

LIST OF MAP UNITS

[Some unit exposures on the printed or plotted map are too small to distinguish the color for unit identification. These units are labeled where possible, and unlabeled units are archived in the database, available at <http://pubs.usgs.gov/si/2909/>.

OVERLAP ASSEMBLAGES

SEDIMENTARY ROCKS

- Surficial Deposits
- Qr Floodplain and tidal flat deposits (Holocene)
 - Qda Actively drifting and recently stabilized dune fields (Holocene)
 - Qs Eolian and water-laid sand and silt sheets and stabilized dune fields (Holocene and Pleistocene)
 - Qua Alluvial, colluvial, glacial, and windblown terrace and slope deposits, undivided (Holocene and Pleistocene)
 - QTgl Glacial and glaciolacustrine deposits (Pleistocene and Pliocene?)
 - QTgr Quartz gravel deposits (Quaternary or Tertiary)
 - Tp Small deposits of nonmarine conglomerate, sandstone, shale, and coal (Tertiary)

YUKON-KOYUKUK BASIN

- Deltaic deposits
- Ks Fluvial and shallow marine sandstone and shale, undivided (Cretaceous)
 - Kms Shallow marine sandstone and shale (Cretaceous)
 - Kcs Offshore calcareous sandstone, siltstone, and shale (Cretaceous)
- Submarine fan deposits
- Kcg Carbonate-clast graywacke and mudstone (Cretaceous)
 - Kcvg Carbonate- and volcanic-clast graywacke and mudstone (Cretaceous)
 - Kvg Volcanic-clast graywacke and mudstone (Cretaceous)
- Marginal shelf and slope deposits
- Kcc Carbonate-clast conglomerate, sandstone, and shale (Cretaceous)
 - Kvc Volcanic-clast conglomerate, sandstone, and shale (Cretaceous)
 - Kqc Quartz- and metagraywacke-clast conglomerate, sandstone, and shale (Cretaceous)
 - Kmc Mafic igneous-clast conglomerate, sandstone, and mudstone (Cretaceous)

- KUSKOKWIM BASIN
- Ksc Fluvial and shallow-marine sandstone and conglomerate (Late Cretaceous)
 - Kss Shallow-marine sandstone, siltstone, and shale (Late Cretaceous)
 - Ksu Shale, siltstone, and sandstone, undivided (Cretaceous)

VOLCANIC AND HYPABYSSAL ROCKS

- Qtb Tholeiitic basalt cones and flows (Holocene? and Pleistocene)
- Qab Alkalic basalt cones and flows (Pliocene)
- Qtb Basalt flows (Pleistocene and Pliocene)
- Tb Basalt flows (Oligocene)
- Ta Andesite and basalt lava flows and volcaniclastic rocks (Eocene and Paleocene)
- Td Dacite and rhyolite lava flows, domes, and volcaniclastic rocks (Eocene and Paleocene)
- Tad Andesite and basalt lava flows and volcaniclastic rocks (T_a) and dacite and rhyolite lava flows, domes, and volcaniclastic rocks (T_d), undivided (Eocene and Paleocene)
- Thr Rhyolite hypabyssal bodies (Eocene or Paleocene)
- Tt Tuff and tuff breccia (Eocene or Paleocene)
- Tka Andesite and basalt lava flows and volcaniclastic rocks (early Tertiary and Late Cretaceous)
- TKd Dacite and rhyolite lava flows, domes, and volcaniclastic and hypabyssal rocks (early Tertiary and Late Cretaceous)
- TKad Andesite and basalt lava flows and volcaniclastic rocks (TKa) and dacite and rhyolite lava flows, domes, and volcaniclastic and hypabyssal rocks (TKd), undivided (early Tertiary and Late Cretaceous)
- TKi Shallow intrusive rocks of silicic and intermediate composition (Tertiary and Late Cretaceous)
- TKvc Volcano-plutonic complexes (early Tertiary and Late Cretaceous)
- TKc Complexes of shallow intrusive rocks and altered Cretaceous sedimentary rocks of the Yukon-Koyukuk Basin, undivided (early Tertiary and Cretaceous)
- Krd Rhyolite, dacite, and trachyte lava flows and volcaniclastic rocks (Late Cretaceous)

PLUTONIC ROCKS

- Tg Granite (Eocene or Paleocene)
- TKg Granite and granodiorite (early Tertiary and Late Cretaceous)
- TKm Monzonite (early Tertiary and Late Cretaceous)
- Kgd Granodiorite and granite (Late Cretaceous)
- Ksm Syenite and monzonite (Late Cretaceous)
- Kgr Granite and granodiorite (Early Cretaceous)
- Ksy Syenite, monzonite, and nepheline syenite (Early Cretaceous)
- Kns Nepheline syenite (Early Cretaceous)
- Kvu Granitic rocks of uncertain affinity (Cretaceous?)

ROCKS OF UNCERTAIN AFFINITY

- TDy Gabbro and diabase (Tertiary?) to Devonian?

LITHOTECTONIC TERRANES

- KOYUKUK TERRANE
- Kk Shoshonitic tuffs and lava flows (Early Cretaceous)
 - Ktg Tuff, volcanic graywacke, and mudstone (Early Cretaceous)
 - Kbd Spilitic basalt and diabase (Early Cretaceous?)
 - Kv Andesite and basalt lava flows and volcaniclastic rocks (Early Cretaceous)
 - Jgt Trondjemite and tonalite (Late and Middle Jurassic)
 - MpMm Mafic-ultramafic complexes (Mesozoic and Paleozoic?)
- MÉLANGE
- Jdv Mélange (Early Cretaceous? and Jurassic)
- ANGYUCHAM-TOZTINA TERRANE
- MpPq Quartzite (metachert), carbonate rocks, and phyllite (Mesozoic? and Paleozoic)
- INNOKO TERRANE
- Kgc Volcanic graywacke and conglomerate (Early Cretaceous?)
 - JMc Chert, cherty tuff, argillite, crystal-litic tuff, volcanic breccia, and conglomerate (Jurassic? to Mississippian)
 - JMb Pillow basalt, chert, and minor agglomerate (Triassic? to Mississippian?)
 - JMg Graywacke, grit, and argillite (Triassic? to Mississippian?)
 - BDc Chert, argillite, and limestone (Triassic? to Devonian)
- NIXON FORK TERRANE
- Kqp Quartz-carbonate sandstone (Early Cretaceous)
 - Ts Spiculate and sandy limestone (Late Triassic)
 - Pa Sandstone, sandy limestone, and conglomerate (Permian)
 - DSw Whirlwind Creek Formation (Devonian and Late Silurian)
 - DSp Paradise Fork Formation (Early Devonian and Silurian)
 - Orl Owl Mountain and Telsima Formations, undivided (Ordovician)
 - Ey Metavolcanic rocks (Late Proterozoic)
 - Bc Calc schist, quartz-mica schist, and greenstone (Proterozoic)
 - Es Pelitic schist, quartzite, quartzo-felspathic gneiss, and greenstone (Proterozoic)
- MINCHUMINA TERRANE
- DcEl East Fork subterrane (Devonian to Cambrian)
 - Oc Chert and argillite (Ordovician)
 - PEs Quartzite, grit, argillite, and quartzite schist (Paleozoic and Proterozoic?)
- RUBY TERRANE
- MEKc Complex of Kokrines Hills (Mesozoic to Proterozoic?)
 - MEBn Metabasite (Mesozoic? to Proterozoic?)
 - Dgnc Granitic gneiss (Devonian)
 - Pgp Phyllite (Paleozoic?)
 - Pc Carbonate rocks (Paleozoic)
 - PEs Pelitic schist, calc schist, and quartzite (Paleozoic and Proterozoic?)
 - PEBa Pelitic schist, calc schist, and quartzite (PEs) and carbonate rocks (PEa), undivided (Paleozoic and Proterozoic?)
- SEWARD TERRANE
- MEBc Complex of the Reindeer Hills (Mesozoic to Proterozoic?)
 - MEBns Metabasite (Mesozoic? to Proterozoic?)
 - Pc Carbonate rocks (Paleozoic)
 - PEBa Pelitic schist, calc schist, and quartzite (Paleozoic and Proterozoic?)
 - PEBsa Pelitic schist, calc schist, and quartzite (PEBs) and carbonate rocks (PEa), undivided (Paleozoic and Proterozoic?)
 - PEBa Pelitic schist, calc schist, and quartzite (Paleozoic and Proterozoic?)
 - PEBa Pelitic schist, calc schist, and quartzite (PEBs) and carbonate rocks (PEa), undivided (Paleozoic and Proterozoic?)
 - PEBa Granitic gneiss (Paleozoic? and Proterozoic?)
 - TDy Gabbro and diabase (Tertiary?) to Devonian?
- ARCTIC ALASKA TERRANE
- MEBna Metabasite (Mesozoic? to Proterozoic?)
 - MEBnm Metabasite (MEBna) and felsic schist (Df), undivided (Mesozoic? to Proterozoic?)
 - Dgna Granitic gneiss (Devonian)
 - Pp Phyllite and subordinate metagraywacke (Paleozoic?)
 - Pg Metagraywacke and subordinate phyllite (Paleozoic?)
 - Pc Carbonate rocks (Paleozoic)
 - PEBa Pelitic schist, calc schist, and quartzite (Paleozoic and Proterozoic)
 - PEBa Pelitic schist, calc schist, and quartzite (PEBa) and carbonate rocks (PEa), undivided (Paleozoic and Proterozoic)
 - PEBa Granitic gneiss (Paleozoic? and Proterozoic)

CORRELATION OF MAP UNITS

[See DESCRIPTION OF MAP UNITS in accompanying pamphlet for specific age assignments]

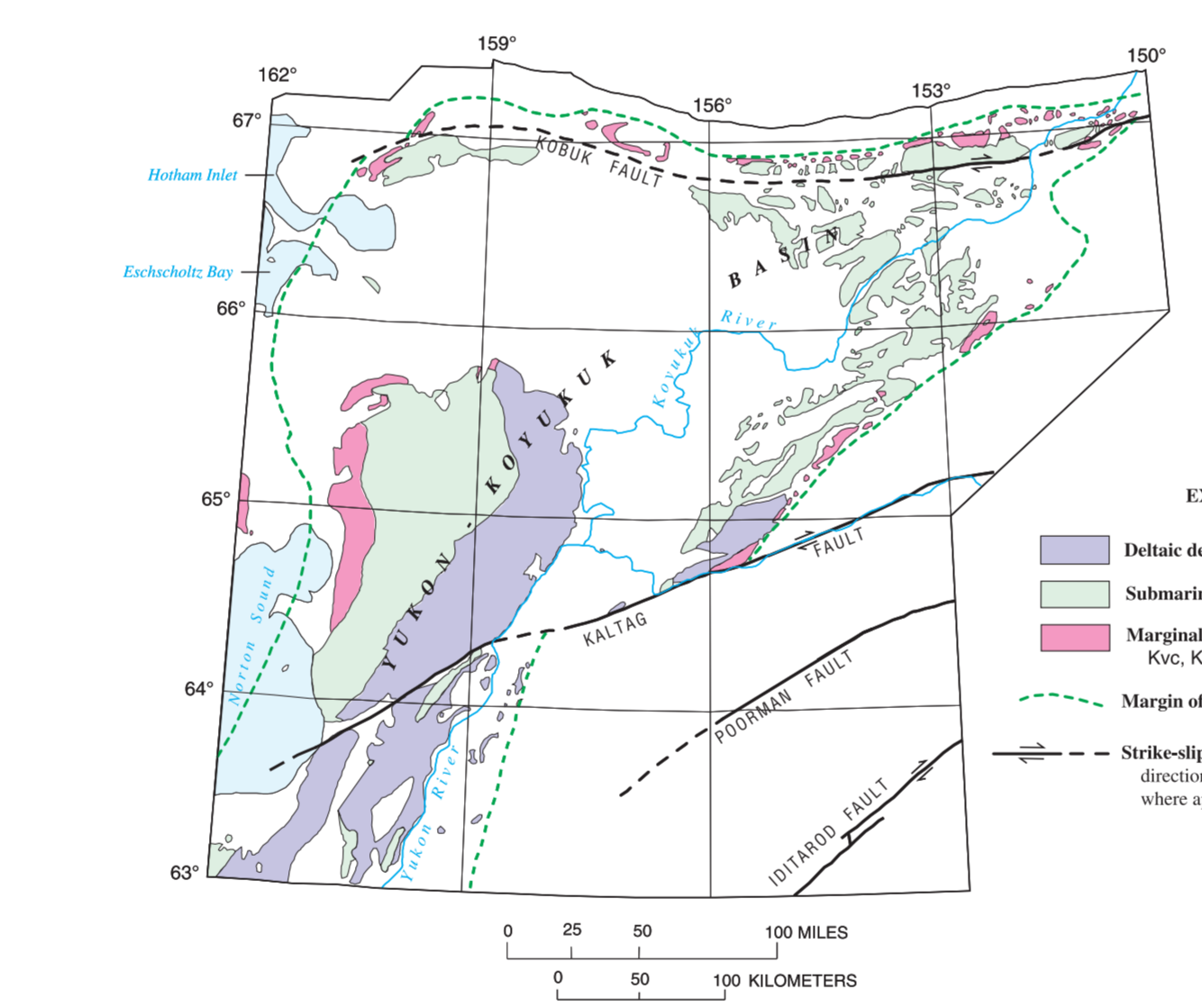
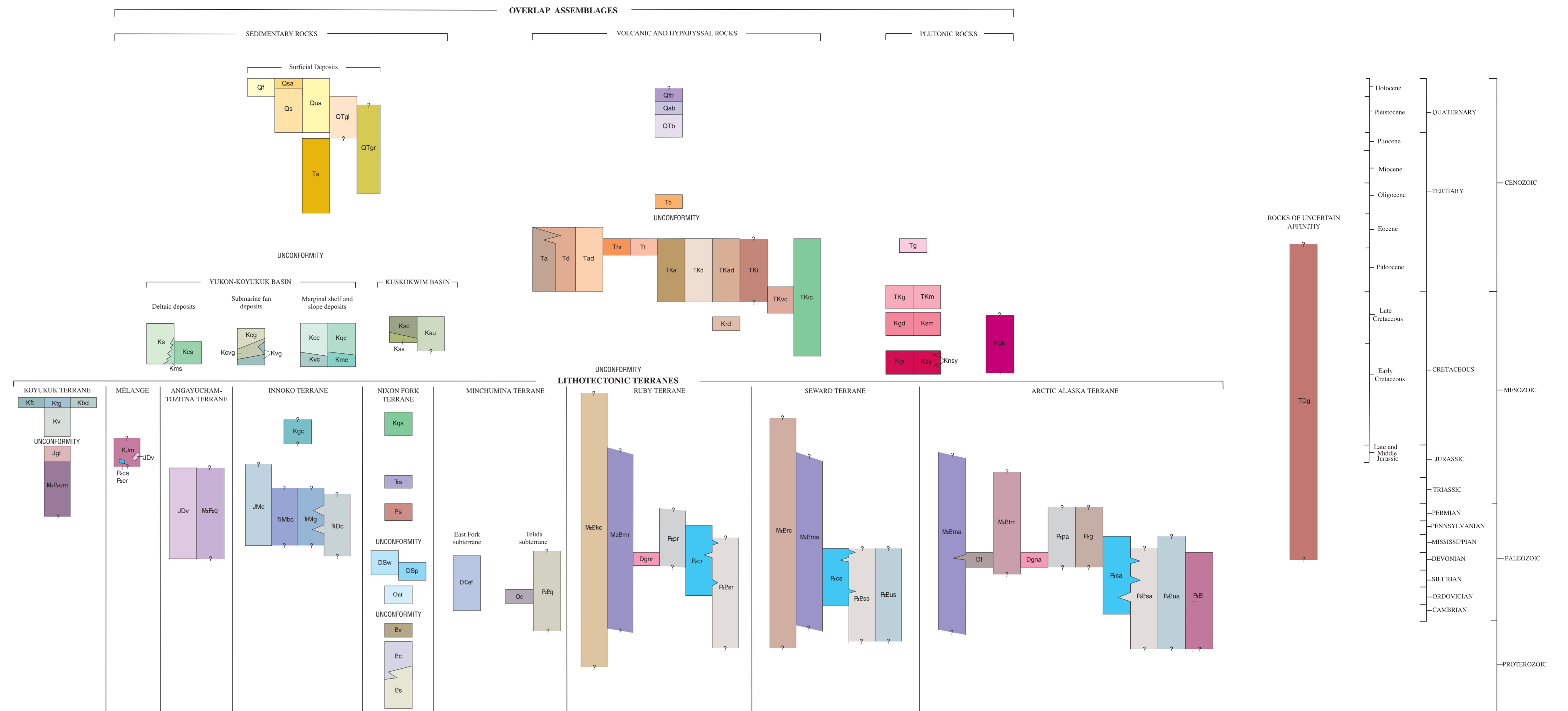


Figure 2. Map showing distribution of middle and Late Cretaceous sedimentary rocks in and near the Yukon-Koyukuk Basin.

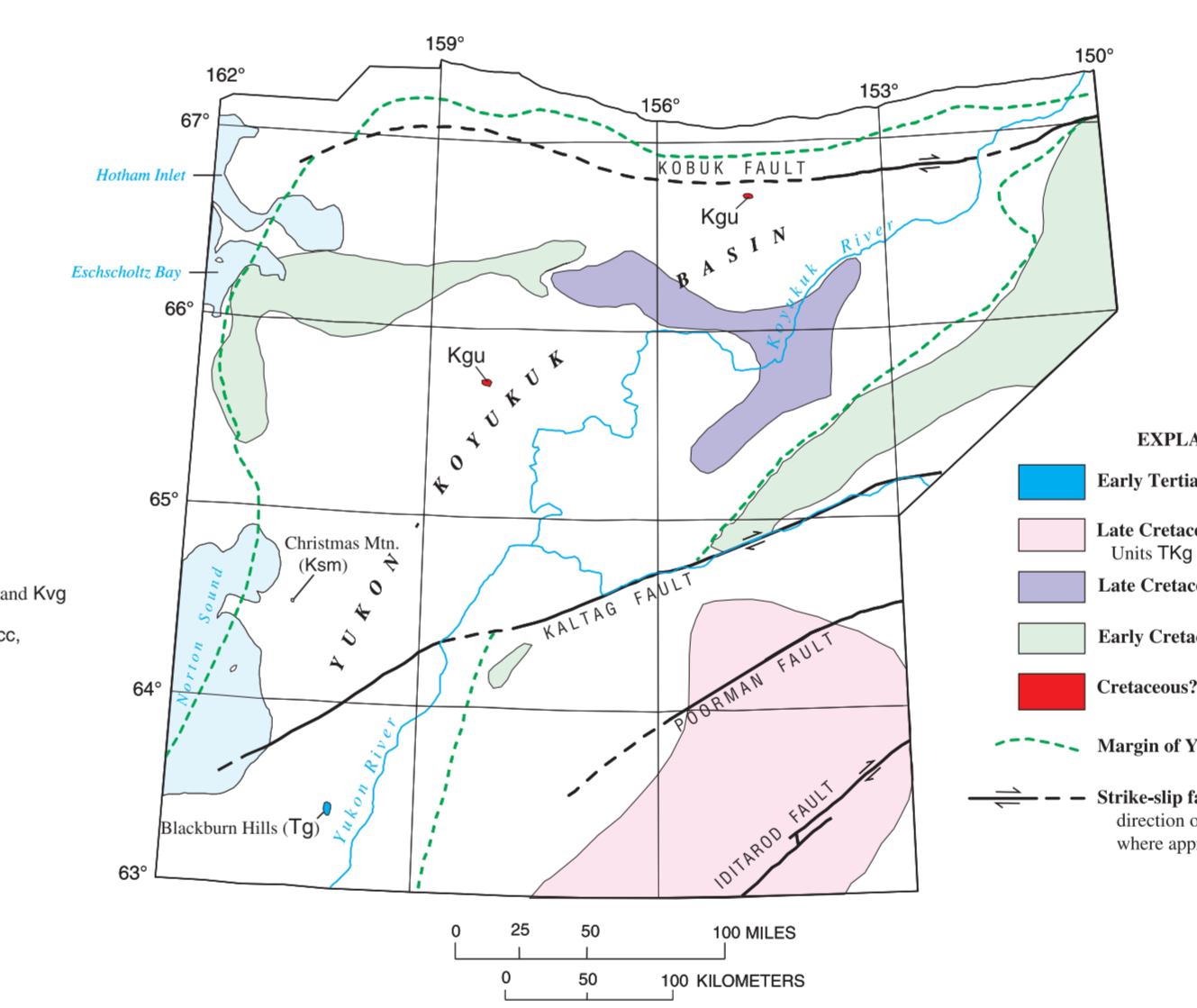


Figure 3. Map showing distribution of plutonic rocks by age groups.

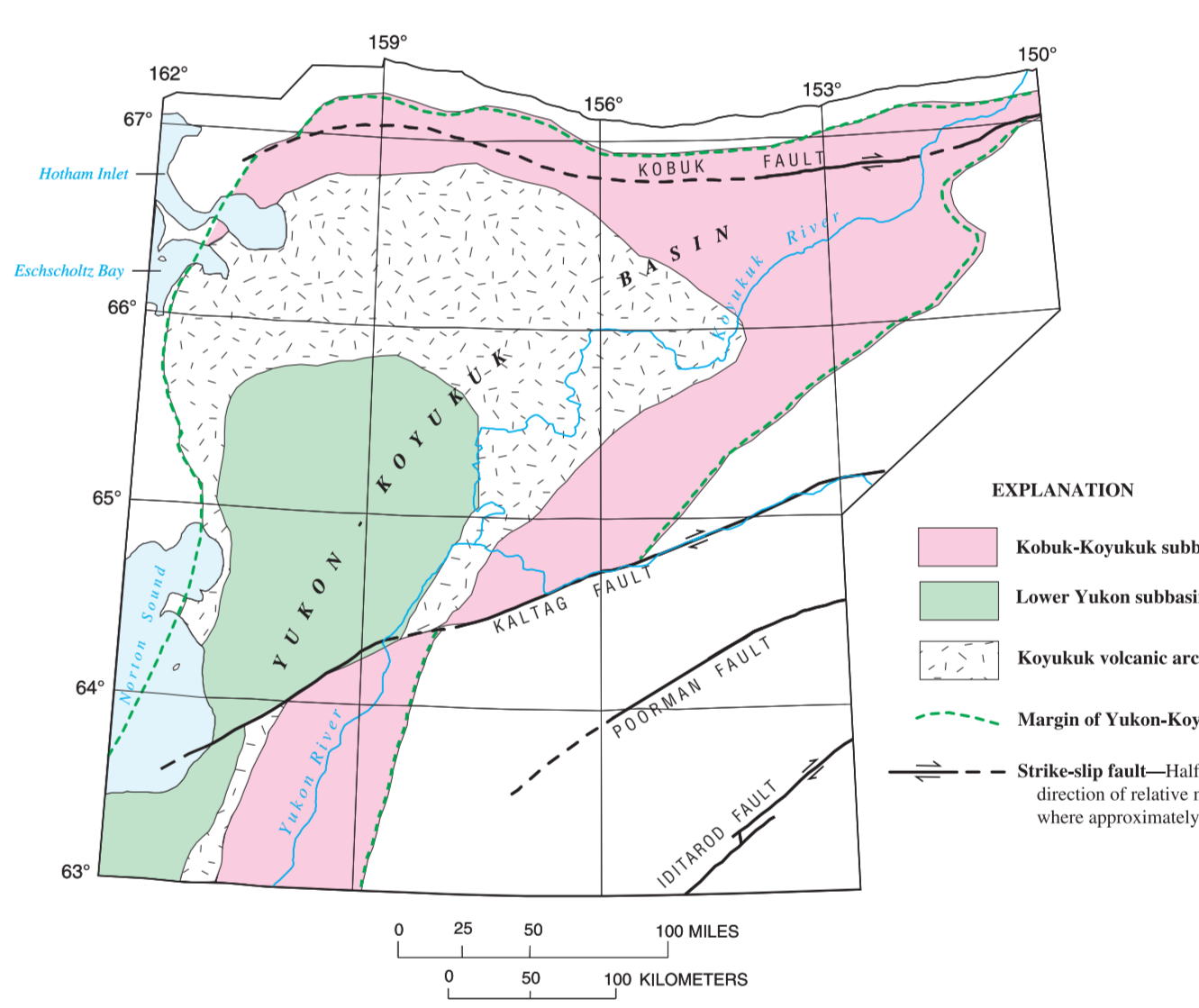
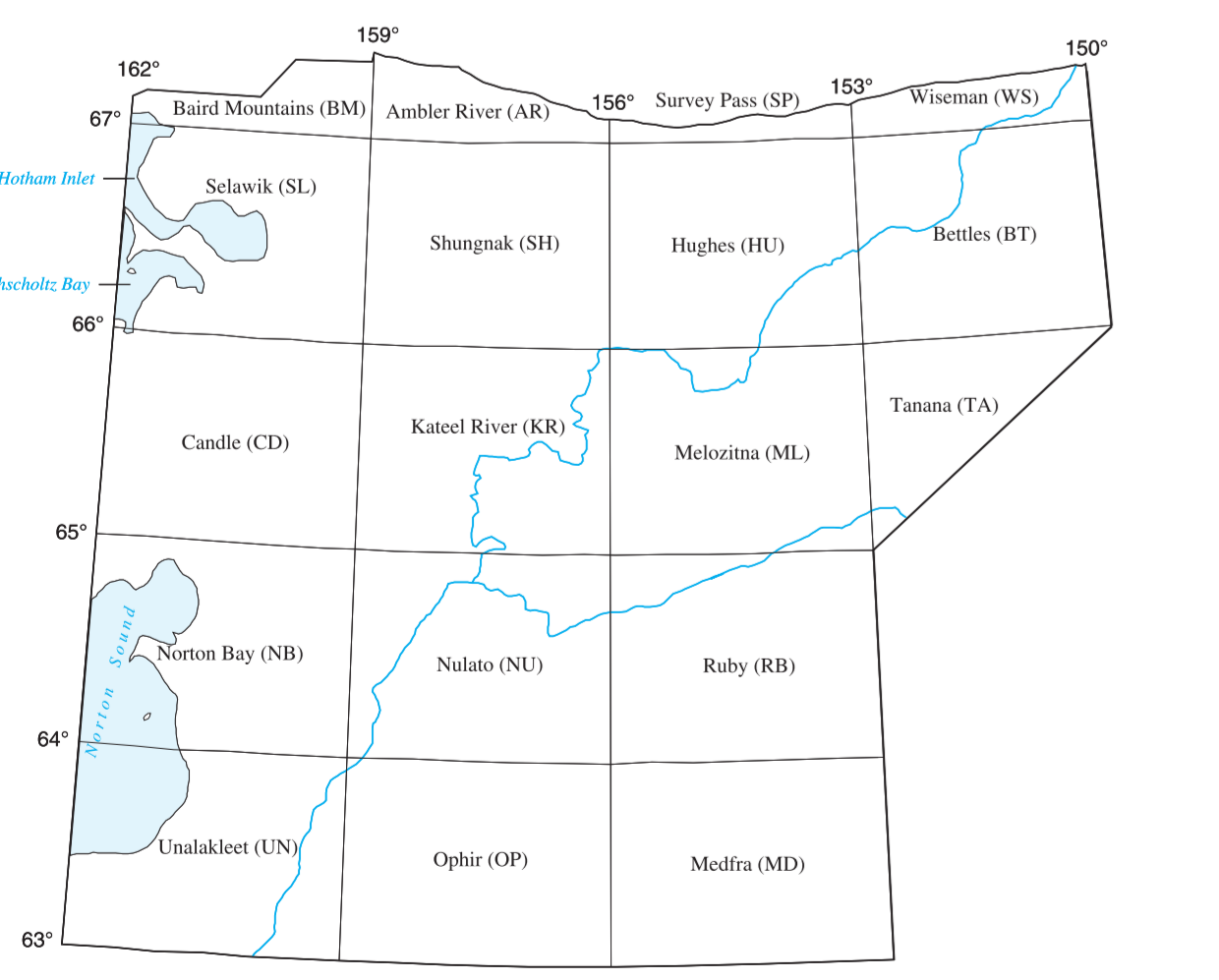


Figure 4. Diagrammatic sketch of Yukon-Koyukuk Basin showing Koyukuk and lower Yukon subbasins and volcanic terranes. The subbasins and the volcanic terranes are distally offset 105 to 130 kilometers along the Kaltag Fault.



Index to 1:250,000-scale quadrangles and quadrangle abbreviations

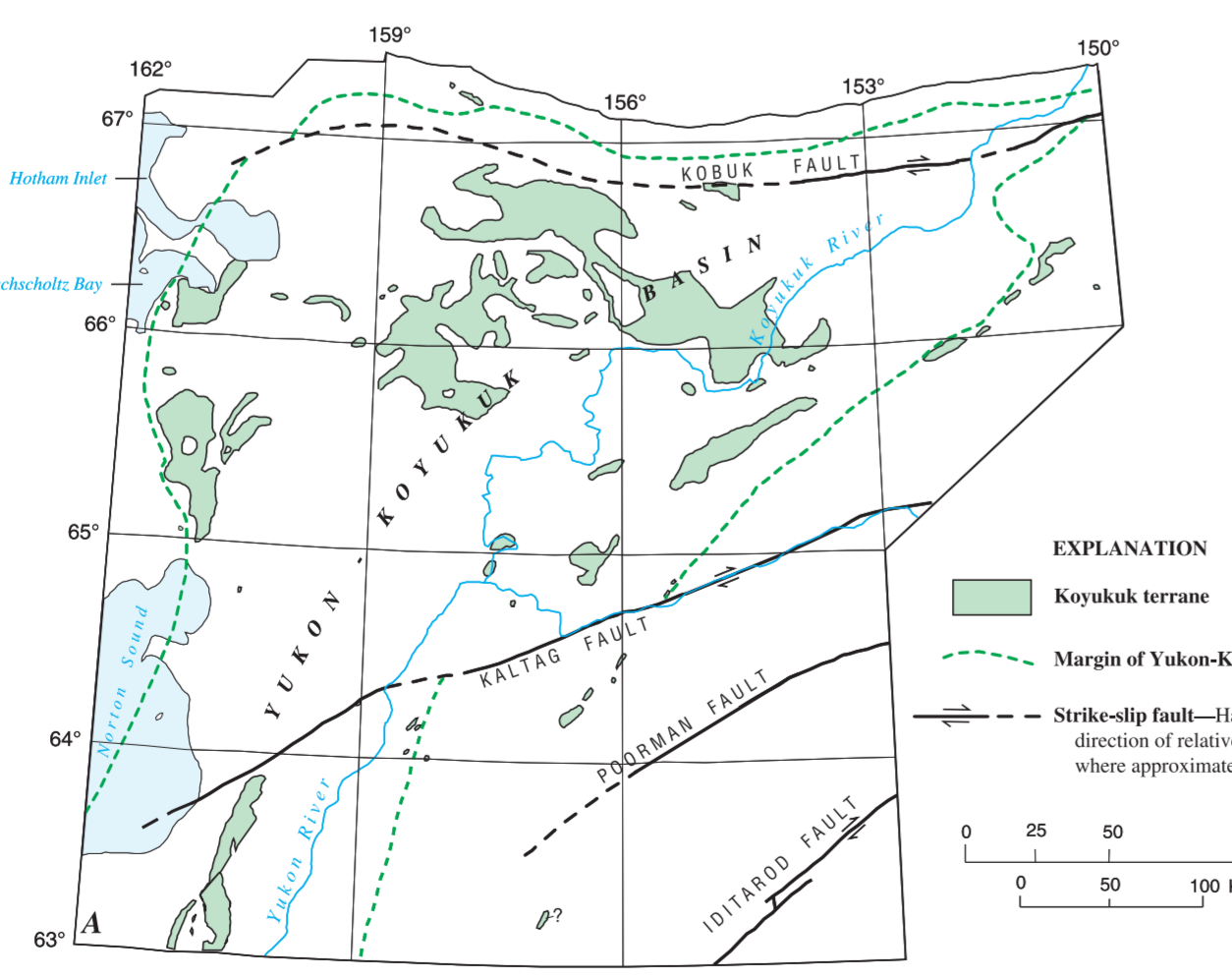


Figure 5A. Map showing distribution of lithotectonic terranes: Koyukuk terrane.

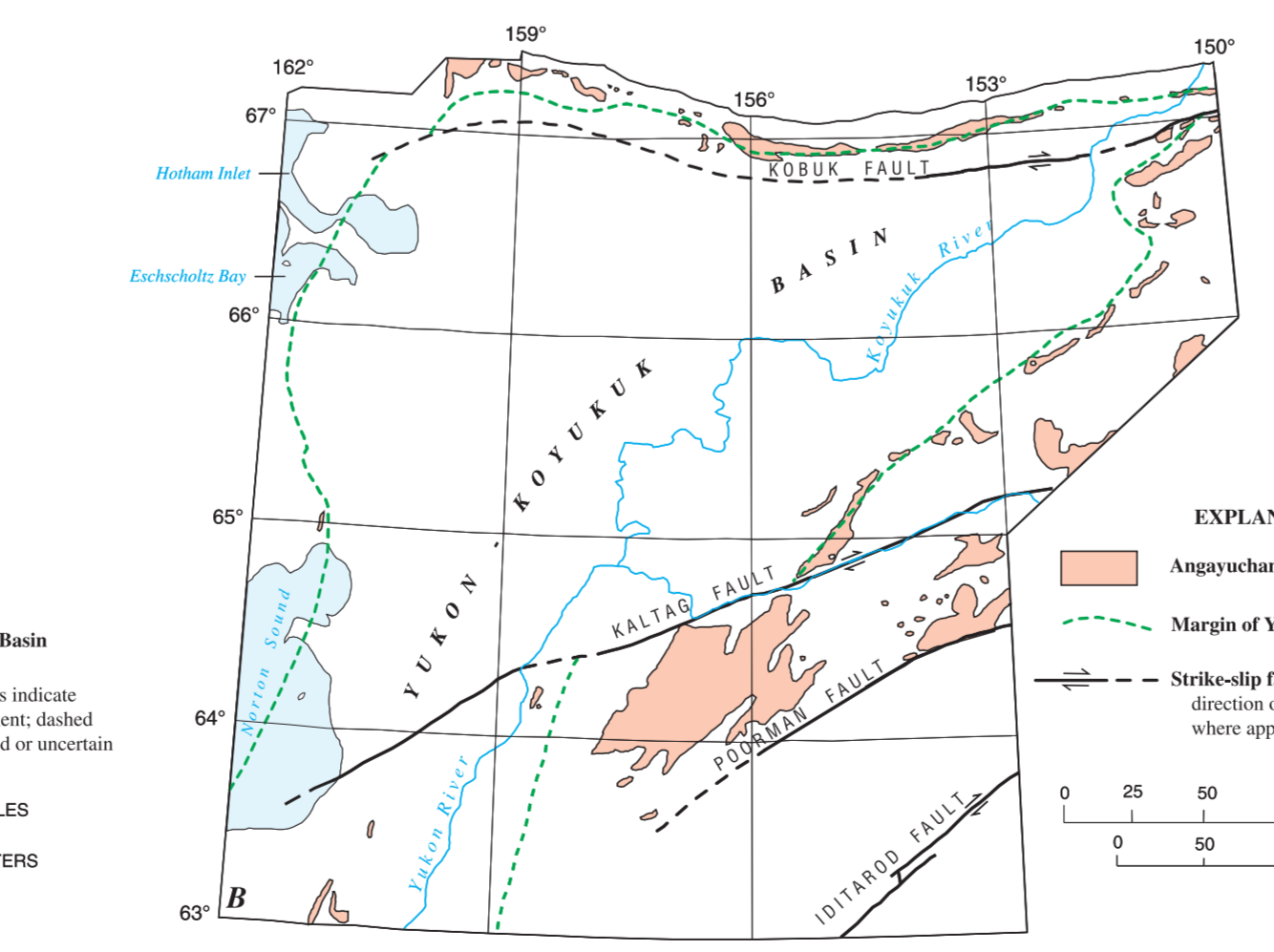


Figure 5B. Map showing distribution of lithotectonic terranes: Angyucham-Toztina terrane.

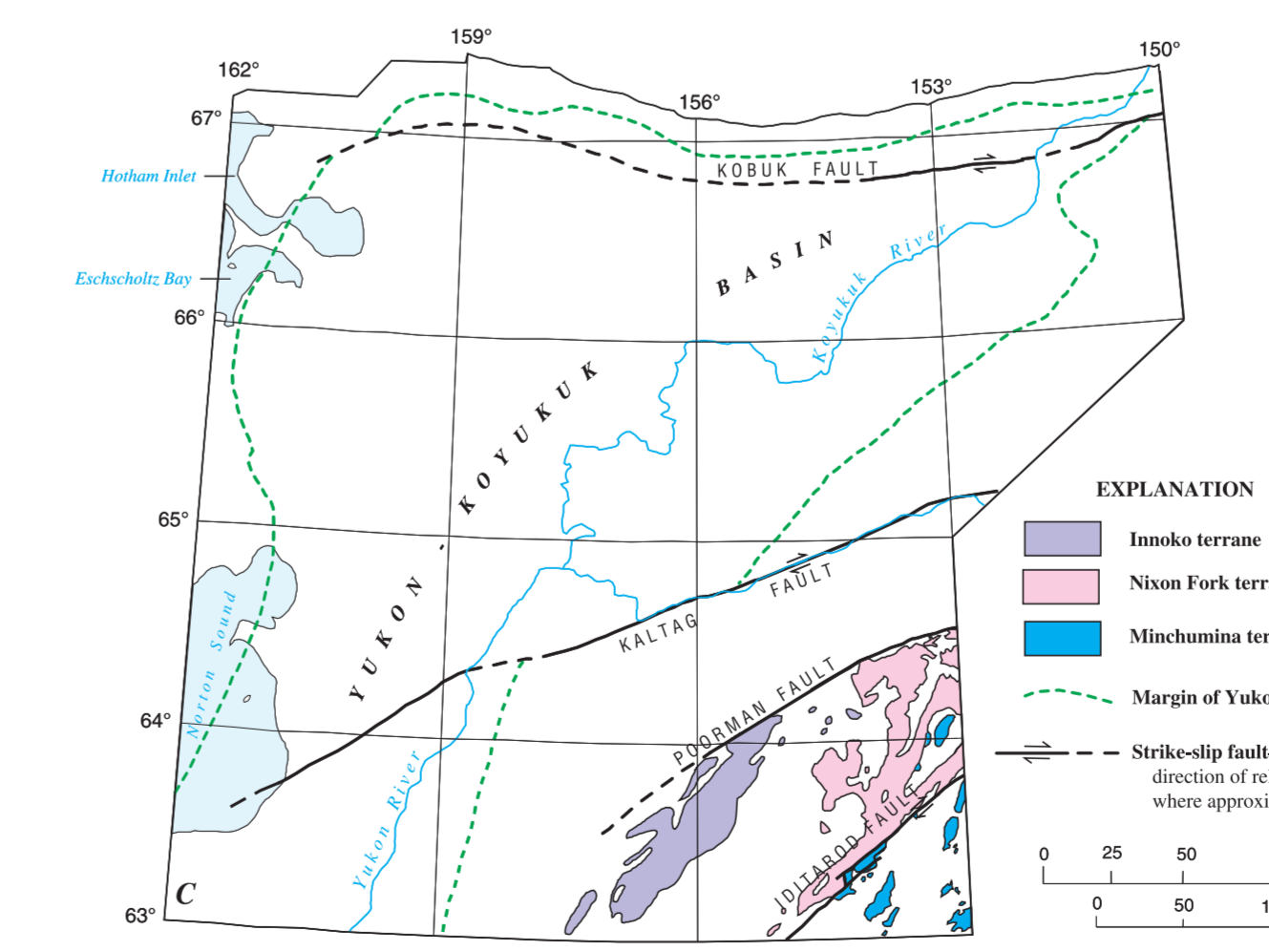


Figure 5C. Map showing distribution of lithotectonic terranes: Innoko, Nixon Fork, and Minchumina terranes.

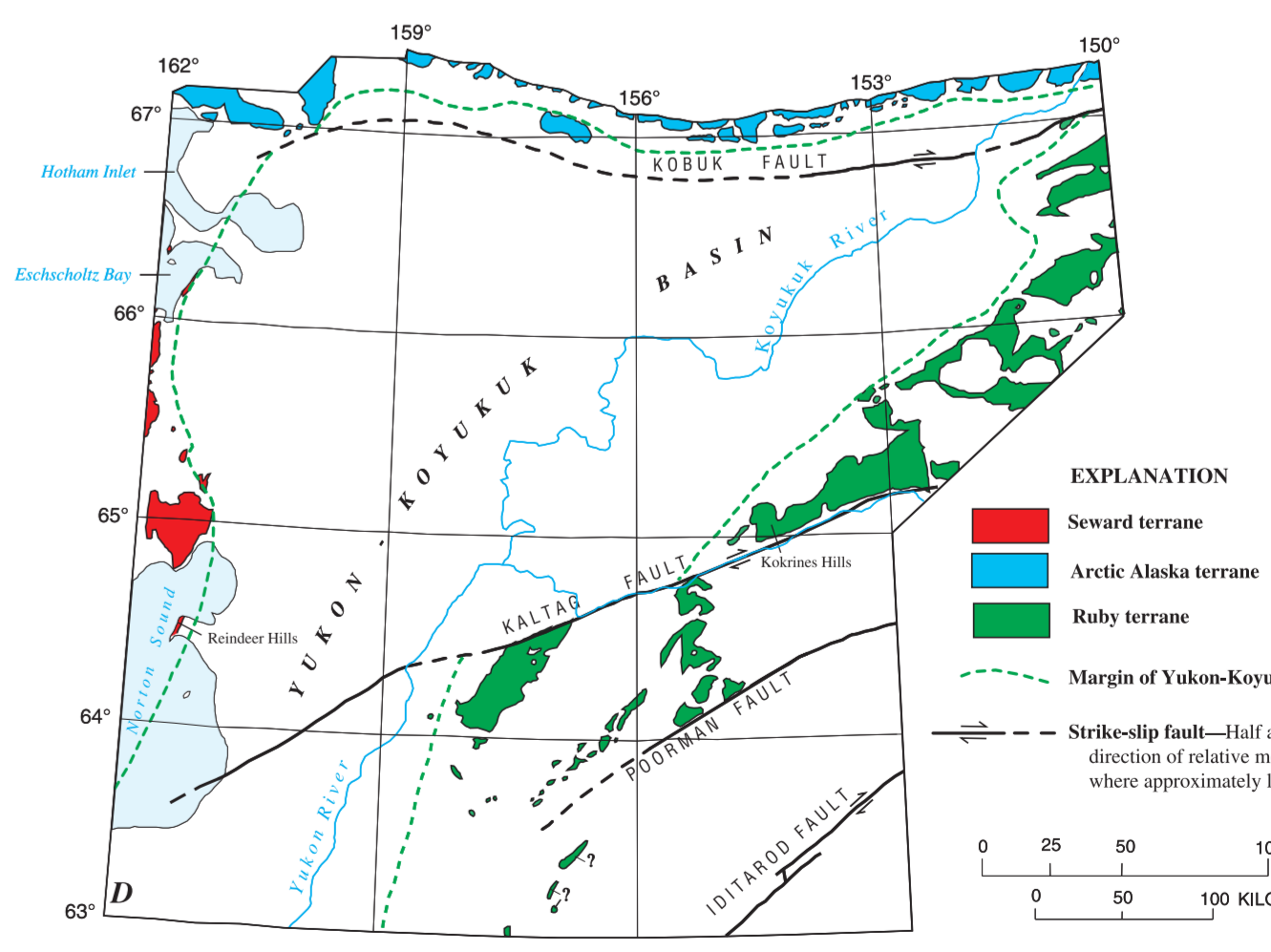


Figure 5D. Map showing distribution of lithotectonic terranes: Seward, Arctic-Alaska, and Ruby terranes.

Geologic Map of the Yukon-Koyukuk Basin, Alaska

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