

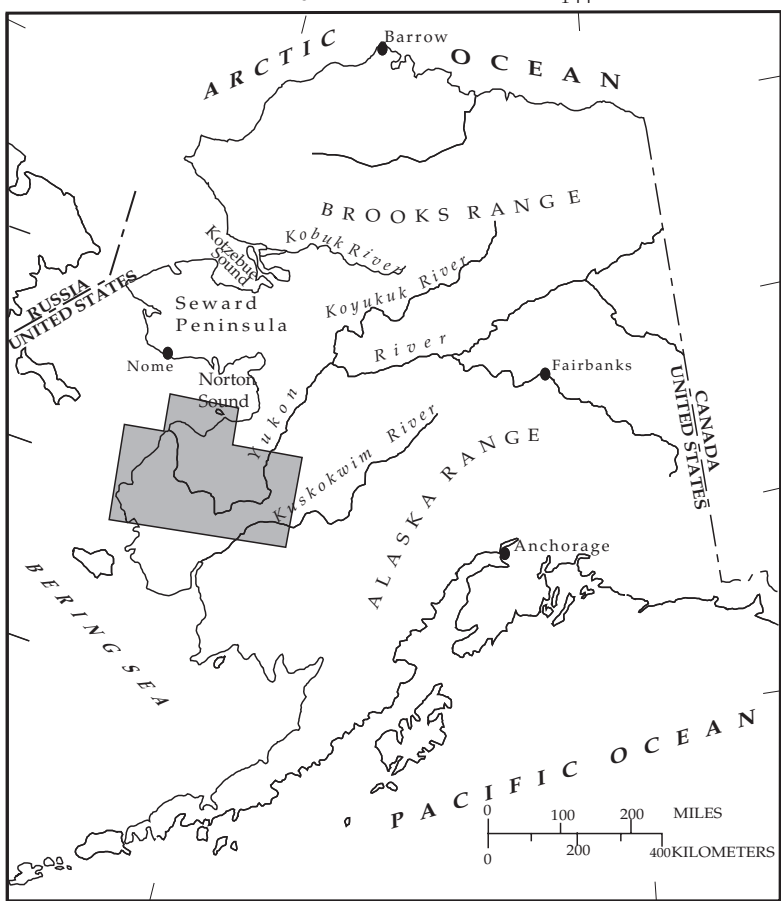
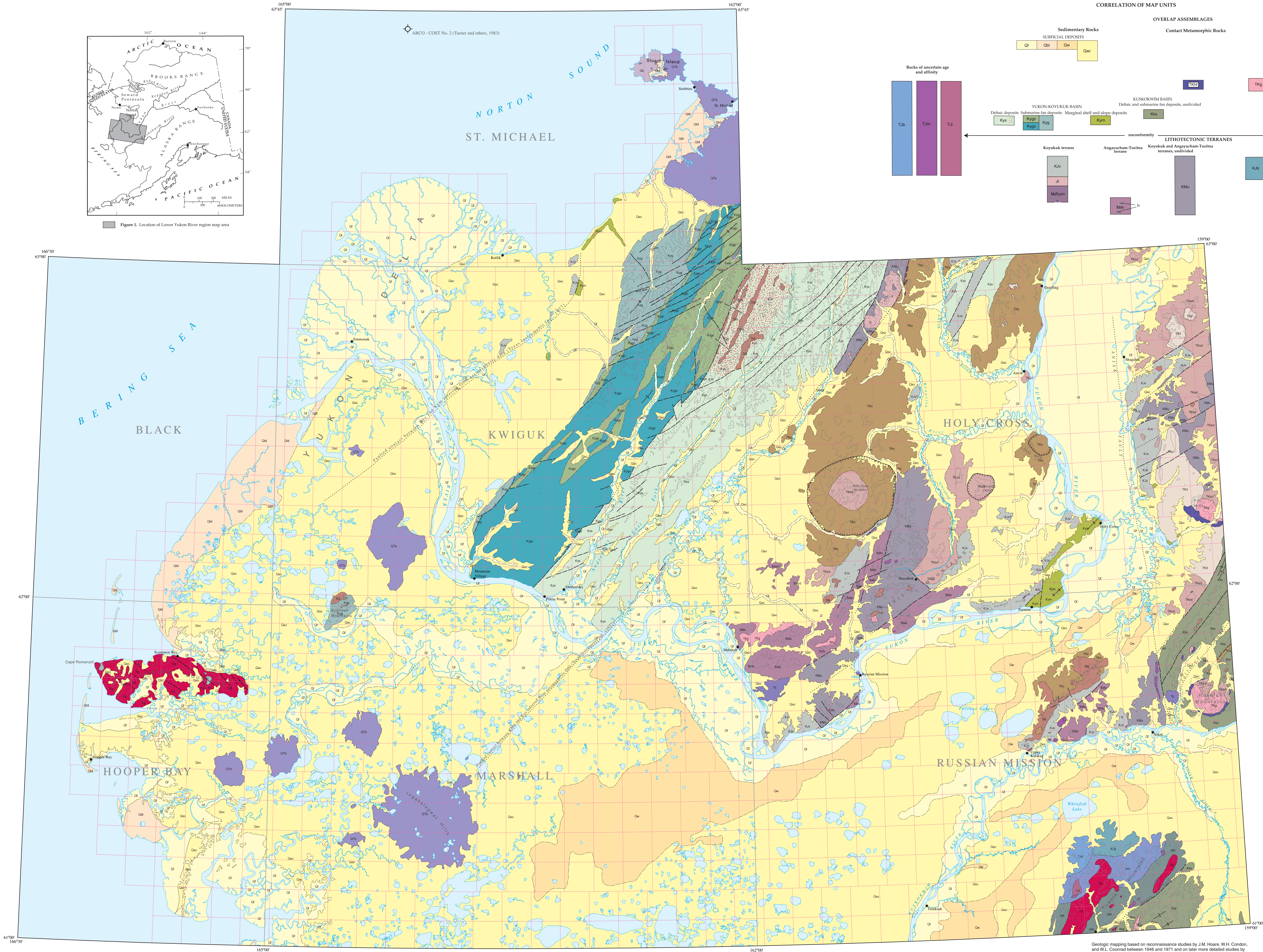


Figure 1. Location of Lower Yukon River region map area



Base from U.S. Geological Survey 1:250,000-scale St. Michael, 1952 (minor revisions 1980);
Black, 1951 (minor revisions 1971); Kwiguk, 1952 (minor revision 1994); Holy Cross, 1952,
(minor revision 1988); Hooper Bay, 1953 (minor revision 1985); Marshall, 1954; Russian
Mission, 1950

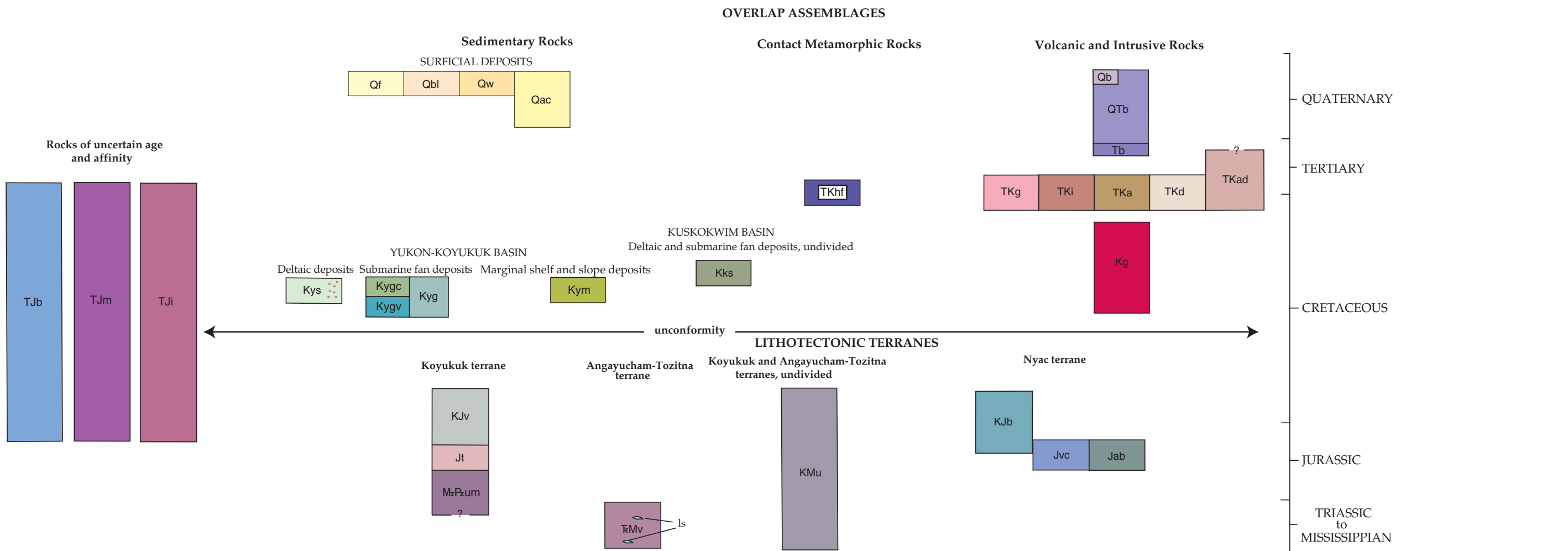
Contours from a compilation of multiple 15 minute U.S. Geological Survey 45.4-meter Digital
Elevation Models (DEMs)

Alaska Albers Equal Area Conic projection; 1927 North American Datum

RECONNAISSANCE GEOLOGIC MAP OF THE LOWER YUKON RIVER REGION, ALASKA

By
William W. Patton, Jr., Frederic H. Wilson, and Keith A. Labay
2006

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

OVERLAP ASSEMBLAGES

- SURFICIAL DEPOSITS**
- Qf Floodplain, tidal flats, and estuarine deposits (Quaternary).
 - Qbl Beach and lagoonal deposits (Quaternary)
 - Qw Wind-blown deposits (Quaternary)
 - Qac Alluvial and colluvial, and glacial drift deposits, undivided (Quaternary)
- VOLCANIC AND INTRUSIVE ROCKS**
- Qb Basalt lava flows (Quaternary and latest Tertiary). Qb, young scoriaceous basalt lava flows and cones
 - Tb Basalt lava flows (late Tertiary)
 - TKg Granite, granodiorite, syenite, and monzonite (early Tertiary and latest Cretaceous)
 - TKi Shallow intrusive rocks of intermediate and silicic composition (early Tertiary and latest Cretaceous)
 - TKa Andesite and basalt lava flows and volcaniclastic rocks (early Tertiary and latest Cretaceous)
 - TKd Dacitic and rhyolitic lava flows and domes, ash-flow tuffs, and hypabyssal rocks (early Tertiary and latest Cretaceous)
 - TKad Dacite, rhyolite, andesite, and basalt lava flows, and volcaniclastic and hypabyssal rocks, undivided, (Tertiary and latest Cretaceous)
 - rg Granodiorite and granite (Late and Early Cretaceous)

CONTACT METAMORPHIC ROCKS

- IKu Hornfels (early Tertiary and latest Cretaceous)
- YUKON-KOYUKUK BASIN**
- Kys Deltic deposits
 - Kysg Sandstone and siltstone (Cretaceous). Stippled pattern where Kys is intruded by numerous small hypabyssal bodies of rhyolite and dacite (TKi)
 - Kysv Submarine fan deposits
 - Kysg Highly calcareous graywacke sandstone and mudstone turbidites (Cretaceous)
 - Kysv Graywacke sandstone and mudstone turbidites containing abundant laumontized volcanic debris (Cretaceous)
 - Kyg Graywacke sandstone and mudstone turbidites, undivided (Cretaceous)

- Kym Marginal shelf and slope deposits
 - Kym Polymict conglomerate, sandstone, siltstone, and shale (Cretaceous)
- KUSKOKWIM BASIN**
- Kks Deltic and submarine fan deposits, undivided
 - Kks Sandstone, siltstone, and shale (Cretaceous)

LITHOTECTONIC TERRANES

- KOYUKUK TERRANE**
- Kkv Andesitic and basaltic volcaniclastic rocks and lava flows, chert, and mudstone (Early Cretaceous and Jurassic)
 - Jt Trondhjemite, tonalite, and gabbro (Jurassic)
 - Mbrum Serpentinized ultramafic rocks (Mesozoic and Paleozoic?)
- ANGAYUCHAM-TOZITNA TERRANE**
- TKmu Completely deformed assemblage of altered basalt, chert, breccia, argillite, tuff, volcaniclastic graywacke, and limestone (Triassic to Mississippian)
- UNDIVIDED KOYUKUK AND ANGAYUCHAM-TOZITNA TERRANES**
- Kmu Andesitic and basaltic volcaniclastic rocks and lava flows, chert, and mudstone (Kkv) and altered basalt, chert, chert breccia, argillite, tuff, volcaniclastic graywacke, and limestone (TKmu) undivided (Cretaceous to Mississippian)
- NYAC TERRANE**
- Kjb Basalt and andesite lava flows (Early Cretaceous and (or) late Jurassic)
 - Jvc Volcaniclastic conglomerate, sandstone, and shale (Late and Middle Jurassic)
 - Jbb Andesite and basalt lava flows and marine volcaniclastic rocks (Middle Jurassic)

- VOLCANIC AND INTRUSIVE ROCKS OF UNCERTAIN AGE AND AFFINITIES**
- Tjb Whitefish Lake volcanic field (early Tertiary? to Jurassic?)
 - Tjm Altered mafic plutonic rocks (early Tertiary? to Jurassic?)
 - Tja Hypabyssal felsic intrusive rocks (early Tertiary? to Jurassic?)

- Contact— Approximately located; dotted where concealed
- Fault— Approximately located; dotted where concealed
- Anticline
- Syncline
- Outline of volcanic structure
- Dry hole

Geologic mapping based on reconnaissance studies by J.M. Hoare, W.H. Condon, and W.L. Conrad between 1948 and 1971 and on later more detailed studies by numerous other investigators. Sources for all the geologic information used in preparing this map are listed in the Description of Map Units in the accompanying pamphlet. Digital map prepared by F.H. Wilson and K.A. Labay.

Edited by _____

Manuscript approved for publication _____