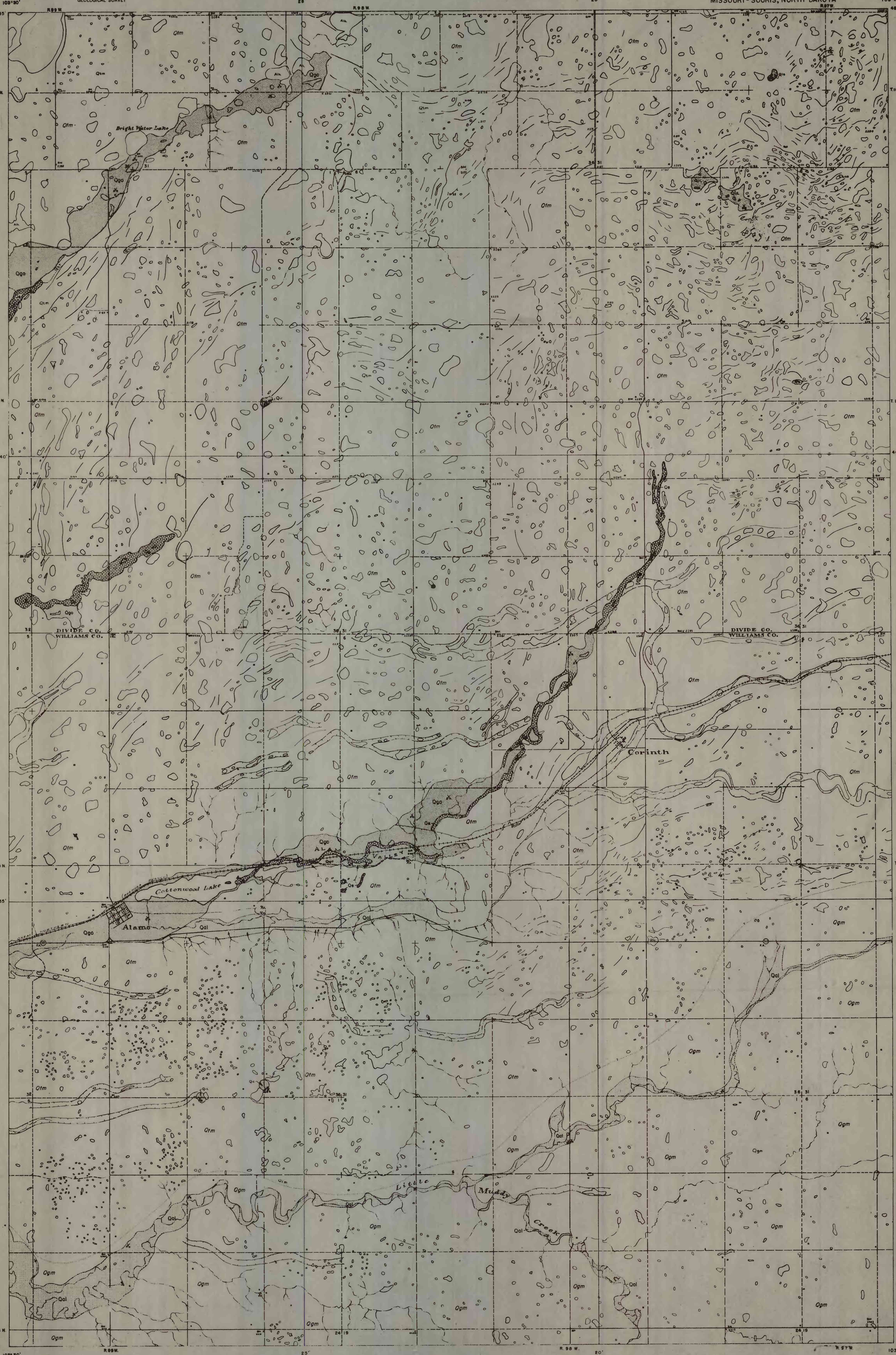
48-9

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PRELIMINARY MAP

MISSOURI RIVER BASIN
MAPPING AND MINERAL REOURCE INVESTIGATIONS
MISSOURI - SOURIS, NORTH DAKOTA



Base compiled from township plots and aerial photographs by means of sketchmaster.

GEOLOGY OF KERMIT NO. 3 QUADRANGLE, NORTH DAKOTA

Geology by Robert M. Lindvall and Wallace R. Hansen, 1946

LEGEND

RECENT

Qal — ALLUVIUM

Clays, silts, sands and gravel. Including possibly some glacial outwash along Little Muddy Creek and its tributaries.

PLEISTOCENE

Qgo — GLACIAL OUTWASH

Fine sand to medium, occasionally coarse gravel. Consists mostly of granite, limestone and gneiss, with varying amounts of basic igneous and metamorphic rocks, dolomite, lignite slack, chert and chalcedony. Caliche common near surface. Bedded and sorted.

Qs — ESKER

Fine sand to coarse gravel. Poorly bedded and sorted. Often covered by a concentration of boulders, and frequently veneered with till.

Qkt — KAME TERRACE

Poorly to well-stratified sand and gravel. Often shows some sign of slumping.

Qic — ICE CONTACT DEPOSIT

Fluvio-glacial sand and gravel. Symmetrical, isolated knobs to highly irregular tracts. Often fairly well-bedded and sorted, with bedding dipping away from crest and parallel to surface profile.

Qtm — ALTAMONT (?) TERMINAL MORAINE

Late Wisconsin (Mankato ?). Mostly calcareous, blue-gray till, gray-brown where oxidized. Contains numerous scattered lenses of sand and gravel. Finerafraction derived mostly from underlying Fort Union sediments. Coarser materials include granite, pegmatite, limestone, gneiss, schist, quartzite and dolomite. Stones range from small pebbles to large boulders.

Qgm — GROUND MORAINE

Wisconsin. Pre-Altamont (?). Lithologically similar to Altamont (?).

Qtm / Qgm — ALTAMONT (?) TERMINAL BOUNDARY

Indicates the southern terminal limits of the last ice (Altamont ?) in the area.

AXES OF MORAINAL RIDGES AND ELONGATED TILL HILLS.

ICE MARGINAL CHANNELS

Carved by drainage diverted in advance of the ice. Mostly bottomed with till and closed at both ends.

GRAVEL PIT

A — LIGNITE MINE (WITH "A" - ABANDONED)

QUATERNARY

ROADS

- Graveled, all weather
- Partially graveled
- Drained and graded
- Primitive

Closed solid lines indicate kettles and irregular closed depressions, marshes, and ephemeral lakes. Alkali lakes marked "Alk".

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North Dakota (Kermit no. 3 quad.). Geol. 1:48,000. 1946.