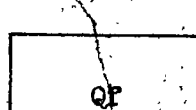
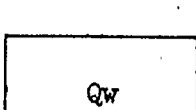
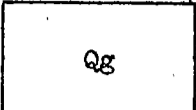


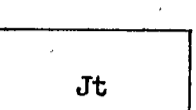
EXPLANATION

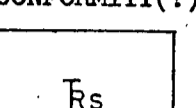
GEOLOGIC MAP OF THE KILLIK-ANAKTUVUK RIVERS REGION, BROOKS RANGE, ALASKA

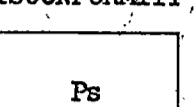
60-21

SEDIMENTARY ROCKS

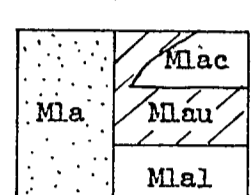
-  Silt and gravel  
Recent flood-plain, riverbed, and lake deposits
-  Silt and sand  
Glaciofluvial and alluvial deposits in large part reworked by wind
-  Silt and gravel  
Glacial and glaciofluvial deposits resulting from valley glaciers

-  Tiglukpak formation  
Sandstone, graywacke type; shale, chert, siltstone, and conglomerate

- UNCONFORMITY (?)
-  Shublik formation  
Dark shale, limestone, and chert

- DISCONFORMITY
-  Sikeikpak formation  
Shale and siltstone, with chert

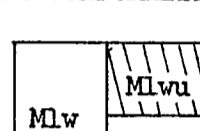
UNCONFORMITY



Alapah limestone

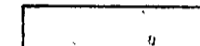
Mla, Alapah limestone; thickness in northern belt of outcrop 1,400 to more than 2,300 feet.  
Mlaa, Alapah limestone (upper part); light-gray colored, coarse-grained limestone, locally silicified, locally replaced by dolomite; some shaly limestone, black chert, lithographic limestone. Lithostrotionoid corals and gigantoproductid brachiopods of Late Mississippian age.  
Mlac, Alapah limestone (chert-shale member); black chert; shale; dark-gray, shaly limestone, locally phosphatic. Brachiopods and goniatites of Late Mississippian age.  
Mlal, Alapah limestone (lower part); dark-gray, predominantly fine-grained, partly shaly limestone, with black, nodular chert

DISCONFORMITY (?)



Wachsmuth limestone

Mlv, Wachsmuth limestone; thickness in northern belt of outcrop 470 to more than 900 feet.  
Mlva, Wachsmuth limestone (upper part); medium-gray, fine-grained limestone, with nodular and bedded gray-black chert. Brachiopods of Early Mississippian age.  
Mlv1, Wachsmuth limestone (lower part); coarse-grained, locally dolomitic; dark-gray shaly limestone; black shale. Brachiopods and corals of Early Mississippian age



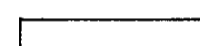
Kayak shale

Black shale, quartzose sandstone at base; ferruginous limestone at top of section. Maximum complete measured section 1,140 feet, minimum complete measured section 850 feet. Corals, bryozoans, and brachiopods of Early Mississippian age



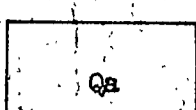
Kanayut conglomerate

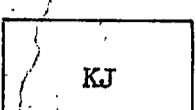
Massive quartz-chert conglomerate, sandstone and quartzite, gray to gray-green. Thickness east of Amthoyuk Lake, 4,500 feet

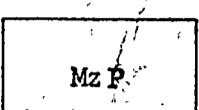


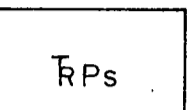
Sandstone, siltstone and shale

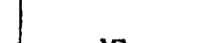
Gray-green sandstone, pink to brown weathering, thin-bedded, partly calcareous, partly schistose, locally crossbedded; green, fine-grained, massive calcareous sandstone; siltstone and shale. Minor amounts of slate-pebble conglomerate. Grades laterally into Ds, grades(?) vertically into Mk

-  Quaternary deposits, undifferentiated  
Include alluvial, glacial, and glaciofluvial deposits where not separately distinguished; colluvium where bedrock cannot be inferred

-  Cretaceous and Jurassic rocks, undifferentiated  
Tiglukpak formation and Cretaceous rocks, predominantly graywacke, sandstone, shale, siltstone; local basal conglomerate

-  Cretaceous, Jurassic, Triassic, and Permian rocks, undifferentiated

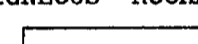
-  Shublik and Sikeikpak formations, undifferentiated



Lisburne group

Thickness of section in northern belt of outcrop approximately 3,200 to 2,200 feet. In southern belt of outcrop 330 to 200 feet

IGNEOUS ROCKS



Mafic intrusive rocks

Contact  
Dotted where concealed

+ - + - +  
Contact of unknown type  
May be contact of overturned beds, or thrust fault

-----??-----  
Indefinite contact  
Includes gradational contacts, inferred contacts, indefinite boundaries of surficial deposits.  
Questioned where doubtful



Fault  
Dashed where approximately located, dotted where concealed, questioned where doubtful. U, upthrown side; D, downthrown side



Thrust fault  
Saw teeth on side of upper plate. Questioned where doubtful



Anticline  
Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located



Syncline  
Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located



Overturned anticline  
Showing trace of axial plane, direction of dip of limbs and plunge of axis. Dashed where approximately located



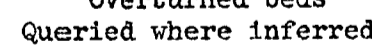
Overturned syncline  
Showing trace of axial plane, direction of dip of limbs and plunge of axis. Dashed where approximately located



Strike and dip of beds



Overturned beds  
Queried where inferred



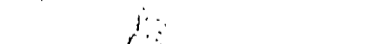
Strike of vertical beds



Horizontal beds



Strike and dip of beds by distant observation or photointerpretation



Generalized strike and dip of crenulated beds

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

# 198

Upper Mississippian

Lisburne group

Lower Mississippian

Upper Devonian

Middle Devonian(?)

QUATERNARY

CRETACEOUS AND JURASSIC

JURASSIC

TRIASSIC

PERMIAN

MISSISSIPPIAN

DEVONIAN