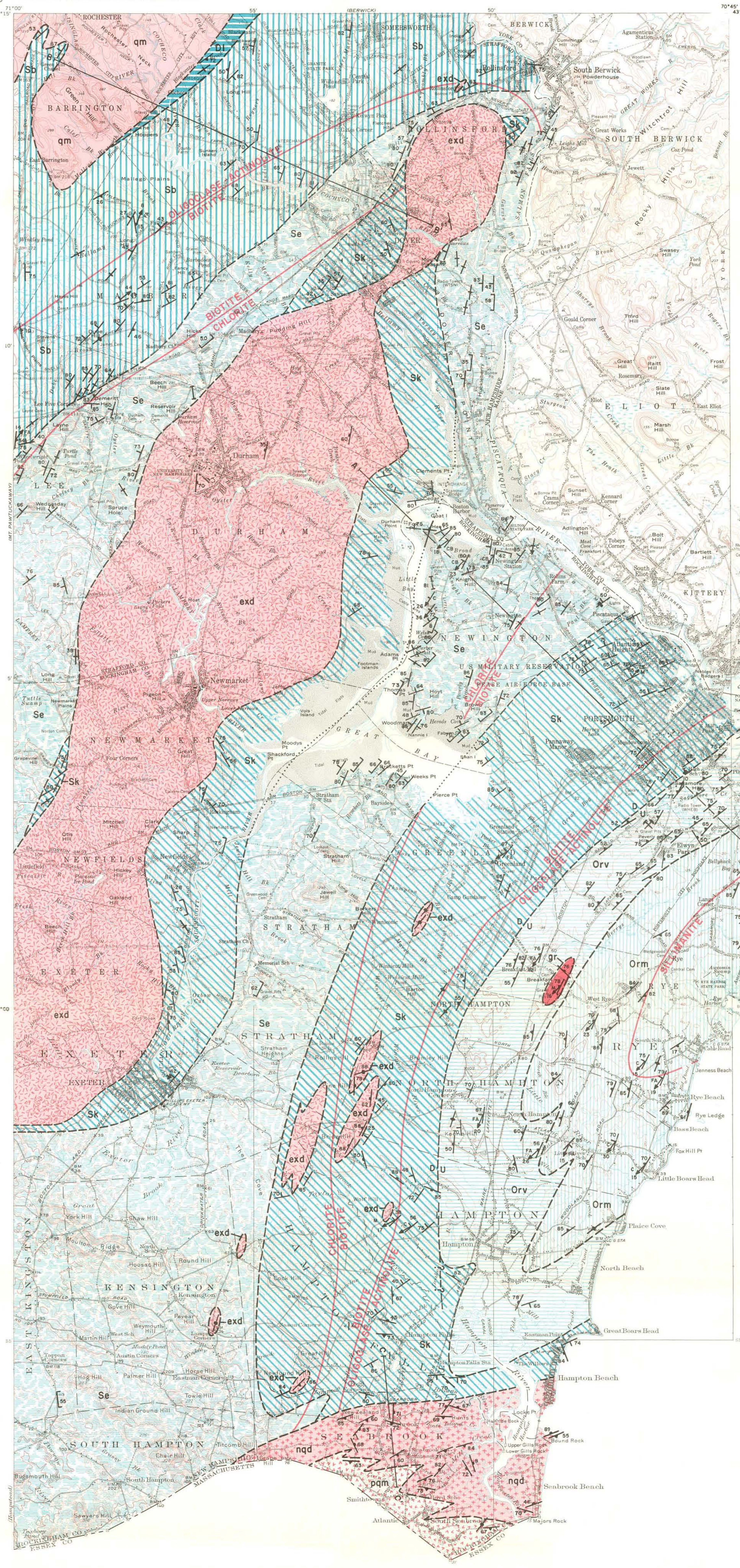
NEW HAMPSHIRE DEPARTMENT OF
RESOURCES AND ECONOMIC DEVELOPMENT



EXPLANATION

IGNEOUS ROCKS

Late Devonian? — *Hillsboro Plutonic Series* — DEVONIAN?

qm — Quartz monzonite

Medium- to coarse-grained, massive, light-gray to buff quartz monzonite, composed chiefly of oligoclase, microcline, microcline-microperthite, and quartz.

exd — Exeter diorite

Light-gray to black, fine- to coarse-grained, massive diorite, quartz diorite, gabbro, and quartz monzonite, composed chiefly of oligoclase, andesine, or labradorite, hypersthene or augite, hornblende, biotite, and microcline.

pqm — Porphyritic quartz monzonite

Medium- to coarse-grained, porphyritic, medium-gray, moderately- to well-foliated quartz monzonite, composed chiefly of microcline phenocrysts and hornblende, biotite, and chlorite.

nqd — Newburyport quartz diorite

Medium- to coarse-grained, well-foliated, medium-gray quartz diorite, composed of oligoclase or andesine, quartz, hornblende, biotite, and chlorite.

gr — Granite and pegmatite

Medium- to coarse-grained, white to tan, massive to well-foliated granite and pegmatite, composed of quartz, microcline, oligoclase, and muscovite, with minor garnet, tourmaline, and biotite.

METAMORPHIC ROCKS

Lower Devonian — DEVONIAN

Dl — Littleton formation

Medium- to coarse-grained, well-foliated, thin-bedded, silvery gray, quartz-staurolite-mica schist, quartz-staurolite-garnet-mica schist, with porphyroblasts of staurolite and garnet.

Middle Silurian? — SILURIAN?

Sb — Berwick formation

Fine- to medium-grained, thin-bedded to massive, light- to dark-gray or black feldspathic quartz-biotite schist, biotite-quartz-sericite schist, and quartz-sericite schist; fine- to medium-grained, light-gray to light gray-green, thin to thick beds and lenses of lime-silicate rock, containing oligoclase-andesine, actinolite, diopside, garnet, epidote-zoisite, calcite, and biotite; minor beds of feldspathic quartzite.

Se — Eliot formation

Dark-gray slate; dark-gray to dark-green phyllite, commonly dolomitic; light- to dark-gray to black biotite schist, quartz-biotite schist, and feldspathic quartz-biotite schist; massive, light-gray to light gray-green, fine-grained quartzite, in part feldspathic, in part dolomitic; light gray-green to brown, fine- to medium-grained, lime-silicate rock, containing actinolite.

Sk — Kittery formation

Dark-gray slate; dark gray-green to silvery gray phyllite; fine- to medium-grained, finely-laminated to massive, poorly- to well-foliated quartz-biotite schist, biotite-sericite schist, and feldspathic quartz-biotite schist, commonly calcareous and actinolitic; light gray-green to dark-gray, well-bedded to massive, fine-grained quartzite and feldspathic quartzite; thin-bedded to massive, medium-grained, light-gray to light gray-green lime-silicate rock.

ORDOVICIAN?

Orv / Orm — Rye formation

Upper metavolcanic member: Orv — dark-gray, medium- to coarse-grained, foliated quartz-biotite-plagioclase gneiss, finely interlaminated fine-grained, maroon feldspathic quartz-biotite schist and fine-grained gray-green feldspathic quartz-actinolite schist; medium- to coarse-grained, dark-gray biotitic or hornblendic injection and permeation gneiss; dark-green to black, fine- to coarse-grained amphibolite and hornblende schist; minor fine-grained gray quartzite.

Lower metasedimentary member: Orm — fine- to coarse-grained, light- to dark-gray and black mica schist and quartzo-feldspathic schist, commonly containing garnet and sillimanite; fine- to medium-grained, thin-bedded to massive, gray quartzite, commonly feldspathic and garnetiferous; fine- to coarse-gained, dark-green to black amphibolite, commonly containing diopside and garnet.

METAMORPHIC ZONES

Indicated by key minerals and separated by isograds
Chloritic zone
Biotite zone
Oligoclase-actinolite zone
Sillimanite zone

CONTACTS

— — — — Approximate
.... Projected

FAULTS

— — U/D — — --?--?--
Dashed where approximate; queried where doubtful
U: Upthrown side
D: Downthrown side

STRUCTURAL SYMBOLS

60 Inclined — Vertical
Strike and dip of bedding

70 Inclined — Vertical
Strike and dip of foliation in metamorphic and plutonic rocks

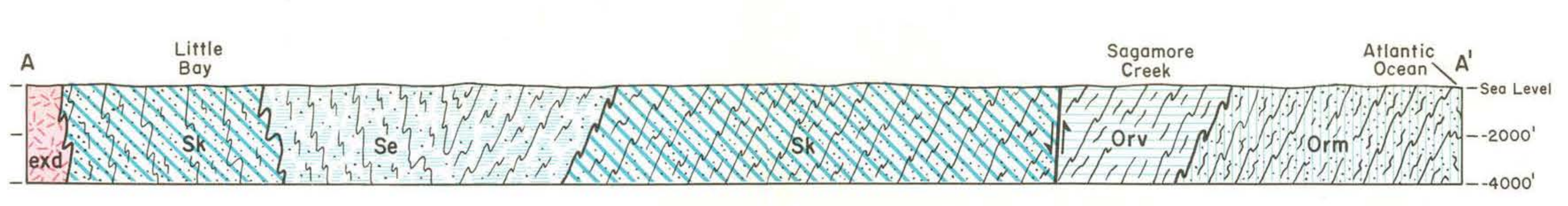
50 Inclined — Vertical
Strike and dip of cleavage

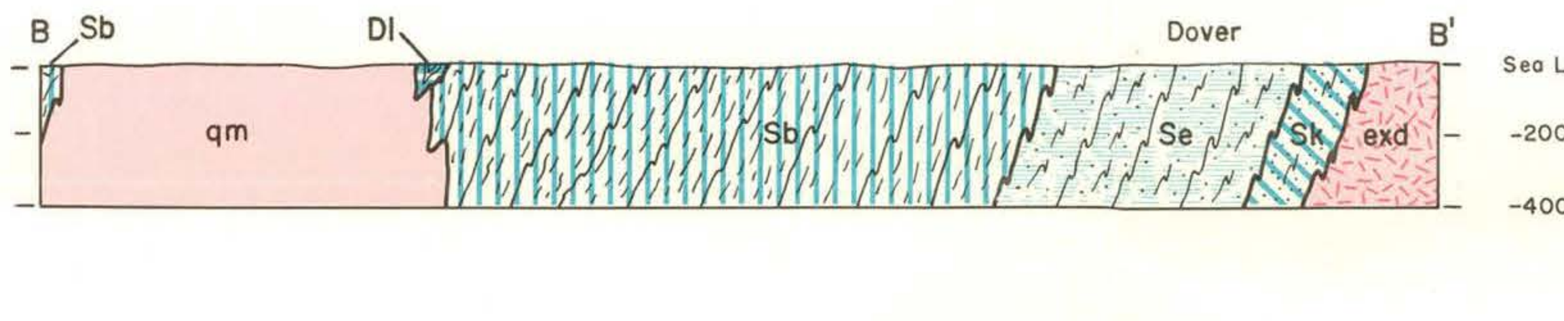
Inclined — Vertical
Strike and dip of joints

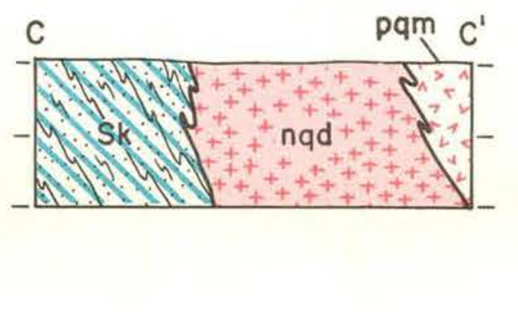
15
Bearing and plunge of minor structures
FA: Small fold axes
M: Mineral alignment
C: Crinkles or corrugations
CB: Cleavage-bedding intersections

QUARRIES

Operating — Abandoned

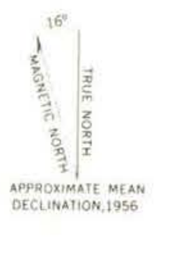






GEOLOGIC MAP OF THE SEACOAST REGION, NEW HAMPSHIRE
BEDROCK GEOLOGY

SCALE 1:62500
1 ½ 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
1 .5 0 1 2 3 4 5 KILOMETERS
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 7 FEET



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