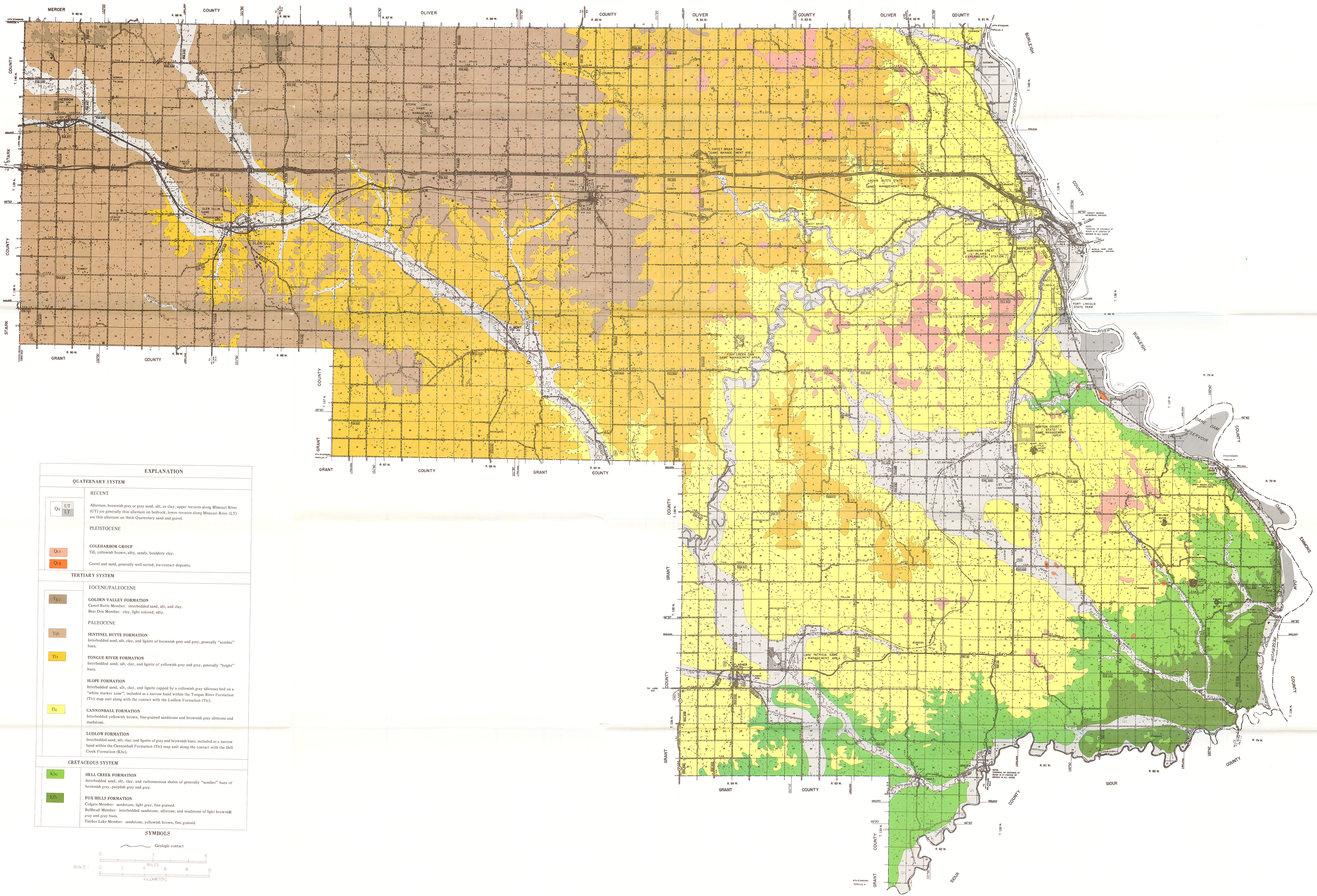


PLATE 1 GEOLOGIC MAP OF MORTON COUNTY

PART 1 PLATE 1
COUNTY GROUNDWATER STUDIES 27
BULLETIN NO. 72

NORTH DAKOTA GEOLOGICAL SURVEY
Don L. Halvorson, State Geologist



EXPLANATION	
QUATERNARY SYSTEM	
RECENT	
Qu	Alluvium; brownish gray or gray sand, silt, or clay; upper terraces along Missouri River (UT) are generally thin alluvium on bedrock; lower terraces along Missouri River (LT) are thin alluvium on thick Quaternary sand and gravel.
LT	
PLEISTOCENE	
COLEHARBOR GROUP	
Qc1	Till, yellowish brown, silty, sandy, bouldery clay.
Qs2	Gravel and sand, generally well sorted, ice-contact deposits.
TERTIARY SYSTEM	
EOCENE/PALEOCENE	
GOLDEN VALLEY FORMATION	
Tgy	Camel Butte Member: interbedded sand, silt, and clay. Bear Den Member: clay, light colored, silty.
PALEOCENE	
SENTINEL BUTTE FORMATION	
Tsb	Interbedded sand, silt, clay, and lignite of brownish gray and gray, generally "somber" hues.
TONGUE RIVER FORMATION	
Tt	Interbedded sand, silt, clay, and lignite of yellowish gray and gray, generally "bright" hues.
SLOPE FORMATION	
Ts	Interbedded sand, silt, clay, and lignite capped by a yellowish gray siliceous bed on a "white marker zone"; included as a narrow band within the Tongue River Formation (Tt) map unit along with the contact with the Ludlow Formation (Tlc).
CANNONBALL FORMATION	
Tlc	Interbedded yellowish brown, fine-grained sandstone and brownish gray siltstone and mudstone.
LUDLOW FORMATION	
Tld	Interbedded sand, silt, clay, and lignite of gray and brownish hues; included as a narrow band within the Cannonball Formation (Tlc) map unit along with the contact with the Hell Creek Formation (Khc).
CRETACEOUS SYSTEM	
HELL CREEK FORMATION	
Khc	Interbedded sand, silt, clay, and carbonaceous shales of generally "somber" hues of brownish gray, purplish gray and gray.
FOX HILLS FORMATION	
Kfb	Colgate Member: sandstone, light gray, fine grained. Bullhead Member: interbedded sandstone, siltstone, and mudstone of light brownish gray and gray hues. Timber Lake Member: sandstone, yellowish brown, fine grained.

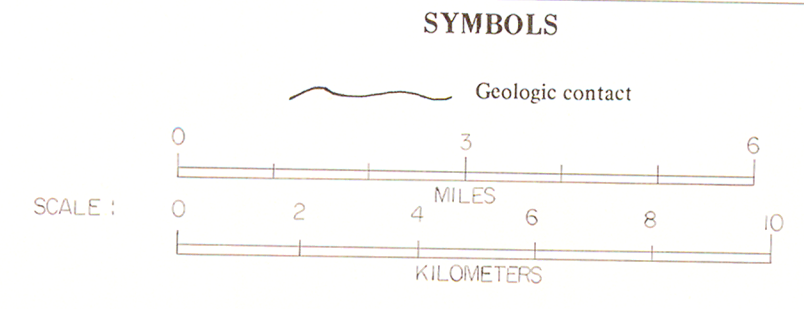


PLATE 2 CROSS SECTIONS OF LOWER CRETACEOUS FORMATIONS IN MORTON COUNTY

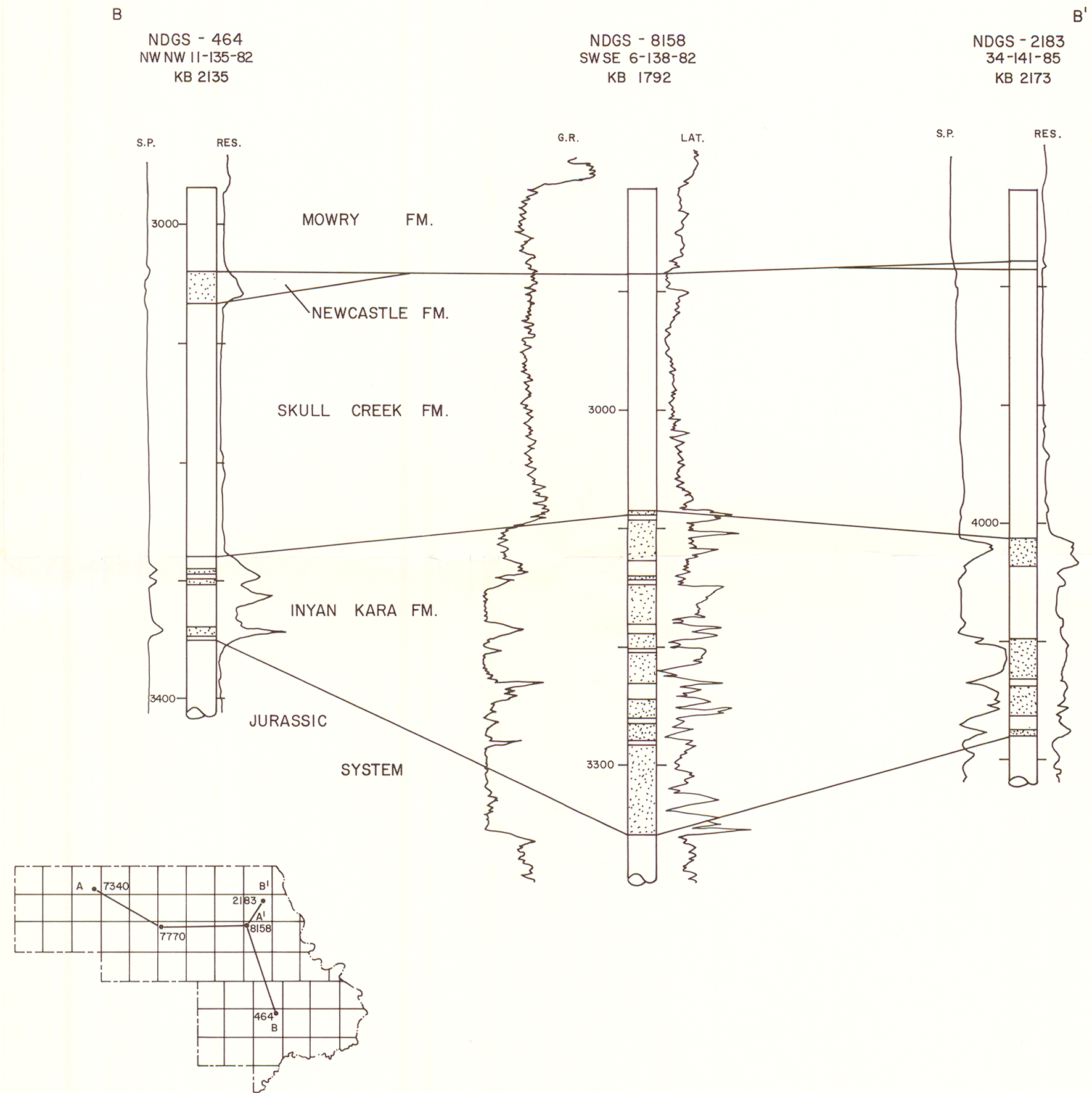
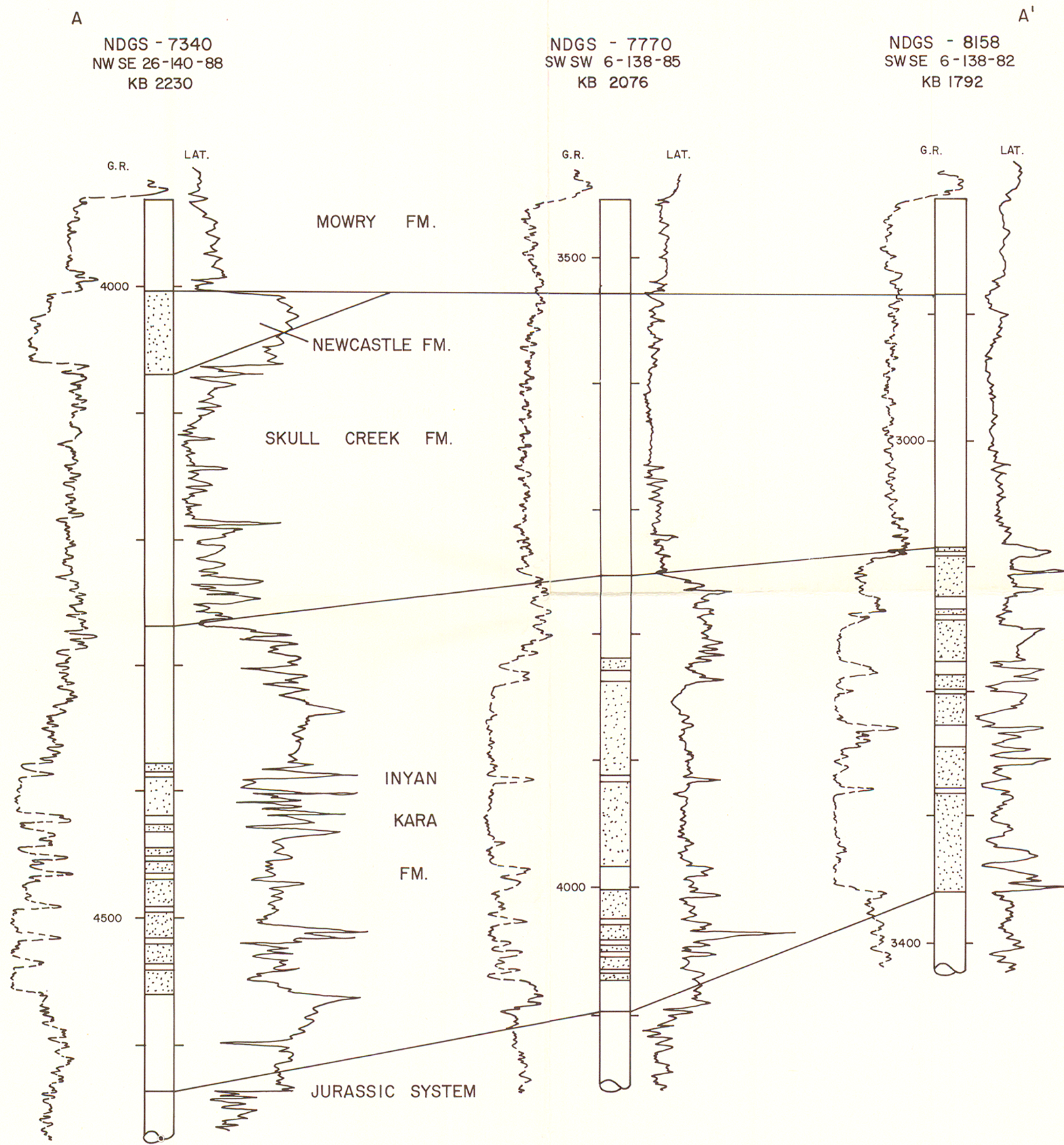


PLATE 3 CROSS SECTIONS OF TERTIARY AND LATE CRETACEOUS FORMATIONS IN MORTON COUNTY

C
 NDGS-115
 NE SW 5-141-90
 KB 2386

