumed)
Thrust fault (teeth in direction of dip; assumed)
Anticline (defined, approximate, arrow indicates plunge)
Syncline (defined, approximate, arrow indicates plunge)
Glacial striae (direction of ice flow known); numbers indicate relative age, 1 being the oldest 1 2
Mine
Mineral occurrence
U-Pb *zircon age (Ma, ± 2 sigma errors)* 438 ± 8

MINERALS

Chalcopyrite	**cp**	*Molybdenite*	**mo**
Fluorite	**fl**	*Native silver and argentite*	**Ag**
Galena	**gn**	*Sphalerite*	**sp**

Geology by J.B. Whalen 1981, 1982, K.L. Currie 1981, 1982, J.G. Graves 1981, and P. Barrette 1982; some areas compiled from Dunning et al. 1982, Hyde and Ware 1981, Kean 1978, 1979, Kean and Jayasinghe 1982, Knapp et al. 1979, and Neale and Nash 1963

Geological cartography by M. Sigouin, Geological Survey of Canada

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

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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

Mean magnetic declination 1988, 24°52' West decreasing 6.5' annually. Readings vary from 24°32'W in the SW corner to 25°12'W in the NE corner of the map

Elevation in feet above mean sea level

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1988: Geology, Topsails igneous terrane, Newfoundland; Geological Survey of Canada, Map 1680A, scale 1:200 000