

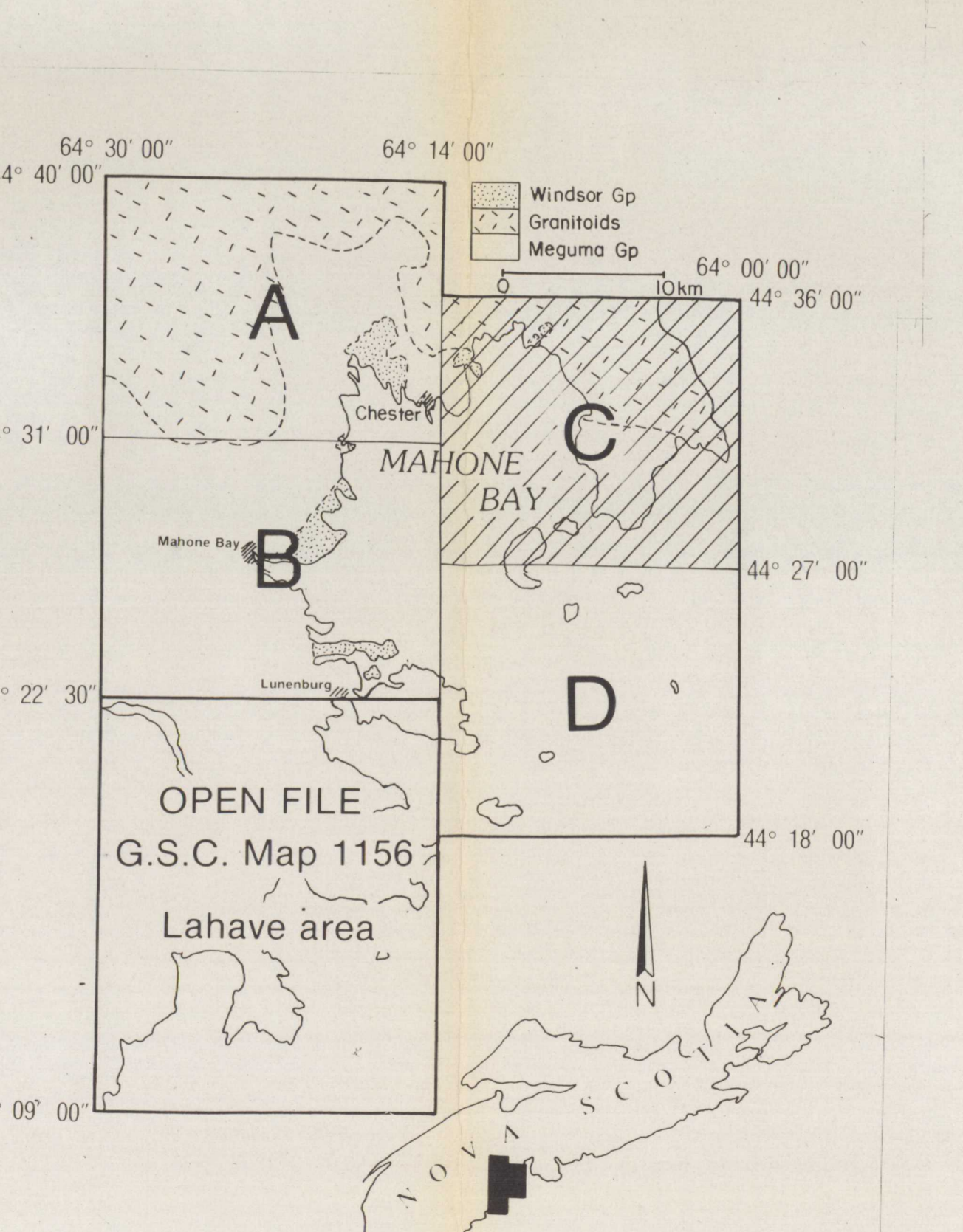
LEGEND

- WINDSOR GROUP**
 WR Limestone, gypsum, conglomerate
- MEGUMA GROUP**
 Halifax Formation
 FZ FELIZEN MEMBER: grey slate and laminated to thinly-bedded, fine-grained sandstones.
 CN CUNARD MEMBER: black slate and thin to thickly-bedded pyritiferous sandstones.
 Green Bay Formation
 MI MOSHERS ISLAND MEMBER: laminated, grey-green and green, fine-grained sandstones.
 WD WISELIDIAN MEMBER: thin to thickly-bedded, buff-washed sandstones with green and grey-green, fine-grained sandstones.
 TK TANCOK MEMBER: thin to thickly-bedded, buff-washed sandstones with green and grey-green, fine-grained sandstones.
 RBSS RISSERS BEACH MEMBER: thinly-bedded, green and grey-green, fine-grained sandstones.
 Goldenville Formation
 NH NEW HARBOR MEMBER: mainly thickly-bedded to massive, buff-washed sandstones; subordinate green laminated sandstones and green slates.

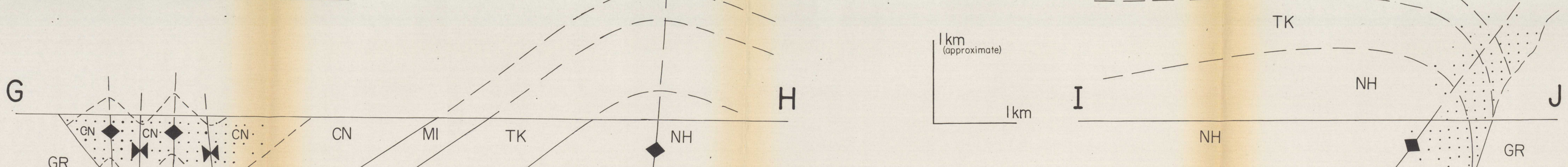
SYMBOLS

- Station outcrop x
- Geological boundary (defined, approximate assumed)
- Bedding (inclined, vertical, overturned)
- Main cleavage (inclined, vertical)
- Late cleavage (inclined, vertical)
- Bedding-main cleavage intersection lineation
- Crenulation lineation
- Mesoscopic fold axis related with main cleavage ("Z", "S", vergence undefined)
- Late mesoscopic fold axis ("Z", "S", vergence undefined)
- Axial trace of macroscopic anticline with plunge direction (defined, approximate, assumed)
- Axial trace of macroscopic syncline with plunge direction (defined, approximate, assumed)
- Axial trace of macroscopic overturned anticline with plunge direction
- Axial trace of macroscopic overturned syncline with plunge direction
- Fault (with displacement direction, displacement unknown)
- Mineral occurrence
 Au: Gold
 U: Uranium

Note: Map units and symbols not present on this map sheet occur on another map sheet or on the open file map of the Lahave area.



Structural cross-sections



SCALE 1:25 000

DISCUSSIVE NOTES

Map sheet C comprises part of the Mahone Bay area in south-central Lunenburg County, Nova Scotia, bounded by 44° 30' N, 64° 14' W. It adjoins map sheet B to the north and map sheets H and I to the west. Approximately half of the ground in map sheet C is underlain by strata belonging to the Carboniferous Meguma Group and the Lower Carboniferous Windsor Group. Devonian-Carboniferous granitoids underlie the remaining area.

An angular unconformity separates the Windsor Group and the Meguma Group at First Cove in the northern part of the map sheet. Nearby, at East River Point, the Windsor Group unconformably overlies Devonian-Carboniferous granitoids. Elsewhere, the Windsor Group is unconformably overlain by Carboniferous strata in various places where there are abrupt changes in physiography or where the surface displays a substantial number of breccia clasts. Another group of breccia clasts, which are quarried at East River and Goat Lake and have been reported in wells near Upper Blanford, The distribution of these breccia clasts in map sheet C is that they occur in a narrow zone near East River and Goat Lake.

Plutonic rocks representing a small part of the Devonian-Carboniferous South Mountain Batholith (Harwood et al., 1983) occur in the north of map sheet C. These intruded rocks are generally granitic in composition. Along the margin of the batholith granitoids show a great variation in primary texture and in the extent to which secondary alteration has proceeded. Pegmatites and apatite are present within the plutonic masses.

The intrusive relationship between granitoid rocks and the Meguma Group is indicated by the presence of abundant xenoliths and large volumes of host rocks near the batholith margin. Regionally, the contact of the granitoids is highly discordant to the trend of tectonic structures in the Meguma Group. Several major folds in the Meguma Group are commonly offset by the granitoid rocks. In the north, the batholith granitoids are unconformably overlain by the Meguma Group. With the local exception of the Felizzen Member, all Meguma Group units in map sheet C are intruded by the batholith. The steeply dipping igneous contact is exposed in several localities between Aspotogan Harbour and Deep Cove.

Physiography, north magnetic horizons over the Meguma Group as a whole in the 2 km wide in the north of the South Mountain Batholith. This zone generally follows the contact of the granitoid rocks, except in the eastern portion, where the contact is more complex. Regionally, the contact of the granitoids is highly discordant to the trend of tectonic structures in the Meguma Group. Several major folds in the Meguma Group are commonly offset by the granitoid rocks. In the north, the batholith granitoids are unconformably overlain by the Meguma Group. With the local exception of the Felizzen Member, all Meguma Group units in map sheet C are intruded by the batholith. The steeply dipping igneous contact is exposed in several localities between Aspotogan Harbour and Deep Cove.

Carboniferous metasedimentary rocks in map sheet C belong to three formations in the Meguma Group. From oldest to youngest, they are the Goldenville Formation (near Harbour Harbour, Harbour Harbour Bay Formation, Tanook Member, West Dublin and Mosher's Island members) and the Halifax Formation (Cunard and Felizzen members).

The New Harbour Member of the Goldenville Formation is typically composed of thickly stratified, buff-washed, quartziferous sandstones. On the Aspotogan Peninsula, where the New Harbour beds are succeeded by the Tanook Member, this upper part of the New Harbour sequence contains 3-5 m of buff-washed sandstones with green and grey-green, fine-grained sandstones. The buff-washed sandstones in the upper part of the New Harbour sequence are commonly replaced by sandstones. In this upper part of the Goldenville Formation, there are numerous occurrences of green mudstone shales. These shales are commonly replaced by sandstones. The highest stratigraphic interval (30 m) is the Sherwood Cove - Broad Cove area. The best bed most continuous exposure of the New Harbour Member in the Mahone Bay area is the Tanook Member on the Aspotogan Peninsula. The stratigraphically lowest New Harbour beds are exposed in the core of the Indian Path Anticline on Great Island.

The West Dublin Member of the Green Bay Formation is lithologically characterized by buff-washed, quartziferous sandstones interbedded with fine grained, pyritiferous, green and grey-green sandstones and siltstones. In map sheet C, it is restricted to a small tract of ground between First Cove and First Cove. There, strongly weathered but relatively unaltered rocks of the West Dublin Member are distinctive in their bedding and display excellent cross-stratification.

The Tanook Member of the Green Bay Formation is made up of 20-30 m of thin, buff-washed sandstones of Goldenville type interbedded with pyritiferous shales, green and grey-green, fine grained sandstones and siltstones. The Tanook Member is typically composed of thickly stratified, buff-washed, quartziferous sandstones. On the Aspotogan Peninsula, where the New Harbour beds are succeeded by the Tanook Member, this upper part of the New Harbour sequence contains 3-5 m of buff-washed sandstones with green and grey-green, fine-grained sandstones. The buff-washed sandstones in the upper part of the New Harbour sequence are commonly replaced by sandstones. In this upper part of the Goldenville Formation, there are numerous occurrences of green mudstone shales. These shales are commonly replaced by sandstones. The highest stratigraphic interval (30 m) is the Sherwood Cove - Broad Cove area. The best bed most continuous exposure of the New Harbour Member in the Mahone Bay area is the Tanook Member on the Aspotogan Peninsula. The stratigraphically lowest New Harbour beds are exposed in the core of the Indian Path Anticline on Great Island.

The Mosher's Island Member of the Green Bay Formation comprises rhythmically laminated and over consolidated, green and grey-green, fine grained sandstones and siltstones. The Mosher's Island Member is typically composed of thickly stratified, buff-washed, quartziferous sandstones. On the Aspotogan Peninsula, where the New Harbour beds are succeeded by the Tanook Member, this upper part of the New Harbour sequence contains 3-5 m of buff-washed sandstones with green and grey-green, fine-grained sandstones. The buff-washed sandstones in the upper part of the New Harbour sequence are commonly replaced by sandstones. In this upper part of the Goldenville Formation, there are numerous occurrences of green mudstone shales. These shales are commonly replaced by sandstones. The highest stratigraphic interval (30 m) is the Sherwood Cove - Broad Cove area. The best bed most continuous exposure of the New Harbour Member in the Mahone Bay area is the Tanook Member on the Aspotogan Peninsula. The stratigraphically lowest New Harbour beds are exposed in the core of the Indian Path Anticline on Great Island.

The Felizzen Member of the Halifax Formation is composed of light grey, dark grey and blue-grey sandstones rhythmically interbedded with laminated to blocky shales. In map sheet C, it is exposed in a small tract of ground between First Cove and First Cove. There, strongly weathered but relatively unaltered rocks of the Felizzen Member are distinctive in their bedding and display excellent cross-stratification.

The Cunard Member of the Halifax Formation is composed of light grey, dark grey and blue-grey sandstones rhythmically interbedded with laminated to blocky shales. In map sheet C, it is exposed in a small tract of ground between First Cove and First Cove. There, strongly weathered but relatively unaltered rocks of the Cunard Member are distinctive in their bedding and display excellent cross-stratification.

The Windsor Group is composed of light grey, dark grey and blue-grey sandstones rhythmically interbedded with laminated to blocky shales. In map sheet C, it is exposed in a small tract of ground between First Cove and First Cove. There, strongly weathered but relatively unaltered rocks of the Windsor Group are distinctive in their bedding and display excellent cross-stratification.

The Devonian-Carboniferous granitoids are composed of light grey, dark grey and blue-grey sandstones rhythmically interbedded with laminated to blocky shales. In map sheet C, it is exposed in a small tract of ground between First Cove and First Cove. There, strongly weathered but relatively unaltered rocks of the Devonian-Carboniferous granitoids are distinctive in their bedding and display excellent cross-stratification.

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GEOLOGICAL MAP OF THE MAHONE BAY AREA, NOVA SCOTIA.

Sheet C

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Contribution to Canada-Nova Scotia Mineral Development Agreement 1984-89, a subsidiary agreement under the Economic and Regional Development Agreement. Project funded by the Geological Survey of Canada.
 Department of Energy, Mines and Resources / Energy, Mines and Resources Canada