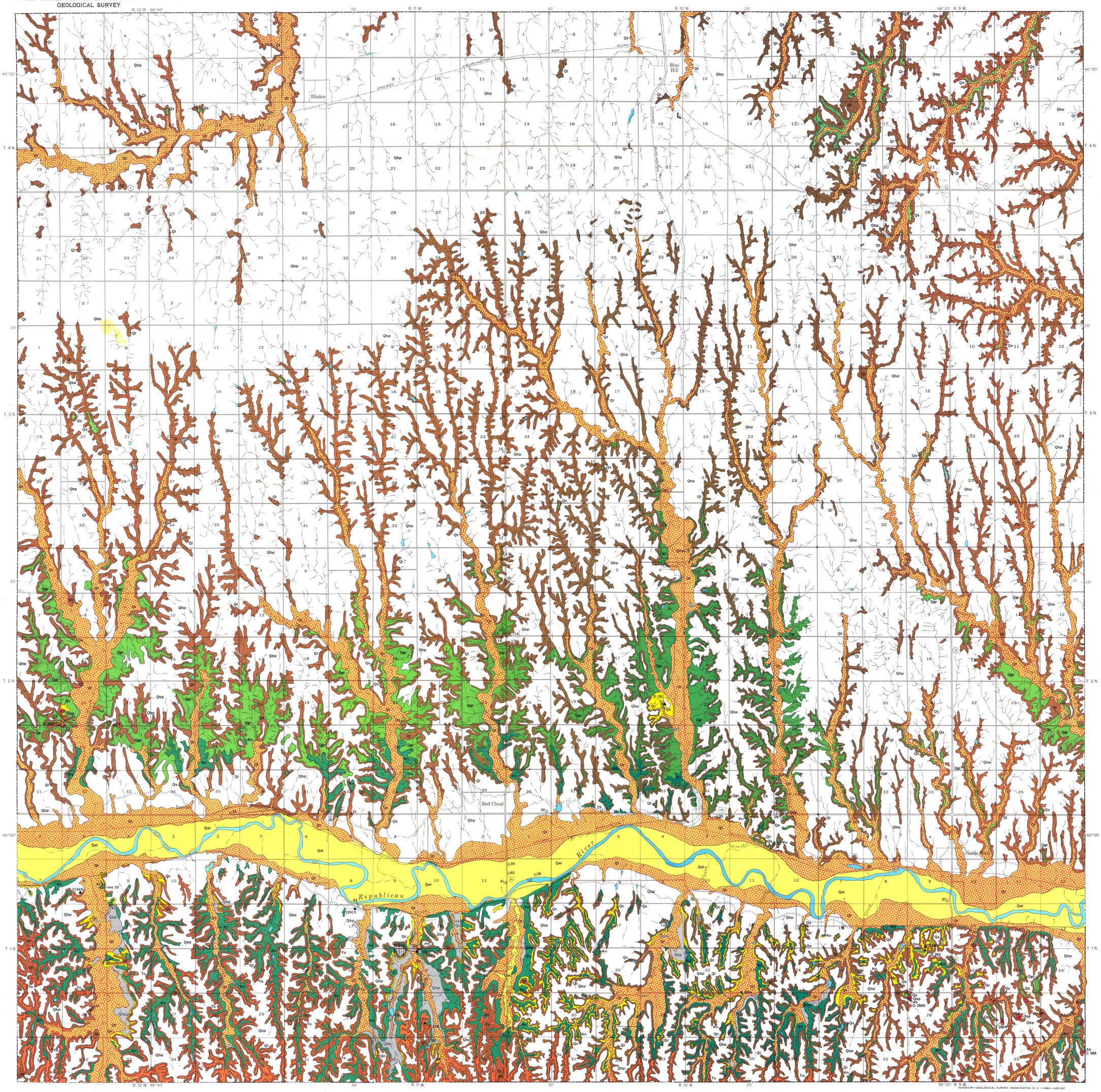

EXPLANATION

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

UNCONFORMITY

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

UNCONFORMITY

Qbp — Bignell and Peorian Loesses
Yellowish-gray, yellowish-brown, or grayish-orange clayey silt. A dark humic soil separates the loesses in some places. Include chalky alluvium (patterned) low in valleys south of Republican River. Probably correlative with loess-covered terrace

UNCONFORMITY

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

UNCONFORMITY?

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

UNCONFORMITY

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

UNCONFORMITY?

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

UNCONFORMITY

To — Ogallala Formation
Grayish-yellow, dark greenish-yellow to moderate yellowish-brown coarse sand; grayish-orange, greenish-gray, or pale-olive sandy to clayey silt; and dusky yellowish-green to dark yellowish-orange clay

UNCONFORMITY

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, interbedded with the chalky shale in the lower 40 feet

Recent — Wisconsin Glaciation — Illinoian Glaciation — Pleistocene — Kansan Glaciation and Yarmouth Interglaciation — Kansan Glaciation — QUATERNARY

Pliocene — TERTIARY

Upper Cretaceous — CRETACEOUS

Contact
Dashed where approximately located; short dashed where inferred

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

Sand pit

ms 10
Measured section locality

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

C 584 G 2866
Volcanic ash sample locality

D 282 21570
Fossil locality
D 282, *U.S. Geological Survey fossil vertebrate ("red" catalogue) locality number.*
21570, *U.S. Geological Survey Cenozoic invertebrate locality numbers*

Base map compiled from Soil Conservation Service aerial photographs

GEOLOGIC MAP OF WEBSTER COUNTY, NEBRASKA

SCALE 1:48 000

1 ½ 0 1 2 3 MILES
1 .5 0 1 2 3 KILOMETERS

APPROXIMATE MEAN DECLINATION, 1964

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1964—G63187

Geology mapped in 1948–50 by
E. Dobrovolny and R. D. Miller