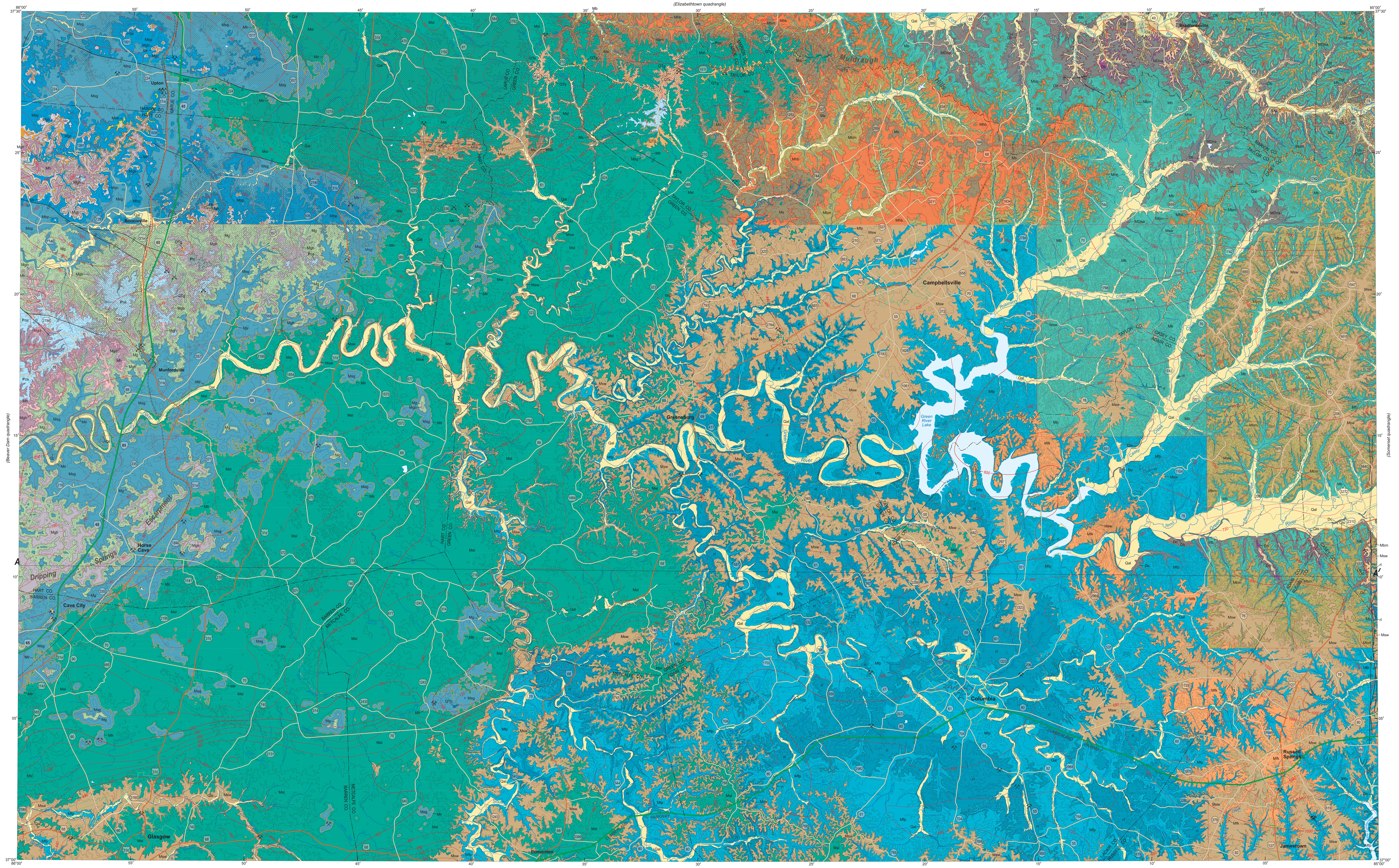
KENTUCKY GEOLOGICAL SURVEY
James C. Cobb, State Geologist and Director
UNIVERSITY OF KENTUCKY, LEXINGTON

GEOLOGIC MAP OF THE CAMPBELLSVILLE 30 x 60 MINUTE QUADRANGLE, SOUTH-CENTRAL KENTUCKY

Mark F. Thompson and Carl Petersen

Cartography by Terry D. Hounshell



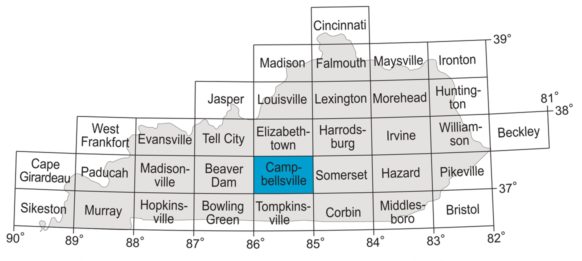
SCALE 1:100 000

universal transverse Mercator projection, zone 16: 1927 North American datum

TOPOGRAPHIC CONTOUR INTERVAL 20 METERS

EXPLANATION

Interstate highway or parkway	Concealed contact
U.S. highway	Inferred contact
State highway	Structure contour, feet
County boundary	Datum horizon boundary
City boundary	Active stone quarry or mine
Railroad	Abandoned stone quarry or mine
Normal fault (U, upthrown side; D, downthrown side)	Active pit; gravel
Concealed fault	Abandoned pit; gravel or asphalt
Contact	



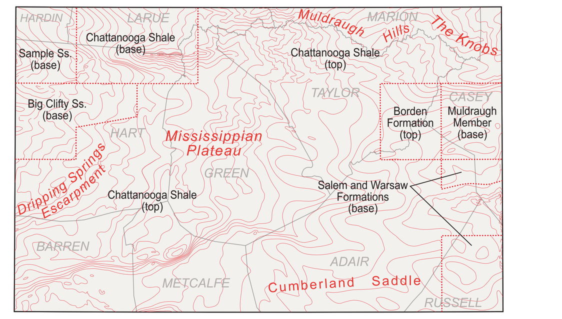
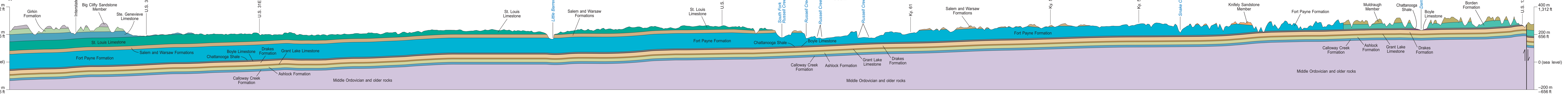


Figure 1. Location of the Campbellsville 30 x 60 minute quadrangle and 7.5-minute quadrangles.



NOTE: cross section is diagrammatic

vertical exaggeration 8x

DESCRIPTION OF MAPPED UNITS

SYSTEM	SERIES	FORMATION AND MEMBER	LITHOLOGY	THICKNESS IN METERS (FEET)
QUATERNARY	Holocene	Landslide deposits	Qls	0–15+ (0–50+)
		Alluvium	Qal	0–3 (0–10)
		Loess	Ql	
		Terrace deposits	Qt	0–7

Qal — ALLUVIUM

Qls — LANDSLIDE DEPOSITS

Ql — LOESS

INTRODUCTION

The geology of the Campbellsville 30 x 60 minute quadrangle was digitally compiled mostly from U.S. Geological Survey 7.5-minute geologic quadrangle maps (GQ's), as cited in the references. The original GQ's were products of a cooperative mapping project between the U.S. Geological Survey and the Kentucky Geological Survey from 1960 to 1978. The conversion into digital format has been another USGS–KGS cooperative program funded through the State Geologic Mapping component of the National Cooperative Geologic Mapping Program (NCGMP STATEMAP). Regional geologic studies on mapping and stratigraphy (Lewis and Potter, 1978; Sable and Dever, 1990) have resulted in changes in the stratigraphic nomenclature and correlation. These changes are shown on this map, and were necessary for compilation of regional maps and for stratigraphic continuity between 7.5-minute quadrangles. The 7.5-minute quadrangles that make up the Campbellsville 30 x 60 minute quadrangle are shown in the index map (Fig. 1).

The data files resulting from the digitization of the GQ's are part of a comprehensive relational and spatial data set, being released as Digitally Vectorized Geologic Quadrangles (DVGQ's) by the Kentucky Geological Survey (Anderson and others, 1999). These DVGQ's are available on CD-ROM, and and are available on an Internet map service on the KGS Web site. Users of the DVGQ's can prepare custom geologic maps by overlaying data using their own GIS or CAD software. KGS has also developed an Internet map server where users can prepare similar maps via an interactive Geologic Map Information Service without purchasing DVGQ's (kgs.uky.edu/kgsmap/kgsgeology) (Weisenfluh and others, 2005).

PROCEDURE

The 7.5-minute quadrangle maps were digitally compiled using a semi-automated data capture technique to convert hard-copy geologic maps into digital format. Compiling 7.5-minute maps into a 30 x 60 minute map required the resolution of significant problems, such as (1) correlating geologic formations across quadrangle boundaries, (2) resolving nonuniform structure-contour datums or intervals, and (3) resolving discrepancies in Quaternary alluvium boundaries and inferred contacts. The metadata portion of the digital file provides detailed information about the conversion process. Formation codes were assigned using the American Association of Petroleum Geologists' standard stratigraphic code (Cohee, 1967), which was modified by the Kentucky

REFERENCES CITED

Moore, F.B., 1972a, Geologic map of the Hammonville quadrangle, Larue and Hart Counties, Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-1051, scale 1:24,000.

Moore, F.B., 1972b, Geologic map of the Upton quadrangle, central Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-1000, scale 1:24,000.

Moore, F.B., 1975, Geologic map of the Magnolia quadrangle, central Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-1280, scale 1:24,000.

Mullins, J.E., 2006a, Spatial database of the Glasgow North quadrangle, Kentucky: Kentucky Geological Survey, ser. 12, Digitally Vectorized Geologic Quad-