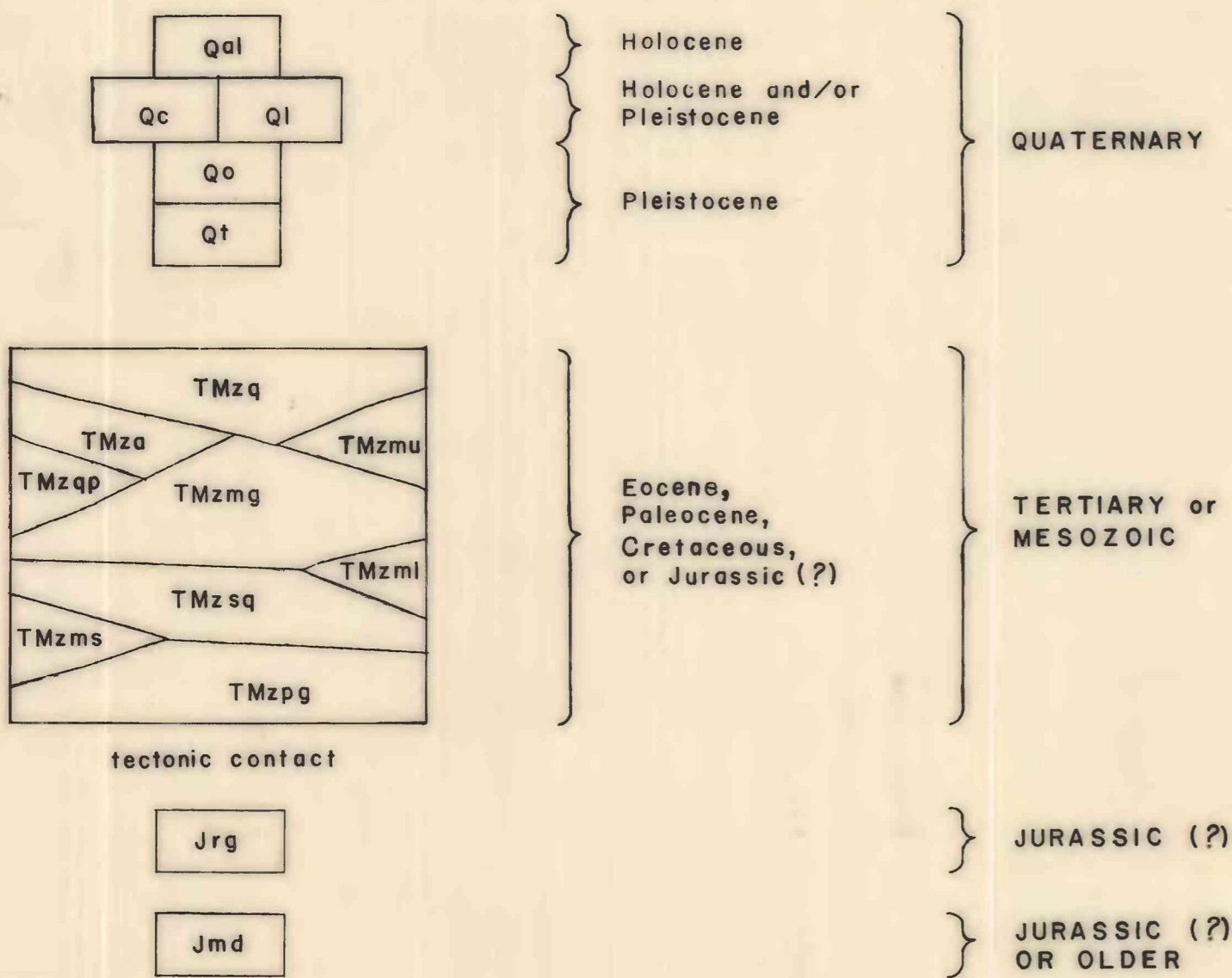


EXPLANATION

CORRELATION OF MAP UNITS



ROCKS OF THE BORDER ZONE

**ROSSLAND GROUP (?) (JURASSIC ?)**  
**GREENSTONE** Greenish gray, medium-grained, weakly metamorphosed igneous rock. Contains dark gray to black, weakly foliated, slightly calcareous argillite and gray pyritic quartzite (metachert?). Resembles and is probably a metamorphosed correlative of the Rossland Group (Jurassic) of the Churchill Mountain 7 1/2' quadrangle 20 km to the north-northeast (K. F. Fox, Jr., written communication, 1980)

**MARBLE OF DOYLE CREEK (JURASSIC ? OR OLDER)** Gray, fine-grained, massive to weakly layered, recrystallized limestone, locally dolomitic

CONTACTS

- Accurately located
- Approximately located
- Gradational

ZONE OF CHLORITE-SERICITE ALTERATION

STRIKE AND DIP OF FOLIATION AND LAYERING

- Earlier, penetrative foliation
- Compositional layering, may be bedding in places
- Later, nonpenetrative, mylonitic foliation

TREND AND PLUNGE OF LINEATION

- Inclined earlier lineation
- Horizontal earlier lineation
- Inclined later, mylonitic lineation

TREND AND PLUNGE OF MINOR FOLD AXES

- Tight to isoclinal, recumbent folds, commonly intrafolial type
- Asymmetric, commonly overturned, usually kink-like close folds
- Gentle to open, upright folds

STRIKE AND DIP OF JOINTS

- Inclined, numerous in outcrop
- Vertical, numerous in outcrop
- Inclined, less numerous in outcrop
- Vertical, less numerous in outcrop

TREND OF GLACIAL STRIATIONS

MINES AND PROSPECTS

- Adit
  - Open pit
  - Prospect
- Materials mined: b, building stone; g, gravel; p, pegmatite (probably uranium); z, zinc

NOTES

Symbols are combined at location measured  
Older foliation and lineation may be later mylonitization in places but was not recognized due to poor exposures

DESCRIPTION OF MAP UNITS

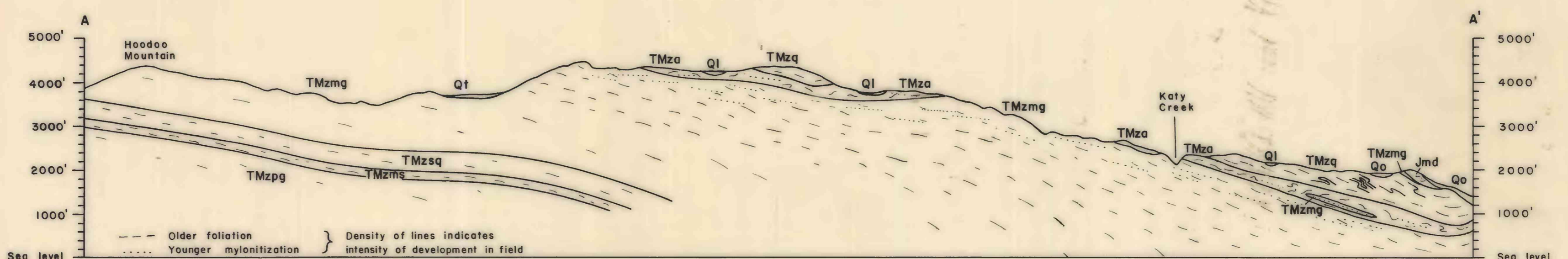
SURFICIAL UNITS

- Qal** ALLUVIUM (HOLOCENE) Post-glacial floodplain deposits along the Kettle River
- Qc** COLLUVIUM (HOLOCENE AND/OR PLEISTOCENE) Landslide deposits, usually developed on glacially oversteepened slopes
- Ql** LACUSTRINE DEPOSITS (HOLOCENE AND/OR PLEISTOCENE) Fine-grained sediments with some peat in marshes and around lakes
- Qo** OUTWASH (PLEISTOCENE) Light brown, loosely-consolidated, moderately sorted sand and gravel deposits. Cross-hatched on terrace levels
- Qt** TILL (PLEISTOCENE) Gray to light brown, unsorted and unstratified deposits of subangular to subrounded rock fragments in a medium to fine-grained matrix

ROCKS OF THE KETTLE GNEISS DOME (EOCENE, PALEOCENE, CRETACEOUS, OR JURASSIC ?)

- TMzq** QUARTZITE Light brown to reddish brown, fine to medium-grained quartzite with thin muscovite folia, interlayered with muscovite schist and rare biotite schist. Also contains veins of massive white quartz. Locally is mylonitic to ultramylonitic
- TMza** AMPHIBOLITE Black, medium-grained, hornblende-feldspar gneiss and schist with minor pegmatite and calc-silicates. Interlayered with mylonite gneiss in places
- TMzqp** QUARTZITE AND PEGMATITE Light brown, fine to medium-grained quartzite with thin muscovite folia and abundant medium to coarse-grained pegmatite
- TMzmu** MARBLE White, coarse-grained, weakly-foliated marble
- TMzmg** MYLONITE GNEISS Gray, medium-grained, feldspar-quartz-biotite-muscovite gneiss; dominantly a mylonite gneiss, but locally develops mylonites, blastomylonites and ultramylonites in thin zones, particularly in the upper part of the unit. Thin pegmatite and alaskite bodies, commonly mylonitic, are common throughout the unit
- TMzml** MARBLE White, coarse-grained, weakly-foliated marble
- TMzsq** SILLIMANITE QUARTZITE Gray to brown, fine to medium-grained quartzite with muscovite, biotite and sillimanite. Interlayered with minor biotite-quartz-feldspar sillimanite schist and marble in southwest. Contains nearly massive white quartzite near top to north
- TMzms** MARBLE AND SILLIMANITE SCHIST Interlayered white, coarse-grained marble and biotite-quartz-feldspar-sillimanite schist and gneiss with minor gray to brown quartzite
- TMzpg** PORPHYROCLASTIC GNEISS Gray, medium to coarse-grained feldspar-quartz-biotite with local 1 to 5 cm-long K-feldspar porphyroclasts. Contains layers of biotite-hornblende-feldspar schist

STRUCTURE SECTION



PRELIMINARY GEOLOGIC MAP OF THE BOYDS QUADRANGLE,  
FERRY AND STEVENS COUNTIES, WASHINGTON

by  
Joseph R. Wilson  
1980

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.