EXPLANATION

SEDIMENTARY ROCKS

QUATERNARY — Pleistocene and Holocene

- Qs — Surficial deposits

TERTIARY — Kenai Group

- Tks — Sterling Formation (Pliocene–Miocene): *Sandstone, siltstone, and some coal*
- Tkb — Beluga Formation (Miocene): *Sandstone, siltstone, and coal*
- Tkt — Tyonek Formation (Oligocene): *Sandstone, siltstone, coal, and conglomerate*
- Tkth — Tyonek Formation and Hemlock Conglomerate, undivided: *Sandstone, conglomerate, and siltstone*
- Tt — Tsadaka Formation: *Conglomerate, sandstone, and siltstone*
- Twf — West Foreland Formation (Eocene): *Conglomerate, sandstone, and siltstone; mostly tuffaceous*
- Tw — Wishbone Formation: *Conglomerate, sandstone, and siltstone*
- Tcl — Conglomerate, sandstone, and siltstone near Copper Lake
- Tar — Arkose Ridge Formation (Paleocene): *Arkose, conglomerate, and shale*
- Tc — Chickaloon Formation: *Claystone, siltstone, sandstone, coal, and conglomerate*

CRETACEOUS

- Kk — Kaguyak Formation (Upper Cretaceous): *Siltstone and sandstone*
- Km — Matanuska Formation: *Siltstone, sandstone, and conglomerate*
- Kss — Siltstone and sandstone (Lower Cretaceous): *Contains abundant Inoceramus fragments*

JURASSIC

- Jn — Naknek Formation (Upper Jurassic): *Sandstone, arkose, conglomerate, and siltstone*
- Jc — Chinitna Formation: *Siltstone, limestone concretions, and sandstone*
- Jt — Tuxedni Group (Middle Jurassic): *Sandstone and siltstone with limy concretions*
- Jtk — Talkeetna Formation (Lower Jurassic): *Volcanic breccia, tuff, agglomerate, and aphanitic lava flows; as mapped, locally includes Kamishak Formation in Iliamna quadrangle*

TRIASSIC — Upper Triassic

- Ꞧk — Kamishak Formation: *Limestone, gray to black chert, and porcellanite*
- Ꞧl — Limestone and fine-grained tuff
- Ꞧc — Contorted chert and some greenstone
- Ꞧb — Limestone of Bruin Bay: *Limestone, banded green and white chert; greenstone sills and dikes*

METAMORPHIC ROCKS

Weakly metamorphosed:

- KJv — Valdez(?) Group (Jurassic(?) and Cretaceous): *Metagraywacke, metasiltstone, and argillite; locally phyllitic*
- KJu — Metasedimentary rocks, undivided (Jurassic and (or) Cretaceous): *Mainly slate and graywacke; locally includes volcanic and intrusive rocks*
- KJm — McHugh Complex: *Weakly metamorphosed siltstone, graywacke, arkose, and conglomeratic sandstone; greenstone (mostly basaltic); metachert, and argillite*

Strongly metamorphosed (Permian and (or) Jurassic):

- JPu — Metamorphic rocks, undivided: *Metasedimentary, metaplutonic, and metavolcanic rocks in Anchorage quadrangle; metamorphic complex of Kakhonak Bay and migmatite in Iliamna quadrangle; metachert, slate, metasandstone, and marble in Seldovia quadrangle*
- MzPzs — Schist at Willow Creek

PLUTONIC AND HYPABYSSAL ROCKS

Felsic rocks — Granite; Granodiorite

- Tg — Granite, quartz monzonite, and syenite (Tertiary)
- Tgd — Granodiorite and quartz diorite (Tertiary)
- TKgd — Granodiorite, quartz diorite, and diorite (Cretaceous and Tertiary)
- Kg — Quartz monzonite and syenite (Cretaceous)
- Jg — Quartz monzonite (Jurassic)
- Jgd — Quartz diorite, diorite, and granodiorite (Jurassic)

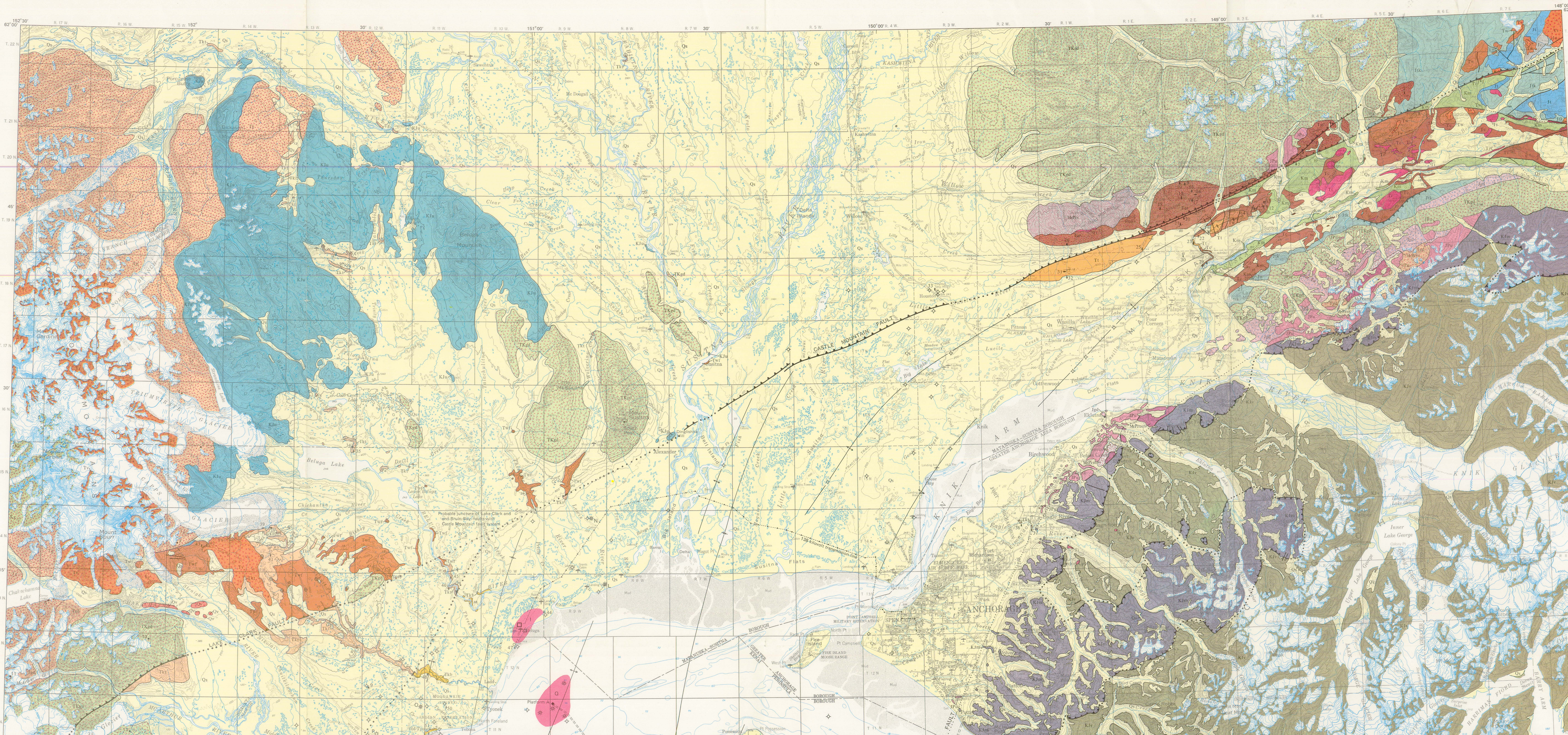
Mafic and ultramafic rocks

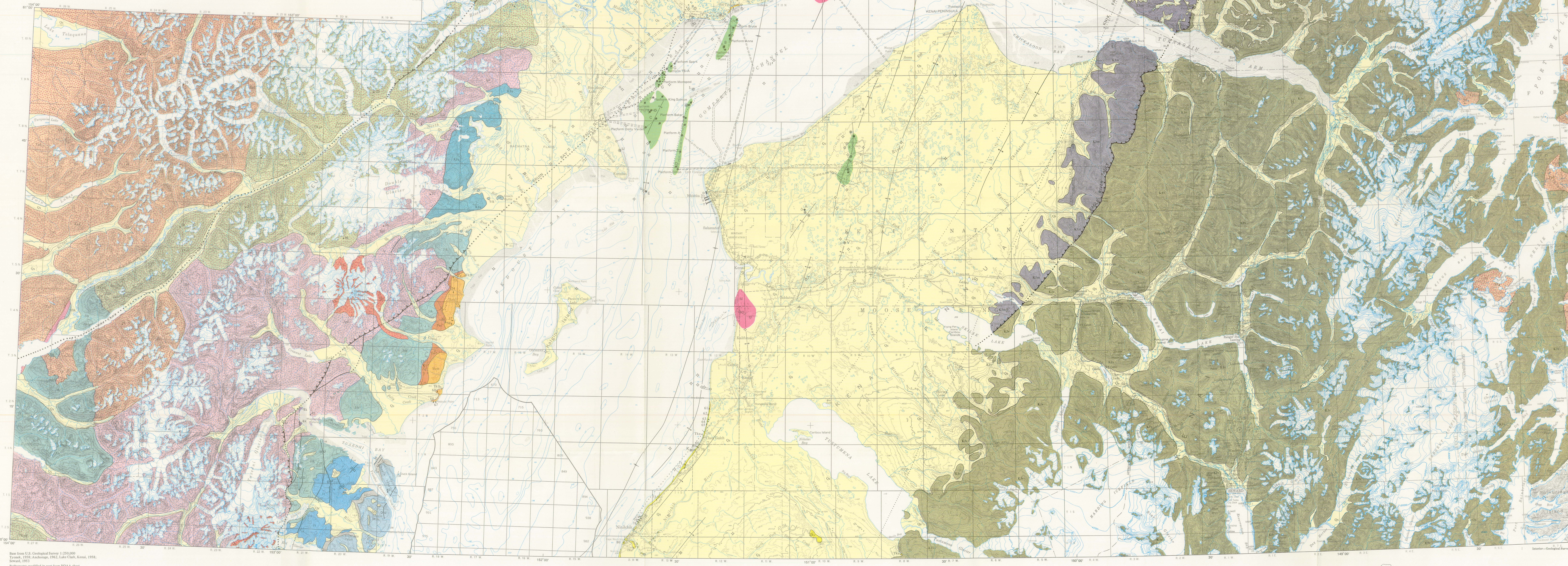
- Jm — Mafic and ultramafic rocks (Jurassic)
- Ꞧm — Mafic rocks (Triassic): *Greenstone of Cottonwood Bay in Iliamna quadrangle; pillow basalt and some chert in Seldovia quadrangle*
- MzPzm — Gabbroic rocks (Paleozoic and (or) Mesozoic)
- MzPzum — Ultramafic rocks: *Peridotite, dunite, and pyroxenite*

VOLCANIC AND SHALLOW INTRUSIVE ROCKS

- Qv — Volcanic rocks (Quaternary): *Lava, breccia, and associated pyroclastic rocks; may include Tertiary volcanic rocks*
- Tv — Volcanic rocks (Tertiary): *Basaltic lava, tuff, and breccia; may locally include Quaternary volcanic rocks*
- Ti — Intrusive rocks: *Dikes, sills, and stocklike masses of felsic to mafic composition*

For explanation of other symbols see sheet 2





Base from U.S. Geological Survey 1:250,000
Tyonek, 1958; Anchorage, 1962, Lake Clark, Kenai, 1958; Seward, 1953
Bathymetry modified in part from NOAA chart C & GS 8553 and 8554
OCS tract outline from BLM, OCS official protraction diagram No. 5–8

SCALE 1:250 000
5 0 5 10 15 20 25 MILES
5 0 5 10 15 20 25 30 35 KILOMETERS
CONTOUR INTERVAL 200 FEET
DOTTED LINES REPRESENT 100-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
DEPTH CURVES IN FEET DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER

ALASKA
AREA OF THIS MAP

Interior—Geological Survey, Reston, Va.—1976—G76291
Geology compiled in 1976

MAP SHOWING GEOLOGY, WILDCAT WELLS, TERTIARY PLANT FOSSIL LOCALITIES, K-AR AGE DATES, AND PETROLEUM OPERATIONS, COOK INLET AREA, ALASKA

By
L. B. Magoon, W. L. Adkison, and R. M. Egbert
1976

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