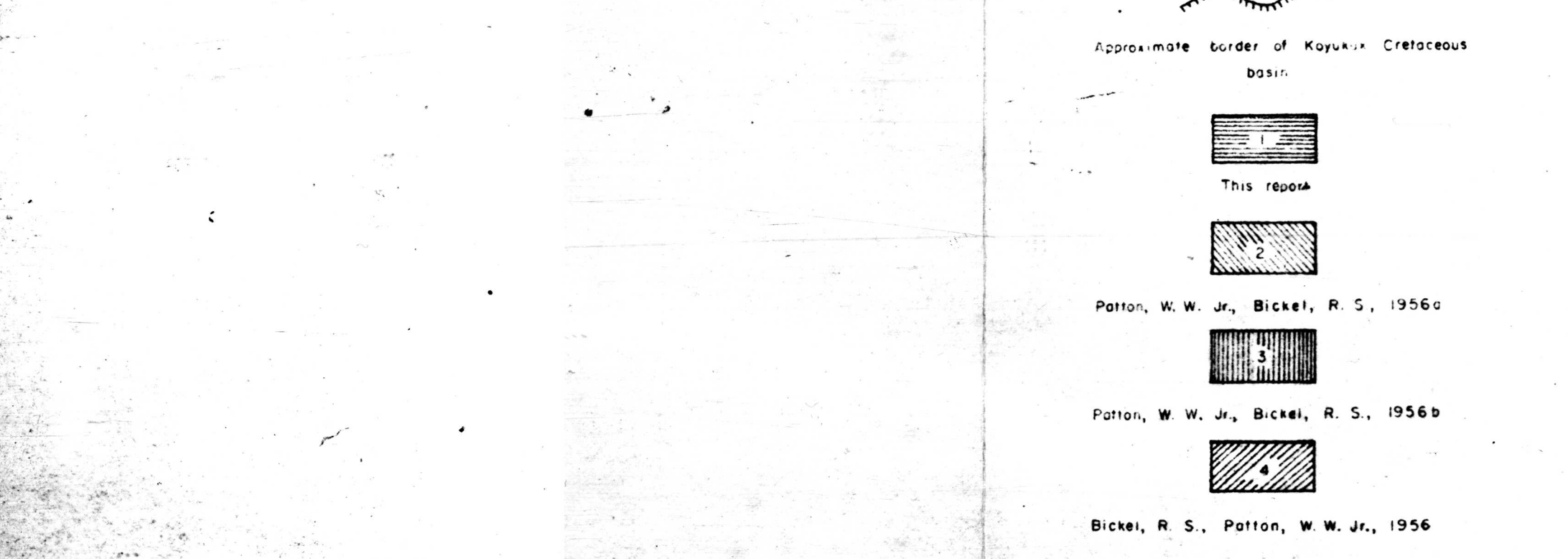
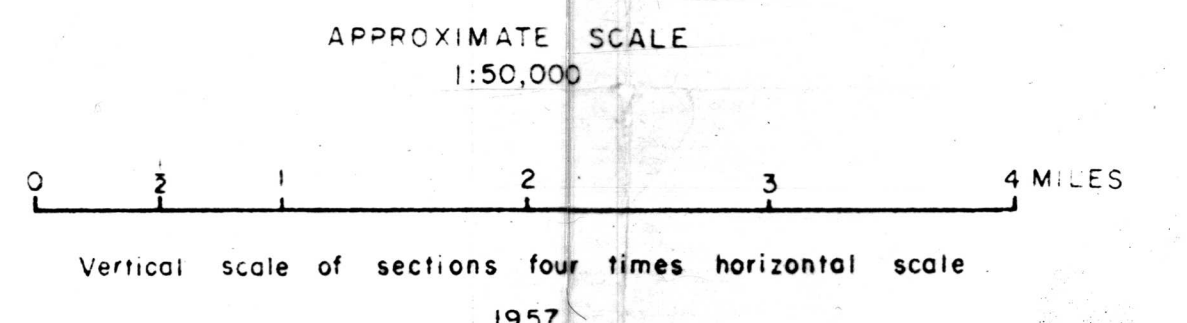


# PRELIMINARY GEOLOGIC MAP AND SECTIONS ALONG THE LOWER KOYUKUK RIVER, ALASKA

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

**K1**  
Siltstone, shale, sandstone and conglomerate. Dark gray to olive-gray, micaceous, locally calcareous siltstone. Grayish-black shale. Fine- to coarse-grained, cross-bedded, friable 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 Kuleto and Kateel Rivers area (Bickel and Patton, 1956) and to K1 along 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 pebbles 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. Illey, personal communication). Littoral and offshore marine origin. Probably equivalent to K2 in the Kuleto and Kateel Rivers area (Bickel and Patton, 1956) and to K2 along the lower Yukon River (Patton and Bickel, 1956a).

**K3**  
Unconformity

**K4**  
Volcanic rocks. Chiefly dark basalt and subordinate volcanic breccia, chert and tuff. These rocks were originally assigned a Tertiary or Quaternary age (Spurr, J. E., 1956, p. 295 (Smith, F. S. and Eakin, H. M., 1911, p. 71-75) but are now believed to be equivalent to the Koyukuk tuffaceous age of older. In a outcrop exposure opposite B group (Schradler, 1909, p. 77) and to be of earliest Cretaceous age or older. In a outcrop exposure opposite B (see sections A-B) K1 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 Kuleto and Kateel Rivers area, Alaska. U. S. Geol. Survey open-file report.

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Patton, W. W., Jr., and Bickel, R. S., 1956b. Geologic map and structure sections of the Shaktilik River area, Alaska. U. S. Geol. Survey Misc. Geol. Inv. Map 1-226.

Schradler, F. C., 1909. A reconnaissance in northern Alaska. U. S. Geol. Survey Prof. Paper 20, 139 p.

Smith, F. S., and Eakin, H. M., 1911. A geological reconnaissance in southeastern Coeur d'Alene and the Burton Bay-Bulato regions, Alaska. U. S. Geol. Survey Bull. 449, 140 p.

Spurr, J. E., 1956. Geology of the Yukon gold district, Alaska. U. S. Geol. Survey, 16th Ann. Rept., pt. 3, p. 57-596.

## FOSSIL COLLECTIONS

- 101-undent. gastropods and pelecypods
- 102-undent. gastropods
- 103-Trigonia leana Gabb
- Outre sp.
- Arctica sp.
- Thracia sp.
- Glycymeris? sp.
- 104-Inoceramus altifluminis McLearn
- 105-Panope sp.
- Arctica sp.
- Outre sp.
- 106-Astarte? sp.
- Solecurtus? sp.
- worm tubes
- 107-Arctica sp.
- Glycymeris? sp.
- Outre sp.
- Panope sp.
- Fluvicopa sp.
- Solecurtus? sp.
- Inoceramus cf. I. altifluminis McLearn
- Trigonia leana Gabb
- 108-Lucina?
- Arctica sp.
- Trigonia leana Gabb
- Thracia stielki McLearn
- Goniatops masonabbi McLearn
- Solecurtus?
- Fluvicopa sp.
- Astarte sp.
- 109-Inoceramus altifluminis McLearn
- Goniatops masonabbi McLearn
- Trochoceras sp.
- Arctica sp.
- Lucina sp.
- Pholadomya sp.
- undent. gastropods
- 110-Inoceramus altifluminis McLearn
- Solecurtus? sp.
- Panope sp.
- Pholadomya sp.
- worm tubes
- 111-undent. gastropods
- 112-undent. gastropods
- 500-509-undent. plant fossils

Collections 103-110 identified by R. W. Illey