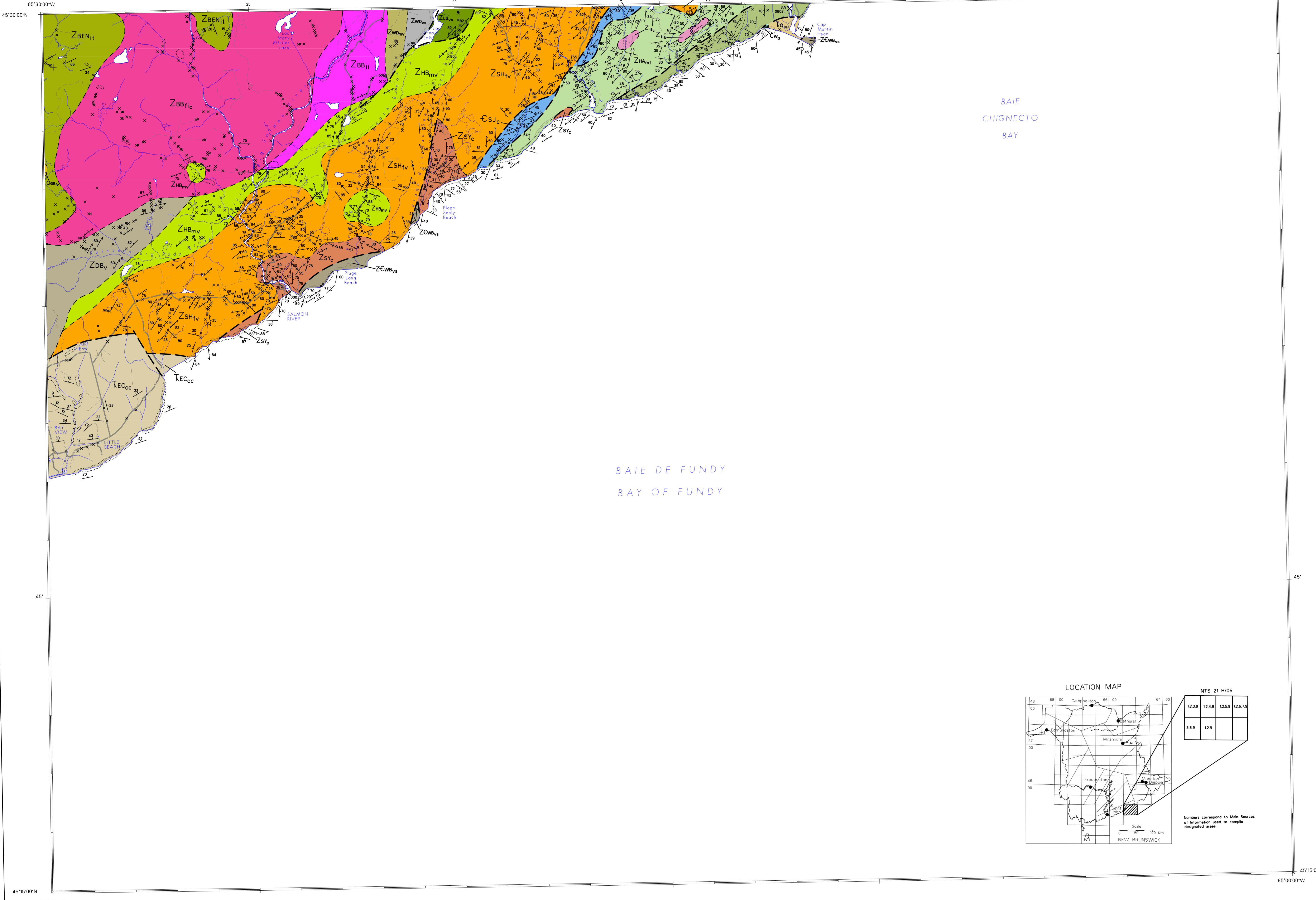


BEDROCK GEOLOGY OF THE SALMON RIVER AREA
(NTS 21 H/06), SAINT JOHN COUNTY, NEW BRUNSWICK

NTS 21 H/06



LEGEND

LATE TRIASSIC
FUNDY GROUP

KECcc ECHO COVE FORMATION: Red to grey, medium- to coarse-grained sandstone, pebbly sandstone and conglomerate, greenish-grey sandstone and shale, commonly containing plant detritus, red, sharpstone conglomerate and minor mudstone.

KOcc QUACO FORMATION: Buff and reddish-brown sandstone, and maroon and green siltstone and mudstone; buff, polymictic conglomerate.

EARLY CARBONIFEROUS
WINDSOR GROUP (Undivided)

CWg Undivided limestone, gypsum, anhydrite, and minor red and grey, fine- to medium-grained clastic rocks.

ORDOVICIAN

OGRfv GRASSY LAKE FORMATION: Dark grey, light grey and pinkish grey, flow-banded, dacitic to rhyolitic flows and crystal tuff; locally abundant vari-coloured lithic-lapilli tuff.

CAMBRIAN
SAINT JOHN GROUP (Undivided)

CSjc Black, grey, grey-green and purple shale and micaceous siltstone and sandstone; minor quartz arenite, conglomerate, tuffaceous siltstone, and limestone.

NEOPROTEROZOIC TO CAMBRIAN (?)
LORNEVILLE GROUP

ZCWbvs WEST BEACH FORMATION: Epidolized and hematized basalt and basaltic breccia; minor red and green, siltstone, sandstone, shale and conglomerate; minor red felsic lithic tuff, rhyolite and quartz sandstone.

LATE NEOPROTEROZOIC

Zii Zib - Granodiorite; Zic - Grey medium- to fine-grained diorite, quartz diorite and tonalite.

ZBBIt/ZBBIf BONNELL BROOK GRANITE: ZBBIt - Pink to orange and grey, medium-grained, equigranular to subophyritic syenogranite (to monzogranite); minor fine-grained diorite and granodiorite. ZBBIf - Grey, fine- to medium-grained, equigranular diorite to quartz diorite.

COLDBROOK GROUP

ZSyC SEELY BEACH FORMATION: Micaceous siltstone, quartzite-pebble conglomerate, red tuffaceous siltstone, locally shale and quartz sandstone.

ZSHfv SILVER HILL FORMATION: Pink to red to grey, commonly flow-banded rhyolite and rhyolitic tuff (locally pyritiferous); minor grey to pale brown laminated siltstone and chert.

ZDBv DOLAN BROOK FORMATION: Interlayered amygdaloidal basalt, basaltic tuff, rhyolite, rhyolitic to dacitic tuff.

ZHBmv HOSFORD BROOK FORMATION: Amygdaloidal to massive basalt, with less abundant mafic tuff.

ZWDvs WALTON DAM FORMATION: ZWDvs - Varicoloured lapilli tuff and tuffaceous conglomerate with interaminated layered siltstone. ZWDmv - Basalt lenses and layers.

ZBENit BEN LOMOND FORMATION: Volcanogenic lapilli tuff or tuffaceous conglomerate, typically with subrounded to subangular dacitic to rhyolitic clasts; colour varies from grey to black to pink to orange and rarely red; black dacitic lapilli tuff, grey crystal tuff and laminated siltstone/chert occur locally.

NEOPROTEROZOIC
BROAD RIVER GROUP

ZLSvs LITTLE SALMON RIVER FORMATION: Crystal and lithic tuff, mainly of dacitic to rhyolitic composition; minor laminated siltstone, arkosic sandstone and mafic tuff.

ZHMv HASTE HILL FORMATION: Mafic to intermediate crystal tuff and lithic tuff; basaltic flows, volcanogenic epiclastic rocks, and minor chlorite schist and phyllite.

ZHAMt HAYWARD BROOK FORMATION: Mafic and felsic tuff, amygdaloidal basalt, minor rhyolite, and abundant pyrite-rich felsic layers; includes grey-green and maroon phyllitic metasedimentary and metalutaceous rocks in the northeast; sheets of rhyolite porphyry, quartz-rich granitoid rocks, and mafic porphyry are common locally.

SYMBOLS

- x ○ Outcrop area of outcrop
- 45 + 30 Bedding, tops known (inclined, horizontal, overturned)
- 30 Bedding, tops unknown (inclined)
- 65 Cleavage (inclined, vertical)
- 85 Crenulation cleavage (inclined)
- - - Geological contact
- - - Fault
- 30 Primary igneous layering
- 30 Fold axis (plunging)
- 45 Stretching lineation (plunging)
- 0003 X Mineral occurrence (with Unique Record Number): VN = quartz; carbonate veins and stockworks; PL = placer deposit

Compilation by E.A. Smith, S.C. Johnson and M.J. McLeod, 2004
Digitized by Maurice Mazerolle and Diane Richard, 2004

This map should be referenced in the following manner:
BARR, S.M. and WHITE, C.E. 2005. Bedrock geology of the Salmon River area (NTS 21 H/06), Saint John County, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2005-42.

NOTE: This plate is a revised version of
MCLEOD, M.J. and JOHNSON, S.C. 1999. Bedrock geological compilation of the Salmon River map area (NTS 21 H/06), Saint John County, New Brunswick. New Brunswick Department of Natural Resources and Energy, Minerals and Energy Division. Plate 99-19.

LITHOLOGIC ABBREVIATION:

- C = clastic sedimentary rocks (undivided)
- CC = coarse-grained clastic sedimentary rocks
- fi = felsic intrusive rocks
- fv = felsic volcanic rocks
- g = gneiss
- g+ = granitoid
- it = intermediate intrusive rocks
- iv = intermediate volcanics
- mt = mafic tuffs
- mv = mafic volcanic rocks
- v = volcanics
- vs = mixed volcanic and sedimentary rocks

MINERAL OCCURRENCES

URN NAME / COMMODITIES

0003 BIG SALMON RIVER - Au
0802 MARTIN HEAD PROSPECT - Cu, Au, Ag

MAIN SOURCES OF INFORMATION

- BARR, S.M. and WHITE, C.E. 1989. Revised geological map of the central Caledonian Highlands, southern New Brunswick (parts of 21 H/5, 6, 10, 11, 12, 14, 15). Geological Survey of Canada, Open File Report 2071, 1 map.
- BARR, S.M. and WHITE, C.E. 1999. Field relations, petrology, and structure of Neoproterozoic rocks in the Caledonian Highlands, southern New Brunswick. Geological Survey of Canada, Bulletin 530, 101 p.
- BARR, S.M. and WHITE, C.E. 2004. Geology of the Salmon River area (NTS 21 H/06) and part of H/06B, Saint John County, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2004-118.
- BARR, S.M. and WHITE, C.E. 2004. Geology of the Arnold Lake area (NTS 21 H/06B), Saint John County, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2004-119.
- BARR, S.M. and WHITE, C.E. 2004. Geology of the Martin Head area (NTS 21 H/06G), Saint John County, New Brunswick. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division. Plate 2004-120.
- MCLEOD, M.J. 1987. Geology, geochemistry and mineral deposits of the Big Salmon River-Goose River area, New Brunswick, map area S-27 and parts of R-27, S-26, and T-26 (parts of 21 H/6, 21 H/18). New Brunswick Department of Natural Resources and Energy, Minerals and Energy Division, Report of Investigation 21.47, 9 p.
- NADON, G.C. 1981. Unpublished information: D-27, R-27, and R-28 (scale: 4 inches = 1 mile). New Brunswick Department of Natural Resources, Minerals Resources.
- NADON, G.C. and MIDDLETON, G.V. 1985. The stratigraphy and sedimentology of the Fundy Group (Triassic) of the St. Martins area, New Brunswick. Canadian Journal of Earth Sciences, 22, pp. 1083-1203.
- RUTENBERG, A.A., GILES, P.S., VENUGOPAL, D.V., BUTTIMER, S.M., MCCUTCHEON, S.R., and CHANDRA, J. 1979. Geology and mineral deposits, Caledonia area, New Brunswick. Department of Natural Resources, Mineral Resources Branch, Memoir 1, 213 p.

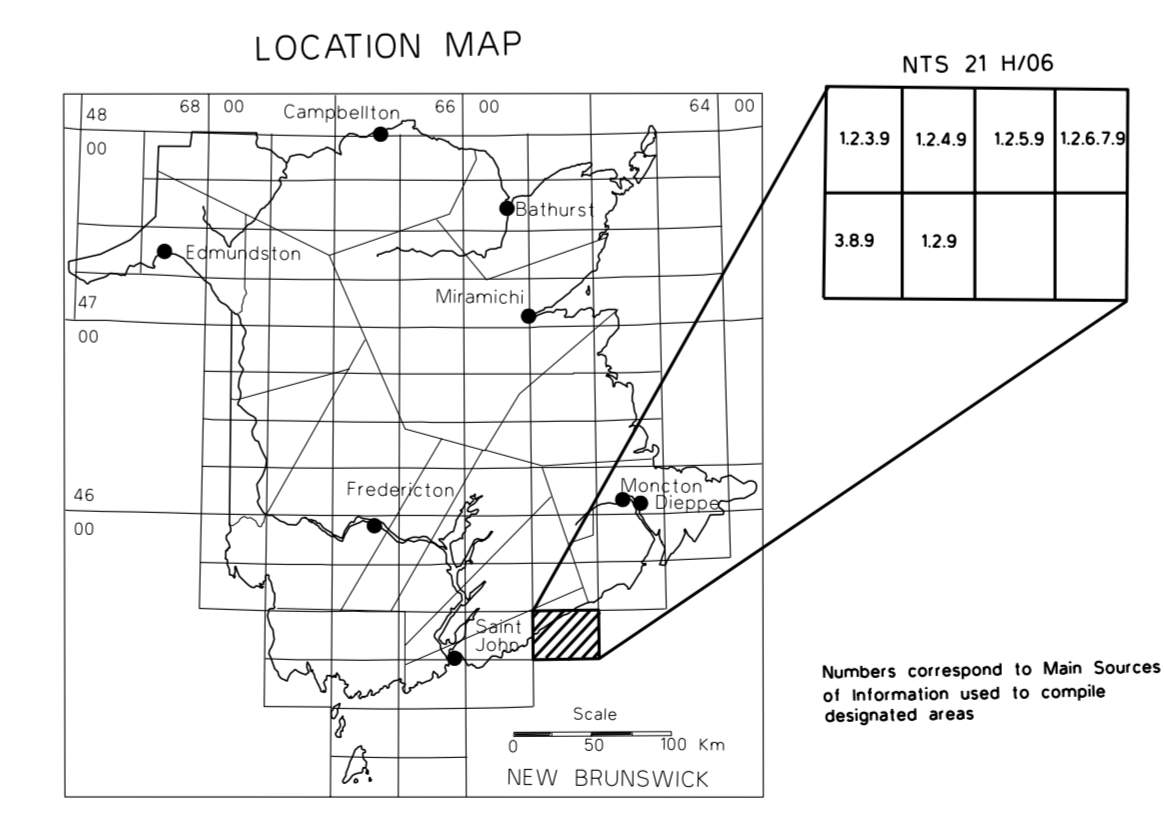
REFERENCE

- Municipal Roads
- National, Arterial, Collector and Local Paved Roads
- Gravel and Other Local Roads (DOT)
- Non-DOT Resource Access Roads
- Lake, River, Stream
- Railway Track
- Power Line
- Marsh or Swamp Outline
- Gravel Pit or Quarry Outline
- County Boundary
- Microwave Tower

Base map derived from Service New Brunswick 1:50 000 base map
Reference System: North American Datum 1983 (NAD83)
Map Projection: New Brunswick Stereographic Double Projection

ADDITIONAL SOURCE OF INFORMATION

BARR, S.M. and WHITE, C.E. 1999. Geology of the Caledonian Highlands, New Brunswick. Geological Survey of Canada, Open File 3915, 3 maps.
KNOLLE, E.D. 1962. Geology of Pointe Wolfe, Albert, Kings, and Saint John counties, New Brunswick. Geological Survey of Canada, Map 1029A (with marginal notes).



Scale 150 000

