LEGEND

CARBONIFEROUS (after Graves and Finck, 1988; Gilles, 1981)

€Cw WINDSOR GROUP UNDIVIDED: red shale, arkose, limestone

DEVONO-CARBONIFEROUS

DCgBB BURNT BLANKET HILL LEUCOGRANITE: buff-pinkish-red, fine- to medium-grained, moderately equigranular to porphyritic; biotite (<2%), muscovite (2-4%); cordierite (trace-1%), contains pegmatite segregations

DCgLO LONG LAKE LEUCOGRANITE: buff coloured, fine- to medium-grained, moderately equigranular; biotite (<2%), muscovite (1-4%); contains pegmatite segregations

DClmPL PANUKE LAKE LEUCOMONZOGRANITE: light buff to pinkish-grey, predominantly fine grained, equigranular to porphyritic; biotite (2-6%), muscovite (trace-6%) cordierite (trace-4%); alteration effects may produce rocks of equivalent quartz depleted to syenogranite composition

DClmPL area of predominately equigranular texture

DClmNR NEW ROSS LEUCOMONZOGRANITE: light- to whitish-grey, pinkish-grey to orange, predominately medium- to coarse-grained, moderately equigranular to K-feldspar megacrystic (<15%); biotite (4-6%), muscovite (trace-4%), cordierite (trace-2%)

DClmSP SPECTACLE LAKE LEUCOMONZOGRANITE: whitish-grey, coarse grained, extremely K-feldspar megacrystic (20-40%); biotite (4-6%); muscovite (trace-2%), cordierite (trace-2%); contains xenoliths (metasedimentary?)

DCmgSL SHERWOOD MONZOGRANITE: whitish-grey to pinkish-red, fine- to coarse-grained, seriate to megacrystic (<15%); biotite (8-10%), muscovite (1-4%), cordierite (trace -1%)

DCmgSL SANDY LAKE MONZOGRANITE: whitish-grey, medium- to coarse-grained, megacrystic (10-20%) to slightly porphyritic; biotite (10-15%), muscovite (trace-1%), cordierite (trace-3%)

CAMBRO - ORDOVICIAN

MEGUMA GROUP (after O'Brien et al., 1985).

€Oh HALIFAX FORMATION: finely laminated grey-black slates and siltstones

€Ogb GREEN BAY FORMATION: thin to thickly bedded, green to grey, fine grained sandstones

€Ogl GOLDENVILLE FORMATION: green-grey metawackes and minor interbedded slates

SYMBOLS
(not all symbols occur on map)

Rock outcrop, area of outcrop, probable outcrop, float

Geological boundary (defined, approximate, assumed, defined by till clasts)

Geological boundary-gradational (< 100 m; > 100 m)

Exposed intrusive contact (arrow pointing toward younger unit, age relation not determined)

Unconformity (hatching on younger side)

Limit of mineralogical or textural variation

Bedding (horizontal, inclined, vertical, overturned, dip unknown, younging direction unknown)

Anticline (defined, approximate)

Syncline (defined, approximate)

Preferred orientation of feldspar megacrysts (horizontal, inclined, vertical, dip unknown)

Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)

Breccia

Schlieren banding (horizontal, inclined, vertical, dip unknown) (size of developed isolated bands as well developed (thin and heavy lines respectively)

Lineament (from air photos)

Fault (defined, approximate, assumed, inclined, vertical)

Fault (sinistral, dextral)

Shearing and intense fracturing, fracture cleavage (horizontal, inclined, vertical, dip unknown)

Joint (horizontal, inclined, vertical, dip unknown)

Dyke or vein: ALBI-albitite; APPG-aplite with minor pegmatite; DIAB-diabase; ELVA-elvan; LUQR-leucoquartz; LUM-leucomonzogranite; LUPO-leucoporphyry; MIAP-mica aplite; PGAP-pegmatite with minor aplite; PEGM-pegmatite; PEGMQ-zoned pegmatite; PORP-porphyry; QTZ-quartz (indicated if mineralized); all unlabelled dykes are aplites; <1 m-thin lines, >1 m-heavy lines (inclined, vertical, dip unknown)

Stockwork (type indicated)

Sheeted complex (type indicated)

Area of abundant dyking (type or map unit indicated)

Greisen; ‹ 1 m, › 1 m (indicated if mineralized)

Megacryst rich area

Xenoliths (‹ 1 m, › 10 m, concentration of xenoliths) map unit indicated when known

Diamond-drillhole (reference number from N.S.D.M.E. Open File Report)

Trench, adit, shaft

Mineral occurrence (commodities indicated at top; number at bottom refers to mineral notes or N.S.D.M.E. mineral occurrence cards). U, Cu 1

Mine or Prospect

Quarry

Alteration: ALB-albitization; CHL-chloritization; DES-dessilicification; HAA-high alumina HEM-hematization; KAO-kaolinitization; LIM-limonitization; POT-potassic (which include biotitization and K-feldspathization); SAU-saussuritization; SIL-silicification; intense and pervasive in capitals, slight to moderate in lower case

LIST OF COMMON MINERAL ABBREVIATIONS

ad-andalusite; am-amethyst; ap-apatite; as-arsenopyrite; au-autunite; bo-bornite; ca-calcite; cc-chalcocite; ks-cassiterite; cp-chalcopyrite; ch-chlorite; cd-cordierite; cy-chrysocolla; fl-fluorite; gr-galena; gr-garnet; he-hematite; il-ilmenite; ka-kaolinite; ma-malachite; mn-manganese minerals; mo-molybdenite; mu-muscovite; po-pyrrhotite; py-pyrite; sh-scheelite; si-sillimanite; sp-sphalerite; se-xenotime; to-torbernite; tr-tourmaline; wo-wolframite.

Planimetric base produced by the SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES. Updated from aerial photographs taken in 1972 and 1973. Culture check 1974. Published in 1976.

Cartography by:
Land Registration and Information Service
Amherst, Nova Scotia

Location Map

Figure 1.
Contoured plot of percentages of poles to combined planar features (joints, dykes, veins) within the map area.

Figure 2.
eU/eTh map for the survey area derived from data furnished by the G.S.C. (1976). Note the excellent correlation between high ratio (› 1.00) anomalies and highly evolved (and hydrothermally altered) leucomonzogranites and leucogranites. The reader is referred to O'Reilly et al. (1988), and Ford and O'Reilly (1985) for a discussion of the relationship between airborne spectrometric data, bedrock geology and granophile mineralization.

DESCRIPTIVE NOTES

Introduction

Bedrock mapping for this survey was restricted to the granitic rocks of the South Mountain Batholith (SMB) and metasedimentary Meguma Group rocks (see Schenk, 1982) within the immediate (≤ 100 m) contact aureole. Previously published geology maps within the area include Fairbault (1924, 1929), Keppie (1979) and O'Brien et al. (1985). In addition to the published maps previous work in the area included thesis studies of McKenzie (1974), Charest (1976), and Logothetis (1985). Carboniferous geology was taken from Sage (1964), Giles (1981) and Graves and Finck (1988). Pleistocene investigations by the latter authors suggest that the actual amount of Carboniferous bedrock is significantly less than that depicted on preceeding geological maps.

The purpose of this survey was to map the area in a consistent and systematic manner focusing on the texture, mineralogy, alteration and spatial relationships of the various granitic rocks. Based upon these parameters and using the classification of Streckeisen (1976), five (5) granitic rock types were distinguished in the project area ranging in composition from granodiorite[1] to monzogranite[2], leucomonzogranite[2], leucogranite[3] and syenogranite[1]. The systematic staining of rock samples using sodium-cobaltinitrate together with extensive point counting are critical for distinguishing between the above rock types.

The reader is referred to O'Brien et al. (1985) for outcrop locations and a detailed explanation of the geology of the Meguma Group within the map area. When observed, the contact of the metasediments with the SMB is generally undeformed with regional structures sharply truncated by granitoids of the SMB. Contact metamorphism has produced hard and massive spotted hornfels characterized by the presence of andalusite and cordierite porphyroblasts in proximity (‹ 2 km) to the granite contact. Xenoliths of Meguma Group (?) metasediments of variable size and degree of assimilation are common within rocks of the SMB. In general, the most mafic SMB unit (i.e. granodiorite) contains the highest concentration of xenoliths while the leucocratic phases contain the least.

Unit Descriptions

SANDY LAKE MONZOGRANITE (DCmgSL)

For the most part rocks of this unit are medium- to coarse-grained, megacrystic (10-20%), and contain biotite (10-15%), muscovite (trace-1%) and cordierite (trace-1%). Exceptions to this are found adjacent to the Meguma Group contact (eg. west of East River; center of map sheet; northwest of Tantallon; and southwest corner of map sheet) where the monzogranite contains less biotite (8-10%), more cordierite (3%) and is less megacrystic. The cordierite occurs as dark green, 1 cm blocky crystals which are invariably *pseudomorphed* by pinite. In other areas (eg. Hubbards - Fox Pt. area; coastal section center of map sheet) rocks of this unit display a porphyritic[4] texture and exhibit a bimodal biotite distribution. A model QAP plot (Streckeisen, 1976) of samples of this unit collected along Highway 103 northeast of East River shows that it straddles the monzogranite-granodiorite join. Exposures of this unit along Highway 103 immediately east of Highway 14 (center of map sheet) have intense pervasive and fracture-controlled hydrothermal alteration as shown by extensive albitization, saussuritization, kaolinization and hematization. Minor fluorite and wolfride (oxy-oxy-asp) mineralization occurs associated with the intense alteration.

Large inliers of the Sandy Lake Monzogranite also occur in the eastern half of the map sheet within texturally variable leucomonzogranites of the New Ross and Panuke Lake units (see below). These inliers have a general northeast orientation and display local moderate to intense pervasive kaolinization, hematization, and saussuritization. Minor fracture-controlled dark purple fluorite also occurs within the inliers.

SHERWOOD MONZOGRANITE (DCmgS)

This unit differs from the Sandy Lake Monzogranite in that it contains significant amounts of muscovite (1-4%), less biotite (8-10%) and generally fewer K-feldspar megacrysts (5%). An exception to this is near the contact with the Spectacle Lake unit where it locally is highly megacrystic (10-15%). This unit is predominantly a fine- to coarse-grained seriate textured rock, with megacrysts occurring as large (‹ 6 cm) white K-feldspar laths. A predominantly medium grained, moderately equigranular to slightly porphyritic phase of this unit is exposed in the vicinity of Millet Lake (center of map sheet) adjacent to rocks of the Meguma Group. At this location, the unit is intensely fractured and contains abundant fracture-controlled, dark purple fluorite and rare pyrite. Milky white quartz and light green quartz-sericite greisen veins were also observed.

Although hydrothermal alteration of this unit is generally mild, local zones of intense and pervasive hematization occur along Card Lake.

This unit displays a gradational contact with the New Ross Leucomonzogranite east and west of Card Lake and is intruded by numerous fine grained dykes of the Panuke Lake Leucomonzogranite along Highway 14 immediately east of Card Lake.

NEW ROSS LEUCOMONZOGRANITE (DClmNR)

This unit occurs throughout the map sheet predominantly as a medium- to coarse-grained, moderately equigranular rock which can contain up to 15% K-feldspar megacrysts, biotite (4-6%), muscovite (trace-4%) and cordierite (trace-2%). The megacrystic (10-15%) phase seems to be generally restricted to the north-central portion of the the map sheet west of Canaan, whereas east of Canaan it is less megacrystic (5-10%). In the extreme northeastern corner of the map sheet, a buff coloured megacrystic to slightly porphyritic rock exists, characterized by deep orange-red megacrysts.

DClmNR is characterized by moderate to intense hematization, which imparts a pervasive buff-orange colouration to the rock. This alteration, where most intense, has rendered the rock extremely friable as observed in the New Ross area (northwest corner of map sheet). Occurring within this unit are numerous small-bodies (≤ 1 km) of the Panuke Lake Leucomonzogranite. Contacts between these two units have been observed as gradational, as noted along a trail north of Whitney Lake and in the New Ross area (Charest, 1976), and sharp as observed in the vicinity of Connaught and Timber Lakes.

SPECTACLE LAKE LEUCOMONZOGRANITE (DClmSP)

This unit is mineralogically similar to DClmNR however unlike the above, this unit is characterized by a homogenous coarse grained and extremely (20-40%) megacrystic (K-spar) texture. Contacts of this unit with surrounding units (DCmgS, DCmgSL) are sharp. East of Highway 14, a gradational contact of ‹ 2 m between this unit and the megacrystic (15%) DClmNR is assumed since the close similarity between these two units makes determination of the contact difficult. Along the western margin of this unit a highly sheared (fault?) and intensely hematized contact with the DClmNR is exposed.

This unit also contains several large Meguma Group metasediment xenoliths, the largest (5 m²) of which occurs along the road north of Second Lake.

PANUKE LAKE LEUCOMONZOGRANITE (DClmPL)

This unit is composed of two fine grained,texturally variable but mineralogically similar phases: a homogenous, light buff to pinkish-grey, fine-to-medium grained equigranular phase; and a porphyritic phase. These phases are similar to the DClmNR in modal mineralogy with the exception of a cordierite-rich (2-4%) porphyry northeast of Glengarry in the New Ross area.

Contacts between phases are usually gradational but may also be sharp. Rocks of this unit are commonly found as discrete bodies of variable dimension (1-10 km²) confined to embayments or protuberances of the DClmNR. Several smaller bodies are inferred from pebble clasts to also occur within DClmNR (Graves and Finck, 1988).

Whether rocks of this unit represent later intrusions or chilled textural equivalents of the DClmNR cannot be determined based upon field observations. Contact relationships are enigmatic, with the same body exhibiting both sharp and gradational contacts with the DClmNR. A similar observation was noted by Charest (1976) for porphyry bodies in the New Ross area.

Dykes of this unit intrude the Sherwood Monzogranite in the Card Lake area. Local but intense metasomatic-hydrothermal alteration of these finer grained phases has produced muscovite-rich (4%) leucogranites, syenogranites, episyenites and greisens. These altered rocks are commonly associated with polymetallic U-Cu-Zn-As-Mo-Sn-W mineralization.

BURNT BLANKET HILL LEUCOGRANITE (DClgBB)

This unit is exposed in the northwest corner of the map sheet east of New Ross. It exhibits the same textural and compositional variations as DClmPL but contains consistently <2% biotite and always has a sharp intrusive contact with the DClmNR. Contacts between textural variations of this unit may be either sharp or gradational. Hydrothermal alteration within this unit varies from a moderate pervasive hematization to local intense hematization and saussuritization as observed along the southern contact with DClmNR. A leucoporphyry phase that occurs in the northern portion of this unit contains abundant pegmatite segregations.

LONG LAKE LEUCOGRANITE (DCgLO)

This buff coloured, fine- to medium-grained, moderately equigranular unit occurs at the extreme tip of a small embayment of the DClmNR in contact with metasediments of the Meguma Group.

This unit contains abundant pegmatite, displays intense autometasomatic-hydrothermal alteration (albitization, K-feldspathization, greisenization) and is associated with significant Mo-W-Sn-Be-Zn-Cu mineralization (O'Reilly et al., 1982; Logothetis, 1985).

Structure

Planar features (aplites, pegmatites, fractures) show predominant northeast and northwest orientations throughout the map sheet (Fig 1; Horne et al., 1988). Similar orientations are reflected by numerous shears, greisen and quartz veins particularly in the vicinity of Chester and the eastern side of the Aspotogan Peninsula. The pronounced northwest trend of the DClmPL unit in this area suggests that magma emplacement was structurally controlled. A well-exposed northwest-trending fault zone at the southern tip of Panuke Lake is intruded by a narrow (10 cm wide) northwest-trending, aphanitic, K-feldspar-rich dyke (elvan). A gravel pit on the east side of Highway 14 approximately 6 km north of Chester exposes intense northeast shearing (mylonites) in the vicinity of the metasediment - SMB contact. Samples from this pit indicate that shearing was multiphase as evidenced by minor displacement of pre-existing shears by later shearing. The importance of these structural features as channelways for mineralizing hydrothermal fluids is indicated at this site by the presence of fracture-controlled fluorite, calcite and pyrite. Evidence for forceful emplacement of the SMB (as opposed to passive stoping) occurs in the vicinity of Aspotogan where an anticline has been rotated normal to the regional (NE) structural trend (O'Brien et al., 1985).

Airborne Radiometrics

Airborne gamma-ray spectrometric survey data for the map area were collected by the Geological Survey of Canada (1976). Figure 2 displays the distribution of the equivalent Uequivalent Th (eU/eTh) data for the map sheet. A comparison of the eU/eTh distribution pattern with bedrock geology shows a good correlation and indicates that, in this area, the airborne radiometric data accurately reflect bedrock geology (O'Reilly et al., 1988). A central corridor of low ratio values (‹ 0.4) correlates with the less evolved DCmgS and DClmSP units. Broad anomalous areas (0.4-1.2) correspond with leucomonzogranites of DClmNR and DClmPL, whereas the highest responses (› 1.2) correlate directly with occurrences of DClmPL and DCgLO. There is also a close correlation of high ratio anomalies with many of the mineral occurrences and areas of intense, pervasive hydrothermal alteration. Examples are the Bezanson Lake area (Finck et al., 1989) and Skinner Meadow (northeast corner of the map sheet; O'Reilly et al., 1988).

Mineral Occurrences

Numerous mineral occurrences were observed within the map area. The majority of these occur within rocks of DClmPL which are associated with intense and pervasive fracture-controlled metasomatic-hydrothermal alteration. O'Reilly et al. (1982) and Logothetis (1985) have described various types of mineralization and associated late-stage alteration phenomena. Although restricted to the New Ross area, their observations are valid for all mineral occurrences within the map area. The most significant of these are discussed below. The number in brackets correspond to a similarly notated mineral occurrence on the map sheet.

New Ross Area: This area is the most variable in terms of the texture and mineralogy of the granitic rocks present. It also contains a wide variation in the type and styles of alteration and mineralization, ranging from pegmatite hosted Mo-Cu-W to uranium phosphate - bearing episyenites to polymetallic Mo-W-Cu-Zn-As-Be-bearing greisens. The most significant of these is the **Long Lake prospect (1)** situated near the north end of Long Lake. At this site, Mo-bearing pegmatites, Mo-Cu-Zn-W-Be-Sn-bearing quartz-muscovite greisens and quartz veins occur within a metasomatized (albitized, K-feldspathized) leucogranite cupola and thermally metamorphosed metasediments of the Meguma Group. This prospect has been the target of sporadic Sn-W-Mo exploration since 1964. The most recent work (trenching, diamond drilling) was conducted by Maritime Exploration Ltd. (M.E.X.) in 1980 (Black, 1980).

Other more local occurrences **(eg. Keddy Mo-W-Nb prospect (2), Marleys pegmatite W-Sn-Be-Nb-Ta prospect (3)**, are documented by O'Reilly et al. (1982).

In addition to these, a new occurrence of disseminated chalcocite and wolframite within pegmatite segregations was discovered within a leucoporphyry phase of DCgBB at **Leville (4)**.

Bezanson Lake Area (5): Bedrock and Pleistocene mapping have delineated an area from Bezanson Lake south to Hennyberry Lake as possessing significant exploration potential for endo- and exocontact Sn-W-Cu-Zn mineralization. Fracture-controlled fluorite, greisenized pegmatite, quartz veins and zones of intense metasomatism (hematization, sericitization, albitization, K-feldspathization, silicification) were discovered during Sn-W exploration (MacGillivray, 1980; MacGillivray et al., 1981). In addition to the above features, several areas have been discovered containing abundant mineralized (As-Cu-Zn-) Sn-(-W) greisen float in local till (Finck et al., 1989). A large high ratio eU/eTh anomaly (Fig 2) is coincident with this area.

Fox Point (6): Chalcopyrite, sphalerite and arsenopyrite disseminations occur within 1.5 cm wide, greisen-bordered, sheeted quartz veins. These are associated with episyenite developed in biotite monzogranite host rock.

Queensland (7): Disseminated to massive arsenopyrite and rare cassiterite occur within narrow (‹1.0 cm), dark grey northwest-trending quartz veins hosted by hematized Panuke Lake Leucomonzogranite. Approximately 0.5 km south of this occurrence, extensive light green quartz-muscovite greisens were discovered in a 20 m coastal exposure. Minor disseminated pyrite was observed.

Timber Lake (8): This occurrence consists of fluorite-bearing leucogranites, pegmatites, and light green, quartz-muscovite greisen veins and pods. The fluorite is invariably fracture-controlled and is deep purple in colour. Minor disseminated pyrite was observed within the greisen.

References

Black, D.L.
1980: Report on rock geochemical and ground EM surveys and diamond drilling, Henry Lake, Lunenburg County, Nova Scotia; M.E.X. Explorations Ltd.; Nova Scotia Department of Mines and Energy, Assessment Report 21A/9B-51-L-11(03)

Charest, M.H.
1976: Petrology, geochemistry and mineralization of the New Ross area, Lunenburg County, Nova Scotia; unpublished M.Sc. thesis Dalhousie University, Halifax, Nova Scotia.

Fairbault, E.R.
1924: Chester Basin; Geological Survey of Canada, Map 87 1929: Mahone Bay; Geological Survey of Canada, Map 88.

Finck, P.W., Corey, M.C. and Graves, R.M.
1989: A multidisciplinary interpretation highlighting the mineral potential of the Bezanson Lake area, southwestern Nova Scotia; in Mines and Minerals Branch, Report of Activities 88-1, eds. D.R. MacDonald and Y. Brown, p.179-194.

Ford, K. L. and O'Reilly, G. A.
1985: Airborne gamma-ray spectrometric surveys as an indicator of granophile element specialization and associated mineral deposits in the granitic rocks of the Meguma Zone of Nova Scotia; in High Heat Production (HHP) Granites, Hydrothermal Circulation and Ore Genesis; Institution of Mining and Metallurgy, St. Austell, Cornwall, England, 1985, p. 113-133.

Geological Survey of Canada
1978: Geophysical Series, airborne gamma-ray spectrometric map no. 35121(8G, eU/eTh: Chester, Nova Scotia, scale 1:50,000.

Gilles, P.S.
1981: The Windsor Group of the Mahone Bay area, Nova Scotia; Nova Scotia Department of Mines and Energy, Paper 81-1, 51 p.

Graves, R.M. and Finck, P.W.
1988: Till clast and glacial geology of the Chester map sheet; Nova Scotia Department of Mines and Energy, Map 88-1, scale 1:50,000.

Horne, R.J., Corey, M.C., Ham, L.J. and MacDonald, M.A.
1988: Primary and secondary structural features in the eastern portion of the South Mountain Batholith, Nova Scotia; implications for regional stress orientations during intrusion; in Maritime Sediments and Atlantic Geology, v. 24, p. 71-82.

Keppie, J.D.
1979: Geological map of Nova Scotia; Nova Scotia Department of Mines and Energy, scale 1:500,000.

Logothetis, J.
1984: The mineralogy and geochemistry of metasomatised rocks from occurrences in the South Mountain Batholith; New Ross area, southwestern Nova Scotia; unpublished M.Sc. thesis, Dalhousie University, Halifax, Nova Scotia.

MacDonald, M.A., Corey, M.C., Horn, L.J. and Horne, R.J.
1986: The geology of the South Mountain Batholith, N.T.S. sheets 21A/09, 21A/10, 21A/15 and 21A/16 (west); in Mines and Minerals Branch, Report of Activities 1986, ed. J.L. Bates and D.R. MacDonald; Nova Scotia Department of Mines and Energy, Report 87-1, p. 119-136.

MacDonald, M.A., Corey, M.C., Horn, L.J. and Horne, R.J.
1987: South Mountain Batholith project: progress report; in Mines and Minerals Branch, Report of Activities 1987, Part A, ed. J.L. Bates and D.R. MacDonald; Nova Scotia Department of Mines and Energy, Report 87- 5, p. 99-103.

McKenzie, C.B.
1974: Petrology of the South Mountain Batholith, Western Nova Scotia; unpublished M.Sc. thesis, Dalhousie University, Halifax, Nova Scotia.

O'Brien, B.H. Barrette, P.D. Kenny, D.A. Gouthro, G.F. and Palmer, S.E.
1985: Geological map of the Mahone Bay area, Nova Scotia; Geological Survey of Canada, Open File Map 1373.

O'Reilly, G.A., Corey, M.C. and Ford, K.L.
1988: The role of airborne gamma-ray spectrometry in bedrock mapping and mineral exploration: case studies from granitic rocks within the Meguma Zone, Nova Scotia; in Maritime Sediments and Atlantic Geology, v. 24, p. 47-60.

O'Reilly, G.A. Farley, E.J. and Charest, M.H.
1982: Metasomatic - hydrothermal mineral deposits of the New Ross - Mahone Bay area, Nova Scotia; Nova Scotia Department of Mines and Energy, Paper 82-2, 96 p.

Sage, N.M.
1964: The stratigraphy of the Windsor Group in the Antigonish quadrangle and the Mahone Bay - St. Margarets Bay area, Nova Scotia; Nova Scotia Department of Mines, Memoir 3, 168 p.

Schenk, P.E.
1982: Stratigraphy and sedimentology of the Meguma Zone and part of the Avalon Zone; in The Caledonide Orogen, NATO advanced study institute, Atlantic Canada, August 1982, compiled by A.F. King, Department of Earth Sciences, Memorial University of Newfoundland, St. John's Newfoundland, IGCP project 17, report 9, p. 189-307.

Sinclair, P.E., MacGillivray, G. and Needham, B.
1980: Report on geological, till and rock geochemical surveys in the Wake Up Hill area, Lunenburg County, Nova Scotia; Nova Scotia Department of Mines and Energy, Assessment Report, 21A/09B - 51-L-45(01).

Streckeisen, A.L.
1976: To each plutonic rock its proper name; Earth Science Review, v. 12, p. 1-33.

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[1] GRANODIORITE-MONZOGRANITE-SYENOGRANITE: After Streckeisen (1976).

[2] LEUCOMONZOGRANITE: A rock of monzogranitic composition with less than 6% combined mafic minerals.

[3] LEUCOGRANITE: A rock of monzogranitic composition with less than 2% combined mafic minerals.

[4] MEGACRYST: A nongenetic term for a crystal that is significantly larger than the surrounding groundmass. In the South Mountain Batholith, megacrysts are predominantly subhedral to euhedral alkali-feldspar, and rarely plagioclase, crystals (generally between 2.5-7 cm in length) in medium- to coarse-grained rocks. (adj. megacrystic.)

[5] PORPHYRY: A rock with a predominantly fine grained groundmass and medium- to coarse-grained phenocrysts (i.e. bimodal grain size distribution). Phenocrysts rarely exceed 2.5 cm. (adj. porphyritic.)

NOVA SCOTIA DEPARTMENT OF MINES AND ENERGY

MAP 90-9

GEOLOGICAL MAP OF

CHESTER

(N.T.S. SHEET 21A/09)

NOVA SCOTIA

M. C. COREY

SCALE 1:50,000

Miles 1 0 1 2 Miles

Kilometres 1 0 1 2 3 4 Kilometres

NOVA SCOTIA DEPARTMENT OF MINES AND ENERGY

JACK MacISAAC, MINISTER — JOHN J. LAYFIN, D.ENG., P.ENG., DEPUTY MINISTER

HALIFAX, NOVA SCOTIA

1991