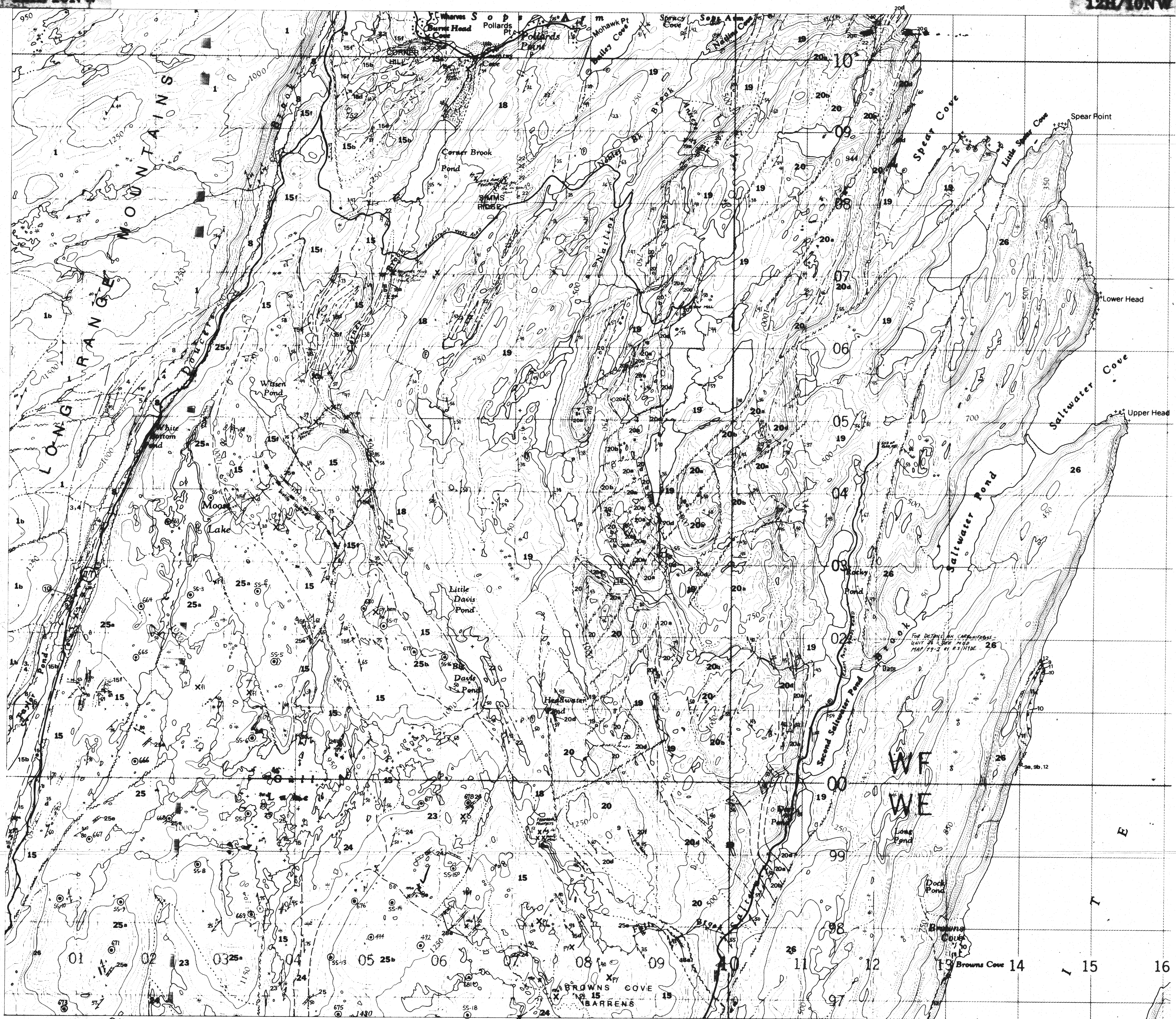
13H/10 (746)
Hughes-Owens
313 1102



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

LEGEND

POST–ACADIAN MOLASSE

CARBONIFEROUS

27 **Deer Lake Group:** *Poorly indurated, red conglomerate and sandstone of the* **North Brook Formation**

26 **Anguille Group:** *Well indurated, thick bedded, gray sandstone and conglomerate with dark gray and black shale interbeds, minor red beds and buff to brown sandstone*

ACADIAN INTRUSIVE ROCKS

GULL LAKE INTRUSIVE SUITE (UNITS 23 - 25)

DEVONIAN

25 **Gales Brook Granite**
- **25e** *Biotite ± muscovite, microgranite dikes*
- **25d** *Chlorite-altered granite*
- **25c** *Biotite granite porphyry*
- **25b** *Fine grained biotite granite*
- **25a** *Megacrystic biotite granite*

24 *Gabbro diabase and intrusion breccia;* **24a**, *mafic dikes, possibly unrelated to Intrusive Suite*

ACADIAN OROGENY

SILURIAN

23 *Pretectonic, biotite granodiorite to tonalite*

SILURIAN

22 *Pink felsite dikes and sills*

21 *Quartz monzonite sills*

VOLCANIC AND SEDIMENTARY COVER ROCKS

SOPS ARM GROUP (UNITS 15 - 20)

SILURIAN

20 **Sops Island Volcanic Member of the Natlins Cove Formation:** *Predominantly ash flow tuff and rhyolite flows*
- **20h** *Pumice flow*
- **20g** *Rheo-ignimbrite*
- **20f** *Conglomerate and volcanic breccia*
- **20e** *Laharic breccia*
- **20d** *Mafic volcanic flows*
- **20c** *Ash-flow tuff or ignimbrite, strongly welded*
- **20b** *Ash-flow tuffs, unwelded and welded*
- **20a** *Flow banded rhyolite*

19 **Natlins Cove Formation:** *Limy siltstone and sandstone*
- **19c** *Coarse sandstone and pebble conglomerate*
- **19b** *Lighthouse Member, white sandstone*
- **19a** *Limestone*

18 **Simm's Ridge Formation:** *Brown weathering slate and argillite characterized by brown, siderite, spots;* **18a**, *limestone;* **18b**, *calcarceous rich tuff*

17 **Frenchman's Cove Formation:** *Bedded, polymictic conglomerate and sandstone*

16 **Jackson's Arm Formation:** *Massive, polymictic boulder to cobble conglomerate;* **16a**, *mafic volcanic flows*

15 **Lower volcanic unit:** *Predominantly ash flow tuffs and rhyolite flows*
- **15f** *Mafic volcanic flows*
- **15e** *Dolostone and thin bedded limestone*
- **15d** *Polymictic conglomerate and sandstone*
- **15c** *Felsic volcanic breccia*
- **15b** *Ash-flow tuff, welded and unwelded*
- **15a** *Flow banded rhyolite*

SILURIAN OR OLDER

14 *Quartz-carbonate schist. Age and orgin uncertain*

CONTINENTAL SLOPE AND OCEANIC ROCKS

SOUTHERN WHITE BAY ALLOCHTHON (UNITS 9 - 13) EMPLACED IN TACONIC OROGENY

MIDDLE ORDOVICIAN TO CAMBRIAN

13 **Coney Head Complex**
- **13e** *Zone of mafic to intermediate dikes*
- **13d** *Leucocratic, muscovite, granite sheets*
- **13c** *Reddish, biotite, graphic microgranite*
- **13b** *Medium to coarse grained biotite tonalite*
- **13a** *Gabbro, quartz gabbro*

12 *Gabbro metagabbro;* **12a**, *talc-carbonate schist;* **12b**, *trondhjemite*

11 **Murrays Cove Schist:** *Polydeformed greenschist, minor metagabbro and red chert*

10 **Maiden Point Formation equivalents:** *Fine to medium grained, dark green to gray graywacke, rare quartz pebble conglomerate*

9 **Second Pond Melange: 9a**, *Black-graphitic slate;* **9b**, *with calc-argillite beds;* **9c**, *with serpentinite blocks and slivers*

THRUST CONTACT

AUTOCHTHONOUS PLATFORMAL SEQUENCE

CONEY ARM GROUP (UNITS 3 - 8)

LOWER ORDOVICIAN AND/OR CAMBRIAN

8 *Undivided, recrystallized, limestone, dolostone and marble. May include 6, 7, and younger , unseparated, units*

CAMBRIAN

7 *Dark gray, recrystallized, bioturbated limestone, minor, black, cherty, dolostone, stromatolite mounds.*

6 *Thick bedded, recrystallized, white dolostone, dolomitic slate, minor interbedded dark gray limestone*

5 **Hawks Bay Formation equivalents:** *Quartz sandstone, sandy dolomite, oolitic limestone, calcareous slate*

4 **Forteau Formation equivalents:** *Graphitic slate and phyllite, calcareous schist and marble; minor psammitic schist;* **4a**, *basal white marble member*

3 **Beaver Brook Formation:** *Arkose, sandstone, pebble conglomerate*

BASEMENT

PRECAMBRIAN OR OR YOUNGER

2 **Devils Room granite:** *Undeformed granite, age unknown*
- **2d** *Medium grained biotite ± muscovite granite*
- **2c** *Porphyritic biotite granite*
- **2b** *Fine grainted pink felsite*
- **2a** *Megacrystic biotite granite*

PRECAMBRIAN

1 **Long Range Complex:** *Undivided biotite and hornblende gneiss, augen granite gneiss, foliated granite, metagabbro and amphibolite;* **1a**, *quartzo-feldspathic and calc-silicate gneiss inclusions in 25 (age unknown);* **1b**, *medium grained, massive granite (may be equivalent to 2)*

SYMBOLS

- *Geological boundary (defined, approximate, assumed, gradational)*
- *Unconformity (defined, approximate, assumed)*
- *Fault (defined, approximate, assumed)*
- *Reverse fault (defined, approximate, assumed)*
- *Bedding (tops known, unknown)*
- *Eutaxitic foliation*
- *Igneous flow banding*
- *Cleavage, schistosity*
- *Crenulation cleavage*
- *Gneissosity*
- *Joint*
- *Structural trends (from aerial photographs)*
- *Minor fold axes (first, second, third phase)*
- *Syncline (defined, approximate, assumed)*
- *Anticline (defined, approximate, assumed)*
- *Anticline and syncline (overturned)*
- *Fault zone*
- *Biotite isograd*
- *Drift covered area*
- *Melange with exotic blocks*
- *Breccia*
- *Dike*
- *Glacial striae (direction of ice movement known, unknown)*
- *Fossil locality*
- *Mine abandoned*
- *Mineral occurrence*
- *Outcrop, area of outcrop (only shown in areas of poor exposure)*

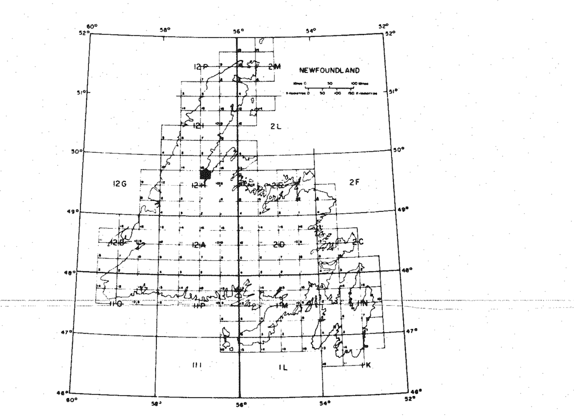
Geology by W. R. Smyth and H. S. Schillereff, 1981.

This open file is subject to revision and correction.

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 prepared by magnification of published 1:50,000 scale topographic maps. Supplied by Noranda Exploration Ltd.

This project was financed in part 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.



INDEX MAP

MAP 81-111
HAMPDEN NORTHWEST (12H/10NW)

Scale 1:25,000

0 1 2 3
Kilometres

REF. OR DRAWING No. 81-111
DETAILS Hampden North West
Hughes-Owens
313 1102