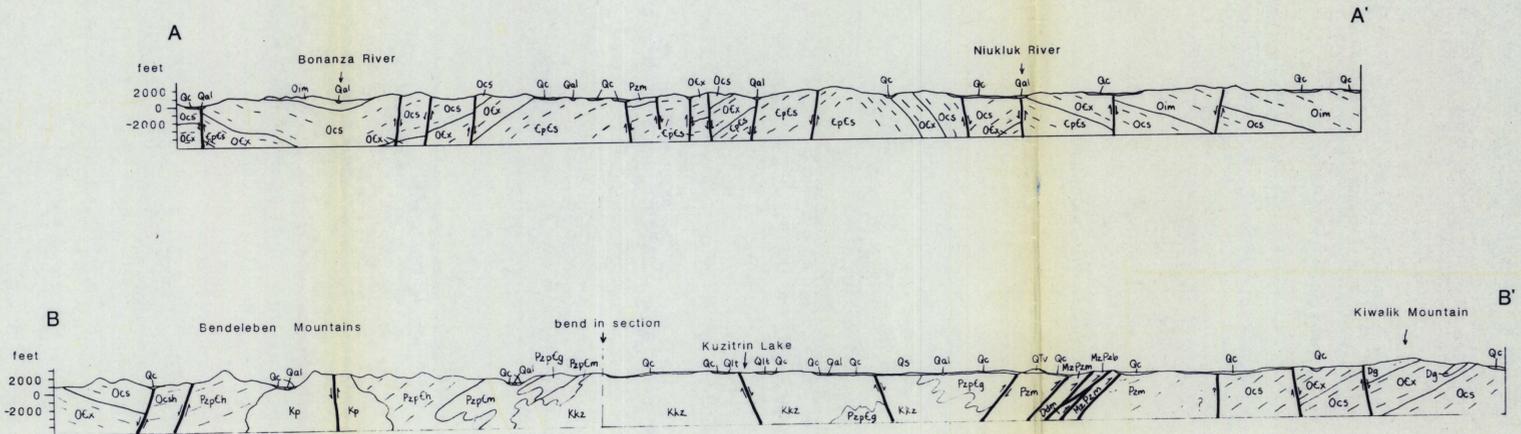


GEOLOGIC CROSS-SECTION



LIST OF MAP UNITS

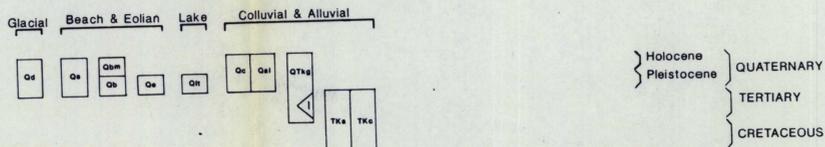
SURFICIAL DEPOSITS		INTRUSIVE IGNEOUS ROCKS	
Qm	MODERN BEACH DEPOSITS (Holocene)	Tm	MAFIC DIKES (Tertiary)--represented by symbol
Qb	BEACH DEPOSITS (Pleistocene)	Ta	QUARTZ LATITE (Tertiary)--light tan to orange weathering dikes, sills and plugs of rhyolitic to andesitic composition; represented by symbol
Qe	DUNE SAND DEPOSITS (Pleistocene)	Xog	ONATUT GRANITE (Late Cretaceous)--Monzogranite and lesser syenogranite; 69.2±2 Ma and 71.2±2 Ma (K-Ar, biotite)
Qs	SILT AND PEAT (Quaternary)	kp	PARGON PLUTON (Cretaceous)--Granodiorite and quartz monzonite
Qt	LAKE TERRACE DEPOSITS (Pleistocene)	kb	BENDELEBEN PLUTON (Cretaceous)--Monzogranite, granodiorite, quartz monzonite and quartz monzodiorite; 81.8±2 Ma (K-Ar, biotite)
Qd	GLACIAL DRIFT, UNDIVIDED (Late Quaternary)	kkz	KUZITRIN PLUTON (Cretaceous)--Monzogranite; 83.0±1.4 Ma (K-Ar, biotite)
Qc	SILTY COLLUVIUM, UNDIVIDED (Quaternary)--Includes slope deposits, glacial deposits highly modified by weathering, and volcanic rocks covered by a thick mantle of silt	kku	KUGRUK PLUTON (Cretaceous)--Quartz monzonite to quartz monzodiorite; 94.9±2.9 Ma (K-Ar, hornblende)
Qa1	ALLUVIUM, UNDIVIDED (Quaternary)	kae	ASSES EARS STOCK (Cretaceous)--Monzogranite to syenogranite
QTKg	KOUGAROK GRAVEL (Quaternary, Tertiary)	kcb	CROSSFOX BUTTE STOCK (Cretaceous)--Monzogranite to quartz monzonite
VOLCANIC ROCKS		kvb	VIRGINIA BUTTE STOCK (Cretaceous)--Quartz monzonite to syenite; 94.8±1.9 Ma (K-Ar, biotite)
Q1j	LOST JIM BASALT (Holocene)--Single basaltic lava flow and vent deposits undisturbed by frost brecciation	knh	NIMWOOD HILL STOCK (Cretaceous)--Monzonite
Qv	VOLCANIC ROCKS, UNDIVIDED (Quaternary)--Basalt and basaltic andesite flows and associated vent deposits slightly to strongly fragmented by frost riving and locally overlain by windblown silt	kd	DARBY PLUTON (Cretaceous)--Monzogranite, locally granodiorite; 94 Ma (K-Ar, biotite, hornblende)
Q1v	VOLCANIC ROCKS, UNDIVIDED (Quaternary and Tertiary)--Basalt and basaltic andesite flows and associated vent deposits thoroughly fragmented by frost action	kwc	WINDY CREEK PLUTON (Cretaceous)--Quartz monzonite
TKv	FELSIC VOLCANICS (Tertiary, Cretaceous)--Sericitized, limonitized tuff, flow, flow-breccia or vent-breccia	kdd	DIORITE (Cretaceous)--Hybrid diorite of Kachauk pluton
NOME GROUP		kkgm	GNEISSIC MONZONITE (Cretaceous)--Gneissic monzonite of the Kachauk pluton
Metasedimentary rocks		kkz	GRANDIORITE (Cretaceous)--Granodiorite to quartz monzonite phase of the Kachauk pluton
Dm	DOLOSTONE AND MARBLE (Devonian)--Black to dark gray dolostone and marble with relict sedimentary structures and megafossils	kkms	MONZONITE-SYENITE (Cretaceous)--Monzonite-syenite phase of the Kachauk pluton; 99.3±3 Ma (K-Ar, hornblende)
Sd	DOLOSTONE (Silurian)--Light to dark gray fine-grained dolostone	kdc	DRY CANYON STOCK (Early Cretaceous)--Nepheline syenite; 108±3 Ma (K-Ar, hornblende)
Od	DOLOSTONE (Ordovician)--Pink to light gray weathering, gray to tan fine-grained dolostone with distinct color mottling	kad	ALKALINE DIKES (Cretaceous)--Nepheline syenite and pseudoleucite porphyry; 96.3±3 Ma (K-Ar); represented by symbol
Cd	DOLOSTONE (Cambrian)--Light or medium gray to pinkish orange dolostone which weathers gray to orange; may contain a few percent quartz and white mica	kpg	PEGMATITE (Cretaceous)--represented by symbol
DOm	BLACK MARBLE (Devonian through Ordovician)--Black to dark gray marble and subordinate dolostone which is commonly well-layered, showing rhythmic alternation of coarse and fine crystalline layers	kfg	FOLIATED GRANITE (Cretaceous)--Leucocratic syenogranite, locally monzogranite
OCm	BLACK MARBLE (Devonian through Cambrian)--Black to dark gray marble and subordinate impure fissile marble; may show rhythmic alternation of purer, coarse crystalline marble and more impure, fine crystalline layers. Mafic dikes and plugs common	kqu	GRANITIC ROCKS, UNDIVIDED (Cretaceous)
OCks	CALC-SCHIST (Devonian through Cambrian)--Medium-grained calc schist interlayered with DOm and OCm	ROCKS OF THE KUGRUK FAULT ZONE	
O1m	IMPURE CHLORITE MARBLE (Ordovician)--Buff to orange weathering impure marble characterized by lenses and layers of chlorite-albite schist	TKs	SANDSTONE (Tertiary, Cretaceous)--Siltstone, sandstone, and pebbly sandstone with locally abundant coal seams
Ocs	CASADAPAGA SCHIST (Ordovician)--Light green and greenish-brown mafic- and calcareous-rich schist	TKc	CONGLOMERATE (Tertiary, Cretaceous)--Conglomerate composed predominantly of carbonate and mafic clasts
OCx	MIXED UNIT (Ordovician, Cambrian)--Interlayered pure and impure marble, quartz-graphite schist, and lesser pelite, calc-schist, and mafic schist	MzPm	MYLONITIC METABASITE (Mesozoic, Paleozoic)--Fine-grained, medium bluish-gray metabasite with fine, laminar foliation and rounded, light-green clinopyroxene grains; contains blue amphibole and leucosite where exposed in the Bendeleben quadrangle
CPcs	SOLOMON SCHIST (Cambrian, Precambrian)--Tons of resistant, well-foliated quartz-rich pelitic schist, locally containing chloritoid, glaucophane and garnet; minor calc-schist	MzPb	METABASALTIC ROCKS (Mesozoic, Paleozoic)--Dark red, green and gray vesicular basalt and basaltic pyroclastic rocks metamorphosed to lower greenschist facies
Pz1m	IMPURE MARBLE (Paleozoic)--Buff to orange weathering impure marble containing white mica, chlorite, albite, quartz and graphite; probably facies equivalent of the impure chlorite marble unit (O1m)	MzPs	SERPENTINITE (Mesozoic, Paleozoic)
		MzPt	SPRUCE CREEK TONALITE (Mesozoic, Paleozoic)

EXPLANATION

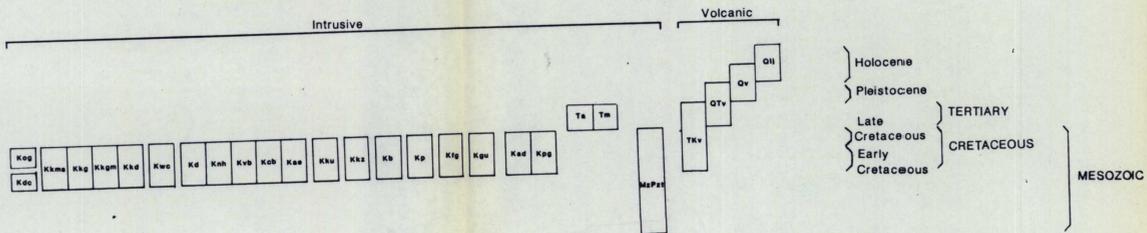
- fault, strike-slip or vertical, dashed where inferred, dotted where buried
- strike and dip of bedding
- strike and dip of metamorphic foliation
- dike; Tm
- dike; Ta
- dike; Kpg
- dike; Kad
- approximate boundary of Kugruk fault zone
- rock pervasively sheared where exposed
- * 83AGe23 location of radiometric age sample and sample number

CORRELATION OF MAP UNITS

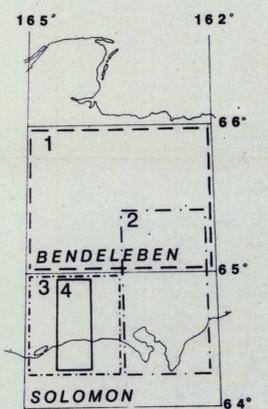
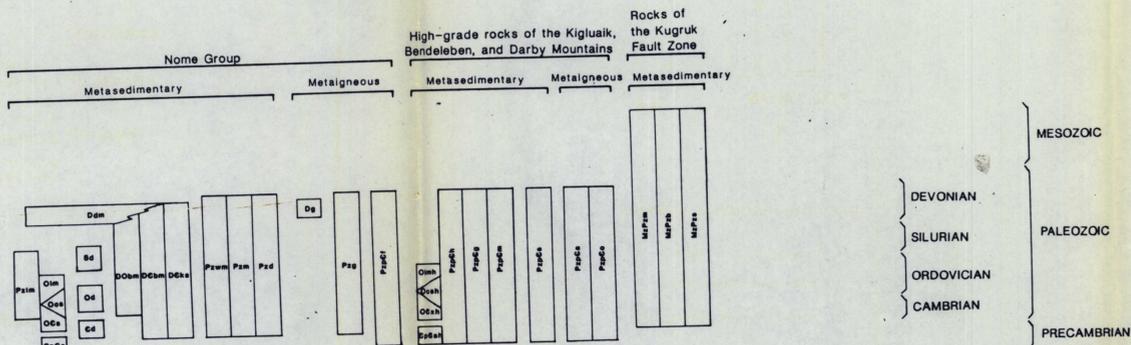
GLACIAL DEPOSITS & SEDIMENTARY ROCKS



IGNEOUS ROCKS



METAMORPHIC ROCKS



PREVIOUS REGIONAL MAPPING

- Sainsbury, C. L. 1974
- Miller and others, 1972
- Sainsbury and others, 1972
- Smith, P. S. 1910

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