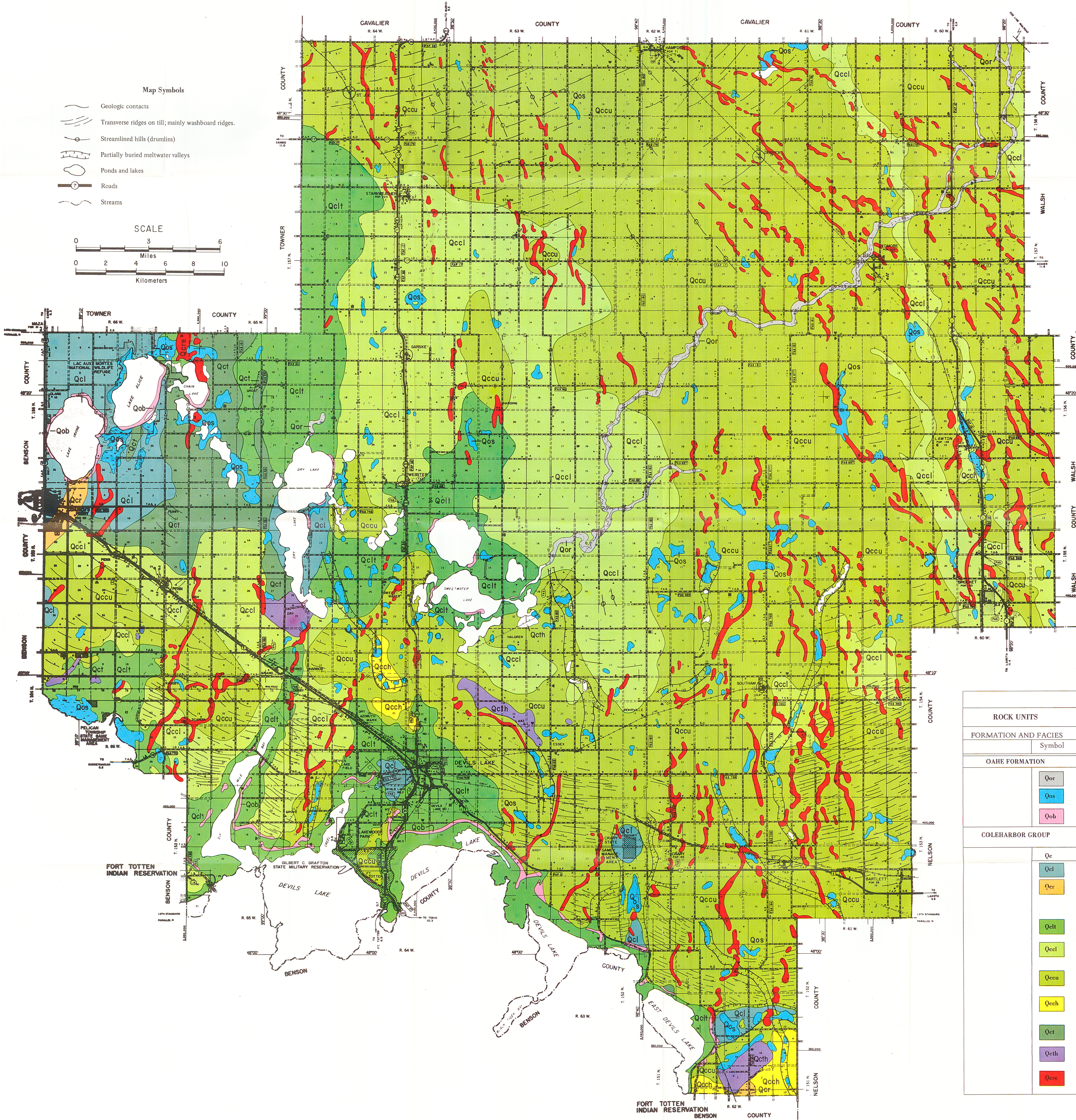


PLATE I. GEOLOGIC MAP OF RAMSEY COUNTY

PART I PLATE I
BULLETIN 71
COUNTY GROUNDWATER STUDIES NO. 26

by
Howard C. Hobbs and John P. Bluemle
1986

NORTH DAKOTA GEOLOGICAL SURVEY
NORTH DAKOTA STATE WATER COMMISSION



LEGEND		See text for a more complete explanation of map units.
ROCK UNITS	DESCRIPTION	
FORMATION AND FACIES		
Symbol	Texture, color, topography or landform, and origin.	
OAHE FORMATION		
Qor	River sediment. Dark, obscurely bedded sand, silt, and clay; overbank sediment.	
Qos	Pond and slough deposits. Dark, obscurely bedded, organic silt and clay; in modern ephemeral ponds.	
Qob	Beach deposits. Well sorted to moderately sorted sand and gravel; low-angle cross-bedding.	
COLEHARBOR GROUP		
(The surface glacial materials in Ramsey County belong almost entirely to the Dahien Formation).		
Qe	Clay, silt, sand, and gravel with dispersed organic material.	
Qcl	Lake deposits. Flat areas of offshore lake sediment consisting of silt and fine sand.	
Qcr	River deposits (includes glacial outwash). Gently sloping areas covered by flat-bedded sand and gravel; some braided channel scars.	
Qclt	Veneer of offshore to nearshore lake sediment overlying glacial sediment; flat to undulating topography; bouldery in places.	
Qccf	Collapsed glacial topography. Nearly flat surface (< 10' local relief) of glacial sediment with poorly integrated to fairly well integrated drainage; faint to subdued disintegration markings can be seen in places on air photos.	
Qccu	Collapsed glacial topography. Undulating surface (< 20' to 40' local relief) of glacial sediment with poorly integrated drainage; subdued to well-defined disintegration markings apparent on air photos.	
Qech	Collapsed glacial topography. Hilly surface (< 20' to 40' local relief) of glacial sediment with non-integrated to poorly integrated drainage; well defined to prominent disintegration markings.	
Qct	Ice-thrust topography. Broad areas where glacial sediment has been draped over glacial or preglacial sediment or rock that has been sheared up into thrust slabs or folds near the ice margin; hilly areas with intense, local linearity.	
Qcth	Ice-thrust hill. Discrete mass of ice-thrust material; high local relief; local concentrations of boulders.	
Qese	Eskers and kames (shown as red areas on the map). Ridges and hills of gravel and sand; cobbles and boulders common; chunks of till common. Ice-contact fluvial material.	

PLATE 2
 BEDROCK SURFACE
 IN
 RAMSEY COUNTY

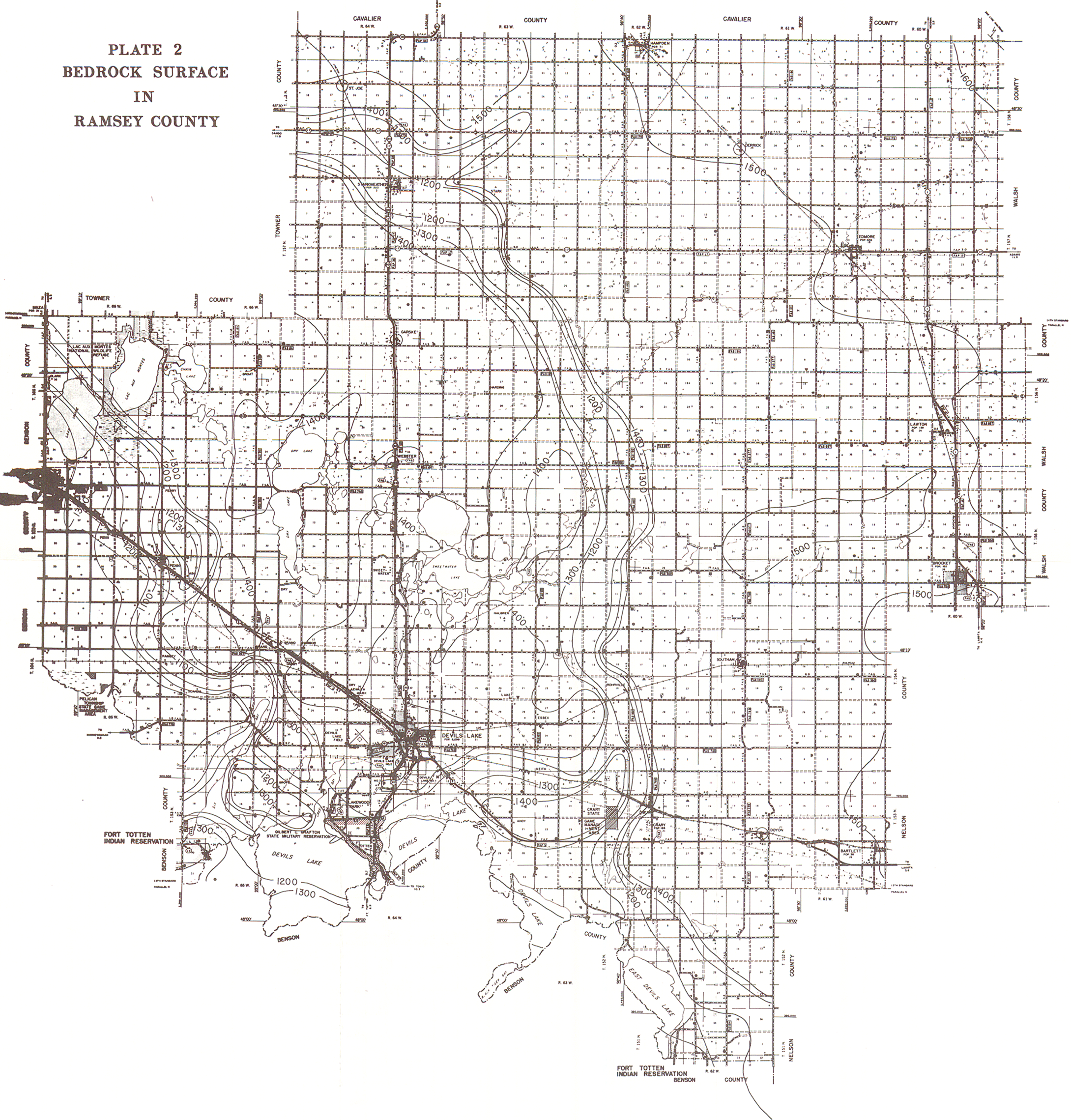


PLATE 3
THICKNESS OF DRIFT
IN
RAMSEY COUNTY

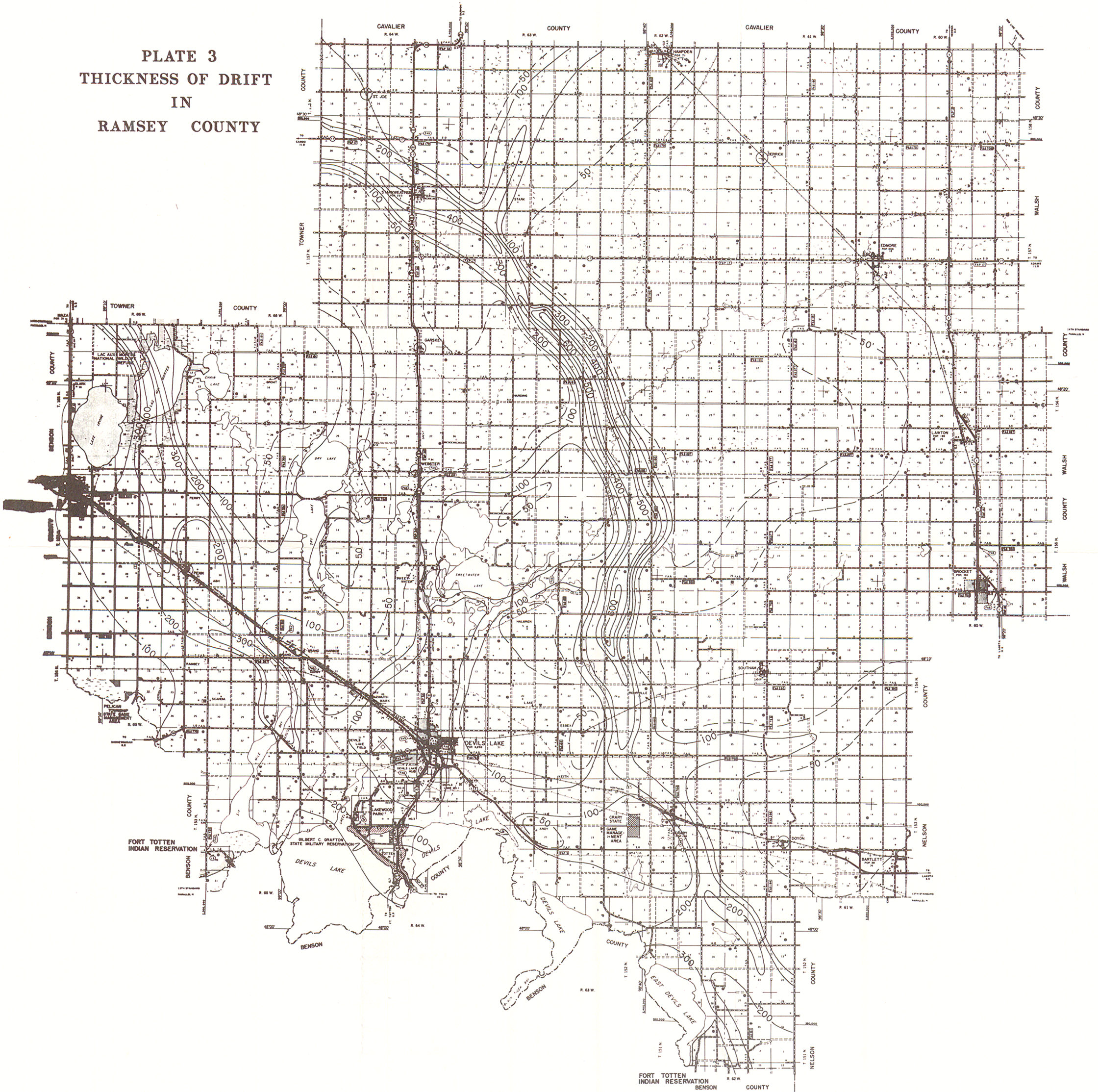


PLATE 4. CROSS SECTIONS OF GLACIAL DEPOSITS IN RAMSEY COUNTY

