Geological Map of the Powderhorn Lake – Baker Brook area [NTS 12H1, 2E4]: Early – Late Ordovician Robert's Arm volcanic belt at 1: 35 000 scale

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GEOLOGICAL SURVEY
NEWFOUNDLAND AND LABRADOR
Celebrating 150 years

Newfoundland Labrador
Natural Resources

Simplified Legend - Robert's Arm Volcanic Belt Only

Late Ordovician – Early Silurian
Sops Head Complex (in part)
- IO-eS:SHC *Tommys Arm Bridge mélange*

Late Ordovician - Powderhorn Lake Tract
Powderhorn Brook Outflow Division
- IO:PLs *metapelite*
- IO:PLv *metarhyolite*

Late Ordovician - Baker Brook Tract
Rocky Brook Division
- IO:Brb3 *argillite*
- IO:Brb2 *wacke*
- IO:Brb *Rocky Brook unseparated*

Middle Ordovician - Baker Brook Tract
Eastern Baker Lake Brook Division
- mO:Beb2 *metawacke*
- mO:Beb1 *metarhyolite tuff*

Middle Ordovician - Catamaran Brook Tract
Joes Lake Division
- mO:CBv3 *pillowed tholeiite*
- mO:CBv2 *felsic-mafic tuffs*
- mO:CBv1 *basaltic andesite*

Middle Ordovician - Sops Head Complex (in part)
Burtons Harbour - Herring Cove Division
- mO:BHHCs *siltstone*
- mO:BHHCv *alkali basalt*

Middle Ordovician - Burnt Pond Tract
Julies Harbour Division
- mO:BPpg *migmatitic paragneiss*
- mO:BPhs *hornfelsic schist*
- mO:BPs *sulphidic phyllite*

Middle Ordovician - Crescent Composite Tract
Deer Pond Division
- mO:CCRs *sandstone and chert*
- mO:CCv2 *rhyolite tuff*
- mO:CCv1 *tholeiitic basalt*

Middle Ordovician - South Brook Tract
Black Gull Island Division
- mO:Rgi *pillowed tholeiite*

EARLY ORDOVICIAN - GULLBRIDGE TRACT
Powderhouse Division
- eO:Rph *tuffaceous wacke*

Gull Brook Bridge Division
- eO:Rgb3 *felsic-mafic tuffs*
- eO:Rgb2 *pumiceous wacke*
- eO:Rgb1 *andesite and komatiite*
- eO:Rgb *unseparated anthophyllite schist*

Loon Pond Intrusive Suite
- eO:FLg *granite*
- eO:FLgd *granodiorite*

Dawes Pond Brook Division
- eO:Rdbf *rhyolite breccia*
- eO:Rdbm *pillow lava*
- eO:Rdb3 *calc-alkaline basalt*
- eO:Rdb2 *felsic-mafic tuffs*
- eO:Rdb1 *rhyodacite*
- eO:Rdb *Dawes Pond Brook unseparated*

West Lake Brook Division
- eO:Rwb5 *flood basalt*
- eO:Rwb4 *calc-alkaline gabbro*
- eO:Rwb3 *basaltic andesite*
- eO:Rwb2 *pillowed arc tholeiite*
- eO:Rwb1 *high-alumina basalt*
- eO:Rwb *West Lake Brook unseparated*

Firetower Hill Intrusive Suite
- eO:Rspf *quartz–feldspar porphyry*

Starkes Pond Division
- eO:Rsp *banded rhyolite*
- eO:Rspt *ash tuff*
- eO:Rspb *rhyolite breccia*
- eO:Rsp? *Sparkes Pond unseparated*

Tectonic Terranes
- eO:RCm *Mud Pond unseparated*
- eO:RCb *Boot Harbour unseparated*

Explanation of symbols

- Folded thrust fault (barbs on hanging wall)

Secondary syn-metamorphic fault

- Reverse fault (barbs in dip direction)

Post-metamorphic faults

- Brittle dextral strike-slip fault
- Brittle sinistral strike-slip fault
- Brittle sinistral strike-slip fault (approximate)
- Brittle dextral-oblique normal fault
- Brittle normal fault

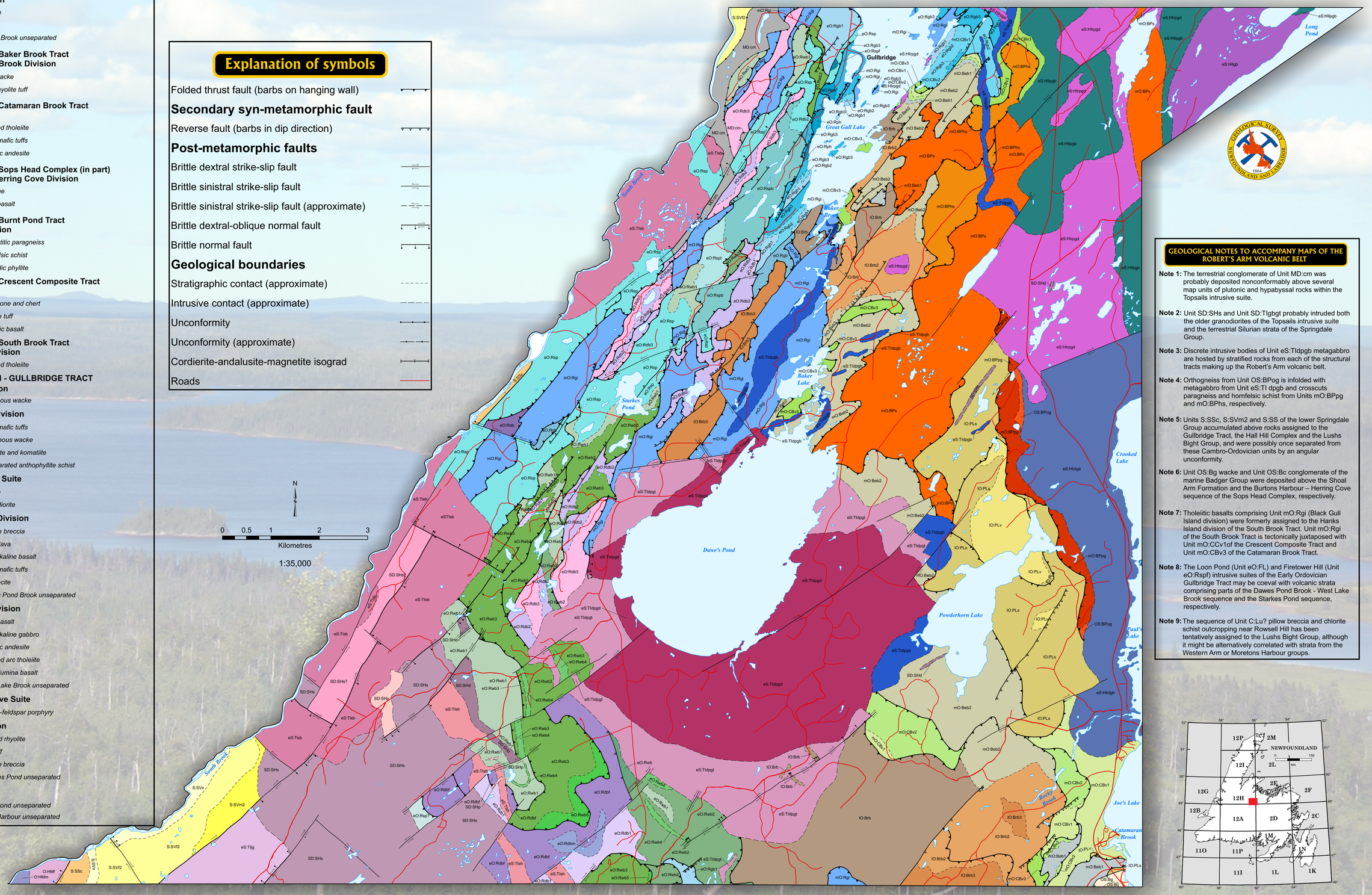
Geological boundaries

- Stratigraphic contact (approximate)
- Intrusive contact (approximate)
- Unconformity
- Unconformity (approximate)
- Cordierite-andalusite-magnetite isograd
- Roads

N

0 0.5 1 2 3
Kilometres

1:35,000



GEOLOGICAL NOTES TO ACCOMPANY MAPS OF THE ROBERT'S ARM VOLCANIC BELT

Note 1: The terrestrial conglomerate of Unit MD:cm was probably deposited nonconformably above several map units of plutonic and hypabyssal rocks within the Topsails intrusive suite.

Note 2: Unit SD:SHs and Unit SD:Tlgbgt probably intruded both the older granodiorites of the Topsails intrusive suite and the terrestrial Silurian strata of the Springdale Group.

Note 3: Discrete intrusive bodies of Unit eS:TIdpgb metagabbro are hosted by stratified rocks from each of the structural tracts making up the Robert's Arm volcanic belt.

Note 4: Orthogneiss from Unit OS:BPog is infolded with metagabbro from Unit eS:TI dpgb and crosscuts paragneiss and hornfelsic schist from Units mO:BPpg and mO:BPhs, respectively.

Note 5: Units S:SSc, S:SVm2 and S:SS of the lower Springdale Group accumulated above rocks assigned to the Gullbridge Tract, the Hall Hill Complex and the Lushs Bight Group, and were possibly once separated from these Cambro-Ordovician units by an angular unconformity.

Note 6: Unit OS:Bg wacke and Unit OS:Bc conglomerate of the marine Badger Group were deposited above the Shoal Arm Formation and the Burtons Harbour – Herring Cove sequence of the Sops Head Complex, respectively.

Note 7: Tholeiitic basalts comprising Unit mO:Rgi (Black Gull Island division) were formerly assigned to the Hanks Island division of the South Brook Tract. Unit mO:Rgi of the South Brook Tract is tectonically juxtaposed with Unit mO:CCv1of the Crescent Composite Tract and Unit mO:CBv3 of the Catamaran Brook Tract.

Note 8: The Loon Pond (Unit eO:FL) and Firetower Hill (Unit eO:Rspf) intrusive suites of the Early Ordovician Gullbridge Tract may be coeval with volcanic strata comprising parts of the Dawes Pond Brook - West Lake Brook sequence and the Starkes Pond sequence, respectively.

Note 9: The sequence of Unit C:Lu? pillow breccia and chlorite schist outcropping near Rowsell Hill has been tentatively assigned to the Lushs Bight Group, although it might be alternatively correlated with strata from the Western Arm or Moretons Harbour groups.