E X P L A N A T I O N

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

SEDIMENTARY ROCKS

Qr

Silt and gravel

Recent flood-plain, riverbed, and lake deposits

Qw

Silt and sand

Glaciofluvial and alluvial deposits in large part reworked by wind

Qg

Silt and gravel

Glacial and glaciofluvial deposits resulting from valley glaciers

Jt

Tiglukpuk formation

Sandstone, graywacke type; shale, chert, siltstone, and conglomerate

UNCONFORMITY(?)

₸Rs

Shublik formation

Dark shale, limestone, and chert

DISCONFORMITY

Ps

Siksikpuk formation
Shale and siltstone, with chert

UNCONFORMITY

Upper Mississippian

Lisburne group

Mla	Mlac Mlau Mlal

Alapah limestone

Mla, Alapah limestone; thickness in northern belt of outcrop 1,400 to more than 2,300 feet.
Mlau, 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(?)

Mlw	Mlwu Mlwl

Wachsmuth limestone

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

Lower Mississippian

Mk

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

Upper Devonian

Dk

Kanayut conglomerate

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

Dss

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 Dk

Middle Devonian(?)

Qa

Quaternary deposits, undifferentiated

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

KJ

Cretaceous and Jurassic rocks, undifferentiated

Tiglukpuk formation and Cretaceous rocks, predominantly graywacke, sandstone, shale, siltstone; local basal conglomerate

₸RPs

Shublik and Siksikpuk formations, undifferentiated

Ml

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

Ds	Dl

Shale, siltstone, sandstone, and limestone

Ds, shale, dark-gray to greenish; dark-gray to greenish gray siltstone, weathers black to dark yellow-red. Minor interbedded light-gray to gray-green sandstone.
Dl, dark-gray limestone with light-gray, white marble in lower part of unit. Corals of Middle(?) Devonian age

MzP

Cretaceous, Jurassic, Triassic, and Permian rocks, undifferentiated

QUATERNARY

CRETACEOUS AND JURASSIC

JURASSIC

TRIASSIC

PERMIAN

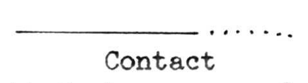
MISSISSIPPIAN

DEVONIAN

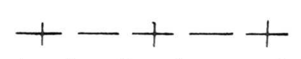
IGNEOUS ROCKS

ir

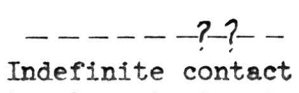
Mafic intrusive rocks



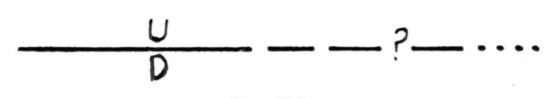
Contact
Dotted where concealed



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

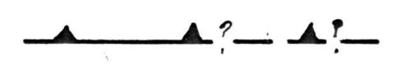


Indefinite contact
Includes gradational contacts, inferred contacts, indefinite boundaries of surficial deposits. Questioned where doubtful

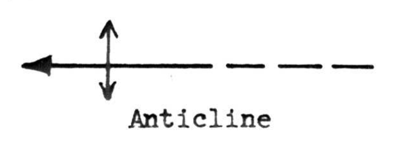


Fault

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

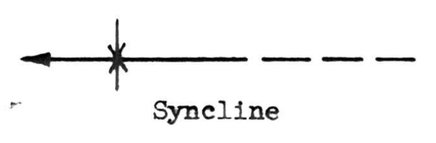


Thrust fault
Saw teeth on side of upper plate. Questioned where doubtful



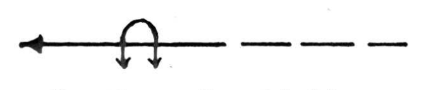
Anticline

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



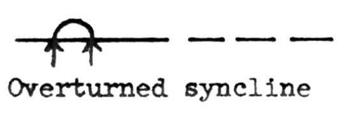
Syncline

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



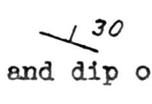
Overturned anticline

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

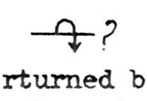


Overturned syncline

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



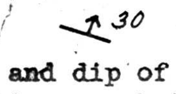
Strike and dip of beds



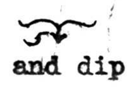
Overturned beds
Queried where inferred

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.