Nova Scotia Department of Natural Resources
Mineral Resources Branch

Open File Map ME 2009-5

Bedrock Geology Map of the Grand Lake Area, Part of NTS Sheet 11D/13 (Sheet 4 of 4), Halifax and Hants Counties, Nova Scotia

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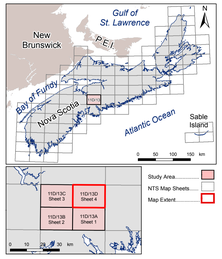
Scale 1:25 000

1 0 1 2 km

Halifax, Nova Scotia
2009

NOVA SCOTIA
Natural Resources

Regional Key Map



Map Notes

Universal Transverse Mercator Projection (UTM), Zone 20, Central Meridian 63°00' West.

North American Datum (NAD) 1983 Canadian Spatial Reference System (CSRS) 98.

Base and digital data derived from the Nova Scotia Topographic Database (NSTDB). Copyright Her Majesty the Queen in Right of the Province of Nova Scotia. The NSTDB is available from Service Nova Scotia and Municipal Relations (SNSMR), Land Information Services Division (LIS), Nova Scotia Geomatics Centre (NSGC), Amherst, Nova Scotia.

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Final map product created using ArcMap 9.3 software.

Acknowledgments

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Disclaimer

The information on this map may have come from a variety of government and nongovernment sources. The Nova Scotia Department of Natural Resources does not assume any liability for errors that may occur. This map is intended for use at the published scale of 1:25 000.

Selected References

Corey, M.C. 1987: Geological map of Mount Uniacke (NTS sheet 11D/13 west half); Nova Scotia Department of Mines and Energy, Map 87-8, scale 1:50 000.

Giles, P.S. and Boehner, R.C. 1982: Geological map of the Shubenacadie and Musquodoboit basins, central Nova Scotia; Nova Scotia Department of Mines and Energy, Map 82-4, scale 1:50 000.

Faribault, E.R. 1898: Plan and sections, Oldham Gold District, Halifax County, Nova Scotia; Geological Survey of Canada, Map 642, scale 1:6000.

Faribault, E.R. 1900: Plan and sections, Renfrew Gold District, Hants County, Nova Scotia; Geological Survey of Canada, Map 701, scale 1:6000.

Faribault, E.R. 1901a: Plan and section, Mount Uniacke Gold District, Hants County, Nova Scotia; Geological Survey of Canada, Map 709, scale 1:3000.

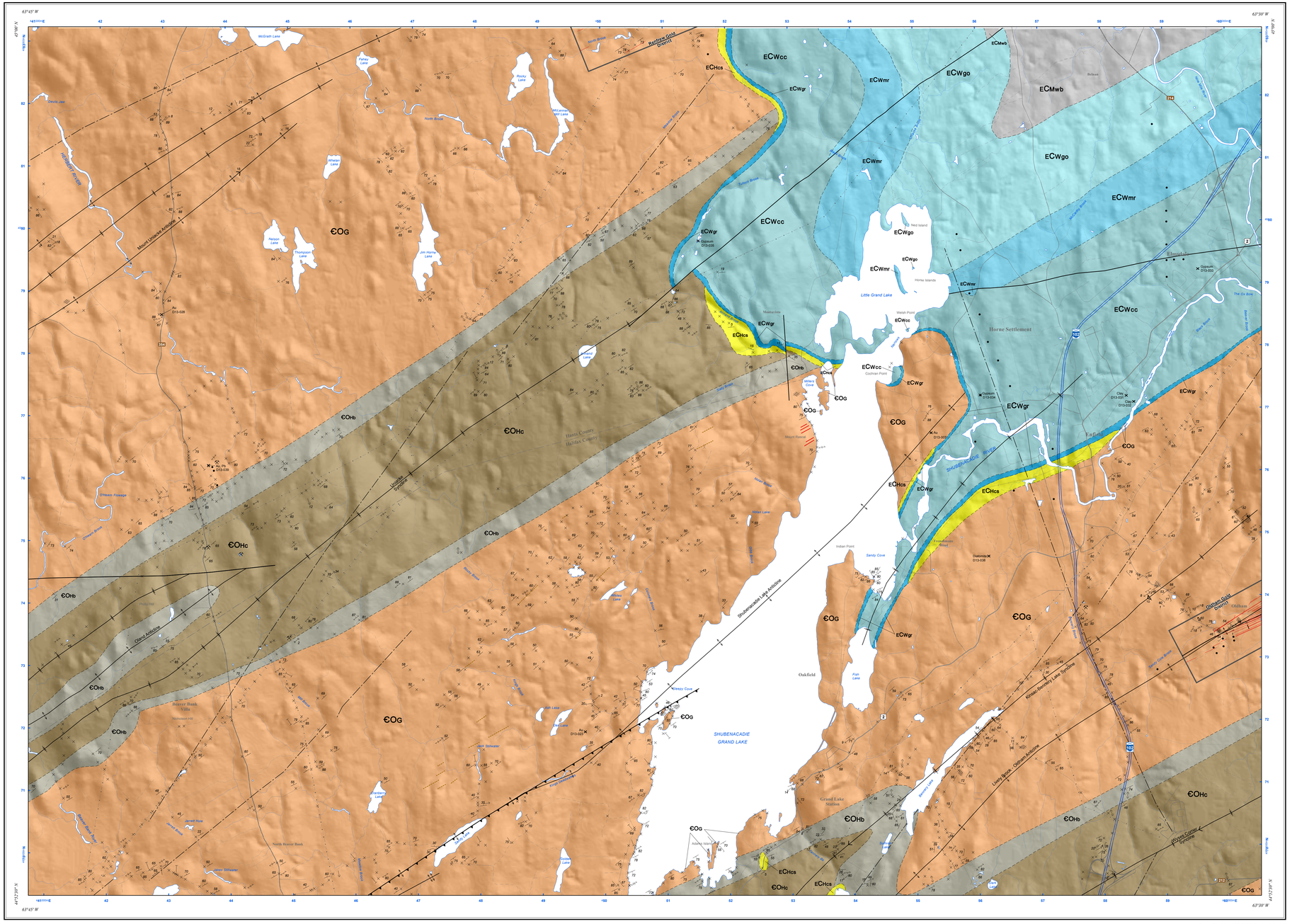
Faribault, E.R. 1901b: Plan and sections, Waverley Gold District, Halifax County, Nova Scotia; Geological Survey of Canada, Map 721, scale 1:3000.

Faribault, E.R. 1902: Plan and section, South Uniacke Gold District, Hants and Halifax counties, Nova Scotia; Geological Survey of Canada, Map 768, scale 1:3000.

Ham, L.J. 1999: Geological map of Musquodoboit Batholith (part of NTS sheet 11D/15), Halifax County, Nova Scotia; Nova Scotia Department of Natural Resources, Minerals and Energy Branch, Open File Map ME 1999-3, scale 1:50 000.

Recommended Citation

Horne, R.J., Ryan, R.J., Corey, M.C. and Fox, D.L. 2009: Bedrock geology map of the Grand Lake area, part of NTS sheet 11D/13 (sheet 4 of 4), Halifax and Hants counties, Nova Scotia; Nova Scotia Department of Natural Resources, Mineral Resources Branch, Open File Map ME 2009-5, scale 1:25 000.



Legend

PALEOZOIC

CARBONIFEROUS (slightly modified after Giles and Boehner, 1982)

MABOU GROUP

ECMwb — *WATERING BROOK FORMATION* (**ECMwb**): grey mudstone and shale with intercalated gypsum, anhydrite and halite; evaporites most abundant in lower part of Formation.

WINDSOR GROUP

ECWgo — *GREEN OAKS FORMATION* (**ECWgo**): maroon to reddish brown siltstone and fine grained sandstone, with intercalated marine limestone and dolostone; with associated anhydrite or gypsum in the Shubenacadie Basin.

ECWmr — *MACDONALD ROAD FORMATION* (**ECWmr**): gypsum, anhydrite and minor halite, with interbeds of grey and maroon siltstone and sheet-like carbonate members; cyclic repetition of these rock units is characteristic.

ECWcc — *CARROLLS CORNER FORMATION* (**ECWcc**): anhydrite, gypsum, with minor dolostone and mudstone in thin beds; includes undifferentiated shale and mudstone breccia with minor gypsum and anhydrite in proximity to the faulted northern margin of the Shubenacadie Basin.

ECWgr — *GAYS RIVER FORMATION* (**ECWgr**): dolostone, minor limestone, thinly bedded, argillaceous and bituminous, locally thickly bedded and highly fossiliferous in mound-shaped deposits resting upon pre-Carboniferous rock.

HORTON GROUP

ECHcs — *COLDSTREAM FORMATION* (**ECHcs**): reddish brown, polymictic conglomerate and conglomeratic sandstone with minor dark grey shale; known mainly from the subsurface along the southern perimeter of the Shubenacadie Basin.

CAMBRO-ORDOVICIAN

MEGUMA SUPERGROUP

HALIFAX GROUP

ECOhc — *CUNARD FORMATION* (**ECOhc**): finely laminated black slate with thinly bedded metasiltstone/metasandstone layers, commonly with high concentrations of pyrite and pyrrhotite.

ECOhb — *BEAVERBANK FORMATION* (**ECOhb**): grey metasiltstone, thin metasandstone beds, slate and, locally, intervals containing thin (<1-3 cm) coticule layers.

GOLDENVILLE GROUP

ECOg — UNDIVIDED (**ECOg**): greenish grey metasandstone and minor interbedded, green, laminated metasiltstone and dark grey-black slate.

Symbols*

- Mineral occurrence [1] — Au D13-021
- Outcrop
- Float
- Shaft
- Drillhole
- Quarry (active, abandoned)
- Bedding, tops known (inclined, overturned, vertical, horizontal)
- Bedding, tops unknown (inclined, vertical)
- Cleavage, first generation (inclined, vertical)
- Bedding-cleavage intersection lineation
- Mineral lineation [2]
- Crenulation cleavage, second generation (inclined, vertical)
- Crenulation lineation, second generation
- Foliation (inclined) [3]
- Stretching lineation [3]
- Shear (inclined, vertical)
- Joint (inclined, vertical)
- Vein (inclined, vertical)
- Dyke (dip unknown, inclined)
- Axis of minor fold (first generation, second generation)
- Axial surface
- Symmetry of minor fold (generation unknown; s,m,z, arrow indicates plunge)
- Axis of boudinage
- Kink band (dextral, sinistral)
- Slickenside striae
- Paleocurrent (flow direction undetermined)
- Glacial striae (ice flow direction known, unknown)
- Feldspar megacrysts (dip unknown)
- Cataclastic texture (fault breccia)
- Trench
- Geological contact (approximate, assumed, gradational) [4]
- Contact metamorphic aureole (approximate, assumed)
- Approximate limit of granite emplacement, high strain zone
- Trace of anticline (approximate), arrow indicates plunge
- Trace of syncline (approximate), arrow indicates plunge
- Thrust (approximate)
- Fault (approximate)
- Trace of sedimentary ridge from air photo
- Trace of lineaments from Digital Elevation Model
- Trace of quartz veins (after Faribault, 1898, 1900, 1901a,b, 1902)
- Quartz vein
- Outline of named gold districts (after Faribault, 1898, 1900, 1901a,b, 1902)

* Note: Compiled symbols list for map series. All symbols and referenced Faribault data may not appear on all maps.

[1] Commodity indicated at top of symbol; Nova Scotia Department of Natural Resources, Mineral Occurrences Database number at bottom of symbol.

[2] Mineral lineation may represent mineral or mineral aggregates, generally in the cleavage plane, i.e. recording fold-related strain.

[3] Foliation and stretching lineation in granite emplacement-related high strain zone. Lineation defined by contact metamorphic porphyroblasts.

[4] Approximate geological boundary constrained by locally exposed contacts, distance between outcrops and aeromagnetic data. Assumed geological contact constrained by stratigraphic position, extrapolation from adjacent maps and aeromagnetic data.

- 100 Series highway (single, twinned) — 102 / 102
- Trunk highway — 4
- Collector highway — 333
- Hard surface road
- Loose surface road
- Resource access road
- Vehicle track
- Railway (active, inactive)
- County boundary
- Lakes, single-line rivers, streams
- Transmission lines (multi, single)

May 13, 2009