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BEDROCK GEOLOGY IN RICHLAND COUNTY

This map is a depiction of the unexposed bedrock geology found beneath the unconsolidated glacial cover across Richland County. Lithologic logs from test holes, water wells, driller's logs and mineral exploration drilling were reviewed for bedrock geologic information consisting of bedrock depth and lithology. A total of 483 locations were selected based on the quality of the lithology recorded on the log and whether bedrock was encountered in the drill hole.

There are two different types of bedrock found in Richland County. Sedimentary sandstone and shale bedrock of Cretaceous age and igneous weathered granitic basement bedrock of Precambrian age. Shale bedrock and sandstone is found nonconformably overlying Precambrian basement rock across most of the county thinning from west to east and is the first bedrock that commonly occurs beneath the shallow cover of glacial deposits. Weathered Precambrian granitic basement rock can be found in isolated areas in the northeastern part of the county, along with isolated subcrops of sandstone closer to Wahpeton.

EXPLANATION

Kn NIOBRARA FORMATION: SHALE - Light-brown to dark-gray, calcareous; upper Cretaceous marine offshore sediment.

Kc CARLILE FORMATION: SHALE - Olive black to Gray-brown, silty, non-calcareous, waxy; upper Cretaceous marine offshore sediment.

Kg GREENHORN FORMATION: SHALE - Dark-gray, calcareous, some fish scale and plant fragments, occasional pyrite; upper Cretaceous marine offshore sediment.

Kbs SKULL CREEK-BELLE FOURCHE FORMATIONS (Undifferentiated): SHALE – Olive-black to brown and gray, occasional shell fragments, micaceous, massive, dominantly noncalcareous, varies from soft to hard; Mesozoic (Cretaceous) marine offshore sediments.

Kik INYAN KARA FORMATION: SANDSTONE – Light-gray to white, fine to coarse; river, lake, and lower Cretaceous nearshore marine sediment.

p€ BASEMENT ROCK OF THE SUPERIOR PROVINCE: GRANITE (WEATHERED) – Dark to light-green and gray to white, highly weathered, soft greenish-pink-white kaolinitic clay, quartz and feldspar grains common; Precambrian (Archean) basement rocks.

Geologic contact (Known)

REFERENCES

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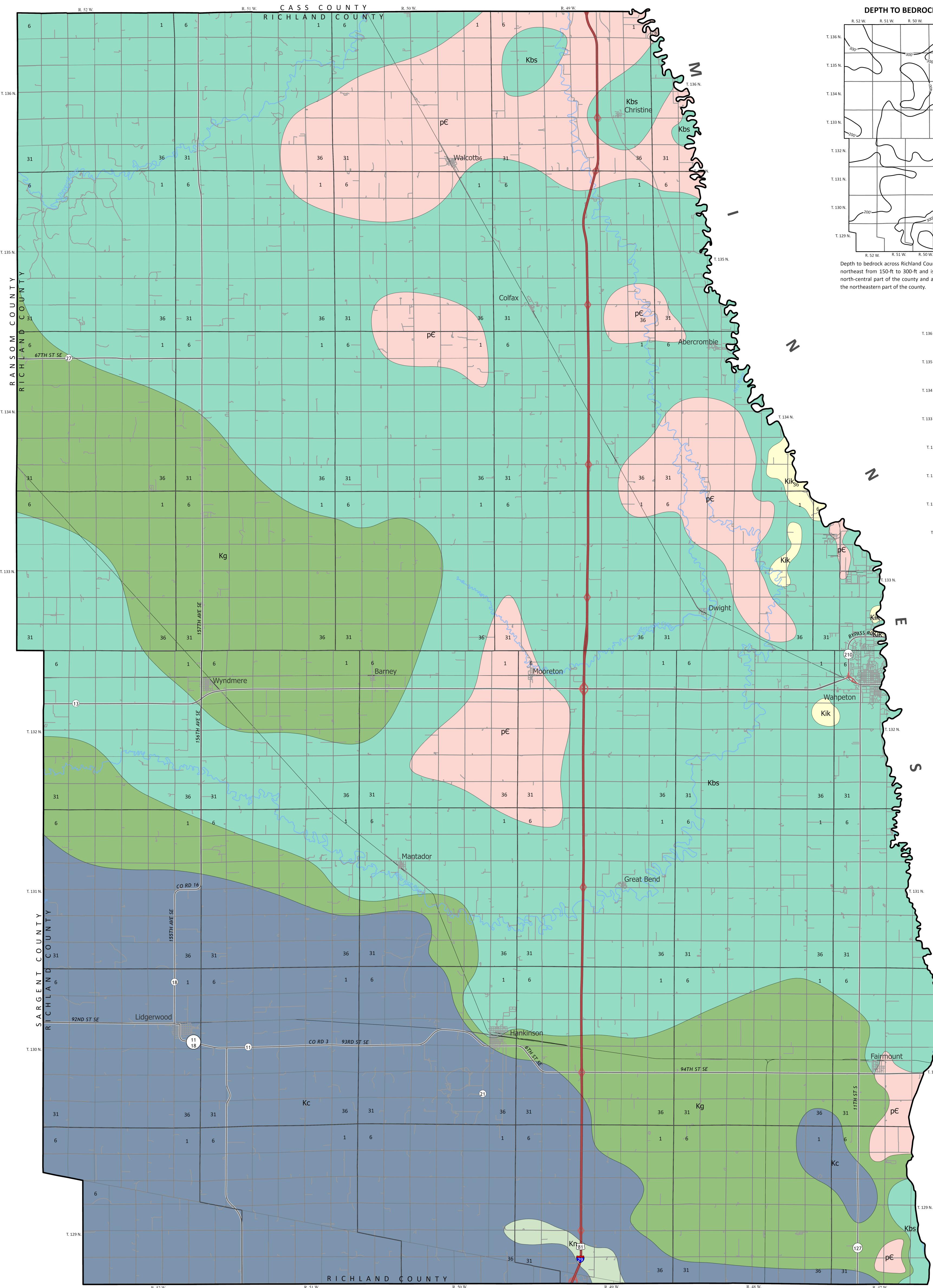
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Scale 1:125,000



Kilometers



RICHLAND COUNTY, NORTH DAKOTA

Cartographic Compilation: Navin Thapa