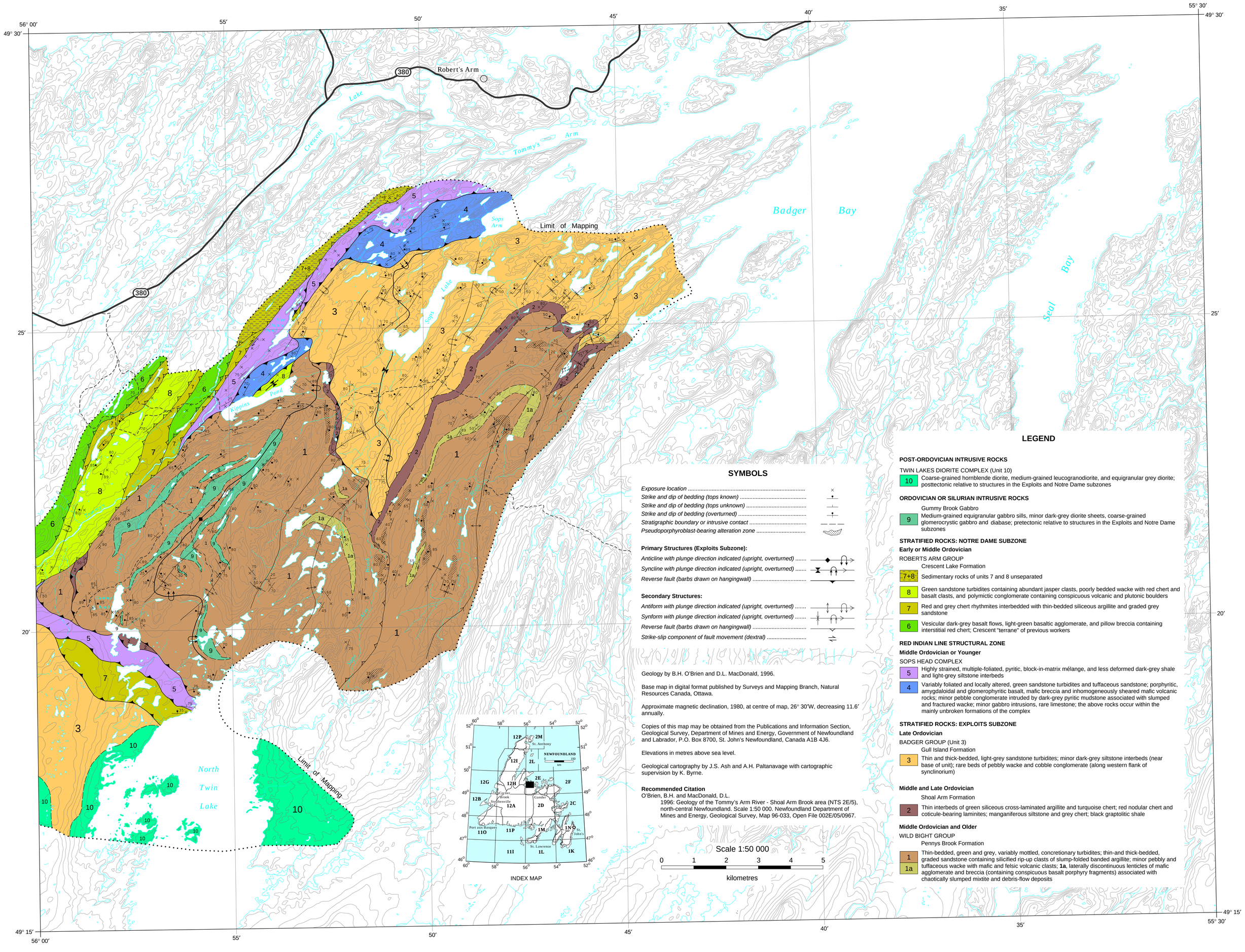

SYMBOLS

Exposure location
Strike and dip of bedding (tops known)
Strike and dip of bedding (tops unknown)
Strike and dip of bedding (overturned)
Stratigraphic boundary or intrusive contact
Pseudoporphyroblast-bearing alteration zone

Primary Structures (Exploits Subzone):

Anticline with plunge direction indicated (upright, overturned)
Syncline with plunge direction indicated (upright, overturned)
Reverse fault (barbs drawn on hangingwall)

Secondary Structures:

Antiform with plunge direction indicated (upright, overturned)
Synform with plunge direction indicated (upright, overturned)
Reverse fault (barbs drawn on hangingwall)
Strike-slip component of fault movement (dextral)

Geology by B.H. O'Brien and D.L. MacDonald, 1996.

Base map in digital format published by Surveys and Mapping Branch, Natural Resources Canada, Ottawa.

Approximate magnetic declination, 1980, at centre of map, 26° 30′W, decreasing 11.6′ annually.

Copies of this map may be obtained from the Publications and Information Section, Geological Survey, Department of Mines and Energy, Government of Newfoundland and Labrador, P.O. Box 8700, St. John's Newfoundland, Canada A1B 4J6.

Elevations in metres above sea level.

Geological cartography by J.S. Ash and A.H. Paltanavage with cartographic supervision by K. Byrne.

Recommended Citation
O'Brien, B.H. and MacDonald, D.L.
1996: Geology of the Tommy's Arm River - Shoal Arm Brook area (NTS 2E/5), north-central Newfoundland. Scale 1:50 000. Newfoundland Department of Mines and Energy, Geological Survey, Map 96-033, Open File 002E/05/0967.

LEGEND

POST-ORDOVICIAN INTRUSIVE ROCKS

TWIN LAKES DIORITE COMPLEX (Unit 10)

10 — Coarse-grained hornblende diorite, medium-grained leucogranodiorite, and equigranular grey diorite; posttectonic relative to structures in the Exploits and Notre Dame subzones

ORDOVICIAN OR SILURIAN INTRUSIVE ROCKS

Gummy Brook Gabbro

9 — Medium-grained equigranular gabbro sills, minor dark-grey diorite sheets, coarse-grained glomerocrystic gabbro and diabase; pretectonic relative to structures in the Exploits and Notre Dame subzones

STRATIFIED ROCKS: NOTRE DAME SUBZONE

Early or Middle Ordovician

ROBERTS ARM GROUP

Crescent Lake Formation

7+8 — Sedimentary rocks of units 7 and 8 unseparated

8 — Green sandstone turbidites containing abundant jasper clasts, poorly bedded wacke with red chert and basalt clasts, and polymictic conglomerate containing conspicuous volcanic and plutonic boulders

7 — Red and grey chert rhythmites interbedded with thin-bedded siliceous argillite and graded grey sandstone

6 — Vesicular dark-grey basalt flows, light-green basaltic agglomerate, and pillow breccia containing interstitial red chert; Crescent "terrane" of previous workers

RED INDIAN LINE STRUCTURAL ZONE

Middle Ordovician or Younger

SOPS HEAD COMPLEX

5 — Highly strained, multiple-foliated, pyritic, block-in-matrix mélange, and less deformed dark-grey shale and light-grey siltstone interbeds

4 — Variably foliated and locally altered, green sandstone turbidites and tuffaceous sandstone; porphyritic, amygdaloidal and glomerophyritic basalt, mafic breccia and inhomogeneously sheared mafic volcanic rocks; minor pebble conglomerate intruded by dark-grey pyritic mudstone associated with slumped and fractured wacke; minor gabbro intrusions, rare limestone; the above rocks occur within the mainly unbroken formations of the complex

STRATIFIED ROCKS: EXPLOITS SUBZONE

Late Ordovician

BADGER GROUP (Unit 3)

Gull Island Formation

3 — Thin and thick-bedded, light-grey sandstone turbidites; minor dark-grey siltstone interbeds (near base of unit); rare beds of pebbly wacke and cobble conglomerate (along western flank of synclinorium)

Middle and Late Ordovician

Shoal Arm Formation

2 — Thin interbeds of green siliceous cross-laminated argillite and turquoise chert; red nodular chert and coticule-bearing laminites; manganiferous siltstone and grey chert; black graptolitic shale

Middle Ordovician and Older

WILD BIGHT GROUP

Pennys Brook Formation

1 — Thin-bedded, green and grey, variably mottled, concretionary turbidites; thin-and thick-bedded, graded sandstone containing silicified rip-up clasts of slump-folded banded argillite; minor pebbly and tuffaceous wacke with mafic and felsic volcanic clasts; **1a**, laterally discontinuous lenticles of mafic agglomerate and breccia (containing conspicuous basalt porphyry fragments) associated with chaotically slumped mixtite and debris-flow deposits

1a

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Department of Mines and Energy
Geological Survey

GEOLOGY OF THE TOMMY'S ARM RIVER – SHOAL ARM BROOK AREA (NTS 2E/5), NORTH-CENTRAL NEWFOUNDLAND

Map 96-033

Open File 002E/05/0967