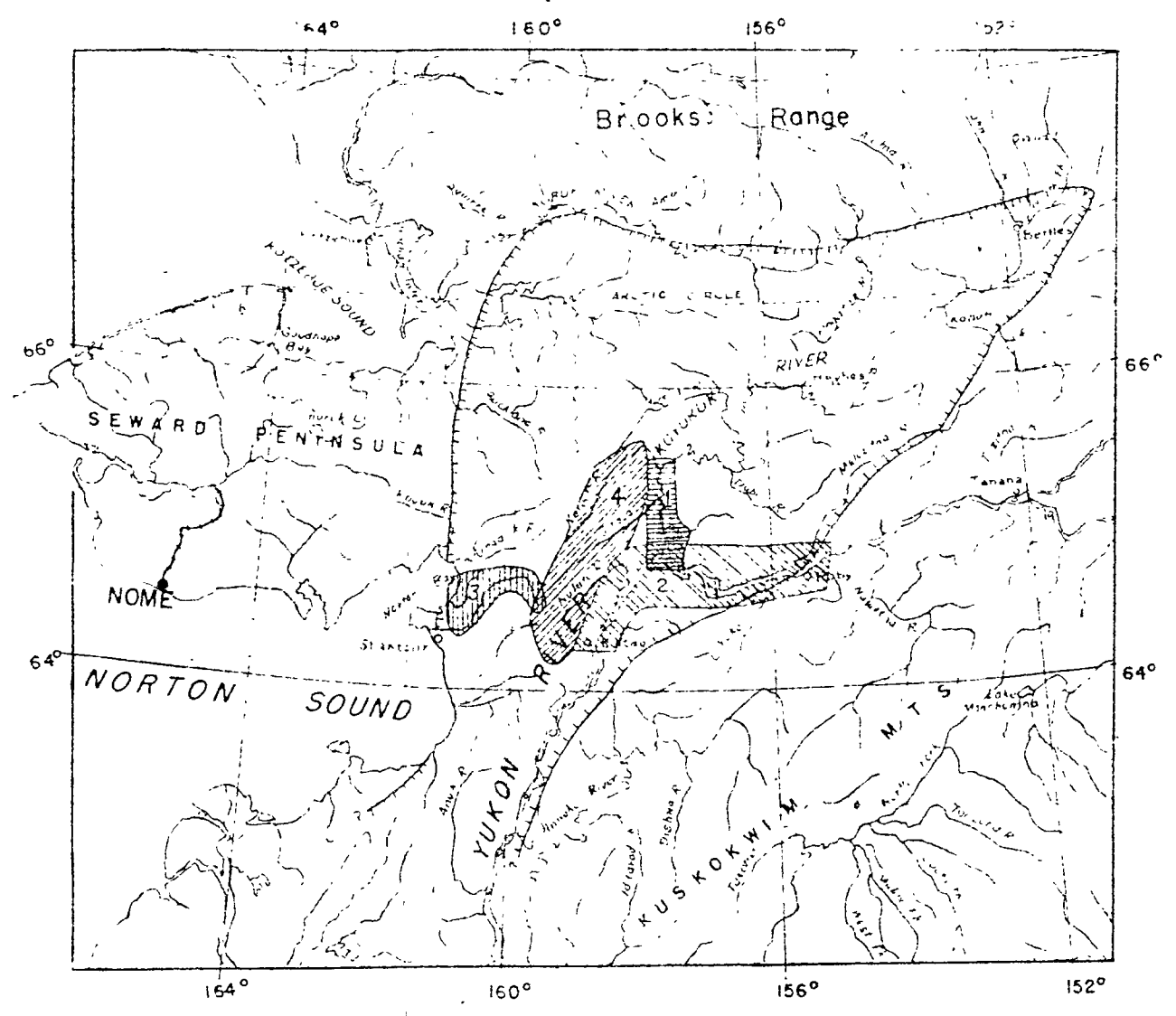
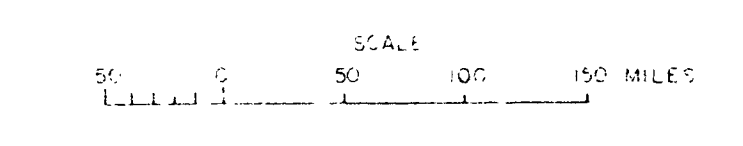


PRELIMINARY GEOLOGIC MAP AND SECTIONS ALONG THE LOWER KOYUKUK RIVER, ALASKA

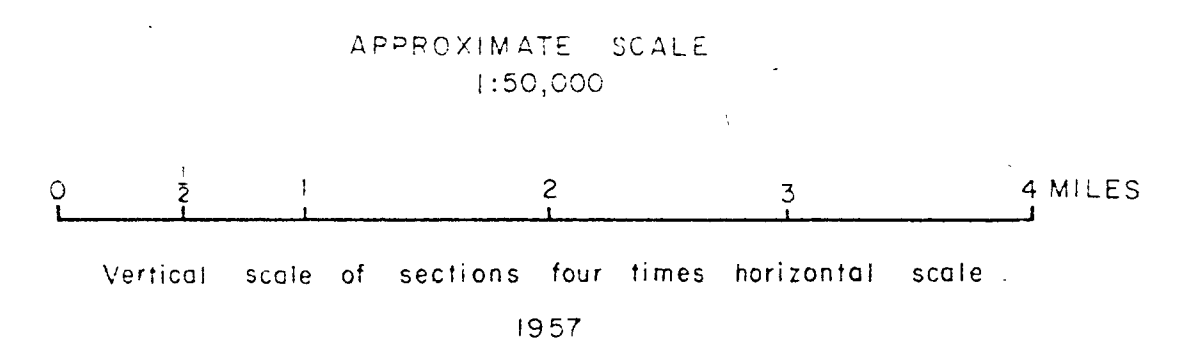
by
William W. Patton Jr., and Robert S. Bickel



INDEX MAP



- Approximate location of Koyukuk, 1951
- This report
- Patton, W. W. Jr., Bickel, R. S., 1956
- Patton, W. W. Jr., Bickel, R. S., 1953
- Bickel, R. S., Patton, W. W. Jr., 1956



Qs
Silt, sand and gravel. Locally includes silt deposits, several hundred feet thick, that may be of glacial origin.

K₁
Siltstone, shale, sandstone and conglomerate. Dark-gray to olive-gray, micaceous, locally calcareous siltstone. Cryptobedded shale. Fine- to coarse-grained, cross-bedded, felspathic, yellowish-gray to yellowish-orange, friable sandstone and conglomerate. Conglomerate pebbles and granules are chiefly white quartz and rarely dark chert, mafic volcanic rocks, and metamorphic rock. Abundant well-preserved plant impressions. Nonmarine. Probably equivalent to K₁ in the Dulato and Kateel Rivers area (Bickel and Patton, 1955) and to K₁ in the lower Yukon River (Patton and Bickel, 1956a).

K₂
Sandstone, siltstone, conglomerate and shale. Interbedded light olive-gray, fine- to coarse-grained, cross-bedded sandstone and dark-gray to dark greenish-gray, very fine-grained sandstone and siltstone. Subordinate light-gray, salt and pepper sandstone. Dark greenish-gray pebble conglomerate. Pebbles are chiefly mafic volcanic rocks and rarely white quartz. Dark silty shale. Abundant marine mollusk fauna of late Early Cretaceous age (R. W. Inlay, personal communication). Littoral and offshore marine origin. Probably equivalent to K₂ in the Dulato and Kateel Rivers area (Bickel and Patton, 1955) and to K₂ in the lower Yukon River (Patton and Bickel, 1956a).

Unconformity
Volcanic rocks. Chiefly dark basalt and subordinate volcanic breccia, chert and sulf. These rocks were originally assigned a Tertiary or Quaternary age (Spurr, J. E., 1950, p. 256) (Smith, P. S. and Eakin, H. M., 1951, p. 71-72) but are now believed to be equivalent to the Koyukuk group (Schradler, 1904, p. 77) and to be of earliest Cretaceous age or older. In a subaerial exposure opposite B (see section 1-2) K₂ overlies the volcanic rocks. K₁ conglomerate beds contain volcanic detritus.

EXPLANATION

- Strike and dip of beds
- Fault
- Contact
- Dashed where approximately located or inferred
- Invertebrate fossil locality
- Plant fossil locality
- Bedrock
- Exposed and in place
- Direction of displacement unknown

LITERATURE CITED

Bickel, R. S., and Patton, W. W. Jr., 1956. Preliminary geologic map of the Dulato and Kateel Rivers area, Alaska. U. S. Geol. Survey open-file report.

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Schradler, F. C., 1904. A reconnaissance in northern Alaska. U. S. Geol. Survey Prof. Paper 53, 129 p.

Smith, P. S., and Eakin, H. M., 1951. A geological reconnaissance in southeastern Seward Peninsula and the Norton Bay-Dulato region, Alaska. U. S. Geol. Survey Bull. 149, 145 p.

Spurr, J. E., 1950. Geology of the Yukon gold district, Alaska. U. S. Geol. Survey, 18th Ann. Rept., pt. 3, p. 57-592.

FOSSIL COLLECTIONS

- 101-undent. gastropods and pelecypods
- 102-undent. gastropods
- 103-Trigonia leana Gabb
- Arctica sp.
- Thracia sp.
- Glycymeris? sp.
- 104-Inoceramus altiflumis McLearn
- 105-Panope sp.
- Arctica sp.
- Arctica sp.
- 106-Astarte? sp.
- Solecurtus? sp.
- worm tubes
- 107-Arctica sp.
- Glycymeris? sp.
- Arctica sp.
- Panope sp.
- Pleuromya sp.
- Solecurtus? sp.
- Inoceramus cf. I. altiflumis McLearn
- Trigonia leana Gabb
- 108-Inocera?
- Arctica sp.
- Trigonia leana Gabb
- Thracia stieliki McLearn
- Goniatites matonabbei McLearn
- Solecurtus?
- Pleuromya sp.
- Astarte sp.
- 109-Inoceramus altiflumis McLearn
- Goniatites matonabbei McLearn
- Trochidites sp.
- Arctica sp.
- Inocera sp.
- Pleuromya sp.
- undent. gastropods
- 110-Inoceramus altiflumis McLearn
- Solecurtus? sp.
- Panope sp.
- Pleuromya sp.
- worm tubes
- 111-undent. gastropods
- 112-undent. gastropods
- XXX-undent. plant fossils

Collections 103-110 identified by R. W. Inlay