

FOLIO NOTE

This publication is part of a folio of maps of the Springfield 1° x 2° quadrangle, Missouri, prepared under the Conterminous United States Mineral Assessment, prepared by the U.S. Geological Survey. Other publications in this folio to date include U.S. Geological Survey Miscellaneous Field Studies Maps MF-1830-A through F (Erickson and others, 1979; Whitfield, 1986; Wharton, 1987; Middelendorf and others, 1987; Kisvaranyi, 1987; Rueff, 1987); U.S. Geological Survey Open-File Report 84-648 (U.S. Geological Survey, 1984); Missouri Geological Survey Open-File Maps OMR-81-40-G1 and OMR-83-159-G1 (Missouri Geological Survey, 1981; Granch and Cordell, 1983); and Missouri Geological Survey Open-File Report OMR-85-42-HR (Martin and Pratt, 1985).

DISCUSSION

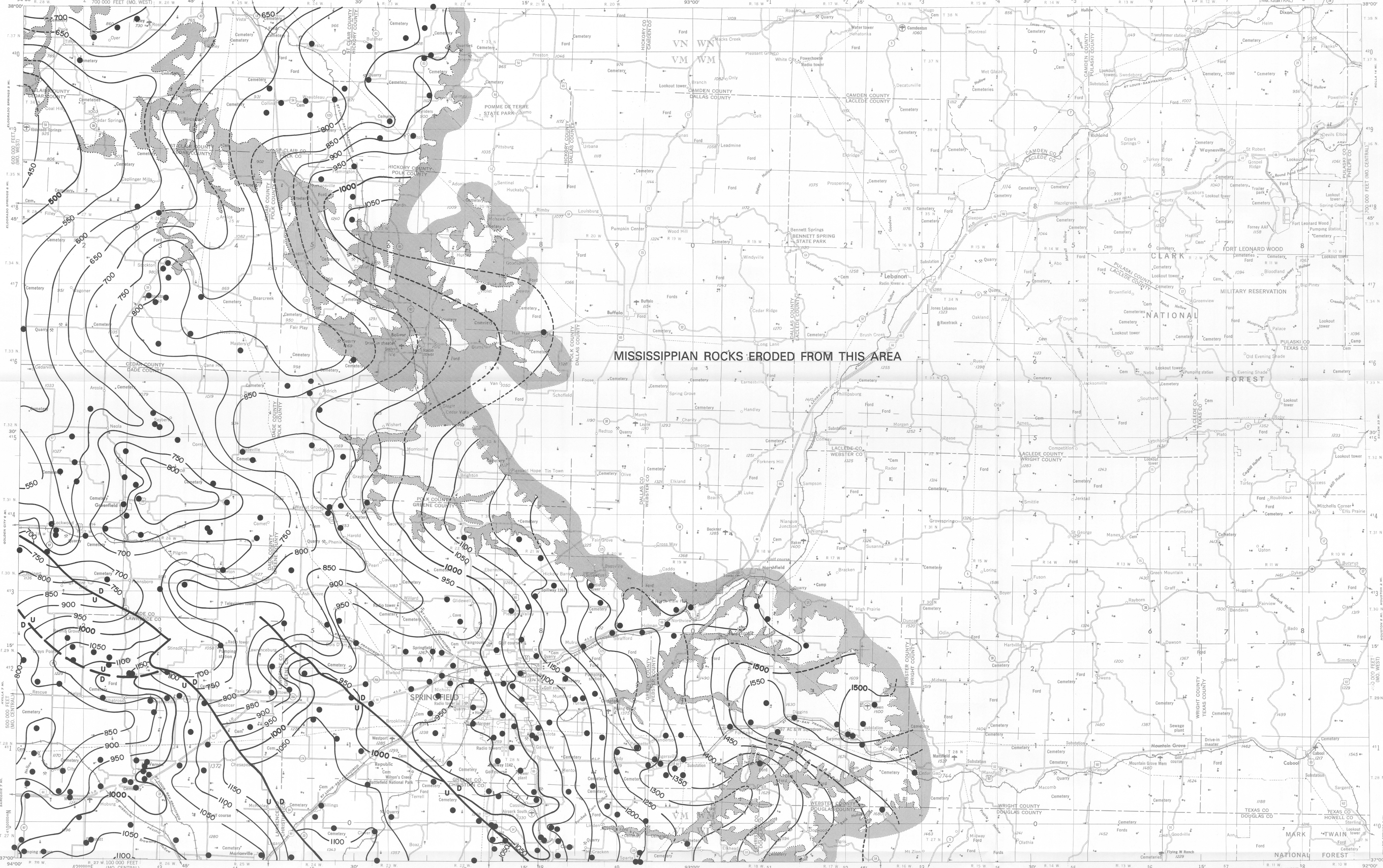
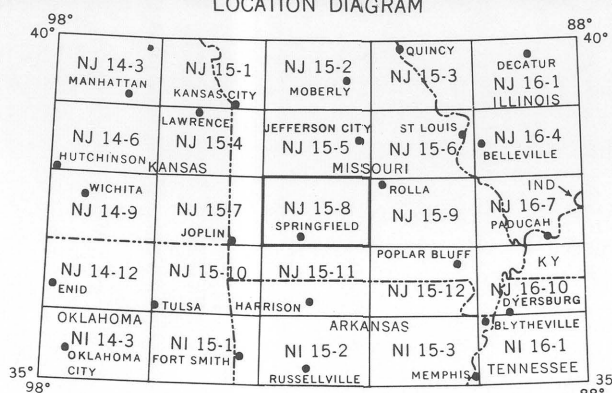
The base of Mississippian strata is the most readily identifiable stratigraphic horizon on which to draw structure contours in the western part of the Springfield quadrangle. Recognition of structural trends is important because lead and zinc deposits in the Mississippian and Ordovician sedimentary rocks have historically been associated with structural highs and major fracture trends. Although the boundary between Ordovician and Mississippian strata is erosional, structural highs in the Mississippian are reflected in the contours, while faults that show displacement at the Ordovician-Mississippian boundary can be indicative of major fracture trends.

The contact at the top of the Cambrian (mapped as the base of the Gunter Sandstone Member of the Gasconade Dolomite of Ordovician age) is one of the most readily identifiable boundaries of the Cambrian and Ordovician sequences. It is important for mineral exploration because the structural expression of this surface may reflect the topography of the underlying Precambrian surface, and Precambrian structural topographic highs have often been targets in exploration for Mississippi Valley-type deposits.

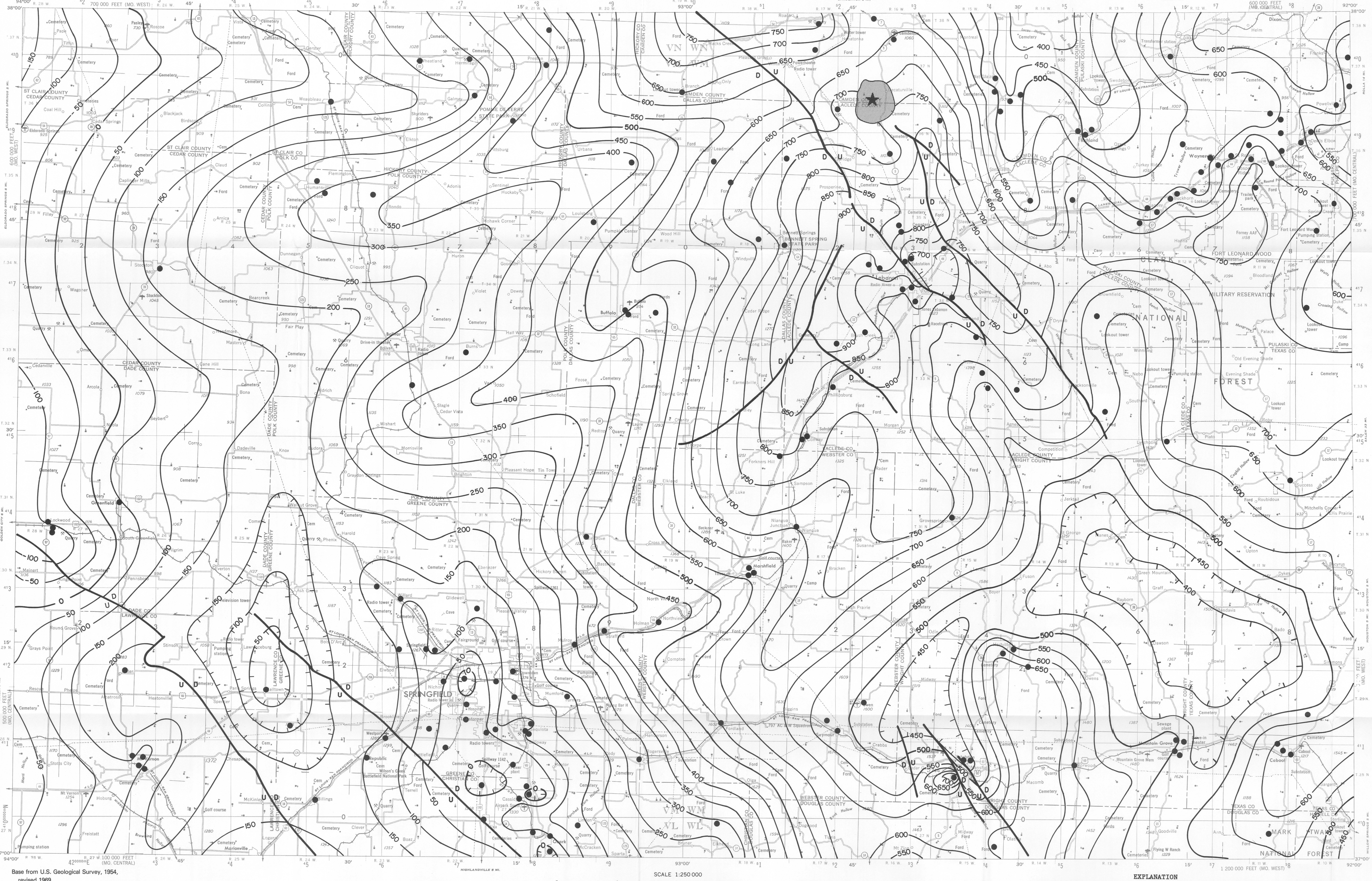
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LOCATION DIAGRAM



MAP A.—BASE OF MISSISSIPPIAN STRATA



MAP B.—TOP OF UPPER CAMBRIAN STRATA

STRUCTURE CONTOUR MAPS ON THE BASE OF MISSISSIPPIAN STRATA AND  
THE TOP OF UPPER CAMBRIAN STRATA, SPRINGFIELD 1° X 2° QUADRANGLE, MISSOURI

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