UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 1165
PLATE 3

GEOLOGIC MAP OF NUCKOLLS COUNTY, NEBRASKA

Base map compiled from Soil Conservation Service aerial photographs

Geology mapped in 1948–50 by L. P. Buck

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1964—GS3187

SCALE 1:48000

3 MILES
3 KILOMETERS

EXPLANATION

QUATERNARY

Recent

Qal — Flood plain alluvium
Yellowish-gray to light-gray unconsolidated silty sand to fine quartz sand along modern channels and modern flood plains

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Qt — Terrace deposit
Dark-brown to gray sandy to clayey silt of two terrace cycles

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Pleistocene

Wisconsin Glaciation — **Qbp** — Bignell and Peorian Loesses
Yellowish-gray, yellowish-brown, or grayish-orange clayey silt. A dark humic soil separates the loesses in some places

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Illinoian Glaciation — **Ql** — Loveland Loess
Moderate yellowish-brown to reddish-brown clayey silt, locally composed of silty sand or sand, dark yellowish-brown to grayish-brown humic soil. Soil of Sangamon age at top at most places

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Qc — Crete Formation
Light-brown silty sand and fine sand; pale yellow to grayish-orange chalky sandy silt locally south of the Republican River

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Kansan Glaciation and Yarmouth Interglaciation — **Qs** **Qsp** — Sappa Formation
Qs, gray to greenish-gray clay and silty clay, tan silt; Qsp, Pearlette Ash Member, white to gray volcanic ash lenses and beds

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Kansan Glaciation — **Qgr** — Grand Island Formation and Red Cloud Sand and Gravel
Light-brown crossbedded fine to coarse sand; contain lenses of silt and pebbles; at places where the Sappa is absent may include some Crete Formation

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CRETACEOUS

Upper Cretaceous

Kn — Niobrara Formation
Smoky Hill Chalk Member, light bluish-gray, light olive-gray, dark yellowish-orange, very pale orange, to light-gray calcareous chalk and chalky shale. Fort Hays Limestone Member, grayish-yellow to light-brown limestone, is interbedded with the chalky shale in the lower 40 feet

Kc — Carlile Shale
Blue Hill Shale Member, dark to light bluish-gray noncalcareous clayey shale capped by Codell Sandstone Member, a 6-inch-thick grayish-orange to pale yellowish-brown sandy siltstone

Contact
Dashed where approximately located; short dashed where inferred

Boundary of ancient terrace covered by Peorian and Bignell Losses
Loess-covered terrace is on the riverward side of the boundary

Sand pit

Quarry

ms 2 — Measured section locality

31 — Materials sample locality reported in open file (Miller and others, 1964)

C 585 ◎ D 2866 — Volcanic ash sample locality

▲21570 ▲R-101 — Fossil locality
21570, U.S. Geological Survey Cenozoic invertebrate locality number.
R-101, invertebrate fossil locality, no Cenozoic number assigned