

DESCRIPTION OF MAP UNITS

UNCONSOLIDATED DEPOSITS

- Qal Floodplain and low terrace deposits  
Qgy Terrace deposits  
Qgo High-level gravel  
Qsm Silt and mud deposits  
Qds Debris slides  
Qsf Solifluction mantle  
Qt Thaw lake deposits  
Qus Upland silt  
Qb Marine beach (?) deposits

BEDROCK

- Kn Nanushuk Group rocks  
Kt Torok shale

SYMBOLS

Contact, dashed where approximately located, queried where extreme doubt as to position

Fault, dashed where approximately located; D - downthrown block, arrow showing dip direction

Anticline showing direction of plunge

Syncline showing direction of plunge

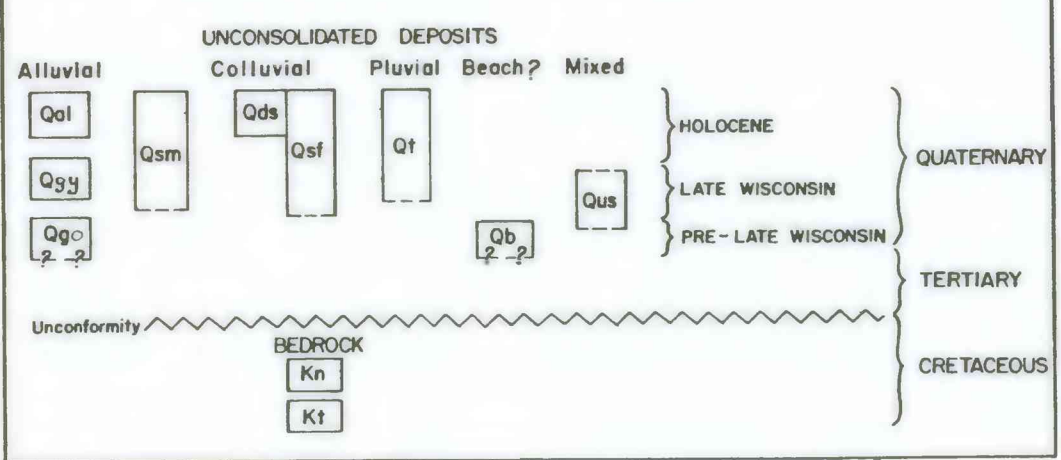
pingo

□ 27 fossil and/or radiocarbon dated locality

△ coal outcrop (Martin and Callahan, 1978)

○ coal reported in shallow seismic drill hole (Martin and Callahan, 1978)

CORRELATION OF MAP UNITS



Fossil and radiocarbon-dated localities

- 2 Fossil ivory (tusk), unnamed western-flowing stream between Kokolik and Utukok Rivers in northeast part of the quadrangle
- 45 Carbonized wood in frozen muck approximately 6 meters down from terrace surface dated at 4,960±100 years B.P. (I-11,145), east bluff of Kokolik River near west boundary of quadrangle. Approximately 6 meters of frozen silt, sand, and clay overlie sandy pebble gravel at this locality
- 30 Peat in frozen muck 1 meter down from top of terrace surface which is 30 meters above the Utukok River dated at 3,890±95 (I-11,154) years B.P. on east bluff of the Utukok River near the south border of the quadrangle. One to 2 meters of gravel underlie 1 to 2 meters of muck and overlie Torok shale at this locality
- 27 Plant fossils and carbonized and petrified stumps occur in the Nanushuk Group rocks along the Ivisaruk River near the northern boundary of the quadrangle. Two to 3 meters of orange-brown sand with well-rounded pebbles overlie the bedrock at this locality
- 8 Mammoth skull found in the east river bluff downstream from the junction of the east and west forks of the Koolik River; skull found in place at the base of a 35-meter-thick section of sand and silt above 8 meters of gravel (O'Sullivan, 1961)
- 4 Saiga antelope metacarpal bone collected by P. S. Pladeland under the direction of W. Quaide as reported in Harrington, 1961; found in the bank of the Kuk River about 2.5 km downstream from its junction with the Olingmaktoak River

Location Index



Published U.S. Geological Survey  
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with Open-file numbers

- 1 Wainwright 83-457  
2 Meade River 83-294  
3 Point Lay  
4 Lookout Ridge 83-278  
5 DeLong Mountains  
6 Misheguk Mountain  
7 Howard Pass 84-401

Geology by W.E.Yeend, 1977, 1978, assisted  
by Inyo Ellersieck, 1977, and Randy Ennis, 1978,  
bedrock adapted from Mayfield and others, 1978,  
coal locations from Martin and Callahan, 1978.

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

ENGINEERING - GEOLOGIC MAPS OF NORTHERN ALASKA, UTUKOK RIVER QUADRANGLE

by  
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1984